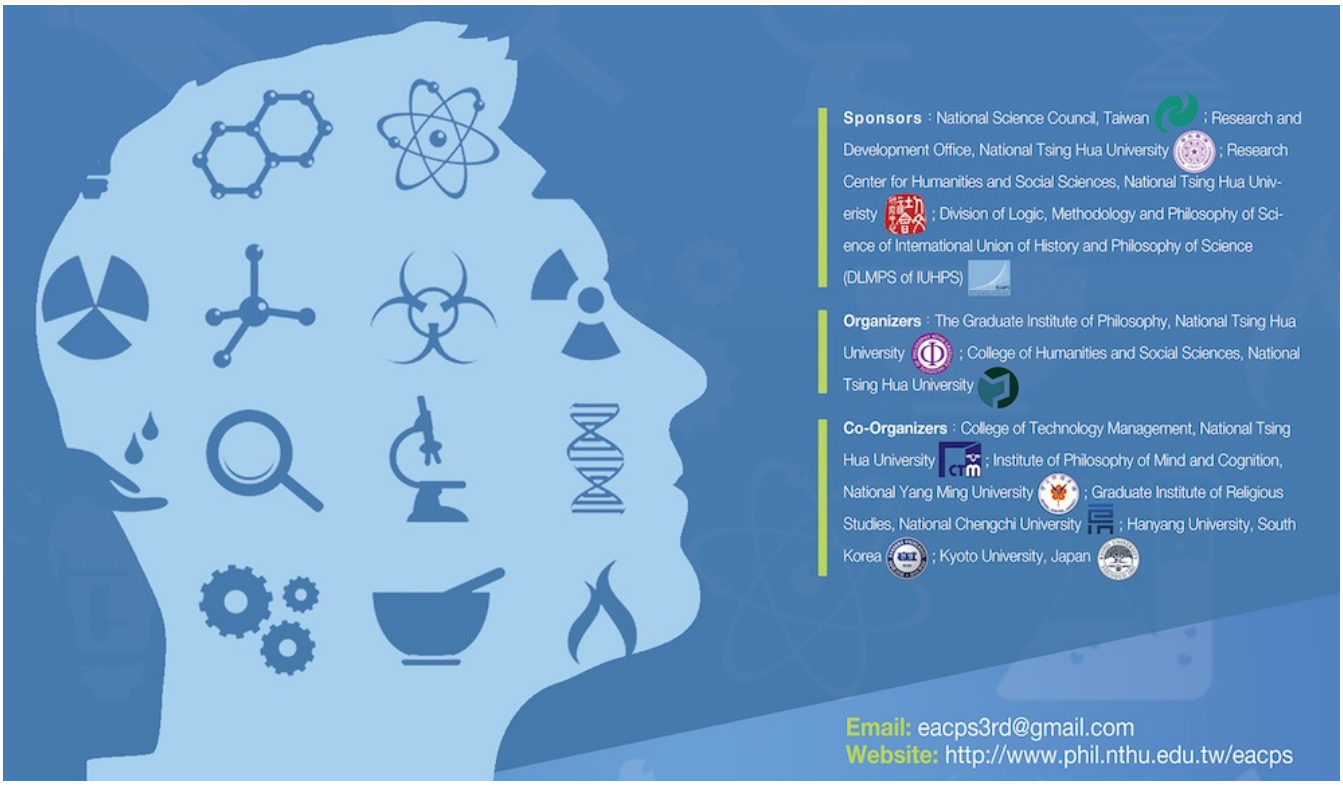
The Third East Asia Conference on the Philosophy of Science

Conference Booklet

National Tsing-Hua University
Hsin-Chu, Taiwan

October3-4, 2013



The Third East Asia Conference on
THE PHILOSOPHY OF SCIENCE 2013

List

History and Objective

For the past fifteen or more years, the philosophy of science in East Asia has been enjoying a lively and energetic growth, with the establishment of a close community among philosophers of science in this area. A great many local students earned their PhDs in philosophy from Western universities; many of them specialize in the philosophy of science. Initially, these philosophers worked within their own countries to establish academic circles. Then, beginning in 2010, a group of philosophers of science in Japan and South Korea sought to reinforce dialogue and communication among their East Asian colleagues having similar research interests. This group initiated the first local academic event for this area, which was the birth of the first East Asia Workshop on the Philosophy of Science. In July 2011, a one-day workshop, organized by Dr. Sang Wook Yi, was held at Hangyang University, where Dr. Yi is a faculty member. The workshop was officially recognized by Korean Society for Philosophy of Science as a satellite event to its annual conference held on the day before the workshop. This workshop was highly successful in that, in addition to convening philosophers of science from South Korea, Japan, and Taiwan to present and discuss their most updated research, this workshop also helped many participating scholars, who met for the first time in this workshop, to establish ongoing communication and collaboration.

Because this workshop functions as a forum to promote and consolidate dialogue and collaboration among philosophers of science in East Asia, the second workshop was greatly anticipated by these philosophers. Held in November 2012 in Miyazaki, Japan, this one-and-half-day workshop was organized by Dr. Tetsuji Iseda, from the department of history and philosophy of science at Kyoto University. The participants also included philosophers from Japan, South Korea, and Taiwan. This second workshop was co-presented with the annual conference of the Philosophy of Science Society Japan as a satellite event to the conference. Holding the workshop in Japan demonstrated the viability of moving the venue to different East Asian countries, encouraging philosophers of science to visit their colleagues' local communities and thereby further promoting collaboration and communication.

The third workshop—which is to be renamed as a "conference" to highlight the expansion of the workshop—is scheduled to take place in this coming October in Taiwan. Dr. Szu-Ting Chen, of the Graduate Institute of Philosophy at National Tsing Hua University, will act as the main local organizer, joining with Dr. Yi and Dr. Iseda to form an international team. As before, the conference will also invite speakers from

South Korea, Japan, and Taiwan to present their most updated research. One feature of this year's conference is that it will invite more young scholars with the hope that the workshop will become a forum for even more lively and motivating communication among philosophers of science of different generations. Another highlight of the conference is that we will also invite scholars coming from Malaysia to present their research and give a presentation on the current status of research on Islamic science studies in Malaysia with the hope that the conference will also become a channel to connect scholars coming from East Asia and South East Asia.

One feature of the conference worth for mentioning is that, due to the objective of encouraging and motivating young scholars coming from East Asia to conduct their communication with each other, part of the budget of the conference is cordially funded by Division of Logic, Methodology and Philosophy of Science, International Union of History and Philosophy of Science (DLMPS-IUPHS). The conference is scheduled for October 3 and 4, 2013 and the venue of the conference is at the School of Humanities and Social Sciences, National Tsing Hua University, Hsinchu City, Taiwan. You are all cordially invited to join the conference.

Transportation

→Taoyuan CKS International Airport to NTHU

You can reach to NTHU by either taxi or public transportation.

Taxi (Taoyuan CKS International Airport → NTHU)

There will be a taxi stop outside the terminal.

Taxi fare to Hsinchu: approx. NT$ 1,600.

Trip length: 60 minutes

NTHU Address: 101, Section 2 Kuang Fu Road, Hsinchu
（清華大學, 新竹市光復路二段 101 號）

Bus & THSR (Taoyuan CKS International Airport → THSR → NTHU)

※ THSR: Taiwan High Speed Rail

You may have to transfer twice.

1. **Taoyuan Airport → THSR Taoyuan Station**

   Ticket price: full fare NT$30, half fare NT$15

   Trip length: 25 minutes

   Intervals: 5-10 minutes during peak times

   ※Tickets must be purchased beforehand. Tickets are sold at UBUS service counters at Arrivals Lobby of Terminals 1 and 2.

2. **THSR Taoyuan Station → THSR Hsinchu Station**

   Ticket price: full fare NT$130, half fare NT$65.

   Trip length: 10 minutes

   Intervals: (please check Appendix 1 for the timetable)

   ※Tickets must be purchased beforehand. Tickets are sold at THSR Taoyuan Station: Platform 1 at bus depot.

3. **THSR Hsinchu Station → National Tsing-Hua University**

   You can take the bus heading to Hsinchu downtown at:

   (1) **Location:** No. 2 stop at the gate 4 of the THSR Hsinchu Station.

   (2) **Bus:** Take Kuo-Kuang bus No.1782 to Dongmen Market, and get off at

National Tsing-Hua University stop.

Ticket price: All THSR Shuttle Bus lines are free until Dec. 31, 2013. (Bus driver of THSR Shuttle Bus may request passengers to provide a THSR ticket for free shuttle service)

Trip length: 20 minutes

Intervals: 20-30 minutes during peak times (please check Appendix 2 for the timetable)

Appendix:

1) Timetable of THSR from Taoyuan to Hsinchu on Oct. 2nd, 2013

http://www.thsrc.com.tw/en/?lc=en

Taoyuan → Hsinchu 2013/10/02(Wed) 18:00 departs at Display complete timetable for 2013/10/02

▲ EARLIER ▼ LATER

Train I.D.	Remark	Departure Time	Arrival Time	Standard Adult	Standard Children Senior Disabled	Standard Group Ticket
733		18:21	18:31	NT$130	NT$65	NT$120
737		18:57	19:08	NT$130	NT$65	NT$120
1529		19:09	19:20	NT$130	NT$65	NT$120
741		19:21	19:31	NT$130	NT$65	NT$120
745		19:57	20:08	NT$130	NT$65	NT$120
749		20:21	20:31	NT$130	NT$65	NT$120
753		20:57	21:08	NT$130	NT$65	NT$120
757		21:21	21:31	NT$130	NT$65	NT$120
761		21:57	22:08	NT$130	NT$65	NT$120
763		22:15	22:25	NT$130	NT$65	NT$120

2) Timetable of Kuo-Kuang bus from THSR Hsinchu Station to National Tsing-Hua Universityhttp://www.kingbus.com.tw/down2.php?li_code=1A140390

18:00	經 交大、清大
18:15	經 交大、清大
18:40	經 交大、清大
19:00	經 交大、清大
19:15	經 交大、清大
19:40	經 交大、清大
20:00	經 交大、清大
20:15	經 交大、清大
20:45	經 交大、清大
21:15	經 交大、清大
21:45	經 交大、清大
22:15	經 交大、清大
22:40	經 交大、清大
23:15	經 交大、清大
23:45	經 交大、清大

Accommodation

Name: Guest House Of National Tsing-Hua University (清華會館)

Telephone number: +886-3-5742100

Location: Guest House is in the campus of National Tsing-Hua University.

(Next page is the map of National Tsing-Hua University.)

Campus Map


國立清華大學校園導覽圖 NTHU Campus Map
Venue: HSS Building
NTHU Guest House
School Bus Stop
Front Gate
國立交通大學
光明新村
光復中學
十八尖山
新安路 Sin-an Rd.
高翠路 Gaocuei Rd.
寶山路 Baoshan Rd.
光復路 Kuang Fu Rd
新竹市區 Downtown
竹東 Highway
A
B
C
D
E
1
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6

Presentation format, computer equipment and handouts

- **Presentation format:**
  Each presenter has 40 minutes: 25 minutes for presentation and 15 minutes for discussion.

- Rooms used for conference are equipped with a computer and a projector. Speakers who wish to use PowerPoint can bring their memory stick.

- For those speakers who would like to distribute hand-outs to the audience, please bring your own copies (we are sorry for the inconvenience, due to the large number of speakers).

Agenda

The Third East Asia Conference on the Philosophy of Science		
	Day1 October 3, 2013	Day 2 October 4, 2013
09:00 – 09:40	**Epistemology and Ecosystem of Knowledge in Islamic Science** Mohd Yusof Hj. Othman (UKM, Malaysia)	**Classification of Knowledge in Southeast Asia** Mohammad Alinor (The Academy of Islamic Science Malaysia, Malaysia)
09:40 – 10:20	**Quine vs. Statistics Revisited** Yasuo Deguchi (Kyoto University, Japan)	**Who was Cartesian in Science? A Philosophical Consideration** Ruey-Lin Chen (CCU, Taiwan)
10:20 – 10:40	**Tea Time**	
10:40 – 11:20	**How a Theory Represents? A View from Model-Based Approach** Szu-Ting Chen (NTHU, Taiwan)	**Collective Confidence in Global Warming: a Social Bayesian Point of View** Tetsuji Iseda (Kyoto University, Japan)
11:20 – 12:00	**Boundary of a Thinking Agent?: (Re-)Demarcating the Internal from the External** Insok Ko (Inha University, South Korea)	**Controversies in Extended Cognition Theory** Rhee,Youngeui (Kangwon University, South Korea)
12:00 – 13:00	**Lunch Time**	
13:00 – 13:40	**The Emergence of Earth and Planetary Science and Its Philosophical Significance** Shigeyuki Aoki (Aizu University, Japan)	**A Philosophical Analysis on the History of Species Concept** Hsien-I Chu (CCU, Taiwan)

13:40 – 14:20	**Models and Credibility** Hsiang-Ke Chao (NTHU, Taiwan)	**What A Tale of Two Minds Can Be** Yuichi Amitani (Tokyo University of Agriculture, Japan)
14:20 – 15:00	**Scientific Metaphysics?** Joonho Park (Chonbuk National University)	**Evolutionary Theory and Bayesianism** Ryota Morimoto (Japan Society for the Promotion of Science, Japan)
15:00 – 15:20	**Tea Time**	
15:20 – 16:00	**Rethinking Our Visual Streams: A Critique of the Dual Visual Systems Hypothesis and the Alternatives** Yuki Sugawara (Kyoto University, Japan)	**Emergentism and Reductionism in Quantum Entanglement** Wonki Her (Seoul National University, South Korea)
16:00 – 16:40	**Laws and Capacities: Rethinking a Contrast between Eastern and Western Worldviews** Kai-Yuan Cheng (NYMU, Taiwan)	**How is a Non-Reductive Nomological Relationship between Chemistry and Physics Possible?** Min Ou Yang (CCU, Taiwan)
16:40 – 17:00	**Tea Time**	
17:00 – 17:40	**Integration of Knowledge and Scientific Method** Yeongseo Yeo (Dongduk Women's University, South Korea)	**The Significance of Value-Like Concepts in Patricia S. Churchland's Naturalistic Study of Morality** Kyungjoon Oh (Hanyang U., South Korea)
17:40 – 18:20		**Scientific Cognition as Distributed Cognition** Hyundeuk Cheon (Seoul National University, South Korea)
	Dinner	

Speaker List

Othman, Mohd Yusof Hj.	Director, Institute of Islam Hadhari Universiti Kebangsaan Malaysia, Malaysia	30
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Sugawara, Yuki	Kyoto University, Japan	34
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What A Tale of Two Minds Can Be

Yuichi Amitani

Tokyo University of Agriculture, Japan

Abstract

The dual process theory (DPT) is, put simply, a view thatthere are two information-processing systems in our mind and that weoften employ either or both of them in problem-solving tasks. It hasbeen popular in cognitive and social psychology for the last decade, butthere are objections to it. A concern about the apparent lack of causalbasis for each system is among the most serious objections. In thispaper I shall explore the ways in which we can interpret the dualprocess theory so that it could meet the challenge. First I will give areason to think that some supporters of DPT are overly optimistic aboutthe prospect of finding the causal basis in brain regions. Then I willargue that the dual process theorists should seek for the causal basisin evolutionary history.

The emergence of earth and planetary science and its philosophical significance

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Abstract

In the midst of the 1960s, when the major scientific revolution occurred in the earth sciences with the resultant formation of "plate techtonics", another scientific development was emerging in Japan – which later transformed earth science into earth and planetary science in Japan. This paper aims to highlight several important aspects of this process of earth science transforming into earth and planetary science, and then give a philosophical analysis as to what kind of philosophical model best fits with this transformation.

The origin of earth and planetary science is itself an issue to be considered. Much of the philosophical, historical, and sociological literature on earth sciences so far has concentrated on geology in the 19th century or emergence of continental drift theory and plate techtonics revolution in the 20th century, and does not catch up with the scientific development after the plate techtonics revolution. This paper first begins to trace several important elements of the contemporary Japanese earth and planetary sciences back to the latter half of the 1960s.

When we are asked about the origins of the earth and planetary sciences, we should pick up the following three formerly independent, but subsequently interconnected areas of scientific research: (1) theoretical astrophysics – this constitutes the core of the whole evolutionary story which the solar system has gone through since its original formation. As I point later, this area sets up the framework within which other areas of geoscientific researches make any meaningful discoveries or observations. (2) chemical analysis – this area provides indirect, but very powerful evidence to back up the evolutionary story of the solar system delineated in theoretical astrophysics. This method of chemical analysis was already-known, established technique in geochemistry, and so this area is the application of that

method to planetary objects and meteorites. (3) space exploration – the idea of scientific investigation outside of the earth has its history going back to the Apollo program in the 1960s. Since then, numerous endeavors have been made to launch shuttles/spacecrafts and investigate planets and asteroids.

In this paper, I focus on the former two areas – theoretical astrophysics and chemical analysis – which were in the embryonic state when the pioneering papers began to appear in 1968. Two papers are worth mentioning here in light of the movement toward earth and planetary science in Japan, one paper by Chushiro Hayashi and the other by Akiho Miyashiro, both of which appeared sequentially in the scientific periodical "*Kagaku* [Science]". Hayashi is well-known for the "Hayashi phase" in the evolution of the solar system, and his model of the solar system formation postulates theoretically several stages from interstellar clouds (gases or dusts), to their contraction, the resultant opaque state and birth of the sun, the gravitational equilibrium state (Hayashi phase), hydrogen nuclear fusion (at present), and the eventual expansion of the sun. The other, Miyashiro's subsequent paper, relying on the postulations provided by theoretical astrophysics, investigates the origin of planets and meteorites by means of the chemical analysis of them. The result was remarkable in that the theoretical models fit with the division of earth-type planets (heavy, being composed of solid particles) and Jupiter-type planets (light, being composed of gases), and explain the distribute ratio of H_2O and the value f=FeO/(MgO+FeO) among various meteorites, and the non-existence of meteorites whose values are 0.01-0.14 and 0.22 – each value corresponds to those of the earth and the Mars.

This coupling of astrophysics and geochemistry marked a watershed, since, later combined with the development of space exploration, this coupling transformed the planets and meteorites from *astronomical* objects into *geological* ones. Hence the title changed from "earth science" to "earth and planetary science".

In the latter part of this paper, I will consider what kind of philosophical model best fits with this transformation of earth science into earth and planetary science. Orthodox three models on scientific growth/change in general philosophy of science are called and tested – traditional view of logical positivism (nest model), Kuhn's paradigm theory (puzzle solving model), and Lakatos's research program (novel prediction model). It will turn out that each model does partially, but not exhaustively,

capture the important aspects of this transformation, and the emergence of "earth and planetary science" calls for more detailed treatment. Toward such a move, I will pick up several constrains under which the modified model has to work:

- The model has to deal with the astrophysical evolutionary stages of gases/dusts transformed into planets and meteorites in *time sequence*.
- In this model, we have to consider that geochemical confirmations always remain *partial* and *indirect*, due to the *non-recurrent* nature of historical objects; this is how geoscientists try to *reconstruct* the past geoscientific events.
- We also have to embed geochemical analysis, space exploration technology, etc. as constituting *essential parts* of the whole earth and planetary sciences.

Thus, the emergence of this hybrid – earth and planetary – science seems to present new explanandum to our philosophical discourse.

Models and Credibility

Hsiang-Ke Chao
National Tsing Hua University, Taiwan

Abstract

Recent philosophical studies on scientific models have given special attention to economics. The accounts developed from and applied to economic models consist of regarding models as representations, idealized or isolating systems, and reasoning devices. Given that each account may involve a distinct modeling strategy, one common question is whether a model is "credible" and how to make it so. For example, an account proposed by the economist Robert Sudgen suggests that models are credible counterfactual worlds, and the modeling can support abductive conjectures about substantive properties of the world. The practice-based nature of Sudgen's account has attracted interest from philosophers to revisit the role models play in the relationship between theory and the world. By way of criticizing Sudgen's account, this paper contributes to the credible world debate by addressing the following interrelated issues. First, Sudgen's account of credible models depends importantly on the property of similarity. It will be argued in this paper that similarity alone is not enough for judging models' credibility. Second, as economic research at present is commonly distinguished as theoretical and empirical, one salient question is whether the credible-world account can be equally applied to empirical economics. Since none of articles in the credible world literature discusses empirical economic models, we would like to extend the discussion to cover the role that empirical models play in the model-world relationship. So, we study the empirical economic models per se and the methodology of empirical modeling. We investigate meaning of credibility in econometrics and whether the modeling strategy offered by econometric revolutionaries could make econometric models credible. Finally, we investigate the philosophical accounts that have been mentioned in Sudgen's 2009 article. By explicating the contemporary accounts of models, it will be argued that a way to gain models' credibility is to establish representation theorems.

Who was Cartesian in Science? A Philosophical Consideration

Chen, Rueylin

National Chung-Cheng University, Taiwan

Abstract

In the history of science, who was adequately qualified as a Cartesian scientist? These historical questions presuppose a generally philosophical problem of science: what is X-ian school or X-ism in science? In this paper, I attempt to answer the generally philosophical question by taking Cartesian science as an example. First of all, I examine several possible answers such as "paradigm", "research programme", and "research tradition" proposed by history-oriented philosophers, say Kuhn, Lakatos, and Laudan. Then I argue that the notion of *theory family* better answer the philosophical question than other examined notions. Finally, I propose a theoretical account of the identification of *a theory family* and give an outline of the formation of Cartesian school, focusing on Descartes, Huygens and Leibniz.

How a Theory Represents?
A View from Model-Based Approach

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Abstract

What does it mean to say that a theory *represents* the targeted phenomenon that it aims to explain? Our interpretation of "representation" is closely related to the methodological position that we would adopt in answering the question of realism in science. As is pointed out by Nancy Cartwright, according to the traditional syntactic approach of explaining scientific theorization, the question of realism is about how *accurately* the sciences can represent the world; in the semantic approach, however, the focus of the question shifts to a concern about the range of science—i.e., how *much* of the world the sciences can represent. This shift in the methodological concern is by no means trivial; it indicates that there is a change of content in the concept of representation from a static idea to a dynamic one. The static idea of representation concerns how reliably the formal structure of a class of sentences—i.e., the formal structure of a theory—can stand for the targeted phenomenon. The dynamic idea, however, perceives a theory as a class of models and explores the development of these models; that is, the dynamic idea of representation investigates how a theorizer uses these models to stand for reality. As a consequence of this shift from a static to a dynamic mode of thinking, it seems that model-building constitutes the main content of the concept of representation. By comparing two differing contemporary accounts of the nature of economic models and presenting a case study in economic theorizing, this paper argues that representation is a process of economists' repeatedly using "realistic representation of the isolated unrealistic world" at each step of their theorizing to build up a class of "unrealistic constructed credible worlds."

Laws and Capacities: Rethinking a Contrast between Eastern and Western Worldviews

Kai-Yuan Cheng
Institute of Philosophy of Mind and Cognition,
National Yang-Ming University, Taiwan

Abstract

Francois Jullien (1999, 2004) has offered a lucid depiction of an Eastern world view in contrast with that of the West, where the notions of shi (勢) and scientific law lie at the center of this depiction. The purpose of this paper is to update this comparison by consulting an alternative, capacity-based view of scientific laws provided by Nancy Cartwright (1983, 1989, 1999). I shall point out that the notion of capacity is close to that of shi (勢) in the Chinese world-view. This result calls for a re-evaluation both of the modernity and rationality inherent in ancient Chinese thinking as well as of Western civilizations built upon a law-based world view.

Scientific Cognition as Distributed Cognition

Hyundeuk Cheon
Seoul National University, Korea

Abstract

Even though it has been argued that scientific cognition is distributed, there is no consensus on the exact nature of distributed cognition. This paper aims to characterize distributed cognition as appropriate for philosophical studies of science. I first classify competing characterizations into three types: the property approach, the task approach, and the system approach. It turns out that the property approach and the task approach are subject to criticism. I then argue that the most preferable way to understand distributed cognition in science is provided by the system approach that takes a distributed-cognitive system as the unit of analysis. I clarify this position by considering possible objections and replies.

A Philosophical Analysis on the History of Species Concept

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Abstract

Species are taken to be the fundamental units of biodiversity or taxonomy. Because of evolutionary theory, how to interpret or understand the species concept is controversy for few decades. This paper shows the development of species concept, and provides a philosophical view about the species problem: there are two concepts of 'species' and they refer to different things.

According to our analysis, there are three stages in the history of species: (1)Before Darwin's evolutionary theory: essentialism; (2)Post-Darwin's evolutionary theory: essentialism mix evolutionary theory; (3)Species Pluralism: competition of lots species concepts. Before Darwin, the concept of species is been taken as a categorical meaning, even it is been thought to equate with nature kind. After evolutional theory, people do understand that creatures could evolve through time. The tradition species concept, essentialism, could not fit this image. It induced philosophers to develop contemporary pluralism of species concepts.

Carl Linnaeus' binominal nomenclature, which been influenced by Aristotle, represented essentialism of the first stage. Simpson's evolutionary species concept and Henning's original phylogenetic species concepts revealed the second stage. Mayr's Biological species concept is a watershed in the third stage. He abandoned the conception of traditional essentialism at all, and considered species only from evolution point of view. The meanings of 'species' is from morphology, evolution to practice in the historical development of species concept.

Even though there are so many different species conceptions been used by biologists, according to our philosophical point of view, there are two type of species concepts. One is individual species concept. It defines a species by the feature of a individual organism. The other is relational species concept. It defines a species by the

relationship between individual organisms. The former concept is categorical, refers to the cognitive meaning, but the meaning of the latter concept is natural kind, refers to basic units of biodiversity. We believe that the species problem risen from the confusion of this two different meanings of species concepts.

'What is species' related to the features of organisms. Because creatures are evolutionary entities, the species concept as a natural kind should be relational not individual. The relational concept of species clearly represents the feature of evolution. But what kind of relationships between organisms should be taken to define a species? More careful consideration is needed.

Quine vs. Statistics Revisited

Yasuo Deguchi

Kyoto University, Japan

Abstract

How are evidence and our theory about the world interrelated? This is one of the central questions of Quine's philosophy. Then what is evidence? How is it produced? Quine would reply; a direct witness of what is going on just in front of our eye is a typical example of evidence. But this is not the case in today's science. Such a direct witness is too naïve to generate scientific evidence. Rather scientific evidence is to be produced only through applications of one or another of highly elaborated statistical methodologies. Then, if those methodologies are taken into account, I argue, we should revise Quine's schema of empirical refutation; $H_1 \Box \ldots \Box H_n \rightarrow O, \neg O \Box \neg H_1 \Box \ldots \Box H_n$. The revision has the following three significant epistemological consequences. First, a subtle but crucial distinction should be made among scientific observations that would trigger modification of our scientific theory; observation as evidence or reason and observation as occasion or cause. This distinction leads us to sort empirical refutation into two kinds; evidence based rejection and observation motivated change. Finally, based on those distinctions, we claim that Quinean holism should be replaced by a sort of methodological transcendentalism.

Emergentism and Reductionism in Quantum Entanglement

Wonki Her[1]

Seoul National University, Korea

Abstract

Many philosophers think that quantum entangled phenomena support ontological emergentism and undermine reductionism. In this paper, I challenge this point of view. Both doctrines concern the relations between a whole and its parts. So, if a system does not have any part, then there is no sense to ask that this system is emergent or reductive. I show that quantum entanglement system do not have parts, it is not a composed system. In conclusion, quantum entangled phenomena cannot support emergentis

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Collective confidence in global warming: a social Bayesian point of view

Tetsuji Iseda
Kyoto University, Japan

Abstract

Assessment reports on climate change (the most authoritative source on the issue of global warming) utilize subjective confidence (what a philosopher might call subjective probability) to represent its findings. For the fifth report now written, an extensive instruction for authors discussing how to decide the level of confidence. The confidence involved seems to be a collective confidence of a team of climate scientists, rather than degree of belief of some particular scientist. Now the question is whether Bayesianism, the most standard theory of subjective probability, can account for the existence of such a collective belief. I propose a kind of social Bayesianism that utilizes an expert judgment model, rather than some aggregation scheme, for collective subjective probability.

Classification of Knowledge in Southeast Asia

Dr. Mohammad Alinor bin Abdul Kadir
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Damansara Utama, 47400 Petaling Jaya,
Selangor, Malaysia

Abstract

If we do research in detail on the intellectual heritage of Southeast Asia, we will stunned by the information given by many Hindu and Buddha scholars from India and China about the abundance of manuscripts copied/written in many civilizations in Southeast Asia. Not to include Central Asia. When we say "in detail", that means doing research up to the level that we know who are the writer of the manuscripts, what is the title of the manuscripts, when the manuscripts being copied/written and where are the manuscripts now? For the Hindu-Buddha manuscripts, in Southeast Asia, we are actually looking at the era around 500-1500AD. And next, it is not difficult to look at the Malay-Jawi manuscripts which are still extend in Southeast Asia and around the world, dated around 1400-1800AD. We will not discuss in detail what are our partial finding for the first case, because we can only giving list of manuscripts that we know now in China and Japan, repeating what we wrote before. And, for the second case, there are already a lot of discussion by many Malay Muslim scholars in Malaysia, Indonesia, Singapore and Brunei. Our intention in this paper is to give a condensed classification of knowledge, documented in some stone inscriptions by the ancient scholars or collected piece-by-piece by modern scholars from stone inscriptions or formulated by modern scholars based on their studies on title/content of manuscripts. All of our information coming from many civilizations in Southeast Asia such as Mon-Myanmar, Funan-Chenla-Kemboja, Campa, Sailendra-Mataram-Singahsori-Majapahit, Sriwijaya, Kedah, Thai, Viet, Lao, Melaka, Patani-Kelantan-Terengganu, Acheh, Sulawesi, Brunei, Mindanao-Sulu, Johor-Riau, etc.

Boundary of a thinking agent?: (Re-)Demarcating the internal from the external

Insok Ko
Inha University, Korea

Abstract

Gertler(2012) argues that there is no univocal thesis of externalism and internalism. She further maintains that the ambiguity in the terms "external" and "internal" is ineliminable, we will not be able to settle the criteria of "intrinsic to the thinker". I agree with her on the conceptual ambiguity as a matter of fact. But it seems not only necessary but also possible to set up a reasonable definition for "in". I will suggest such a criterion for demarcation of the internal (thus the external). This shall throw some guiding light on the debate about extended mind, Clark-Chalmers versus Adams-Aizawa. I will discuss the implications of this criteriology for the ontology of intelligent artificial beings, for the categorization and individuation of (responsible) agents.

Evolutionary theory and Bayesianism

Ryota Morimoto
Keio University, Japan

Abstract

The concept of probability is an integral part of evolutionary theory. What does probability represent? If it represents the reality of the biological world, then it means that the world is indeterministic. In the classical world view, however, the probabilities appearing in the scientific context are interpreted as our ignorance of the deterministic world: they do not represent the real world.

Alex Rosenberg (1994) argues that the probabilities used in evolutionary theoryshouldn't be interpreted realistically because they only reflect our ignorance of details. In this presentation, I propose an alternative to Rosenberg's interpretation. First, I give a critical appraisal of his arguments and show that the probabilities reflect not merely our ignorance but some aspects of reality. Second, I compare evolutionary theory with statistical mechanics and show that in evolutionary theory we can update the probabilities rationally depending on what we know. Then I suggest that probability in evolutionary theory can be interpreted inBayesianterms

The significance of value-like concepts in Patricia S. Churchland's naturalistic study of morality

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Abstract

I consider how we can explain morality in the naturalistic view instead of traditional philosophical view. In this case, traditional philosophical view means metaphysical and thought-experimentcentered approaches to morality.I examine Churchland's view on morality especially of a book called "braintrust". In this book, Churchland employs concepts of neuroscience on brain structure and factorsof human brains, and of physiology on neuro-peptides and neural circuitries. She also used evolutionary biological concepts for explaining the origin of humanneural circuitries. In this program, she mentioned "value" in her own way. And I will focus on how we employ this "value" in interdisciplinary study of morality.

EPISTEMOLOGY AND ECOSYSTEM OF KNOWLEDGE IN ISLAMIC SCIENCE[2]

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Abstract

Western Science is secular. As the result it does not bring us closer to the Almighty. In fact, we have to put God aside in order to develop science. As a result, responsibility towards God is not considered when scientists develop their understanding of nature. Consequently, there is a tendency for human being to fulfil their lust, desire and personal needs in developing this world based on man-made regulation and law which contributes to the unsustainable development. The contemporary issues of global warming, crisis of currency manipulation by international financial institutions and societal moral decadence are good examples of the results of this development. As Muslims, any kinds of knowledge should make us closer to Him. The world should be in peace and harmony environmentally, economically, and socially. Therefore, there is a genuine need to revolutionize contemporary science in such a way that ultimately it will: (1) improve our piety; (2) enhance justice; and (3) improve our quality of life. Accordingly, in this presentation I will delve in a science that is centred on the Islamic concept of Tauhid and Justice that are relevant to the development of science. Development of Islamic Science has to acknowledge three main entities: God, man and nature which are existed coherently. The ecosystem of knowledge in Islam which contributes towards development of Islamic Science evolves within these entities. I will show that such a science is indeed operational and much better than the Western Science that we are practicing today.

[2] *The Third East Asia Conference on the Philosophy of Science organized by Graduate Institute of Philosophy, National Tsing Hua University, Hsinchu City, Taiwan on 3&4 October 2013.*

How is a non-reductive nomological relationship between chemistry and physics possible?

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Abstract

Until quite recently, chemistry was generally regarded as part of physics by mainstream philosophers of science. This belief was gradually challenged, especially after the 1990s. Among others, Lombardi and Labarca (2005) propose a notion of non-reductive nomological links to buttress their position of the chemical world being ontologically autonomous. I am sympathetic to their position, but hold that their project might lead to a self-contradictory conclusion. Therefore, I propose a Davidsonian anomalous monist model for replacing their idea of non-reductive nomological links in order to make their ontological pluralism viable. I argue that this anomalous monist framework may provide a possible metaphysical foundation for a non-trivial ontological pluralism used to specify interdisciplinary relationships.

Scientific Metaphysics?

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Abstract

Recently some philosophers, e.g., James Ladyman, Don Ross, and Harold Kincaid etc., baldly urge the difference between traditional metaphysics and scientific metaphysics, and the latter is only legitimate metaphysics. But what is this? Is there anything like scientific metaphysics? There is no such thing as, so called, a scientific metaphysics as a field of philosophy, but we can safely concede it as a kind of metaphysical or metametaphsical claims. According to scientific metaphysics, metaphysics should be scientific. But what does exactly this mean and is this true or convincing? I will discuss several differences between science and metaphysics, and raise some issues about the scientific metaphysics and the legitimacy of it.

Controversies in Extended Cognition Theory

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Abstract

Since the last decade of the twentieth century we have seen the advent of a new paradigm in the field of cognitive science called collectively the embodied cognition theory. Many theories are subsumed under the paradigm including theories of embodied cognition, embedded cognition, enactive cognition, extended cognition, distributed cognition, and situated cognition. The purpose of the paper is to examine controversial points in the theory of extended cognition. First, I shall examine the theory of extended cognition with the parity principle suggested by C. Clark and D. Chalmers (1998). Second, I shall argue that the differencebetween extended cognition theory and embedded cognition theory consists in that of constitution and dependence. Third, I shall deal with problems that can be occurred when we think that functionalism support the theory of extended cognition.

Rethinking our visual streams: A critique of the dual visual systems hypothesis and the alternatives

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Abstract

Recently the *dual visual systems hypothesis* (Goodale & Milner, 1992; Milner & Goodale, 2006) has been paid much attention to both by philosophers and by neuroscientists (e.g., Gangopadhyay et al., 2010). The hypothesis argues that humans (and other primates) have two anatomically and functionally distinct and independent pathways for two kinds of vision, i.e., *vision for action* and *vision for perception*, and this hypothesis has some implications for the nature and philosophy of our visual perceptions. This paper focuses on debates on the hypothesis among neuroscientists: We critically examine the hypothesis itself, the evidence, and some alternative hypotheses against the hypothesis, and argue that the central-peripheral hypothesis (Pisella et al. 2006, 2009; Rossetti et al. 2010) is most plausible. Thus we conclude that although philosophers have mostly focused on the dual visual systems hypothesis, they should pay much more attention to the central-peripheral hypothesis.

Integration of Knowledge and Scientific Method

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Abstract

There are two philosophical problems of the integration of knowledge; the definition of the integration of knowledge and the method of the integration of knowledge. For the definition problem, a realistic and pragmatic picture is presented based upon Neurath's concept of unified science. Its details will be characterized by comparing it with that of Carnap's. For the methodology problem, Neurath's concept of "Ballungen" will be analyzed focusing its implication on the relation between evidence and hypothesis. Based upon this analysis, I suggest that there is a scientific method, the long arm of common sense. It is a basic problem solving tool, and I propose that it is the method for the integration of knowledge.