

# 出國報告（出國類別：國際會議）

## 蒯因，邏輯與哲學國際研討會 (International Conference: Quine, Logic and Philosophy)

服務機關：國立中正大學哲學系

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派赴國家：中國大陸

出國期間：102年7月26日至102年7月30日

報告日期：102年8月2日

## 摘要：

本次出國目的為參加國際會議發表論文 *Fading Apriority* (中文譯名：褪色的先驗性)，本人為論文第二作者及通訊作者，隨行人員為蕭銘源(國立中正大學哲學系博士生，博士候選人，論文第一作者)，會議名稱為：蒯因、邏輯與哲學國際研討會 (International Conference: Quine, Logic and Philosophy)，會議主辦單位為北京大學哲學系，會議全程使用英文。本會議為一系列國際會議的第三次舉辦，循往例，本次會議邀請了蒯因(Quine)哲學領域重要的專家及學者與會，本人在會議中以英文口頭發表論文，獲得許多重要的建議及指教。

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本文：

## 目的

本次出國目的為參加國際會議發表論文，會議名稱為：蒯因、邏輯與哲學國際研討會（International Conference: Quine, Logic and Philosophy），會議主辦單位為北京大學哲學系。發表的論文名稱為 Fading Apriority（中文譯名：褪色的先驗性），本人擔任第二作者及通訊作者，隨行人員為蕭銘源（中正大學哲學系博士班，博士候選人），蕭銘源為論文的第一作者。本論文的內容主要分為三部分，第一部份探討蒯因（Quine）對先驗知識的觀點，第二部分探討帕特南（Putnam）對蒯因的批評，第三部份從反事實條件句的觀點來分析帕特南對蒯因的批評，對進一步從反事實條件句的知識論面向來反駁帕特南的論證。基於本論文內容與蒯因的哲學直接相關，因此參加此國際會議，與國際學者交流，希望獲得建議及指教，將論文中的弱點加以補強。

## 過程

102 年 7 月 26 日：出發前往北京參加『蒯因、邏輯與哲學國際研討會』。

102 年 7 月 27 日至 102 年 7 月 28 日：在北京大學校內參加『蒯因、邏輯與哲學國際研討會』，包括發表論文、參與其他學者的演講並進行討論。

102 年 7 月 27 日：下午於會議發表論文 Fading Apriority（中文譯名：褪色的先驗性），英文口頭報告 25 分鐘；在發表論文後，針對論文中的重要議題，和與會學者進行細緻的討論，取得一定程度的進展。

102 年 7 月 29 日：學術參訪，與大陸重要學者（包括本次會議主辦人陳波教授，以及知名邏輯學家周北海教授）見面及交流，並對台灣以及兩岸的分析哲學發

展，進行實質討論。

102年7月30日：搭機返台。

以下將從會議議程及議場主題、與會內容重點及心得、個人報告內容及交流三方面說明與會過程。

### *會議議程及議場主題*

本次會議主題為探討哲學家蒯因(Quine)的哲學思想，會議中共有三十六口頭論文報告(詳細議程請見附錄1)，其中包含八位學者的主題報告，數量相當豐富。在三十六篇會議論文中，內容涵蓋哲學家蒯因(Quine)思想的不同面向，包含(1)蒯因(Quine)的數理邏輯與邏輯哲學思想的研究與討論、(2)蒯因(Quine)自然主義化的認識論與心靈哲學思想的研究與討論、(3)蒯因(Quine)的語言哲學思想研究與討論、及(4)蒯因(Quine)的形上學思想的研究與討論。

### *與會內容重點及心得*

在36篇會議論文報告中，許多學者的報告內容令人印象深刻，以下僅對其中最令本人印象深刻的內容及本人的學習收穫提供概要說明：

- (1) 美國納布斯卡大學 (University of Nebraska) 著名的蒯因哲學學者 貝克 (Edward Beck) 教授發表論文，題目為「蒯因對模態邏輯的反對」(Quine's Objections to Modal Logic)。論文中說明，蒯因對模態邏輯反對的主要立場，並說明反對蒯因的許多不同觀點。這篇論文的内容可以作為學者們研究蒯因對模態邏輯立場的一個重要參考文獻。
- (2) 台灣國立陽明大學 王文方教授發表論文，題目為「蒯因對邏輯真的基礎的看

法」(On Quine on the Ground of Logical Truth)。論文中首先指出，一般主要從蒯因的著名論文「經驗主義的兩個教條」中，來說明蒯因對邏輯真的基礎的想法，但王文方教授指出，蒯因在「邏輯的哲學」一書中，對於邏輯真不具有先驗基礎提出兩個額外的論證，王文方教授清楚的說明了這兩個論證，並對這兩個論證提出反駁。其中一個反駁用到了著名的「投石器論證」(slingshot argument)，非常新奇而有創意。

- (3) 中國大陸山東大學 任會明特聘教授發表論文，論文題目為「再探雙生地球」(Inverted Earth Revisited)。在論文中，任會明教授首先說明雙生地球論證如何被用來反駁意識理論中的表徵理論，但是，任會明教授認為，在雙生地球論證中的假設是不成立的，並建立數個例子及論證來反駁雙生地球論證，最終，任會明教授主張雙生地球論證根本無法挑戰表徵理論。這個想法非常新穎，具有前瞻性，值得進一步探究。
- (4) 台灣國立中正大學侯維之教授發表論文，論文題目為「無否證與理論的非決定性」(No Falsification and Under-determination)。在論文中，侯維之教授首先說明了無否證及理論的非決定性的論題內容，並論證，無否證的特性蘊涵了理論的非決定性。侯維之教授並進一步論證，理論並不蘊涵可觀察的結果，而只提供對於可觀察結果的預期。侯維之教授的兩個核心主張具有許多重要的其它結果，並提出了具有說服力的論證，具有進一步研究的價值。

### 個人報告及交流

本人會議報告論文題目為 Fading Apriority (褪色的先驗性)，論文中摘要如下(論文全文請見附件 2)：

摘要：蒯因在「經驗論的兩個教條」一文中對先驗知識的反對面臨許多挑戰。我們在本論文中將目標侷限在檢驗普特南對蒯因的挑戰。我們論證，普特南的挑戰

基於以下兩個理由是不成功的：第一，普特南的論證依賴在某種的反事實知識，第二，普特南的論證是有內在暇疵的，因為，基於最近哲學及社會科學文獻中的討論，反事實的推理及反事實條件句皆不是先驗的。這個結果使得蒯因式的經驗主義知識論者跨越外延式的架構，進一步擁抱像是反事實條件句之類的內含概念。

在本次論文的口頭報告中，與會人士對論文提出兩個疑問。

第一個疑問主要針對論文中利用實驗設計中對照組的設計，來說明反事實條件句的語意及知識論，並從這個角度來說明對照組的設計意義。提問者認為，對照組的設計並不需要利用反事實條件句來說明，而且引進反事實條件句似乎並不會被蒯因接受。針對這個疑問，我的回答著重於，說明當代生物醫學及社會科學中，我們如何利用反事實條件句來說明及理解對照組的實驗設計，並強調這個面向的經驗意義，而後，也說明了這個思考方向可以作為蒯因的經驗主義的實質延伸，所以對蒯因或者支持蒯因立場的學者而言，應是可以接受這樣的觀點。而基於與會者的這個疑問，我預計在論文中加入一些新段落來回應。

第二個疑問針對論文未來的發展，詢問是否可提供一個以反事實條件句為基礎的傾向理論。在基於時間的限制下，我並無法給與一個完整的回答，僅強調，我認為這個工作是可行的，即使文獻中提及許多的困難。

在口頭報告後，我和隨行人員蕭銘源與學者們對論文內容有一些進一步的討論，為文章內容的改進有許多幫助。

心得

本會議為一系列國際會議的第三次舉辦，前兩次會議分別為：佛列格、邏輯與哲學國際研討會（International Conference: Frege, Logic and Philosophy）以及 克里普奇、邏輯與哲學國際研討會（International Conference: Kripke, Logic and Philosophy）。循往例，本次會議邀請了蒯因哲學領域重要的專家及學者與會，如來自美國納布斯卡大學（University of Nebraska）著名的蒯因哲學學者 貝克（Edward Beck），及美國夏威夷大學（University of Hawaii）的著名教授 成中英（Chung-ying Cheng），及數位來在日本的優秀學者。有這些學者的參與，讓本會議在會議討論時很精彩。

本會議含口頭報告及討論部分，皆全程使用英文，如前所述，本人及隨行人員在會議中發表論文，獲得許多重要的建議及指教。本會議也有數位大陸學者發表論文，其中有大陸本土博士，也有從英美著名大學取得博士學位的學者，可以看出，即使它們的研究能力依然一定程度的落後台灣的哲學界，但它們研究能力正快速的累積，例如山東大學哲學系的特聘教授 任會明（Ren Huiming）在國際著名哲學期刊已發表一些論文，可預見中國大陸的哲學研究會有相當快速的進展。

### 建議事項

經由這個國際會議可以看出，中國大陸所主辦的國際會議水準正快速的提升，原因之一是國際學者對中國大學學術發展的強烈興趣，參加這樣的學術會議除了是精進個人的研究外，已是對自我的一個警惕，要從國際化的眼光來看待學術研究的發展。

從與會大陸學者的論文報告，及與大陸學者的許多討論，可以看出他們對學術的未來有比台灣學者更強的企圖心及憧憬，這或許一部份源於中國大陸給與優秀學者的實質鼓勵比台灣政府來的更多，也更廣。或許，與中國大陸的學術單位



建立更多的交流，可以進一步刺激台灣學者們往前邁進。

附錄 1：會議議程。

附錄 2：會議論文 Fading Apriority 全文。

**International Conference**  
**Quine, Logic and Philosophy**

**国际会议**

**蒯因，逻辑和哲学**

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资助

# Program

Time: July 26, 2013
Location: Qianqingwu, Xihua Hotel [锡华酒店千晴屋]
Welcome dinner: Japanese Buffet

Time: July 27, 2013		
Location: Renwenxinyuan , Peking University [北京大学人文新苑, 未名湖边]		
Opening Ceremony		
Chair:	8:30—8:35	Speaker: Prof. Chen Bo (Peking University)
Prof. Chen Bo	8:35—8:40	Speaker: Prof. Shang Xinjian (Peking University)
	8:40—8:45	Speaker: Ms. Jia Aiying (Peking University)
	8:45—9:00	Taking Group Photos
Section I:		
Chair:	9:00—9:35	Keynote Speaker: Prof. Nobuharu Tanji (Nihon University, Japan)
Prof. Edward Becker		Title: From Conventionalism to Holism
	9:35—10:10	Keynote Speaker: Prof. Ye Feng (Capital Normal University)
		Title: A Hidden Supernatural Stance in Carnap, Quine, and Contemporary Naturalists
Tea Break	10:10—10:30	
Section II:		
Chair:	10:30—11:05	Keynote Speaker: Prof. Zhu Zhifang (Wuhan University)
Prof. Koji Nakatogawa		Title: The Indeterminacy of Radical Translation Again: An Evolutionary Perspective
	11:05—11:30	Speaker: Prof. Richard Hou (Chung Cheng University)
		Title: No Falsification and Under-determination
	11:30—11:55	Speaker: Prof. Yu Zhenhua (East China Normal University)
		Title: Epistemology: End or Transformation
	11:55—12:20	Speaker: Prof. Jonathan Chan (Hong Kong Baptist University)
		Title: The Self-defeating Nature of Quine's Holism and Some Critical Remarks on His Methodological Monism

Lunch	12:20-14:00	Nong-yuan Dining Hall, Third Floor
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Section III:		
Chair: Prof. Ye Chuang	14:00—14:35	Keynote Speaker: Prof. Wang Wenfang (Yang Ming University) Title: On Quine on the Ground of Logical Truth
	14:35—14:50	Speaker: Mr. Ka-Wo Chan (University of Calgary, Canada) Title: On a Tension Engendered by Quine's Characterizations of Logical Truth
	14:50—15:15	Speaker: Dr. Takashi Aso (Furano Nursing School, Japan) Title: Revisability and Scientific Antirealism
	15:15—15:30	Speaker: Mr. Lau Tsz Yuen (Peking University) Title: Deviant Logic, Logical Pluralism and Quine
	15:30—15:55	Speaker: Dr. Li Qilin (Peking University) Title: Quine's Naturalized Epistemology, Epistemic Normativity and the Gettier Problem
Tea Break	15:55—16:15	
Section IV:		
Chair: Prof. Richard Hou	16:15—16:40	Speaker: Prof. Cheng Sumei (Shanghai Academy of Social Science) Title: Quantum Mechanics and Underdetermination
	16:40—17:05	Speaker: Prof. Linton Wang (Chung Cheng University) Title: Fading Apriority
	17:05—17:30	Speaker: Prof. Ren Huiming (Shandong University) Title: Inverted Earth Revisited
	17:30—17:55	Speaker: Dr. Chen Chin-wei (Chung Cheng University) Title: The Analytic-Synthetic Distinction under Epistemic Two-Dimensionalism
	17:55—18:15	Speaker: Dr. Li Nan (Wuhan University) Title: Hempel's Dilemma and the Threat of Being Misjudged
	18:15—18:30	Speaker: Mr. Pan Song (East China Normal University) Title: Has Quine's Discomfort Been Cured?
Supper	18:30	Nong-yuan Dining Hall, Third Floor

Time: July 28, 2013		
Location: Renwenxinyuan , Peking University [北京大学人文新苑, 未名湖边]		
Section V:		
Chair: Prof. Yu Zhenhua	8:30—9:05	Keynote Speaker: Prof. Chung-ying Cheng (University of Hawaii, USA) Title: Is There A Hidden Theory of Mind in Quine? What Does Indeterminacy of Meaning mean?
	9:05—9:40	Keynote speaker: Prof. Edward Beck (University of Nebraska, USA) Title: Quine's Objections to Modal Logic
	9:40—10:05	Speaker: Prof. Chow Pak Kiu (HKCT Institute of Social Science) Title: Confirmation and Neural Intakes
Tea Break	10:05—10:25	
Section VI		
Chair: Prof. Linton Wang	10:25—10:50	Keynote Speaker: Prof. Yasuo Deguchi (Kyoto University, Japan) Title: Quine vs. Statistics
	10:50—11:15	Speaker: Dr. Su Qinghui (Shandong University) Title: On the Concept of Existence
	11:15—11:40	Speaker: Prof. Hui Jihong (Henan University of Technology) Title: Quine: Between Positivism and Pragmatism
	11:40—12:05	Speaker: Prof. Ma Minghui (Southwest University) Title: On Quine's Conception of Logic
Lunch	12:05-14:00	Nong-yuan Dining Hall, Third Floor
Section VII:		
Chair: Prof. Cheng Sumei	14:00—14:25	Keynote Speaker: Prof. Jiang Yi (Beijing Normal University) Title: On Quine's Metaphysics
	14:25—14:50	Speaker: Dr. Yu Guofei (Yunnan University) Title: Is A Priori Justification Compatible with Naturalized Epistemology?
	14:50—15:15	Speaker: Prof. Wan Xiaolong (Huazhong University of Science and Technology) Title: An Interpretation to 'the Failure of Equivalent Substitution Principle'
	15:15—15:30	Speaker: Mr. Nie Chenwei (Shandong University) Title: An Epistemic Analyticity in the Scope of the Understanding of Language: Why and How should

		Gillian Russell's Analyticity Be Revised?
	15:30—15:45	Speaker: Dr. Yang Hongyu (Henan University) Title: Quantification and Ontology Commitment: From Quine's Point of View
	15:45—16:00	Speaker: Dr. Nashunwuliji (East China Normal University) Title: Some Difficulties of Naturalism and Husserl's Resolution
Tea Break	16:00—16:20	

Section VIII:		
Chair: Prof. Jonathan Chan	16:20—16:45	Speaker: Prof. Liu Xinwen Title: Axiomatization of FOL with Schönfinkel-type Operators
	16:45—17:10	Speaker: Dr. Cui Jianying (Sun Yat-sen University) Title: A Unified Epistemic Analysis of Iterated Elimination Algorithms from Regret Viewpoint
	17:10—17:35	Speaker: Dr. Liu Jingxian (Liaoning University) Title: Second-order Stratified Comprehension and Hume's Principle
	17:35—17:50	Speaker: Ms. Wang Hongguang (Nanjing University) Title: Quinean Disquotationalism and Deflationism about Truth
	17:50—18:05	Speaker: Mr. Sun Qianqian (Peking University) Title: Kim's Exclusion Argument --a Reconstruction and Defense
	18:05—18:25	Speaker: Prof. Chen Bo (Peking University) Title: The Nature of Logical Knowledge: An Unfinished Agenda of Quine's Philosophy
Closing		
	18:25—18:30	Prof. Chen Bo: Closing Remarks
Banquet	19:00	Nong-yuan Dingting Hall, Third Floor

# Fading Apriority

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**Abstract.** Quine's implicit thesis against *a priori* knowledge in his "Two Dogmas" faces challenges from various aspects. We limit the scope of this paper on examining Putnam's rejection of Quine's thesis. We argue that Putnam's attempt fails for the reasons that (i) Putnam's argument relies on counterfactual knowledge of a certain sort, and (ii) Putnam's argument is internally flawed in that neither counterfactual inferences nor counterfactuals are *a priori*, based on recent discussion on counterfactual knowledge in both philosophy and social sciences. This result also invites the Quinean empiricist epistemology to go beyond the extensional framework and embrace intensional notions such as counterfactuals.

**Key Words.** A Priori; A Posteriori; Empiricism; Independence; Historical Argument; Counterfactual

## 1 Introduction

The scope of this paper is limited to Quine's implicit thesis on *a priori* knowledge in his well-known "Two Dogmas of Empiricism" and Putnam's rejection of Quine's thesis. The issue may seem to be aged, but the tool we shall exploit to engage the issue is relatively recent. We shall examine the issue by relying on recent discussions on counterfactual knowledge, from both philosophy and social sciences. It should be found that the pay-off is significant. The examination contributes to the discussion of *a priori* knowledge in general, and on the other hand reflects on the very basic philosophical methodology of making uses of thought experiments.

To set the stage, we take that the so-called *a priori* knowledge, in its first approximation, is the knowledge which is "independent" of experiences or empirical data. This independence has two features: first, experiences cannot play the role of justification; second, experiences cannot play the role of (dis-)confirmation. For example, people usually believe that knowledge of logical truth is a kind of *a priori* knowledge, because its independence of experiences. So, if knowledge of logical truth has these features of independence, then traditional empiricists have the burden to



settle the epistemic status of logical truth, given that empiricists hold that either the justification or confirmation of knowledge must be experience-related, unless they admit the untenable position that we do not have knowledge of logical truth. At the face of it, either empiricists have to revise the empiricist doctrines of knowledge, or argue that logical truth does not have the features of independence.

In section 2, we briefly review Quine's arguments in "Two Dogmas" to indicate that he rejects the revisionary approach and takes the second path. Section 3 presents Putnam's argument to reject Quine's thesis by presenting a counterexample. In section 4-6, we argue that Putnam's argument fails for the reasons that (a) Putnam's argument relies on counterfactual knowledge of a certain sort, and (ii) the counterfactual knowledge that Putnam relies on is not *a priori*. Our arguments are composed two steps. We first reconstruct Putnam's argument in a form of counterfactual reasoning, and show the counterfactual reasoning does not have the feature of independence. Second, we show the premises in the counterfactual reasoning are not *a priori* either. We present the theory of counterfactual knowledge in Williamson (2007), where Williamson argues that counterfactual knowledge is neither *a priori* nor *a posteriori*, but rather a special sort which he calls *arm-chair* knowledge. We further advance the thesis that counterfactual knowledge is strictly *a posteriori*.

## **2 No statement is Immune to Revision**

Quine's theses in "Two Dogmas" may be divided into two parts: the rejection of analyticity, and the rejection of reductionism. Many philosophers find that Quine's criticism of reductionism is indeed a criticism of *apriority*: if confirmation holism is correct, then no statement is immune to revision (by experiences or empirical data), so that there is no so-called *a priori* truth which is independent of experiences.

Let's start with Quine's evaluation of reductionism. Generally speaking, positivists claim that all cognitive statements can be divided into two parts: the synthetic statement which can be confirmed or disconfirmed by experiences, and the analytic statement whose truth is in virtue of its meaning. This perspective is called reductionism, in Quine's words, which implies that "*the truth of a statement is somehow analyzable into a linguistic component and a factual component.*" (Quine, 1951: 38) When we try to figure out the truth of a statement, its factual component is examined by confirmatory experiences and its linguistic component is examined by its meaning. If there is a statement which can be known to be true only by knowing its linguistic components, i.e. its truth is independent of experiences, then this statement is true solely in virtue of meaning, and thus an analytic truth.

Consequently, analytic statement for positivists is the statement without factual component and is immune from revision by experience, i.e. immune from the

(dis-)confirmation of experiences. If reductionism is correct, then positivists have a good proposal, though a “revisionary” one, to settle the epistemic status of logical truth: all they have to do is to take logical truth as analytic truth and thus *a priori*. This approach to settle the epistemic status of logical truth has the advantage of being consistent with positivists’ empiricist position. When positivists take reductionism for granted, they in principle can have two ways to grasp the meaning of a statement, and an analytic statement for positivists is just statement which says nothing about reality. So that positivists take them as cognitive statements do not violate the spirit of empiricism (cf. Carnap, 1957).

To refute reductionism, Quine has one negative and one positive proposal. For the negative one, in “Two Dogmas”, he argues that the synthetic-analytic distinction fails. For the positive one, he embraces the thesis of the so-called *confirmation holism* on belief-revision. According to Quine:

No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole. If this view is right, it is misleading to speak of the empirical content of an individual statement - especially if it be a statement at all remote from the experiential periphery of the field. (Quine, 1951: 40)

Given Quine’s view of belief revision, there is no factual/linguistic component distinction for any statement, hence no statement can be true independent of experiences, i.e. no statement can be immune to revision by experiences. The benefit is that the challenge from apriority for empiricism is then dismissed, for there is no *a priori* knowledge or truth.

Besides being a potential solution to the challenge from apriority, Quine does offer reasons to accept “no statement can be immune to revision.” One of Quine’s justifications for his thesis that “no statement is immune to revision” comes from the induction of the history of sciences, which Putnam calls the *historical argument*: based on the history of science, we can see that, many statements previously believed to be true can later on be revised by experiences.<sup>1</sup> It is a *historical* fact that scientific claims can be challenged and refuted. Moreover, if we hold that some statements which are immune to revision, then the revolution of science would not happen, and we would obstruct the improvement of science. In order to not to obstruct the improvement of science, we have no reason to suppose that there is any scientific

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<sup>1</sup> Here, Quine’s examples are that Kepler superseded Ptolemy, Einstein superseded Newton, and Darwin superseded Aristotle (cf. Quine, 1951: 40).

statement immune to revision. For Quine, logical statements are not immune to revision as scientific claims, which can be revised in a sense. They are not really “independent of experience” or “say nothing about reality.” They are not “true by convention” or “true in virtue of meaning.” Hence, according to Quine, there is no statement which can be the analytic statement (in positivist’s perspective), neither logical truth nor mathematical truth.

If we look at the historical argument specifically, we should see that the argument is specifically against apriority rather than analyticity. When we ask how to confirm a statement, what we consider is usually the conditions of the confirmation of the statement; when we claim that there are some statements can be held true no matter what empirical data turn out to be, we just claim that these statements are “independent of experiences, and we accept them to be true independent of experiences.” In general, what we just talked about is specifically about apriority, but not analyticity. That is, when people claim that a statement’s justification is independent of experience and it is held true no matter what empirical data turn out to be, we usually take this kind of statements as *a priori* statements, but not specifically analytic statements. We take that this is why most philosophers consider that Quine’s criticism of reductionism is the criticism of apriority, but not the criticism of analyticity. So we take a statement immune to revision an *a priori* statement. In this sense, what Quine’s confirmation holism challenges is directly on the apriority, not directly on the analyticity.

We may summarize Quine’s argument as follows:

**Anti-ApRIORITY Argument (AA)**

(AA-1) If confirmation holism is correct, there is no statement immune to revision.

(AA-2) If there is no statement immune to revision, there’s no so-called *a priori* statement.

(AA-3) Confirmation holism is correct.

(AA-4) Therefore, there is no *a priori* statement.

As we see, if Quine is correct about belief-revision, then for empiricists, there is no statement in our belief system immune to revision by experiences. And this will make empiricists have to admit that there is no so-called *a priori* knowledge, or they will encounter an internal inconsistent in their conception of knowledge. Although this kind of extreme empiricism is not totally untenable, it seems to violate our intuition about logical truth, that is, we do not think that logical truth is *a posteriori*. This is why many people try to refute Quine’s thesis. In the next section, we present how

Putnam argues for the existence of *a priori* truth, and hence refutes Quine's thesis.

### **3 There is at Least One A Priori Truth**

Quine insists that all statements previously believed to be true may later on be refuted by experience (e.g. Newtonian physics), hence we seem to have no reason to claim that nowadays held truth will be held true forever. If we agree with Quine's observation of the history of science, it seems that, Quine is right about that we *should not* take any logical truths as unrevisable statements. However, Putnam does not agree with this. According to Putnam, even if so we should not take *all* logical truths as unrevisable statements, this does not mean that there is *no* statement immune to revision (cf. Putnam, 1983b: 100).

Putnam's example of unrevisibility is the *minimal principle of contradiction* (MPC): *not every statement is both true and false*. In general, the *traditional principle of contradiction* says that no statement is both true and false. But, as we know, the traditional principle of contradiction is challenged by the quantum mechanics (including the uncertainty principle). Based on that, the traditional principle of contradiction may be revised because it cannot stand in microscopic world (e.g. the movement of electrons). The traditional principle of contradiction is then not obviously immune to revision. But if we still look for an unrevisable statement, Putnam suggests that we can consider MPC:

The denial of this principle is, of course, the claim that every statement is both true and false. If every statement is such that under some circumstances it might be rational to revise it, then under some circumstances it might be rational to accept that every statement is both true and false. Is this the case? Well, it certainly doesn't seem to be the case. And if it is not the case, if, indeed, there are no circumstances under which it would be rational to give up our belief that not every statement is both true and false, then there is at least one a priori truth. And one is all we need. (Putnam, 1983b: 101)

Putnam maintains MPC is unrevisable. For, if we revise it, we have to accept its denial, that is, every statement is both true and false. However, is it possible for us to abandon MPC and accept its denial? Or, is there any rational motivation which pushes us to accept "every statement is both true and false?" It seems not. Therefore, MPC will not be revised. And this it to say, there is at least one statement immune to revision. Quine's thesis encounters a counterexample.

But, some doubt may remain: will MPC be revised (by possible experiences) in the future? Or, to be more specific, is it possible that there is a theory including the

denial of MPC in the future? To reply to this challenge, Putnam offers a thought experiment for us to judge:

Suppose, there is some weird physical theory T which we have not yet thought of, but which implies the denial of the minimal principle of contradiction and that some day when some scientist - some future Einstein - invents the theory T and shows us what beautiful predictions it leads to, and how much it enhances our understanding and control of nature to accept the theory T, then we will all be converted and by a kind of 'gestalt switch' we will go over to accepting the theory T and to denying the minimal principle of contradiction. (Putnam, 1983b: 101)

If this thought experiment is reasonable, then it is still possible to revise MPC. Thus, it means that Putnam's idea is still subject to challenge by Quine's historical argument, and failed.

Putnam claims that it is difficult for theory T to stand because it is impossible for us to accept it. According to Putnam, if we ever give up the minimal principle of contradiction (we ever come to believe that every statement is both true and false), then the theory T will have to be the theory which consists of every statement and its negation (cf. Putnam, 1983b: 101-102). How could it be possible for us to accept this kind of theory? It is impossible. Putnam says,

Suppose there is a sheet of paper in front of you. Usually, you claim that this sheet of paper is red, or claim that this sheet of paper is not red. But, if you accept theory T, then you will claim that this sheet of paper is red and not red. Hence, when you claim that this sheet of paper is red, your claim is both true and false (cf. Putnam, 1983b: 103-104).

This case shows that, when we accept the theory T, every time we claim something, we have to claim its denial. And this will make the communication and rational deliberation impossible: we just cannot understand what the speaker said when he or she accepts theory T, even the speaker cannot understand what he or she said, either. And this is the reason we will not accept the theory T: the prediction from the theory T always consists of the claim and its denial; and this makes us unable to understand what the theory T really 'predicts'. Obviously, we do not want to lose the ability of rational deliberation or the ability to communicate, so we will not accept the theory T.

But before we make judgments on Putnam's case, there is one thing we have to put in our minds. As we see, Putnam justified his thesis by thought experiments, and

the outcome of his thought experiments is that we cannot accept a theory like T, or even MPC, without giving up our rationality. According to Putnam:

...To believe that all one's beliefs are both true and false (or whatever) is to give up both the notions of belief and truth (or warranted assertibility). In short, to believe all statements are correct (which is what we are talking about) would be to have no notion of rationality. At least one statement is *a priori*, because to deny that statement would be to forfeit rationality itself (Putnam, 1983c: 129).

From this paragraph, Putnam thinks that to deny MPC will make us lose rationality (or at least lose the ability of rational deliberation). In other words, for Putnam, MPC is a necessary condition of rationality.

Indubitably, Putnam's thought experiment and his understanding of our rationality seems quite right. However, this does not automatically imply that MPC is therefore *a priori*. Actually, when Putnam takes MPC as a necessary condition of rationality, his justification for the claim that MPC is *a priori* true is a kind of conditional argument: if rationality is not impossible and the previously mentioned thought experiment sustained, MPC is not revisable. In turn, whether that MPC is revisable is *a priori* or not depends on whether the antecedents of the conditional are *a priori*, and even whether the inference is *a priori* valid. The answer substantively depends on whether our counterfactual knowledge on the thought experiment is *a priori* or not. Our answer to this question is "no." In the following sections we will argue for that.

#### **4. Fading Apriority: Counterfactual Inferences**

We may summarize Putnam's argument as follows:<sup>2</sup>

##### **Putnam's Argument (PA)**

(PA-1). If MPC were not true, then the theory T would be rationally acceptable.

(PA-2). If the theory T were rationally acceptable, then rational deliberation would be impossible.

(PA-3). Rational deliberation is not impossible.

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<sup>2</sup> Putnam's argument is here formulated in terms of subjunctive (counterfactual) conditionals rather than material implications for the following reason. To justify (PA-1) in the form of the material implication, for example, it is to justify that MPC is true or T would be rationally acceptable. The second disjunct is not the one to be justified, for it is one to be rejected. To justify the first disjunct, we need an argument such as PA. If PA is confined to be construed in terms of the material implication, the justification just goes for the infinite regress.

(PA-4). Therefore, MPC is true.

In order for PA to stand, it needs to be sound. Moreover, to maintain that the conclusion (PA-4) is true *a priori qua* immune from revision, Putnam may appeal to the following principle:

**(Inference to Apriority)** If a conclusion C follows from *a priori* valid inferences and *a priori* true premises, then the conclusion C is *a priori*.

To apply the inference to apriority, we need to examine the following two claims: (a) the validity of the inference is *a priori*, and (b) the premises (PA-1) to (PA-3) are *a priori*. However, we shall argue that both claims fail. Our strategy to reject Putnam's counterexample is thus not to provide further support for the historical argument or the confirmation holism, but to show that Putnam's argument is internally flawed, by extending Quinean empiricist epistemology to counterfactuals.

We begin with the validity of the inference in PA. We consider two possible ways that the inference may be considered as valid. First, PA may be validated by the following two inference patterns.

(I-1)  $\phi > \psi, \psi > \chi \vdash \phi > \chi$

(I-2)  $\phi > \psi, \neg \psi \vdash \neg \phi$

However, (I-1) is in general taken as not held in logic for counterfactuals. An alternative may run by appealing to the follows, where ' $\rightarrow$ ' stands for material implication.

(I-3)  $\phi > \psi \vdash \phi \rightarrow \psi$

(I-4)  $\phi \rightarrow \psi, \neg \psi \vdash \neg \phi$

(I-3) is in general considered as correct for counterfactuals (e.g. in the Lewis-Stalnaker semantics).

What interests us is not specifically whether Putnam's argument is valid or not, but rather, on what ground, we can evaluate whether Putnam's argument is valid or not. The above two different paths provide us some clues: on what ground we may consider (I-1) as in correct but (I-3) as correct? This question may have a simple answer: whether (I-1) or (I-3) is correct depends on the given formal semantics. But this is not the answer we are looking for. We are asking the following question: on what ground (I-1) or (I-3) is correct, given that '>' is understood as standing for

counterfactuals. A given formal semantics for ' $\rightarrow$ ' may not be a semantics for ' $\rightarrow$ ' as standing for counterfactuals.

For the invalidity of (I-1), the answer seems to be straightforward: its incorrectness comes from counterexamples. Stalnaker (1991: 38) consider the following invalid inference as a counterexample for (I-1):

If J. Edgar Hoover were today a communist, then he would be a traitor.

If J. Edgar Hoover had been born a Russian, then he would today be a communist.

*Therefore*, If J. Edgar Hoover had been born a Russian, he would be a traitor.

Similarly, one may reject the validity of antecedent-strengthening by counterexamples, e.g. the one from Stalnaker (1991: 38):

If this match were struck, it would light.

*Therefore*, If this match had been soaked in water overnight *and* it were struck, it would light.

On the other hand, to see the validity of (I-3), it is not enough to appeal to examples. Instead, in the literature, (I-3) is validate by formal semantics of ' $\rightarrow$ ' and ' $\rightarrow$ ', e.g. Lewis (1973) appeals to that if the antecedent is true in the actual world then the actual world is one of the antecedent true closest possible worlds, and Jackson (1977) appeals to that if the antecedent is true in the actual then the actual world is one of the antecedent true reasonably close possible worlds.

To argue against validity by counterexamples, we need to show true premises but false conclusions. In the given counterexamples for valid inferences concerning counterfactuals, premises and conclusions are hardly *a priori*, for justification and confirmation of their being true essentially rely on our experiences. Unless one finds counterfactual premises can be true *a priori*, the invalidity of counterfactuals inferences is not *a priori*. Moreover, whether counterexamples are really counterexamples are under disputes. For example, Lowe (1995) argues that counterexamples for (I-1) are not real counterexamples by appealing to the contextual sensitivity of counterfactuals. The correctness of contextual sensitivity requires justification from how we make judgments on counterfactuals based on experiences.

On the other hand, by showing the validity of (I-3), the arguments essentially rely on the formal semantics for ' $\rightarrow$ '. There is not yet an *a priori* justification or confirmation for the validity. What is needed is that the formal semantics for ' $\rightarrow$ '



correctly stands for counterfactuals. However, in the literature, this is still an ongoing debate for various formal semantics of '>', and the debate in the end is grounded not just on how we take the meaning of counterfactuals, but also on how we find true or false counterfactuals.

### **5. Fading Apriority: Williamson-Style**

We may set aside the *a posteriori* feature on the (in-)validity of counterfactual inferences in PA, but focus on whether its premises are *a priori*. To start the investigation, we need a theory of counterfactual knowledge. Our attempt is not to settle the dispute on whether counterfactual knowledge is *a priori* or not, but to present theories that find counterfactuals knowledge not *a priori*.

Williamson (2007) presents a fine-grained theory of counterfactual knowledge. First, Williamson finds that counterfactual knowledge arises from a very unique sort of *imaginative* evaluation. Suppose one noticed a rock sliding into a bush on a slope, and consequently not falling into the lake at the bottom. He may wonder:

(1) If the bush had not been there, the rock would have ended in the lake.

(Williamson 2007: 142)

(1) may seem to be intuitively true. Williamson suggests that the way we see it true comes from the following mode of evaluation.

[We] "roll back" history to shortly before the time of the antecedent, modifying its course by stipulating the truth of the antecedent and then rolling history forward again according to patterns of development as close as possible to the normal ones to test the truth of the consequent.

(Williamson 2007: 150)

Williamson further indicates that this imaginative evaluation does not generate knowledge suitably characterized by traditional *a priori-a posteriori* distinction. He takes that experiences play the role of *enabling* one to entertain concepts in the generation of *a priori* knowledge, but experiences play the role of being evidence in the formation of *a posteriori* knowledge. However, he finds that

[I]n our imagination-based knowledge of counterfactuals, sense experience can play a role that is neither strictly evidential [for *a posteriori* knowledge] nor purely enabling [for *a priori* knowledge]. For, even without surviving as part of our total evidence, it can mold our

habits of imagination and judgment in ways go far beyond a merely enabling role. (Williamson 2007: 164)

He further advances the thesis that counterfactuals knowledge is *armchair* knowledge:

We may acknowledge an extensive category of *armchair knowledge*, in the sense of knowledge in which experience plays no strictly evidential role, while remembering that such knowledge may not fit the stereotype of the *a priori*, because the contribution of experience was far more than enabling. (Williamson 2007: 169)

Though Williamson's notion of armchair knowledge may be broadly classified as *a posteriori* knowledge in the sense of *not being independent of* experiences indicated at the beginning of this paper, the benefit of his notion is to identify the special epistemic status of counterfactual knowledge.

In Williamson's framework of counterfactual knowledge, counterfactual knowledge is armchair knowledge, so are (PA-1) and (PA-2). However, some may have doubt: do experiences specifically play *any* role in our imagination or judgment of "rational acceptance" and "rational deliberation"? Putnam's major claim is that the denial of MPC leads to that one's all beliefs are both true and false, and this result destroys rationality since it forces us to give up the notions of belief and truth. However, to arrive at this conclusion, do experiences only play the role of enabling concepts?

Some may be inclined to find that Putnam's suggestion intuitively true. But this is not ready to show that his proposal is *a priori*, for intuition may be of various sources. Instead, we focus on the debate on whether truth plays a role in the condition of beliefs or assertions. The point is that, it can be that, based on one's experiences, truth plays its role in beliefs or assertions. For example, in Shah (2003, 2005, 2006), he argues that truth governs our beliefs based on the very basic psychological fact, which he calls *transparency* thesis, that when we consider *whether to believe that p* we directly shift to *whether p is the case*. From Shah's point, (PA-1) and (PA-2) can not be *a priori*.

## **6. Fading Apriority: Scientific Style**

The evaluation of counterfactuals is an evaluation under situations which are *not actual*. It is then seems to be natural or reasonable to think that the evaluation cannot rely on the experiences we actually have. However, Williamson finds a leak in this seeming reasonableness, for experiences affect the evaluation in that it molds our

habit of imagination and judgment developed from experiences. But still, given the counterfactual nature of the evaluation, Williamson seems reasonable to insist that experiences we actually have cannot be evidence for the evaluation in any serious aspects. What we would like to push for one more step is to show that experiences can be evidence for counterfactuals. Moreover, there is no non-arbitrary manner to draw the line between those counterfactuals needing experiential evidence and those that do not, if one insists that there are such counterfactuals.

In the literature, it is fairly uncontroversial to say that an evaluation of a counterfactual is to examine the consequent in the antecedent oriented circumstance (AOC). The main thesis to advocate our view is the *non-transparency* of counterfactual evaluation.

**(The Non-Transparency)** An evaluator of counterfactuals does not have *introspective access* to the AOCs and the manners of the examination of the consequents.

By having no introspective access, we mean that the AOCs cannot be accessed by introspection alone, though experiences may help to access. When one evaluates counterfactuals introspectively, the non-transparency of AOCs leads one to the possibility of making mistakes in the characterization of AOCs, and the non-transparency of AOCs leads one to the possibility of making mistakes in the examination of the consequents. Either way, introspective evaluation is threatened by errors.

Consider Williamson's (1) for example. (1) may seem to be intuitively correct, by introspection. Nonetheless, what if there had a safe net at the end of the slope that was undiscovered? If so, (1) is false. Whether there was a safe net is not introspectively accessible by any evaluator. Instead, it depends on the actual environment of the world not accessible from introspection. Consider also whether the following is true:

(2) If John took the cocktail treatment, then he would live longer than ten years.

To evaluate (2) properly, we need, for example, a lot of information about John's physical condition and how John's physical condition interacts with the cocktail treatment, and also examine how the interact related to how long John would live. However, this information is also not introspectively available.

To evaluate (2), many ways can overcome the obstacle of non-transparency. One

may consult past data on cocktail treatments. But if past data is not good evidence for (2), we are evaluating (2) partially by guessing. Good data are required to be retrieved from those subjects similar to John, at least both physically and psychologically. Bio-medical sciences and social science have already provided a lot of experimental designs and theoretical tools to help us to obtain those data (cf. Morgan and Winship 2007). We only emphasize that, by those experimental data, we evaluate counterfactuals such as (2) even without knowing the AOCs or how to examine the consequents in those AOCs, introspectively or not.

We are often confident with the evaluation of counterfactuals by using introspection, but maybe we are often too comfortable with that. Once we admit that the evaluation of counterfactuals is non-transparent, we should see that experiences not only mold our imagination and judgment concerning the evaluation of counterfactuals, but also that experiences (e.g. by proper experimental designs) should be used as evidence to overcome the obstacle of non-transparency.

When one looks at (PA-1) and (PA-2), one may have the “feeling” that evaluating them requires no experiential evidence. This is already an attempt to draw a line between those counterfactuals whose evaluation is transparent from those whose evaluation is non-transparent. However, this move of drawing the line is dangerous. It is in danger of dogmatically identify a counterfactual as true simply by introspective reflection alone. Unless one can in a principled and a non-arbitrary manner to draw the line, which we find quite implausible, the evaluation of counterfactuals needs experiential evidences.

## **7. Concluding Remarks**

Quine’s historical argument against *a priori* knowledge and truth faces challenges from various aspects. The challenge from Putnam is an attempt to exploit *a priori* counterfactual knowledge and counterfactual inferences to defend the existence of *a priori* truth. However, some close inspections show that it is no easy matter to establish *a priori* truth in Putnam’s fashion, for both counterfactuals knowledge and counterfactual inferences are grounded on top of experiences as evidences. The lessons to be learned is that, when one attempts to use counterfactuals, e.g. to use thought experiments, to establish some claim, one should pay attention to the *a posteriori* nature of counterfactuals. Moreover, this result invites Quinean empiricist epistemology to go beyond extensional framework and embrace intensional notions such as counterfactuals.

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