Joachim Bouvet’s interpretation of Zhouyi and his mathematical model : research on Joachim Bouvet’s Chinese manuscripts of Yijing in the Apostolic Vatican Library collection

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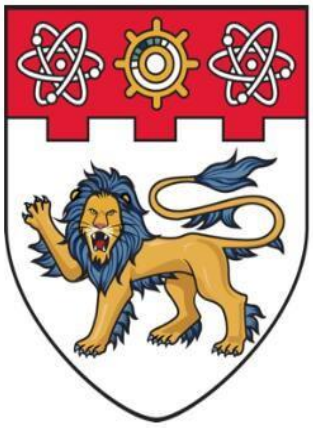

NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

Joachim Bouvet's Interpretation of *Zhouyi* and His Mathematical Model

Research on Joachim Bouvet's Chinese Manuscripts of *Yijing* in the Apostolic Vatican Library Collection

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SCHOOL OF HUMANITIES

2020

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School of Humanities

A thesis submitted to the Nanyang Technological University

in partial fulfillment of the requirement for the degree of

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2020

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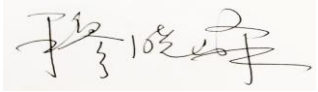
Signature of Student:	

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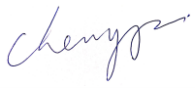
Signature of Supervisor:	

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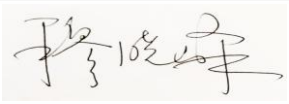
Siganature of Student:	

Acknowledgments

Since 2012, for eight years now, I have been studying for a Master's and then a doctoral degree at the Philosophy Department of Nanyang Technological University in Singapore. Looking back at these years when I worked and studied at the same time, memories come back how, besides attending classes in Singapore or in Shanghai, I did academic research in spare time, sacrificing family and business. Inevitably, I find my mind filled with many mixed emotions of sadness, joy, helplessness, anxiety, and even the idea of giving up, but ultimately the clear awareness emerges that what made me stick to my goals was everyone around me who supported and encouraged me. As I am finishing my Ph.D. dissertation, I would like to express my deepest respect and gratitude to all of you.

First of all, I must express my sincere gratitude to my supervisor, Professor Li Chenyang. It is a great fortune for me to get acquainted with Professor Li and further do academic research with him. He is not only a generous Confucian scholar, but more like a loving elder. His patience and tolerance for my academic study, and his care and encouragement for my life are all Confucian exhortations that have deeply influenced me and will serve as an example for me to learn from throughout my life. My thesis committee members Professor Scott Cook and Professor Franklin Perkins have rendered their support to my work from the beginning and throughout its completion. I would like to take this opportunity to thanks them for their support, care and professional guidance. Three anonymous examiners of this thesis offered encouragement as well as valuable detailed suggestions for revisions. Their insightful comments helped me significantly improve this work. To them, I am grateful.

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like Matteo Ricci, he not only guided and strengthened me in my faith, but also paid close attention to my academic research. In addition to helping me search for Western literature as much as possible, he gave me many valuable suggestions for my thesis and helped me revise my grammar. He was like a kind father, making me feel the love of God and his amazing providence.

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Abstract

The westward spread of *Zhouyi* 周易 (or *Yijing* 易经) and the Missionaries' *Yijing*-study coincided with the prelude of modern Catholic missions in China and became entangled with the ups and downs of their development over a period of 200 years. Jesuit missionary Fr. Joachim Bouvet 白晋 (1656-1730) undoubtedly was one of the most representative and influential figures of such academic pursuits during the reign of Emperor Kangxi (1654-1722). Bouvet's study of *Zhouyi* was gradually done under the guidance of Kangxi himself. Fruits of such painstaking endeavor are the sixteen writings authored by Bouvet in the Chinese language conserved in the Vatican Apostolic Library.

This thesis will research these sixteen manuscripts and will further argue that mathematics was used as a kind of neutral philosophical bridge between Western Catholicism and *Yijing*. Joachim Bouvet's interpretation of the *Yijing* not only established a new research paradigm for Chinese and Western study of the *Yijing*, but also created a new study model of Christian-*Yi* 耶易, which sets itself apart from Confucian-*Yi* 儒易，Daoist-Yi 道易 and Buddhist-*Yi* 佛易.

Key words: *Zhouyi*; *Yijing*;*Yi*-study; study of *Yijing*; mathematical interpretation

List of classical Chinese terms with English translation/Pinyin often used in this dissertation

1. Terms:

动静： Dynamic-static
方圆： Square-round
刚柔： Strong-soft
河洛： He-Luo(Hetu 河圖 and Luoshu 洛书)
後天： *Houtian*
律吕： *Lülü*
三易: Three-*Yi*/*Lianshan* 連山；*Guizang* 歸藏；*Zhouyi* 周易
三易(义): Simple and easy 易简; Change 變易；Constant 不易
三皇： Sanhuang/Tianhuang 天皇；Dihuang 地皇；Renhuang 人皇
三才： Sancai/Three-Powers/Heaven 天；Earth 地；Man 人
三极： Sanji/Three-poles
太极： *Taiji* or the Great Ultimate
太一： *Taiyi* or the Great One
天地： Heaven-earth
天學： Study of Heaven/Heaven-learning
象数： Image-number
先天： *Xiantian*
后天： *Houtian*
心學： Study of human-mind/heart
阴阳： *Yin-yang*
易傳： *Yizhuan*
周易/易经：*Zhouyi*/*Yijing*

2. Phrases:

地方三角: Earth-square and Three-angles
叁天两地: Three-Heaven and Two-Earth
天圓三極: Heaven-round and Three-poles
天阳地刚： Heaven-Yang and Earth-Strong
天陰地柔： Heave-Yin and Earth-Soft
未变;已变;不变：Un-changed; changed; not-changing
一本二元： One-Origin and Two- Elements

1. Introduction

As one of the major sources of traditional Chinese culture, *Zhouyi*[1] has been called "Chief of all teachings 万经之首" and "Source of the great Dao 大道之源". *Zhouyi* not only touches upon all aspects of Chinese social and natural science, but its influence traversed China's boundaries and spread all over the world, gradually coming to be regarded as the symbol of Chinese wisdom. Compared with studies on other Chinese ancient classics, Western studies of *Zhouyi* followed an entirely different path of development. Having considered Western studies of *Zhouyi* from the 16th to the end of the 20th century, by identifying their different research purposes, in a previous study, I divided such studies into three stages. The first of these is the "Missionaries' *Yi*-study[2] stage", which played a crucial role in the introduction of *Zhouyi* to the West. The second is the "Richard Wilhelm's *Yi*-study stage". The third and last one is the "Comprehensive *Yi*-study stage".[3] The first stage spans the period from the 16th to the end of the 19th century. With the emergence of Richard Wilhelm's German translation in 1924, the studies of *Yi* entered their second stage (the first half of 20th century), which was defined as "Richard Wilhelm's *Yi*-study stage". The third stage (after 1950) opened the rapid development period of western studies of *Yi* directly with the emergence of Richard Wilhelm's English translation, which was defined as "Comprehensive *Yi*-study stage".

In the first stage, the Missionaries' *Yi*-study and the westward spread of *Zhouyi* coincided with the prelude of Catholic missions in China and became entangled with the ups and downs of their development over a period of 200 years. From the time of Jesuit pioneer Matteo Ricci 利玛窦 (1552-1610) the missionaries' *Yi*-study, though basically aimed at preaching the Gospel, reached a high

[1] *Zhouyi* is one of the Five Classics 五经 and is also known as the *Yijing*. Western scholars used to call it the *I Ching*, or translated it as *The Book of Changes*. In this dissertation, these different names will be used interchangeably in different contexts.

[2] *Yi*-study 易学 means all related knowledge or studies of *Zhouyi*.

[3] Please see my MA dissertation (2014): *The Westward Spread of Zhouyi and the Issue of Its English Name*, (unpublished manuscript).

academic level and eventually influenced Chinese contemporary mainstream studies of *Zhouyi*, to the extent that some parts of the missionaries' work were included in the *Siku Quanshu* 四库全书 of Qing dynasty (completed in 1782). Jesuit missionary Fr. Joachim Bouvet 白晋 (1656-1730) evidently was one of the most representative and influential figures of such academic pursuits during the reign of Emperor Kangxi (1654-1722; reigned 1661-1722). Bouvet's study of *Zhouyi* was gradually done under the guidance of Kangxi himself. In particular, the sixteen writings authored by Bouvet in the Chinese language are currently conserved in the Apostolic Vatican Library.

It is these sixteen manuscripts, rarely studied from a philosophical interpretative point of view, that will constitute the focus of my dissertation. Bouvet's passionate and painstaking research work eventually led him to a blind alley, yet it deserves fresh attention. In this thesis, I will argue that Bouvet used mathematics as a kind of common philosophical language to bridge the two traditions, Western Catholicism and Chinese *Yijing*. Bouvet understood *Yijing* better and offered much more incisive interpretations than any Western scholar in his time. The method eventually adopted by the French missionary and scholar, encouraged by Emperor Kangxi, not only offers a new paradigm for both Chinese and Western studies on *Yijing* today, but has had immediate and lasting effects on the way later Qing Dynasty scholars approached this Classic.

1.1. Literature review

The current status of Western and Chinese research

Bouvet was not only the chief representative of the missionaries' *Yi*-study, but he was also the founder of the school of thought known as 'Figurism'. As mentioned, he was once a teacher of Kangxi, whom he tutored in algebra and geometry in the imperial palace. Eventually, his study of *Zhouyi* became entangled in the "Chinese Rites Controversy 礼仪之争", in which it played a significant role. Consequently, both Chinese and Western scholars have undertaken research on him and his *Zhouyi* studies from different perspectives. Most scholars who investigate cultural and ideological Sino-European exchanges mention the French missionary and his painstaking Figurist studies on *Yijing*.

Among them, American sinologist David Mungello is undoubtedly the scholar who has written most extensively about Bouvet from the perspective of Catholic missionaries in China and the cultural interaction between China and Europe. In his two works, *Leibniz and Confucianism: The Search for an Accord*[4] and *Curious Land: Jesuit Accommodation and the Origins of Sinology*,[5] Mungello studied Bouvet's Figurist ideas and the transmission of these to Europe through his often-quoted correspondence with Leibniz. In his latter work, in particular, he mentions Leibniz' relationship with Bouvet, pointing to the *Yijing* as a bridge between them. He writes,

> The Leibniz-Bouvet correspondence is one of the most important sources for the study of cultural relations between Europe and China in the late seventeenth and early eighteenth centuries. The correspondence has been frequently cited by scholars and interest has extended to the Far East.[6]

Mungello mentions Bouvet in another edited work, *The Chinese Rites*

[4] Mungello, David E. (1977). *Leibniz and Confucianism: The Search for an Accord*, Honolulu, University of Hawaii Press.
[5] Mungello, David E. (1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*, Honolulu, University of Hawaii Press.
[6] *Ibid*, p.39-40.

Controversy, Its History and Meaning[7], but the focal point in this context was Bouvet's Figurist ideas rather than his study of *Zhouyi*.

Other scholars, such as Zhu Qianzhi 朱谦之, Franklin Perkins and Richard J. Smith, also mention the correspondence on *Yijing* between Bouvet and Leibniz.[8] Smith, in particularly, describes how Bouvet led Leibniz 莱布尼茨 (1646-1716) to discover the binary principle of *Yijing*,

> Bouvet met Leibniz in Paris and started to communicate by letter even after his own return to China with another ten missionaries in 1698. Among these letters, the most important one was sent to Leibniz by Bouvet on November 4th, 1701: the letter dealt with the binary principle of Yijing. When Bouvet sent a copy of Shao Yong's 邵雍 (1011-1077) diagram (the Sixty-four hexagram's position) to Leibniz, the latter was ecstatic to see cross-cultural confirmation of his binary system. In a sense, the Bouvet-Leibniz exchange serves as a metaphor for the problems facing exponents of a Chinese-Christian synthesis in both China and Europe.[9]

Smith also mentions in part the interaction between Kangxi and Bouvet on the latter's study of *Zhouyi*.

German scholar Claudia von Collani's intellectual biography of Bouvet, *P. Joachim Bouvet S.J. - Sein Leben und Sein Werk*[10] is by far the most exhaustive book about the French missionary. Her authoritative work takes the life of Bouvet as a clue to focus on the study of Chinese ancient classics, in particular the *Yijing* and on the creation of the cross-cultural Figurist system. The book also dwells on the 'Chinese Rites Controversy' and the history of the relationship between Kangxi's court and the Church of Rome. Although Dr. von Collani's is undoubtedly the most detailed work in academic circles, she did not undertake a

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[7] Mungello, David, ed. (1994), *The Chinese Rites Controversy, Its History and Meaning*, Sankt Augustin, Steyler Verlag.

[8] Zhu Qianzhi 朱谦之.(2006), *The Influence of Chinese Philosophy in Europe* 中国哲学对欧洲的影响, Shanghai People Press; Perkins, Franklin (2004), *Leibniz and China: a commerce of light*, Cambridge University Press; Smith, Richard J. (2012). *How the Book of Changes Arrived in the West*, in New England Review, Vol. 33.

[9] *Ibid*., Smith, p.27.

[10] Collani, Claudia von. (1985). *P. Joachim Bouvet, S.J. – Sein Leben Und Sein Work*, Sankt Augustin, Steyler Verlag, Monumenta Serica Monograph Series 17.

comprehensive analysis of Bouvet's thought in the absence of certain original documents, in particular Bouvet's Chinese writings. She wrote in the preface,

> I have just undertaken a collection and evaluation of a small part of Bouvet's manuscripts, but perhaps in other libraries and archives there are thousands of manuscripts which have not yet been studied. Also, when I studied these manuscripts, I have had to exclude many mathematics and pure sinological related parts.[11]

To which, Professor Zhang Xiping adds the following comments,

> The German scholar Claudia von Collani's *P. Joachim Bouvet S.J. - Sein Leben und Sein Werk* (白晋生平和他的著作) is the most thorough work in the international academic arena. However, the basic literary works consulted for her study were the French manuscripts of the National Library of Paris. When I read von Collani's German publication, I found that she had not noticed the Chinese writings kept in the Vatican Library.[12]

Mr. Yan Zonglin 阎宗临 (1904-1978), the historian who first in Chinese academic circles disclosed the existence of Bouvet's manuscripts kept in the Vatican library, in 1941 was also the first to publish the document of Kangxi's imperial edict about Bouvet's study of *Zhouyi*.[13] Relying on these documents, historian and Catholic priest Fr. Fang Hao 方豪(1910-1980) studied the relationship between Kangxi and Bouvet's study of *Zhouyi* in his *History of Relations between China and the West.*[14] He also separately wrote a biography of Bouvet in his other widely read and influential work, *The Biography of Catholics in China.*[15] Earlier on, French Jesuit and China missionary Fr. Louis Pfister 费赖之(1833-1891) also briefly described the life of Bouvet and some of the important events related to his life in China[16]. On the basis of these historical works, other scholars contributed to

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[11] Claudia von Collani's German work (2009) *P.Joachim Bouvet S.J. - Sein Leben und sein Werk,* was translated into Chinese by Li Yan as 耶稣会士白晋的生平与著作, Daxiang Press, Henan, p.003.

[12] Zhang, Xiping. (2003). *An Instructional Examination of the Document on Bouvet's Research on the Book of Changes in Vatican Library* 梵蒂冈图书馆藏白晋读《易经》文献初探. Wen Xian, July, No.3, p.19.

[13] *Ibid*., p.18.

[14] Fang, Hao (1987). *History of Relations between China and the West* 中西交通史, Changsha:Yuelu Press 岳麓书社.

[15] Fang, Hao (1988). *The Bibliography of Catholics in China* 中国天主教史人物传, Beijing: Zhonghua Book Company 中华书局.

[16] Pfister, Louis 费赖之.(1995). *Notices Biographiques et Bibliographiques sur les Jesuites de l'ancienne mission de Chine 1552-1773* 在华耶稣会士列传及书目, Beijing: Zhonghua Book Company 中华书局.

further developments, such as Lin Jinshui's 林金水 representative work *Brief Research on the Westward Spread of Yijing* 易经传入西方考略, Zhang Xiping's *The Early Spread of Yijing in the West* 易经在西方的早期传播 and Luo Lida's 罗丽达 *Examination of Bouvet's study on the Book of Changes* 白晋研究易经史事稽考.[17] In addition, in the published work *Emperor Kangxi's Comments in Manchu language on Memorials Submitted to Him* 康熙朝满文朱批奏折全译, Wu Boya 吴伯娅 was able to find new information and to explore further historical facts on Bouvet's study of *Zhouyi.*[18]

The batch of documents kept in the Vatican library are all in Chinese, giving Chinese scholars the opportunity to conduct research on them, in particular Bouvet's study of *Zhouyi*. The most representative scholars that did so include Han Qi 韩琦 and Zhang Xiping 张西平. Through the analysis of the Vatican library collection, Han Qi was able to provide new perspectives to the research of academic history of early Qing dynasty.[19] He was also able to point out that Luo Lida's studies failed to consult the Roman manuscripts of the *Yijing*.[20] He observed:

> Bouvet's study of the *Yijing* is not an isolated incident but the product of the conflict and blending between Chinese and Western culture…but this kind of research itself, in turn, makes the Chinese view their own traditional culture from a new perspective…The Vatican library collection of *Yijing*'s

[17] Lin, Jinshui (1988). *Brief Research on the Westward Spread of Yijing* 易经传入西方考略, in Literature and History, Vol. 29; Zhang, Xiping (1998), *The Early Spread of Yijing in the West* 易经在西方早期的传播, in Research of Chinese Culture 中国文化研究, Vol. Winter (22); Luo, Lida 罗丽达 (1997), *Examination of Bouvet's study on the Book of Changes* 白晋研究易经史事稽考, in Sinology Research (Taiwan), Vol. 15, No.1, p.173-185.

[18] Wu, Boya 吴伯娅. (2002). *Kangxi, Yongzheng, Qianlong and the western theories' oriental approach* 康雍乾三帝与西学东渐, Beijing: Zongjiao Wenhua Chubanshe 宗教文化出版社.

[19] Han Qi 韩琦. (1998). *Joachim Bouvet's Study of the Yijing and the Theory of Chinese Origin of Western Learning during the Kangxi Era* 白晉的《易经》研究和康熙时代的'西学中源'说. Sinology Research (Taiwan), Vol.16, No.1, p.185-201; Han Qi 韩琦. (2004). *Another Discussion of Bouvet's Study of the Yijing*. In: Rong Xinjiang 荣新江, Li Xiaocong 李孝聪, eds. The history of Sino-international relationship: New historical document and new question. Beijing: Kexue Chubanshe, p.315-323; Han Qi 韩琦. (2004). *Between Science and Religion: The Jesuit Bouvet's Study of Yijing*. In: Tao Yafei 陶飞亚, Liang Yuansheng 梁元生, eds. Reinterpretation of the east Asian Christian 东亚基督教再诠释. Hongkong: The Chinese University of Hong Kong Chung Chi college for the study of religion and Chinese society, p. 413-434.

[20] *Ibid*., p. 432.

manuscripts undoubtedly enables us to have a further understanding on Bouvet's study of *Yijing.*[21]

Professor Zhang Xiping also attributes great importance to this batch of manuscripts, as he conducted a preliminary investigation of the Vatican library collection.[22] In an article, he then clarified the authorship of the sixteen Chinese documents of Bouvet's study of *Zhouyi* and made a simple inference: through a comparison of two existing directories,[23] he concluded that all the sixteen Chinese documents (manuscripts) clearly are Bouvet's work[24]. In addition, Zhang Xiping also found and copied some new documents about Bouvet and fellow Jesuit missionary Jean-Francois Foucquet's 傅圣泽 (1665-1741) study of *Yijing,* which supplemented the historical data of Fang Hao's work.[25] On the basis of these documents, Zhang Xiping wrote yet another article to introduce the basic history of Bouvet's study of *Zhouyi* for the purpose of, and under the arrangement and influence of Emperor Kangxi.[26]

Western researchers also paid attention to these Chinese works of Bouvet. University of Helsinki scholar Paulos Huang proposed that Bouvet and his Figurist team produced a different Sino-Figurist Theology, even though they all adhered to Matteo Ricci's strategy of accommodation. In his *Sino-Christian Academic Figurist Theology: An Analysis of the Cultural Dialogical Attempt by some French Jesuits in Following the Footprints of Matteo Ricci* 汉语索引神学—对法国耶稣会士续讲利玛窦之后文明对话的研究, Paulos referred to Bouvet's

[21] *Ibid*., p. 323.

[22] Zhang Xiping 张西平. (2003). *An instructional examination of the document on Bouvet's research on the Book of Changes in Vatican Library* 梵蒂冈图书馆藏白晋读易经文献初探. Wen Xian, July, No.3, p. 17-30.

[23] Paul Pelliot [French] 伯希和 /Edited by Takata Tokio 高田时雄/Translated by Guo Ke (2006), *Inventaire sommaire des manuscrits et imprimés chinois de la Biblioteque Vaticane* 梵蒂岡圖書館所藏漢文寫本和印本書籍簡明目録& *Supplement a Linventaire des livres chinois de la Bibliotheque Vaticane* 梵蒂岡圖書館所藏漢籍目録補編, Zhonghua Publishing House 中华书局, Beijing; Yu, Dong 余冬(1996), *Catalogo delle Opere Cinesi Missionarie della Biblioteca Apostolica Vaticana (XVI-XVIII SEC.)*梵蒂崗圖書館館藏早期傳教士中文文獻目錄（十六至十八世纪）, B.A.V., Vatican City.

[24] Zhang Xiping, *An instructional examination*, p. 24.

[25] Jean-Francois Foucquet 傅圣泽 (1665-1741).

[26] Zhang, Xiping 张西平. (2007), *Conversations between China and the West: The missionaries in early Qing Dynasty and their researches on the Book of Changes*, in Front. Hist. China, 2 (4), p. 46- 492.

Vatican library manuscripts when exploring the connotation, theme, method and influence of Sino-Figurist Theology.[27] But in the article, he did not conduct any specific analysis on these materials as such. In addition, as an American scholar dedicated to studying the global spread of *Yijing*, Richard J. Smith mentioned Bouvet's figurist style of *Yijing* study in a series of papers. In his article, *Jesuit Interpretation of the Yijing (Classic of Changes) in Historical and Comparative Perspective,* he explains in detail the distinctive characteristics of *Yijing*, then focus on Bouvet's figurist interpretation of the Classic, mentioning in passing some of Bouvet's Chinese writings in the Vatican library, such as *Yigao* 易稿, *Yiyao* 易钥, *Yikao* 易考, *Yiyin Yuangao* 易引原稿 so on.[28] In his other article, *The Yijing (Classic of Changes) in global perspective: some reflection*[29], he separately discusses the development of the *Yijing* both in East Asia and the West, and compares the *Yijing*, the *Bible*, the *Qu'ran* of Islam and the *Vedas* of India. Incidentally, he also mentions Bouvet's manuscripts. In his *Fathoming the Cosmos and Ordering the World: The Yijing (I-Ching, or Classic of Changes) and Its Evolution in China*, published in 2008, in the section *The Kangxi Era in Changes Scholarship*, he outlines the *Yijing* study and relevant activities of Bouvet in China. In particular, he relates that the *Yijing Zonglungao* 易经总论稿 and *Tianzun Dibei tu* 天尊地卑图 are stored in Vatican library,[30] but no further study on them is offered.

One of Bouvet's 16 writings, the *Gu Jin Jing Tian Jian* 古今敬天鉴 (*A Record of Heaven-Worshiping Since Ancient Times*), has drawn the attention of, and has

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[27] Paulos Huang 黄保罗. (2011). *Sino-Christian Academic Figurist Theology: An Analysis of the Cultural Dialogical Attempt by some French Jesuits in Following the Footprints of Matteo Ricci* 汉语索引神学—对法国耶稣会士续讲利玛窦之后文明对话的研究. Journal of Shenzhen University (Humanities & Social Sciences), No.2.

[28] Richard J. Smith. (2001). *Jesuit Interpretations of the Yijing (Classic of Changes) in Historical and Comparative Perspective*. Article based on the conference "Matteo Ricci and After: Four Centuries of Cultural Interactions between China and the West," sponsored by the City University of Hong Kong and Beijing University; October 13-16.

[29] Richard J.Smith. (2002). *The Yijing (Classics of Changes) in global perspective:some reflection*. Paper for the *Book of Changes* World Conference, Taipei, Taiwan, September 28-October 2.

[30] Richard J. Smith. (2008). *Fathoming the Cosmos and Ordering the World: The Yijing (I-Ching, or Classic of Changes) and Its Evolution in China*. University of Virginia Press.

been studied by, a number of scholars. The most relevant of these include Claudia von Collani's *Tianxuebenyi - Joachim Bouvet's Forschungen zum Monotheismus in China;* David E. Mungello's *Unearthing the manuscripts of Bouvet's 'Gu jin' after nearly three centuries*; Xu Zongze's 徐宗泽 *The Summaries of Jesuits translations and writings during Ming and Qing Dynasties* 明清间耶稣会士译著提要 and Zheng Ande's 郑安德 *Collections of Materials on Jesuit Thoughts during the late Ming and early Qing Dynasties* 明末清初耶稣会思想文献汇编.[31] In his *The Hermeneutical Circle: The Interpretation of Confucian Texts by Late Ming and Early Qing Missionaries and Local Responses* 诠释的圆环：明末清初传教士对儒家经典的解释及其本土回应, Liu Yunhua 刘耘华 analyzes the main approaches that Bouvet followed in compiling his work.[32] He takes *Gu Jin Jing Tian Jian* as a single interpretational case of the missionary's production from a hermeneutical perspective. Xiao Qinghe 肖清和 also carried out a further study based on the previous researches. His article *Interpretation and Renewal: On Joachim Bouvet's (1656-1730) Doctrine of Revering Heaven during the Early Qing Dynasty* 诠释与更新：清初传教士白晋的敬天学初探[33], explores the main content, the meaning, and the hermeneutical strategy of Bouvet's doctrine of Revering Heaven.[34] Quan Hui 全慧 points out that there are always different opinions about the relationship between *Gu Jin Jing Tian Jian* 古今敬天鉴 and *Tian Xue Ben Yi* 天学本义 as they were written in different times. But the most common point of view assumes that they are the same book with two different

[31] Collani Claudia von (1988), *Tian xue ben yi - Joachim Bouvet's Forschungen zum Monotheismus* in China Mission Studies (1500-1800) Bulletin 10, p. 9-33; Mungello, David E. (1988), *Unearthing the manuscripts of Bouvet's 'Gu jin' after nearly three centuries,* in China Mission Studies (1500-1800) Bulletin 10, p. 34-61; Xu, Zongze 徐宗泽(2010), *The Summaries of Jesuits Translations and Writings during Ming and Qing Dynasties* 明清间耶稣会士译著提要, Shanghai Book Shop Press, Shanghai; Zheng, Ande (2003), *Collections of Materials on Jesuit Thought during the late Ming and early Qing Dynasties* 明末清初耶稣会思想文献汇编, Institute of Religions, Beijing: Peking University.

[32] Liu, Yunhua 刘耘华 (2005), *The Hermeneutical Circle: The Interpretation of Confucian Texts by Late-Ming and Early-Qing Missionaries, and Local Responses* 诠释的圆环：明末清初传教士对儒家经典的解释及其本土回应. Beijing: Peking University Press.

[33] Xiao, Qinghe 肖清和 (2014). *Interpretation and Renewal: On Joachim Bouvet's (1656-1730) Doctrine of Revering Heaven during the Early Qing Dynasty* 诠释与更新：清初传教士白晋的敬天学初探. Journal of Comparative Scripture, Vol. 4, p. 198-242.

[34] *Ibid*., p. 242.

titles. There are multiple copies of *Gu Jin Jing Tian Jian* in different places.[35] The copy of the Vatican library, however, has not often been used, because it is still unpublished.

There are still few studies on Bouvet and his thought, especially on his study of *Zhouyi*, and although some scholars, both Western and Chinese, have produced valuable and meaningful works on such study, most of their research has been done in a perspective of communication between the Chinese and Western culture, the history of Qing dynasty or the history of the spreading of Catholicism in China. So far few scholars have conducted direct researches on Bouvet's sixteen Chinese writings conserved in the Vatican library. And this is true especially of studies in a perspective of Chinese traditional philosophy of *Zhouyi*. This explains Zhang Xiping's comment: "My reference to documents is limited because of the limited number of documents and books I have been able to consult. Personally, I have not yet seen any in-depth introduction and research directly on Bouvet's Chinese writings in the Vatican library."[36]

When I began to research this dissertation, Dr. Chen Xinyu published her doctoral thesis, *Joachim Bouvet's Yijing Investigations– A study of the Chinese Materials in the Vatican Library*[37]*.* It is no doubt the first study to give a complete introduction of Bouvet's idea of *Yijing* study based on the Vatican collection. Chen's work sets itself apart by being the first to conduct direct research on Bouvet's Chinese writings. Before her, these materials had been noted or mentioned sporadically, but the specific *Yijing* idea of Bouvet had not been comprehensively studied. In addition, Chen's work is not from the perspective of

[35] Quan, Hui 全慧. (2014). *Textual Criticism and Interpretation of the Unpublished Works by the Famous "Figurist" Joachim Bouvet*"索隐派"的集大成者——白晋未刊作品考释. International Sinology, Vol. 1, p.122.

[36] Zhang, Xiping，*An instructional examination*, p. 20.

[37] Chen, Xinyu 陈欣雨.(2017). *Bai Jin yixue sixiang yanjiu: Yi fandigang tushuguan jiancun Zhongwen yixue ziliao wei jichu* 《白晋易学思想研究：以梵蒂冈图书馆见存中文易学资料为基础》. Beijing: Renmin Press.

the history of Christian religious communication, nor is it limited to the history of cultural communication, but it explores the westward development of *Yijing* by using the traditional interpretation of Chinese classics. Chen's work does not stop at the level of introduction and translation of Bouvet and of his two disciples, Foucquet and Premare's *Yijing* study, but rather analyzes their research methodology and thought characteristics, however limiting itself to combing and synthesizing the contents of the manuscripts, without deeply delving into Bouvet's research, in particular his image-numerology. And even the great influence and significance on *Yijing* study on Chinese and Western scholars by Bouvet was not given enough attention in her work.

While contributions offered so far by respected scholars seldom go beyond the lively scholarly interchange between China and the West, the focus of the present dissertation is to go back to the ancient *Zhouyi* study tradition and, based on that tradition, conduct a first-hand study on Bouvet's original Chinese manuscripts. In particular, going beyond Chen Xinyu's valuable work on the manuscripts, the dissertation studies the characteristics of Bouvet's *Yijing* study from two perspectives, 'Inner' and 'Outer', that is, from the perspective of his theological analysis and that of his image-numerological interpretation of *Yijing* in order to examine and discuss key concepts contained in the traditions of the ancient classic. In the process, the dissertation brings to light the traditional research paradigm of *Zhouyi* behind Bouvet's persistent work, and the great influence on important academic achievements both in China and the West at that time, as well as the significance of Bouvet's intuition and investigation for Catholic evangelization today. As such, this thesis is primarily a work of the history of philosophy, augmented by philosophical analysis and assessment on various issues.

Thanks to Dr. Yu Dong's kind help, I was able to obtain full copies of this batch of

Bouvet's Chinese manuscripts kept in the Vatican library.[38] On the basis of these original documents, this thesis intends to carry out a direct and comprehensive research from the perspective of *Zhouyi* philosophy.

1.2. Research materials

Introduction of Bouvet's 16 Chinese manuscripts

Rome's Vatican Apostolic Library is one of the most prestigious manuscript libraries in the world as well as one of the libraries which collect most Catholic documents of China's Ming and Qing dynasties. According to Zhang Xiping, research on these Chinese manuscripts relies mainly on two directories. The first is based on Paul Pelliot's 伯希和 *Inventaire sommaire des manuscrits et imprimes chinois de La Bibliotheque Vaticane* 梵蒂冈图书馆所藏汉文写本和印本简明目录, rearranged and published by contemporary scholar Takata Tokio in 1995. The other directory is Yu Dong's 余冬 *Catalogo delle Opere Cinesi Missionarie della Biblioteca Apostolica Vaticana <XVI-XVIII SEC>*梵蒂冈图书馆藏早期传教士中文文献目录（十六至十八世纪）, published by the Vatican library in 1996.

Compared with Pelliot's directory, Yu Dong's work appears as a monographic directory mainly targeting the Chinese writings of early missionaries from 16th to 18th centuries, so that the manuscripts are classified according to a list of the missionaries, presumably their authors' names. Bouvet's Studies of *Zhouyi* occupy several pages of Yu Dong's directory, which lists 16 documents on the study of *Zhouyi* that are ascribed to Bouvet. In Pelliot's directory, the writings assigned with certainty to the French missionary are five, while eleven other documents are classified as of uncertain authorship, also summing up to a total of sixteen writings. Hence, according to Zhang Xiping, Yu Dong's work marks a clear step forward, made possible by Takata Tokio's rearrangement of the

[38] Dr. Yu Dong 余冬 is Head of the Chinese department of the Vatican Apostolic Library. The study of the research materials that follows is based on her catalogue. See note 23 above.

documentation. Dr. Yu Dong un-hesitantly attributes to Bouvet the eleven documents that Pelliot's directory classifies as of uncertain authorship.[39]

This thesis is based on the copies of Bouvet's sixteen Chinese manuscripts[40] as contained in Yu Dong's directory. These are:

Serial number	Yu Dong's classification	Titles	Paul Pelliot's number
1	**25-1**	***Tian xue ben yi (Jing tian jian)*** **天學本義（敬天鑒）二卷**	**Borgia Cinese 316 (14)**
2	**26-2**	***Yi yin (Yi kao)*** **易引（易考）二卷**	**Borgia Cinese 317 (6)**
3	**27-3**	***Ze ji jing shu tian xue zhi gang*** **擇集經書天學之綱**	**Borgia Cinese 317 (15)**
4	**28-4**	***Zong lun bu lie lei luo shu deng fang tu fa*** **摠论布列类類洛書等方圖法**	**Borgia Cinese 317 (12)**
5	**29-5**	***Tian xiang bu jun qi kao gu jing ji jie (Ju gu jing zhuan kao tian xiang bu jun qi)*** **天象不均齊攷古經籍解（據古經傳攷天象不均齊）**	**Borgia Cinese 380 (7)**
6	**30-6**	***Tian ji lue shuo*** **太極略说**	**Borgia Cinese 317 (5)**
7	**31-7**	***Shi xian tian wei bian shi zhong zhi shu you tian zun di bei tu er sheng*** **釋先天未變始终之數由天尊地卑圖而生**	**Borgia Cinese 317 (11)**
8	**32-8**	***Yi xue wai pian yuan gao*** **易學外篇原稿（十三節）**	**Borgia Cinese 361 (6)**
9	**33-9**	***Yi xue wai pian*** **易学外篇八節**	**Borgia Cinese 317 (4)**
10	**34-10**	***Yi xue zong shuo*** **易学總说**	**Borgia Cinese 317 (8)**
11	**35-11**	***Yi jing zong shuo hui*** **易经總说彙**	**Borgia Cinese 317 (3)**

[39] Zhang, Xiping，*An instructional examination*, p. 22.

[40] In addition, there are 6 other relevant documents, Emperor Kangxi's edicts and responses. 41-17 [*Shangyu* 上谕]; 42-18 [*Zougao* 奏稿]; 43-19 [*Zougao* 奏稿]; 44-20 [*Zo gao* 奏稿]; 45-21 [*Zou gao* 奏稿]; 46-22 [*Shangyu* 上谕].

12	**36-12**	***Yi gao*** **易稿**	**Borgia Cinese 317 (7)**
13	**37-13**	***Yi yao*** **易鑰**	**Borgia Cinese 317 (16)**
14	**38-14**	***Yi yao zi xu*** **易鑰自序**	**Borgia Cinese 317 (2)**
15	**39-15.**	***Zhou yi yuan yi nei pian*** **周易原義内篇**	**Borgia Cinese 317 (9)**
16	**40-16**	***Zhou yi yuan zhi tan mu lu*** **周易原旨探目録 理數内外二篇**	**Borgia Cinese 317)**

2. *Yijing* study by missionaries in late Ming and early Qing dynasties

Chinese and Western scholars hold divergent views regarding the earliest time of *Yijing*'s transmission to the West. Lin Jinshui thinks that *Yijing* was first introduced to the West by Jesuit missionaries towards the end of seventeenth century, during Kangxi's reign (1654-1722). Although Jesuit missionary Matteo Ricci 利玛窦 (1552-1610) was the first westerner to study the *Yijing* at the end of the Ming Dynasty, the person who first introduced the *Yijing* to the West was another Jesuit, Philippe Couplet 柏應理 (1623-1693).[41] Zhang Xiping, while agreeing that Matteo Ricci was the first to study the *Yijing*, holds that the *Yijing* was first introduced to the West by yet another Jesuit missionary, namely Alvaro de Semedo 曾德昭 (1586-1658)[42]. Wang Jiadi points to Martino Martini 卫匡国 (1614-1661) as the first person who gave a significant contribution to the spreading of *Yi*-studies westwards. In his *Sinicae historiae decas prima*, published in Munich in 1658, Martini wrote that the *Yijing* was not only the oldest

[41] Lin, Jin-shui. (1988). *The Preliminary Summary on the Westward Spread of Yijing* 易经传入西方考略. Literature and History, Vol. 29, 文史第二十九辑, p. 366.

[42] Zhang, Xi-ping. (1998). *The Early Spread of Yijing in West* 易经在西方早期的传播. Research of Chinese Culture 中国文化研究, Vol. Winter (22), p. 123.

Chinese book, but also the first work on science and mathematics.[43] Li Yiyin states that, among western scholars, Belgian missionary Nicolas Trigault 金尼阁 (1577-1628) was the earliest translator of *Yijing*. He had come to China to work as a missionary in 1610, under Ming Emperor Wan Li 万历, and translated and published the *Yijing* in Latin in Hangzhou in 1626. In that sense, the history of "Western *Yi*-study" is a little more than three hundred years old.[44] Richard J. Smith thinks that the westward movement of *Yijing* began in the late sixteenth century, and the first book in a European language to give substantial attention to the *Changes* was a Jesuit compilation known as *Confucius Sinarum Philosophus* (Confucius, Philosopher of the Chinese, 1687).[45] Although scholars do not have a consensus on the specific time or person, there is one thing which can be affirmed, that Western "missionaries" made a considerable contribution to the early westward spreading of *Yijing*. It can be said without exaggeration that their research literature on *Yi*-study still affects contemporary Western scholars. As protagonists of *Yijing*'s transmission, Jesuit missionaries shared their research and publications with their contemporaries in the West at least for over three centuries, from the late 16th to the early 20th century. Hence we can rightly call this phase the "Missionaries' *Yi*-study stage".

2.1. The early stage of missionaries' *Yi*-study

A direct and systematical study of *Yijing* in the West was begun in the late 16th century by a group of European Jesuits. Their primary purpose was missionary work, yet they amazingly left a collection of scholarly works on *Yi*-study in Chinese characters. Richard J. Smith states,

> Beginning in the late sixteenth century, in a pattern replicated in many other parts of the world, Jesuit

[43] Wang, Jia-di. (Feb., 2010). *Translation and Study on I Ching of Western Missionaries and Research on Sinology of Figurism in Late Ming and Early Qing Dynasty* 明末清初来华传教士对易经的译介及索隐派的汉学研究. Vol. 10, No. 1, p.111.
[44] Li, Yi-ying. (1991). *Studies of I Ching in West* 易学在西方. Studies, No. 10, p.152.
[45] Smith, Richard J. (2012). *How the Book of Changes Arrived in the West*. New England Review, Vol. 33, No. 1, p.25.

> missionaries traveled to China, attempting to assimilate themselves as much as possible to the host country. They studied the Chinese language, learned Chinese customs, and sought to understand China's philosophical and religious traditions - all with the goal of winning converts by underscoring affinities between the Bible and the Confucian classics. Naturally the Changes served as a major focus for their proselytizing scholarship.[46]

Hence, the westward spread of *Yi*-study actually began with the eastward transmission of Western religion and culture. Westerners came to China for doing missionary work, pioneered by Jesuits, many of whom were Italian missionaries. Among them, Matteo Ricci is undoubtedly considered by most scholars as the first to have studied the *Yijing*.

Matteo Ricci first arrived in Zhaoqing 肇庆, Guangdong Province, in 1583, and then moved up to Beijing, where he lived from 1601 until the end of his life, in 1610. In the first edition of his *The True Meaning of the Lord of Heaven* 天主实义 (1595, 23rd year of emperor Wan Li), he proposes that *Tianzhu* 天主, the Lord of Heaven, the God of the *Bible* and *Shangdi* 上帝, the God of *Yijing*, are one and the same. He writes, "*Yi* says: 'God comes out from the Zhen[47] position of East, the God of Heaven does not mean the substance of heaven, since the heaven embraces eight positions, how can it come out from one position only?.....after reading the ancient classics, I know that God and the Lord of Heaven are the same, only with different names." [48] Basically, here Ricci rejects Neo-Confucianism: he thinks that the Confucian *Taiji* 太极 theory of Song Dynasty is paltry, and refutes it affirming, "I heard that the ancient sages worshipped the God of Heaven and Earth; I never heard of them worshipping the *Taiji*; if the *Taiji* is the God of ancestors, why would the sages of old conceal this theory?"[49] Yang Honsheng believes that Ricci's dispute regarding *Taiji* was not

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[46] *Ibid*.

[47] *Zhen* ☳(震) Trigram

[48] 《易》曰：'帝出乎震'天帝也者，非天之谓，苍天者抱四方，何能出于一乎？……历观古书而知上帝与天主，特异以名也．Zhu, Weizheng. (2001). *The Collection of Matteo Ricci's Chinese Literatures* 利玛窦中文著译集. Shanghai: Fudan University Press 复旦大学出版社.

[49] 但闻古先君子敬慕于天地之上帝，未闻有尊奉太极者，如太极为上帝之祖，古圣何隐其说？ *Ibid.*

specifically raised to discuss the *Yi*-study issue, being interested merely on the question of religion and culture. Matteo Ricci treated the *Yijing* as one of the early Confucian classics, and treated all Confucian classics as a kind of philosophy based on natural law, rather than on religion as such. He tried to reconcile Confucianism with Christianity,[50] but never thought that by doing this he was sowing the seeds of the future "Chinese Rites Controversy," which climaxed in the early 18th century.[51] A disciple of his, Belgian Jesuit Nicolas Trigault 金尼阁 (1577-1628), translated the *Yijing* with other "four Confucian classics" - *Shi* 诗、*Shu* 书、*Li* 礼、*Chunqiu* 春秋 - into Latin and published it in Hangzhou in 1626. He followed his teacher in trying to establish a link between Eastern traditional thought and Christianity. Trigault is considered as the earliest translator of *Yijing* into a western language, but unfortunately his edition was lost. Even so, his work obviously influenced the *Yijing*'s Latin translation by later Jesuits.

Yang Honsheng also mentions two other missionaries, Nicolaus Longobardi 龙华民 (1559-1654) and Julius Aleni 艾儒略 (1582-1610): the former was the successor of Matteo Ricci as Jesuit superior in Beijing, while the latter was a disciple.[52] Rather than studying the value and the ideological significance of *Yijing*, both concentrated on opposing the Confucian *Taiji* theory, hence scholars disregard them as researchers of *Yi-study*. So, who was the earliest person to introduce the *Yijing* to the West? Ling Jinshui thinks it was Philippe Couplet.[53]

Philippe Couplet 柏應理 (1623-1693), a Belgian Jesuit, arrived in China in 1659 and did missionary work for twenty-three years in the regions south of the

[50] Yang, Hon-sheng. (2003). *Theories on Yi by the Jesuit missionaries in China at the turn of the Ming and Qing dynasties* 明清之际在华耶稣会士之易说. Studies of Zhouyi, No. 6, 2003 (62), 41-51.

[51] Chinese Rites Controversy 中国礼仪之争: 17th to 18th century dispute among Catholic missionaries as to whether certain Chinese traditional customs were superstitious, and hence against Catholic doctrine. At one stage the controversy involved also Emperor Kangxi and the missionaries, especially as regards the worship of Confucius.

[52] Yang, Hon-sheng, *Theories on Yi*, 41-51.

[53] Lin, Jin-shui. (1988). *The Preliminary Summary on the Westward Spread of Yijing* 易经传入西方考略. Literature and History, Vol. 29, 文史第二十九辑, p.365-382.

Yangtze River.[54] He translated the "*Four Books* 四书" [55] into Latin together with other Jesuits who lived in China, Christian Herdtricht 恩理格 (1625-1684), Prospero Intorcetta 殷铎澤 (1625-1676) and others. The title of this compilation is known as *Confucius Sinarum Philosophus* 中国哲学家孔子. An appendix to the book, which was published in Paris in 1687, featured the Sixty-four hexagrams of *Yijing* and their meaning. Western readers began to learn about the *Yijing* from it.[56] However, Zhang Xiping holds a different opinion as to who first introduced the *Yijing* to the West: Jesuit Alvaro de Semedo preceded Philippe Couplet by several decades.

Alvaro de Semedo 曾德昭 (1586-1658), a Portuguese Jesuit, arrived in China in 1613 and worked as a missionary in Nanjing. In his book *Relatione della grande Monarchia della China* 中华大帝国史, he referred to *Yijing* when he introduced Confucianism and the Classics. He said that *Yijing* was a piece of literature pertaining to natural philosophy, and it could use the natural law to predict the future and calculate bad or good fortune.[57] Semedo's book was published in Portuguese in Madrid in the year 1641. In addition, he was the first western scholar to point out the research on *Yijing* by the Neo-Confucians of the Northern Song dynasty. He wrote, "The Neo-Confucians regained their alleged Confucian orthodoxy through reinterpreting *Yijing.*"[58] According to Zhang and others, there was yet another key person who contributed significantly to the westward transmission of *Yijing*: Martino Martini.

Martino Martini 卫匡国(1614-1661) was also an Italian Jesuit. In his book on Chinese history, the *Sinicae historiae decas prima* 中国上古史, published in Munich in 1658, he pointed out that chronologically and historically speaking the

[54] Shanghai, Suzhou, Zhenjiang, Huaian.
[55] *Analects* 论语、*Mengzi* 孟子、*Great Learning* 大学、*Mean* 中庸.
[56] Lin, Jin-shui, *Preliminary Summary*, p,365-382.
[57] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology.* Honolulu: University of Hawaii Press, p. 83.
[58] Zhang, Xi-ping. (1998). *The Early Spread of Yijing in West* 易经在西方早期的传播. Research of Chinese Culture 中国文化研究, Vol. Winter (22).

Yijing was not only the oldest Chinese book, but also China's first scientific and mathematical work.[59] Zhang Xiping thinks that Martini had two important contributions on the westward movement of *Yi*-study. He was the first to point out to western audiences Fuxi as the earliest author of *Yijing*, as he was the first to give a preliminary introduction of the contents of *Zhouyi*. He explains to his readers that the "*Yin*" represents concealment and incompletion, while the "*Yang*" represents openness and completion. The combination of *Yin* and *Yang* constitutes the Eight trigrams, and the repeating change of the eight trigrams constitutes the Sixty-four hexagrams. The Sixty-four hexagrams separately symbolize and indicate the various changes and development of nature and society. In other words, Martini's book announced the Sixty-four hexagrams figure to Europe twenty-seven years before Philippe Couplet did so.[60]

All the above mentioned missionaries made rich and important contributions on *Yi*-study's westward transmission; yet theirs was just an introduction of *Yijing* to the West. It was not until the latter part of the 17th century that a group of French missionaries really produced an in-depth study of *Yijing* and transmitted it to the West. In a sense, they benefited from the "Chinese Rites Controversy" then raging, and from the inspiration of Qing Emperor Kangxi (1654-1722). They are the main characters of this dissertation: French Jesuits Joachim Bouvet and his Figurist companions.

2.2. Emperor Kangxi and the missionaries' *Yijing* study

In 1687, in response to the invitation of Emperor Kangxi, King Louis XIV of France dispatched five French Jesuits to China. They were Joachim Bouvet 白晋

[59] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 128.
[60] Zhang, Xi-ping. (1998). *The Early Spread of Yijing in West* 易经在西方早期的传播. Research of Chinese Culture 中国文化研究, Vol. Winter (22).

(1656-1730), Jean-Francois Gerbillon 张诚 (1654-1707), Jean de Fontaney 洪若翰 (1643-1710), Louis-Daneil Le Comte 李明 (1655-1728) and Claude de Visdelou 刘应 (1656-1737). In 1697, Joachim Bouvet went back to France by order of Kangxi to have ten more missionaries dispatched by the King. These were Joseph Henri-Marie de Premare 马若瑟 (1666-1736), Dominique Parrenin 巴多明 (1665-1741), Jean-Baptiste Regis 雷孝思 (1663-1738) and several others. Yang Honsheng believes that these two groups of French Jesuits, in particular Bouvet, Comte, Visdelou, Premare, Regis and later P. Antonius Goubil 宋君荣 (1722-175), P. Alexander de la Charme 孙璋 (1728-1767), and P. Joan-Joseph Maria Amiot 钱德明 (1750-1793) were the first scholars who transmitted the *Yijing* to the West.[61] Among them Bouvet, together with his Figurist friends, was by far the most influential.

In brief, the Figurists tried to find in Old Testament texts evidence of the coming and significance of Jesus Christ through an analysis of “letters, words, persons, and events”. In other words, apart from and beyond the literal meaning of the “outer” text, there existed – they believed - a hidden, “inner” meaning to be discovered. In China, this gave rise to a concerted effort to find reflections (that is, “figures”) of the biblical patriarchs and examples of biblical revelation in the Chinese classics themselves.[62] The basic tendency of the Figurists was to identify Christian relics in Chinese traditional classics, in particular in the *Yijing*. As a matter of fact, Figurism turned out to be a product of the “Chinese Rites Controversy”. By the method of textual research, Figurists hoped both to be accepted by the Qing government and obtain support for their missionary work from the Rome and European society at large. The main members of this group of scholars included Jean-Francois Fouquet 傅圣泽 (1665-1741), Joseph Henri-Marie de Premare 马若瑟 (1666-1736) and J. Alexis de Gollet 郭中传

[61] Yang, Hon-sheng. (2003). *Theories on Yi by the Jesuit missionaries in China at the turn of the Ming and Qing dynasties* 明清之际在华耶稣会士之易说. Studies of Zhouyi, No. 6, 2003 (62), 41-51.
[62] Smith, Richard J. (2012). *How the Book of Changes Arrived in the West*. New England Review, Vol. 33, No. 1, p.26.

(1664-1741), while the founder was Joachim Bouvet.

Joachim Bouvet 白晋 (1656-1730) was one from among the first batch of French Jesuits to arrive in Beijing. Together with Jean-Francois Gerbillon, he tutored Emperor Kangxi in algebra and geometry, eventually winning the favor of the emperor, who considered him as the only Westerner who "knew a little Chinese literature". Bouvet knew both the Han characters and the Manchu script and started learning the *Yijing* at the beginning of his sojourn in China. His research on *Yi*-study was a prolific one, as it filled some sixteen papers of various length in Chinese, now the precious property of the Vatican Apostolic Library. He returned to France under Kangxi's orders and made a public speech in Paris in 1697. He said,

> Although the assertion (mine) could not be considered as the opinion of the Jesuits, since most Jesuits so far thought that the *Book of Changes* was awash with superstition, and that its theory does not have any basis […] Chinese philosophy is reasonable; at least, it is as good as the philosophy of Plato and Aristotle. *The Book of Changes* embraces the principle of the first creator of Chinese monarchy and that of the first Chinese philosopher (Fuxi)… Besides, apart from letting the Chinese understand how our religion is consistent with their ancient reasonable philosophy, I don't believe there is anything else in this world that could better promote Chinese thought and spirit to understand our sacred religion.[63]

Although Rome proscribed all of Bouvet's Figurist writings and forbade him to spread his Figurist ideas among the Chinese, these writings captured the attention of some prominent European scholars, in particular the great German philosopher and mathematician, Gottfried Wilhelm Leibniz 莱布尼茨 (1646-1716). Bouvet met Leibniz in Paris and started to communicate by letter even after his own return to China with ten other missionaries in 1698. Among these letters, the most important one was sent to Leibniz by Bouvet on November 4th, 1701: the letter dealt with the binary principle of *Yijing*. When Bouvet sent a copy of Shao Yong's 邵雍 (1011-1077) diagram (the Sixty-four hexagram's position) to Leibniz, the latter was ecstatic to see cross-cultural confirmation of his binary system. His

[63] Lin, Jin-shui, *Preliminary Summary*, p. 367.

system was dismissed and rejected by the French Academy of Sciences, which was found and demonstrated in the ancient *Yijing* of China. Smith thinks that in a sense, the Bouvet-Leibniz exchange serves as a metaphor for the problems facing exponents of a Chinese-Christian synthesis in both China and Europe.[64] This shows that Bouvet's letter played an important role in the westward spread of *Yijing*. In a sense, the discovery of *Yijing*'s binary principle was attributed to Emperor Kangxi since Bouvet learned Shao Yong's imagery and numerology of *Yi*-study under the guidance of His Majesty.

Bouvet's study of *Yijing* could not be done without the support of Emperor Kangxi. Kangxi not only provided all the convenience to Bouvet and his colleagues for studying the *Yijing*, but also sometimes gave them instructions. During Bouvet's studies, Kangxi repeatedly inquired about his progress to show his concern and interest. The emperor even volunteered to explain the *Yijing* to Bouvet. According to one record, Kangxi said,

> Bouvet will certainly need to read a large variety of books to study the *Yijing*, then he can verify the meaning of the contents. If he refuses to read other books because he disagrees with the ideologies and opinions he finds in them, then he will not be able to properly study the *Yijing*. Take Shao Kangjie as an example: he was a famous expert in the principles of *Yijing*, but all his divinations were written by his disciples rather than by him. If one does not verify his subtle numerology for reference, how can one find the supporting evidence? Tell Bouvet to read the Chinese classics carefully, despite the ideological and religious conflicts.[65]

According to this record, Kangxi reminded Bouvet of the need to read a variety of books and have the courage to face existing ideological and religious conflicts, warning the missionaries not to fall into the trap of pragmatism when studying the *Yijing*. He hoped that when transmitting *Yijing* to the West they should reflect and

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[64] Smith, Richard J. (2012). *How the Book of Changes Arrived in the West*. New England Review, Vol. 33, No. 1, p. 27.

[65] 白晋释《易经》，必将诸书俱看，方可以考验。若以为不同道则不看，自出己意敷衍，恐正书不能完，即如邵康节，乃深明易理者，其所有占验，乃门人所记，非康节本旨，若不即其数之精微以考查，则无所倚，何以为凭据？尔可对白晋说：必将古书细心校阅，不可因其不同道则不看。
Lin, Jin-shui, *The Preliminary Summary*, p.368-369.

represent the Chinese orthodox Confucianism prevailing at that time rather than producing a concoction of individual opinions by the missionaries. This also indicates Kangxi's awareness of Bouvet's thoughts and difficulties, as a French missionary, in understanding the *Yijing*. After a period of study, Bouvet felt that the *Yijing*'s study was too difficult to be carried out by him alone. Hence, he requested Emperor Kangxi to invite another scholar to assist him in his research.[66] The emperor agreed with this request, and so Bouvet was soon joined by Jean-Francois Fouquet.

Jean-Francois Fouquet 傅圣泽 (1665-1741), also a French Jesuit, moved to Beijing to work with Bouvet in the *Yijing* project in 1711, the 50th year of Kangxi's reign. Though a Figurist, he eventually disagreed and came into conflict with Bouvet. The document just quoted indicates that Fouquet was with Bouvet for no more than two years: after having written numerous articles on *Yijing* and Chinese culture, he went on to study astronomy and mathematics on his own[67]. French sinologist Jean Pierre Abel Remusat 雷慕沙(1788-1832) points to Fouquet as a key member of the Figurists: "Among the missionaries, Fouquet was extremely eager to find Christian remnants in Chinese characters. He was bewildered…and startlingly believed that a certain mountain in the Chinese classic was the one on which Jesus had been crucified, that words praising King Wen and Zhou Gong were actually praising the Savior, or that ancient Chinese emperors actually were the "Judges" in the Bible."[68] Yang Honsheng further tells us that Fouquet's thought was extremely visionary, and this put him in a collision course not only with Bouvet, but even with the thought of Matteo Ricci, as he went too far. His radical ideas were spiritually closer to science. He was all taken

[66] Bouvet said that there was a Westerner living in Jiangxi who had read many Chinese books, and was able to give him assistance. (Fang Hao, 1987:1054-1057)

[67] Zhang, Xi-ping. (2007). *Conversations between China and the West: The missionaries in early Qing Dynasty and their researches on the Book of Changes*. Front. Hist. China, 2(4), p.474-475.

[68] Pfister, Louis 费赖之 & Feng, Cheng-jun trans. (1995). *Notices Biographiques Et Bibliographiques Sur Les Jesuites De L'Ancienne Mission De Chine 1552—1773* 在华耶稣会士列传及书目. Beijing: Zhonghua Book Company 中华书局 p.556.

up by academic work and immersed himself in research on the Calendar.[69]

In addition to Bouvet and Fouquet, other missionaries contributed to the westward spread of *Yijing*. The most representative are mentioned here.

Joseph Henri-Marie de Premare 马若瑟 (1666-1736), one of the ten French Jesuits who later joined the China mission at Bouvet's invitation, was also a key exponent of Figurism and the precursor of French sinology. Premare read Chinese classics extensively with the aim of finding quotes in Chinese classics for illuminating the Christian message. His objective was not dissimilar to Fouquet's, even though his understanding differed from Bouvet's and Fouquet's. According to Premare, "The entire Chinese religious thought was contained in the classics; in them, in terms of the basic doctrine, people could discover that the ancient Chinese acquired the natural law from the sons of Noah. They taught people the knowledge of God and how to respect God."[70] His Chinese work *Discussion on Classics and Commentaries* 经传论 totaled twelve chapters, one of them being *Yi-Discussion* 易论. In the West, his most influential literature was *Notes critiques pour entrer dans l'intelligence de l'Y King* 易经入门注释 (French version). In this book, he gave the specific introduction of *Yijing* in his own understanding and as discussed with Bouvet and Fouquet.

French Jesuit Fr. Claude de Visdelou 刘應 (1656-1737) came to China with Joachim Bouvet in 1687. He was one of the early Jesuits who made annotations on the *Yijing*, which were then appended at the end of the *Translation of the Book of History* 书经译本 by Antoine Gaubil, (1689-1759), and it was edited in *Livres Sacres de l'Orient* 东方圣经. Visdelou's understanding of *Yijing* and his explanations of trigrams were different from Bouvet's. He thought that the symbol

[69] Yang, Hon-sheng. (2003). *Theories on Yi by the Jesuit missionaries in China at the turn of the Ming and Qing dynasties* 明清之际在华耶稣会士之易说. Studies of Zhouyi, No. 6, 2003 (62), p. 47.
[70] Fang, Hao. (1987). *History of Relation on Chinese and Western* 中西交通史. Changsha: Yuelu Press 岳麓书社.

of trigrams was created by Fuxi, but there were many different explanations of trigrams in old books due to different authors who wrote in different times. Since he supported the point of view of the Pope in the “Chinese Rites Controversy”, his writings were appreciated in Rome. Together with his confrere Antoine Gaubil 宋君荣 he was a constant and powerful critic of Figurism. His main contribution was the translation of *Yizhuan*. He thought that the *Yizhuan* was Confucius’ own commentary on King Wen and Zhou Gong’s statements about hexagrams and lines.[71]

Jean-Baptiste Regis 雷孝思(1663-1738), also a French Jesuit, came to China with Joseph Henri-Marie de Premare. His Latin translation of *Yijing* was its first complete version in the West. The original title of his translation was *Y-King antiquissimus Sinarum liber* (*Yijing*, a Very Old Chinese Book). It was subsequently published in Stuttgart in 1834 and Tubingen in 1839. It is divided into three volumes. The first volume contains overviews on the *Yijing* in the eleven chapters which discuss the author, source and purpose of the book, as well as several of its commentaries. In particular, chapter eight deals with the book’s relationship with the *Five Classics* 五经. The author indirectly rejects the views of those missionaries who thought they had found conformity with Christianity in the *Five Classics*. The second volume is the translation of the original text and its commentaries, and includes also the author’s own annotations. The third volume is a critique of *Yijing.*[72] The completion of Regis’ book was based on the work of two other Jesuit commentators: Joseph Marie Anne de Moyriac de Mailla 冯秉正(1669-1748), founder of Sinology in France, who was in China since 1703, and was proficient in Chinese characters and history; and Pierre-Vincent de Tartre 汤尚贤(1669-1724), who had arrived China in 1701, and whose contribution consisted of special notes on some intractable

[71] Original text: Zhu, Qianzhi 朱谦之. (1985).*The Influence of Chinese Philosophy in Europe* 中国哲学对于欧洲的影响. Fujian: Fujian People Press 福建人民出版社.

[72] Fang, Hao. (1987). *History of Relation on Chinese and Western* 中西交通史. Changsha: Yuelu Press 岳麓书社.

portions of *Yijing*. Regis made liberal use of such notes. Of course, his erudition in the Chinese language is evident in his translation of the *Yijing*. He produced another piece of writing in Latin, *Dissertationes et Notae criticae in primam partem commentarij Y-King* 易经注疏第一卷评论 which is conserved in the National Library in Paris. Famous *Yijing* English translator, James Legge 理雅各 wrote of Regis' version, "It is so far the most valuable published translation."[73]

During the reign of Emperor Qianlong (1711-1799), from his prohibition of western religion to the final banning of Christianity, missionaries' *Yi*-study, which was so thriving under his grandfather Kangxi, began to decline. The Jesuits' *Yi*-study under Qianlong mainly continued along the lines prevalent in previous decades, even though there were some new outstanding works of research. Major figures in this period were P. Alexander de la Charme 孙璋 (1695-1767), and P. Jean-Joseph Marie Amiot 钱德明 (1718-1793). The former came to Beijing in 1728. His *Xinglizhenquan* 性理真诠 was not just another theological work produced by Jesuit missionaries in China; it was at the same time an important book which systematically discussed philosophical problems inherent to *Yi*-study. The book, which basically opposed the Neo-Confucian position, was translated into Manchu language in 1757. French Jesuit Fr. Amiot was an experienced scholar both in the West and in China. He was proficient in Chinese characters as well as in Chinese history, literature and arts. After the suppression of the Society of Jesus by Pope Clement XIV in 1773, Amiot still studied Chinese classics intensely until the end of his life. In his writings he discussed the issues of *Yi*-study to varying degrees, such as *L' antiquite des Chinois-Prouvee parles monuments* 中国古史实证(1775), *Abrege Chronologique de l' histoire universelle de l' empire chinois* 纪年略史(1770) and *Memoire sur la musique des Chinois tant anciens que modernes* 中国古代乐记(1776).[74]

[73] Legge, James (English trans.) & Qin Ying; Qin Sui (Chinese trans.) (1994). *Book of Changes* 周易. Changsha: Hunan Press 湖南出版社.

[74] Yang, Hon-sheng. (2003). *Theories on Yi by the Jesuit missionaries in China at the turn of the Ming and Qing dynasties* 明清之际在华耶稣会士之易说. Studies of *Zhouyi*, No. 6, 2003 (62), 41-51.

From the late 16th century to the end of the 18th century Western missionaries in China left a considerable number of works on *Yi*-study written mostly in western languages, with some notable exceptions: 16 writings in Chinese authored by Fr. Joachim Bouvet now conserved in the Vatican library. To put it frankly, in order to be successful, the westward movement of Chinese classics had to depend on translations, but in the two hundred years since the beginning of *Yi*-study only one Latin translation of *Yijing* was actually published and what the missionaries actually produced during this period were mainly introductory works. By contrast, Joachim Bouvet, the first western scholar to really study the *Yijing* from the philosophical perspective, not only followed the traditional study paradigm, but also proposed a new methodology in his 16 Chinese manuscripts of *Yijing* study, which had great influence and significance.

3. The life of Joachim Bouvet and a study of his 16 research papers on *Yijing*

3.1. Biography

Joachim Bouvet, 白晋 in Chinese,[75] was born on 18 July 1656 in or near Le Mans, France, of parents of the lower nobility. His father was a judge at the local high court, and he had two brothers and two sisters. He entered the Society of Jesus on October 9, 1673,[76] received his priestly ordination on January 13, 1685 and celebrated his first Mass the following day.[77] Shortly thereafter, on March 3, Bouvet began his journey to China with five fellow Jesuits, Louis XIV's mathematicians. He spent his entire life at the imperial court, except for the years 1693-1698 when he returned to France as a special envoy of Emperor Kangxi. He died in Beijing on June 29, 1730 and was buried there:[78] his tomb, or rather his tombstone, is now kept in the Stone Sculpture Art Museum of the Five-Pagoda temple in Beijing.[79] The Chinese and Latin inscription reads as follows,

> 耶穌会士白公之墓：耶穌會士白先生讳晋，號明遠。泰西拂郎濟亞國人。緣慕精修，棄家遺世，在會五十二年，於康熙二十六年丁卯東来中華傳天主聖教至雍正八年庚戌五月十五日卒於都城。年七十四歲。D.O.M. P. JOACHIMUS BOUVET GALLUS SOCIE. JESU PROFESSUS VIXIT IN SO. ANNIS LII IN MISS. SIN. ANNIS XLIII OBIIT PEKIN ANNO DOM. MDCCXXX DIE XXIX JUN. AETATIS ANN. LXXIV.[80]

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[75] The Chinese name of Joachim Bouvet is Bai Jin 白晋 or 白进; the other name, or 'Style name' (字) is Ming Yuan 明远.

[76] Louis Pfister, in line with the tombstone, gives October 9, 1678 as the date of his entry into the Society. Pfister, Louis 费赖之 & Feng, Chengjun trans. (1995). *Notices Biographiques Et Bibliographiques Sur Les Jesuites De L'Ancienne Mission De Chine 1552—1773* 在华耶稣会士列传及书目. Beijing: Zhonghua Book Company 中华书局, p. 434. Joseph Dehergne SJ 荣振华 gives October 9, 1673 as Bouvet's entry in the noviciate. Dehergne, Joseph 荣振华 & Geng Sheng 耿昇 trans. (1995). *Repertoire des Jesuites de Chine* 在华耶稣会士列传及书目补编. Beijing: Zhonghua Book Company, p. 78.

[77] *Biography of Joachim Bouvet SJ, China missionary*, (http://encyclopedia.stochastikon.com).

[78] After Kangxi's death, Bouvet was one of a few missionaries who were permitted to stay in Beijing till their death under Yongzheng 雍正 (1723-1736).

[79] Bouvet was buried in the Zhengfu temple in Beijing. His grave was later destroyed during the Boxers' Rebellion. See: 陈欣雨. (2017). *Bai Jin yixue sixiang yanjiu: Yi fandigang tushuguan jiancun Zhongwen yixue ziliao wei jichu* 白晋易学思想研究:以梵蒂冈图书馆见存中文易学 资料为基础, Renmin Press, Beijing, p. 95.

[80] The text has been copied from the tombstone, which I visited in Oct 2018: on the left side is the inese text and, on the right, the Latin text, the two separated by eight Chinese characters: 耶稣会仕白晋之墓.

In terms of his thought and academic development, Bouvet's life can be aptly divided into two main historical stages.[81] The first stage was dedicated to his studies at various Jesuit schools before he left France in 1685. This gave him a solid academic foundation and an ability to think independently. The second stage was the application of the broad knowledge he had previously acquired, which enabled him to capably interpret the heterogeneous culture he encountered in the latter part of his life, mainly in China. The education he received at Jesuit schools paved the way for his later, unique contribution on the study of *Yijing*.

3.1.1. Education

The Society of Jesus, one of the main and most respected religious orders of the Catholic Church, was founded in 1534 in Paris by a Spanish Basque aristocrat, Ignatius of Loyola (1491-1556), and received formal approval by Pope Paul III in 1540.[82] The main mission of the Society is to evangelize and to educate. Jesuit colleges were disseminated throughout Europe's most important cities and have played a significant role in European education. Their typical educational methodology and curriculum structure are still at the basis of education systems in many countries even today. While the University of Paris held an undisputed preeminent position on education in France – Ignatius studied theology there for five years - the schools and colleges gradually established by the Society conspicuously surpassed the more venerable institution in prestige and enrollment. To effectively fulfill its mission, the Society of Jesus paid special

[81] Quan Hui 全慧. (2011). *Brief discussion on the origin of "Figurism" of Society of Jesus---Joachim Bouvet as center* 浅谈耶稣会"索隐派"的思想之源——以白晋为中心. Chinese Studies, Vol. 13. Beijing: Xueyuan Press, p. 197.

[82] Peter C. Hartmann [Germany], Gu Yu trans. (2003). *DIE JESUITEN* 耶稣会简史. Beijing: Religious Culture Press, Preface p. 1.

attention to the intellectual training of its members, a training which normally required 15 years to complete. During this period, the Jesuits would systematically study languages, literature, philosophy, theology, law, politics, medicine and natural sciences, and pass rigorous examinations. Unsurprisingly, most Jesuits possessed an impressive accumulation of knowledge and a profound erudition.[83]

The Society gradually developed a constructive modern teaching method and drew up its "*Ratio Studiorum*"[84] which constituted the foundation of the teaching system adopted in Jesuit schools. The *Ratio* remained effective even beyond the suppression of the Society in 1773. It first appeared in embryonic form in 1545; Ignatius made constant revisions and it was formally promulgated in 1599. The *Ratio Studiorum* provided the specific educational policy of the Society, defined the teaching plan and the responsibilities of teachers. The system embraced all stages of education, from preparatory classes for students 6 to 8 years old, up to university when students were in their early twenties.[85]

The Society established colleges (*collegia*) and universities (*universitates vel studia generalia*) in important cities, easily attracting students from famous families with curricula adapted to local conditions.[86] The curricula differed because of the era and/or location. College usually took three years to complete and its curriculum was dominated by humanities. One year was devoted to the study of classical literature and the other two years to rhetoric. Students began to study philosophy in university. They would start with logic, then go on to learn physics, mathematics, geometry, geography, cartography, mechanics, astronomy

[83] *Ibid.*,: Preface p. 2.
[84] *Ratio atque Institutio Studiorum Societatis Iesu* (The Official Plan for Jesuit Education), often abbreviated as *Ratio Studiorum* (Latin: Plan of Studies).
[85] Hartmann, *DIE JESUITEN*, p. 66.
[86] Liu, Yunhua 刘耘华 (2005), *The Hermeneutical Circle: The Interpretation of Confucian Texts by Late-Ming and Early-Qing Missionaries, and Local Responses* 诠释的圆环：明末清初传教士对儒 家经典的解释及其本土回应.Beijing: Peking University Press, p. 34.

and finally metaphysics and theology, mainly based on the writings of Aristotle and Thomas Aquinas.[87] American scholar George Ganss has given us a brief account of the Jesuit University's curriculum and the corresponding student age. During the Elementary stage, usually done outside the Jesuit school, students 5 to 9 years old would undertake the study of Latin in listening, speaking, reading and writing. During the Secondary stage, at the age of 10 to 13, students would continue the study of languages (mainly Latin and Greek up to the age of 12) plus rhetoric, poetry and history. The Higher stage was for students 14 to 23 years of age. Among them, the 14-16 years old would devote themselves to learning logic, physics, metaphysics, moral science and mathematics. The Bachelor of Arts degree would be acquired after three years, while the Master of Arts degree would require another three years of study. On reaching the age of 17-19 years, students would undertake the study of theology, law and medicine. Theology was, naturally, the most important course and it included the theology of the Scholastics, natural theology, Scripture, Bible literature and so on. The final stage came at the age of 21 to 23, and if anyone wanted to get a doctoral degree at this stage, he had to go through another two years of probation."[88]
Jesuit Universities aimed to cultivate versatile talents, a task that required nearly 20 years of schooling. The intellectual preparation of the missionaries in China was, thus, truly remarkable and Joachim Bouvet proved to be the most outstanding among them.

There is no specific information available on Bouvet's years at school and the courses of study he completed. From existing materials, we know that he started his education, based on the *Ratio*, at the Collège Henri IV de la Flèche.[89] The college was actually a comprehensive school, offering almost all courses from grammar to theology. Bouvet's language ability, scientific knowledge and

[87] *Ibid.*, p. 35.
[88] George E. Ganss. (1956). *Saint Ignatius' Idea of a Jesuit University: A Study in the History of Catholic Education*. Milwaukee: Marquette University Press, p. 45.
[89] *Biography of Joachim Bouvet SJ, China missionary*, (http://encyclopedia.stochastikon.com).

humanistic cultivation improved rapidly and steadily as he went through the strict curriculum adopted by the school. He was proficient in many western and ancient languages: Latin, Greek, Hebrew, Syriac, Italian, Spanish, Portuguese and so on. This confirmed his strong language learning ability, which would allow him to master the Manchu and Chinese languages in a very short time and take up the type of challenging research that even most Chinese scholars would be wary to undertake. In addition, as a student he especially liked physics and mathematics. He studied the two subjects in depth and mastered a great deal of mathematical knowledge. It was this knowledge that helped him gain a great reputation in China.

Bouvet began to be interested in China when still at la Flèche. He had heard of the exploits of Matteo Ricci in China, and before that he had always regarded Francis Xavier (1506-1552)[90] as an example. Francis had repeatedly tried to preach the word in China, but without success. Bouvet looked forward to fulfilling his idol's dream and, as he joined the Society of Jesus, he pledged to become a missionary to China. He once wrote: "I have decided to devote myself to the Chinese mission and have had a plan since I joined the Society".[91] This desire never died out, but grew more and more intense, and always spurred Bouvet in his studies, during his internship and as a teacher.

After his two years of probation, Bouvet went back to school to continue his studies in eloquence, philosophy, mathematics and physics. He also studied the Jewish Kabbalah, the Hieroglyphics of ancient Egypt and the philosophy of Plato and Pythagoras. Not every missionary of his time could rely on such a variety and depth of knowledge as he did. In 1676, he was reassigned to la Flèche and studied philosophy there. In 1680 he became a teacher at Quimper school and

[90] The first Jesuit to come to China in 1551, only to die on Shangchuan island off Guangdong province the following year 1552.

[91] Collani, Claudia von. (2009). *P. Joachim Bouvet S.J. - Sein Leben und Sein Werk* 耶稣会士白晋的生平与著作. Translated from German by Li Yan. Henan: Daxiang Press 大象出版社, p.013.

taught literature there. Afterwards, this young clergyman came to the Louis-Le-Grand College at Clermont. The city of Clermont was then the center of astronomical research. Astronomy was highly valued in China, and Bouvet did not miss the opportunity to acquire this knowledge as well, one that would become a valuable asset in his future life.

3.1.2. Applying for the China mission

In 1681, Philippe Couplet SJ 柏应理 (1623-1693)[92] was sent to Rome by Ferdinand Verbiest, 南怀仁 (1623-1688),[93] Vice-Provincial of the Jesuit mission in China, to report to the Pope on the state of Chinese missionary work and submit some requests. Verbiest, well aware of the vital importance of natural science for missionary work in China, commissioned him to recruit French missionaries specially trained as natural scientists, who were in the lead in scientific development, to be sent to China as emissaries. Couplet actively sought to convince his Provincial Superior that missionary work in China would bring the Society reputation and benefits. He arrived at Versailles in 1684 and was introduced to Louis XIV by the king's confessor, Père François de la Chaize S.I. (1624-1709). Given that this was an opportunity to influence the Far East, and that the political and economic situation of France was also conducive to the implementation of the plan, Louis XIV accepted the advice and gave orders to prepare a team of missionary scientists to China.

Bouvet had just started his third year in theological studies when Philippe Couplet arrived in Paris. The two met at the Jesuit Professed House in Paris and discussed the possibility of a visit to the China mission area. Couplet advised the

[92] Belgian Jesuit and sinologist; arrived in China in 1659.
[93] Belgian Jesuit and astronomer, arrived in China in 1658; in 1669 was appointed as head of the imperial observatory 钦天监监正 in Beijing; in 1677 he was appointed vice provincial, i.e. superior of all the Jesuit missions of China.

younger confrere to write to the General Superior. Bouvet also often met future fellow missionary Jean de Fontaney 洪若翰 (1643-1710) at Couplet's residence, and there he came to know about the royal plan for the dispatch to China. He soon felt that it was the opportunity he had been waiting for and immediately offered to join the expedition, but the unfinished studies became a barrier to his efforts. Fortunately, his language talent and the many languages he had mastered helped him to be admitted with an exception together with his best friend and fellow Jesuit Claude de Visdelou 刘应 (1656-1737), who was in the same situation as his.[94] The three, i.e. Joachim Bouvet, Claude de Visdelou and Jean de Fontaney, together with Guy Tachard 塔查尔 (1648-1712), Jean-Francois Gerbillion 张诚 (1654-1707) and Louis Le Comte 李明 (1655-1728) were selected and dispatched to China as "Mathematicians of the King".

On September 13, 1684 Fontaney, the leader of the group, was ordered to be ready in six weeks. On December 20, Bouvet and three other partners, i.e. Gerbillion, Visdelou and Fontaney, each were granted the title of "Associate member" of the Royal Academy of Sciences by order of Louis XIV. During these six tense weeks, Bouvet passed the final theological examination and was ordained a priest in an *'extra tempore'* condition. In Brest, Bouvet and his companions received the King's travel orders and the appointment as "King's mathematicians" from Marquis de Chaumont, the French envoy to Siam. On March 3, 1685 they set sail from Brest to China on the *Oiseau*, a three-masted ship headed to Siam. All, except for Guy Tachard who was assigned to serve the King of Siam,[95] set foot in Ningbo, Zhejiang, on July 23, 1687 and arrived in Beijing, their final destination, on February 7 the following year.

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[94] Witek John W., S.J.魏若望 (2006). *Controversial Ideas in China and in Europe: A Biography of Jean-Francois Foucquet, S. J. (1665-1741)* 耶稣会士傅圣泽神甫传：索隐派思想在中国及欧洲. Translated by Wu Li-wei. Henan: Daxiang Press 大象出版社, p. 28-32.

[95] At the request of the prime minister of Siam, Tachard went back France to organize a group of 12 Jesuits to establish an astronomical observatory in Siam.

3.1.3. Life and service during Kangxi's reign

Although Bouvet and his companions had safely reached Ningbo, they still met difficulties before arriving in Beijing. Jin Hong 金鋐,[96] the Zhejiang provincial governor and an opponent of Christianity, did not welcome the missionaries' entry and reported them to powerful supporters within the Ministry of Rites 礼部 in Beijing. The report pointed out that the five were not businessmen but people intending to settle in China with their mathematical and Catholic books as well as the mathematical instruments they brought along. The report also suggested that the Ministry of Rites should promulgate a decree forbidding Chinese vessels sailing through neighboring kingdoms to transport any European to China. The Ministry authorized Jin Hong to expel the missionaries, driving them to ask Verbiest to intervene, who in turn appealed to emperor Kangxi, informing him that the five were his confreres, the long-awaited mathematicians with their precious cargo of books and instruments.[97] On November 2 the emperor quashed the deportation decree and invited the missionaries to Beijing. In a letter to Père de la Chaize dated February 15, 1703, de Fontaney wrote that all had arrived at the imperial court, those who mastered mathematics to stay with him to serve at court, while the rest had moved to the provinces where they had chosen to work.[98] On February 7 Bouvet and four other Jesuits finally settled in Beijing,[99] and since then, China opened its doors to French missionaries.

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[96] Jin Hong obtained the Jinshi 进士 in 1652 and was appointed governor of Zhejiang province in 1686-1689.

[97] When Ferdinand Verbiest learnt of the French Jesuits' arrival, on September 15, he sent a letter to Zhaochang 赵昌(a Manchu official who served the Imperial Household Department 内务府 as a liaison to the Jesuits) in order to let Kangxi know that these were Verbiest's colleagues with the precious mathematical instruments and books.

[98] Jean-Baptiste Du Halde 杜赫德. (2001). *Lettres edifiantes et curieuses: ecrites des Missions Etrangeres: Memoires de la Chine* 耶稣会士中国书简集---中国回忆录 I. Zhenzhou: Daxiang Press, p. 264.

[99] The group reached the suburbs of Beijing on February 1, 1688 but unfortunately the queen mother and Ferdinand Verbiest had died on January 27 and January 28 respectively. In keeping with Chinese mourning customs, the Beijing Jesuits could not meet the new arrivals in person, until on February 7 an official was ordered to take them to the Portuguese Jesuits House.

Bouvet remained at the royal palace, with Jean-Francois Gerbillion[100] as a companion,[101] even though the latter initially wanted to preach the Gospel in Liaodong 辽东 and Eastern Tartary 東鞑靼,[102] where no missionary was working.[103] It is not clear whether the two were selected to remain in Beijing at Kangxi's request or because of the influence of Thomas Pereira SJ 徐日昇 (1645-1708),[104] deputy head of the imperial observatory. What we know is that when Jean Francoise Foucquet SJ 傅圣泽 (1665-1741) mentioned this decision many years later, he asserted that Pereira favored the two because they were easier to handle than others.[105] Whatever the case, Bouvet's missionary career at the imperial court began at that time.

Learning the Chinese language was the first difficulty missionaries faced but Bouvet's language talent enabled him to rise to prominence in the early days of Beijing. At the beginning, the two missionaries undertook the task of the pastoral care of all Christians in the city. They went out daily to hear confessions and administer the last sacraments. On Sundays and holidays, they were busy hearing confessions, teaching catechism, giving baptismal names to neophytes and other matters pertaining to church life. Soon, however, they began to work for the emperor. Kangxi encouraged them to learn Manchu and assigned teachers to them so that he could avail himself of their services after he returned to Beijing from his southern tour. He cared about their studies and even examined them to monitor their progress. Manchu turned out to be much easier than Mandarin to learn and it took the two less than seven months to master the language.[106] Bouvet thought that the Tartar language was easier and more

[100] Gerbillion, one of the members of Kangxi's mission, participated in the negotiation and signing of the Treaty of Nerchinsk.
[101] The other three left Beijing on March 29, to do missionary work in other provinces.
[102] In ancient maps, the land is called Outer Manchuria 外满洲.
[103] Du Halde, *Lettres edifiantes*, p. 266.
[104] Portuguese Jesuit, in China since 1673. At the death of Ferdinand Verbiest in 1688, he was appointed deputy head of the imperial observatory 钦天监监副.
[105] Jean-Francois Foucquet, French Jesuit, in China since 1699. Witek, *Foucquet*, p. 44-45.
[106] Du Halde, *Lettres edifiantes*, p. 277.

practical to use because, unlike Mandarin, its grammar used conjugations and particles.[107] And so, even though they had just begun to learn the emperor's mother tongue, they felt confident enough and began to work without hesitation.

After this quick introduction to the Manchu language, Bouvet was appointed as one of Kangxi's teachers in European sciences along with Foucquet, Pereira and Antoine Thomas 安多 (1643-1709). The lectures lasted from 1689 to 1692. Kangxi acquired a strong desire to learn western sciences at a tender age, as he confided to Bouvet. This desire arose when, as a mere eight years old, he witnessed the calendar dispute between Ferdinand Verbiest and Yang Guangxian 杨光先 (1597-1669).[108] Following that, for two solid years he focused on learning mathematics with such determination that, apart from dealing with state affairs, he spent almost all the rest of his time on his studies. Bouvet relates that during the initial stage in those two years, Verbiest taught Kangxi the application of some of the main mathematical instruments and explained the most interesting and most basic concepts of geometry, statics and astronomy to him, and compiled popular and easy to read books specially for him.[109]

Kangxi asked Bouvet and Gerbillion to explain to him the principles of Euclidean geometry in the Manchu language, using various mathematical instruments to carry out experimentation. They had to go to the palace, the newly built Pleasant Spring Garden 畅春园 in the outskirts of the city, and provide tutoring in mathematics for two to four hours a day. Even though transportation was provided, the palace was difficult to reach. Not to be late, the two got up at four in the morning and returned home at dusk, sometimes working till midnight to

[107] Collani, *Joachim Bouvet*, p. 23.

[108] Joachim Bouvet, Ma Xuxiang 马绪祥 trans. (1980). *Histoire de l'Empereur de la China* 康熙帝传. In the Historical materials of Qing dynasty, Episode 1 清史资料第一辑, Beijing, Zhonghua Book Company, p. 220. "康熙历狱" or "Yang Guangxian Christianity Case 杨光先教案", who opposed the western calendar.

[109] *Ibid.*, p. 222.

prepare the classes for the following day.[110] Bouvet wrote, “Kangxi studied science with great interest; in addition to the two or three hours he usually spent with us every day, he devoted a lot of time to self-study, day and night. He insisted on going to bed late and getting up early. He applied the most interesting things he learned in geometry to practice, using some mathematical instruments for pleasure.”[111] In this way, Kangxi had mastered the principles of geometry in five to six months. After that, he also asked Bouvet and Gerbillion to write an outline of practical geometry in Manchu, including all the theories, and to explain it for him. Shortly thereafter, Kangxi completed the principles of geometry, theoretical geometry and applied geometry. Meanwhile, he asked them to translate all the lecture notes into Chinese and Manchu, then printed them and issued them throughout the country.[112]

In addition to geometry, Kangxi got very interested in philosophy. He instructed Bouvet and Gerbillion to write a philosophy book in Manchu and teach him using the methodology already used for teaching geometry. This task doubled the enthusiasm of the two missionaries, as they felt that the compilation and interpretation of a philosophical work could favour the emperor and other Chinese literati’s acceptance of Catholic truth. Together they produced a manual of ancient and modern philosophy in Manchu based on the *Philosophia Vetus et Nova* of Jean-Baptiste du Hamel,[113] but soon the philosophy class had to be interrupted due to Kangxi’s illness. In the absence of recovery, Kangxi’s enthusiasm turned to medicine and anatomy so that the two fathers wrote eight notes about these subjects, again in the Manchu language. Then, in order to

[110] Du Halde, *Lettres edifiantes*, p. 280.

[111] Own translation from Joachim Bouvet, Ma Xuxiang 马绪祥 trans. (1980). *Histoire de l’Empereur de la Chine* 康熙帝传. In the Historical materials of Qing dynasty, Episode 1 清史资料第一辑, Beijing, Zhonghua Book Company, p. 224.

[112] *Ibid.*, p. 227.

[113] Jean-Baptiste du Hamel (1624-1706) was a French cleric and natural philosopher of the late seventeenth century, and the first secretary of the Academie Royale des Sciences. In 1678, he published a new, four volume work, *Philosophia Vetus et Nova* (originally attributed to Colbert, but written by du Hamel), that was created to discuss and attempt to reconcile the various schools of philosophy, both ancient and modern: https://en.wikipedia.org/wiki/Jean-Baptiste_du_Hamel

satisfy Kangxi's desire to understand the cause of disease, over the period of two to three months they wrote 18 to 20 works on various diseases. In light of such distinguished performance, as reward on 22 March 1692 Kangxi issued the edict known as the "Chinese Edict of Toleration".[114] Bouvet had also set up a pharmaceutical laboratory in the imperial palace and in 1693 healed Kangxi of malaria by administering an ounce of quinine.[115] As a token of gratitude, on 4 July that year Kangxi gave Bouvet and other three Jesuits a house in the front yard of the imperial palace for them to live in. This was later converted into a church, known as "the Northern Church" 北堂.[116] Bouvet was obviously Kangxi's most favored and closest among missionaries. Together they hatched the plan of recruiting more educated Jesuits from France to establish an academy of sciences in China and strengthen the relationship between the two monarchies.

That same year 1693, Kangxi sent Bouvet back to France as his legate bearing many precious gifts.[117] After a long odyssey, in March 1697 Bouvet finally set foot in Brest and two months later arrived in Paris. His presence at the French court caused a huge stir and even sparked a Chinese craze. At Versailles, almost everyone was talking about China and wherever Bouvet appeared, people would ask him a lot of serious or amusing questions. In order to stimulate Louis XIV's interest in missionary work in China and introduce Kangxi to Europe, that same year Bouvet published two books, *L'Estat présent de la Chine en figures* 中国现状和服饰 and *Portrait Historique de l'Empereur de la Chine* 中国皇帝的历史画像,[118] which were respectively dedicated to the Duke and Duchess of Burgundy and Louis XIV. In response, Louis XIV authorized Bouvet to spend 10 thousand

[114] The Edict, also called "康熙容教令", recognized the Roman Catholic Church, barring attacks on churches and missions, and legalizing the practice of Christianity by the Chinese people.
[115] Du Halde, *Lettres edifiantes*, p. 290.
[116] The church was originally established in 1703, an addition to the three other churches in Beijing, the "South Church" 南堂 (1605), "the West Church" 西堂 (1723) and "the East Church" 东堂 (1655). Kangxi also hand-wrote the calligraphy plaque and couplets for the building.
[117] Among these gifts, 49 volumes of exquisite books were collected by the National Library of Paris. By now, they are still the core of the Chinese collections in the library.
[118] The name of its Chinese version was Kangxi Huangdi 康熙皇帝 or Kangxi Dizhuan 康熙帝传.

francs to prepare gifts for Emperor Kangxi and promised to send another batch of Jesuits to China.[119] No doubt, Bouvet had achieved a great success.

On 6 March 1698 Bouvet set sail for China from La Rochelle on the "Amphitrite" together with the following Jesuits: Charles Dolze 翟敬臣(1663-1701), Louis Pernon 南国光 (1664-1720), Jean-Charles-Étienne de Broissia 利圣学 (1660-1704), Joseph-Henri de Prémare 马若瑟 (1666-1736), Jean-Baptiste Régis 雷孝思 (1663-1738), Dominique Parrenin 巴多明 (1665-1741), Philibert Geneix 颜伯理 (1667-1699), the sculptor and lay brother Charles de Belleville 卫嘉禄 (1657-1730) and the Italian painter Giovanni Gherardini 聂云龙 (1654-1723?), a lay person. As part of the plan, Bouvet also arranged the passage of additional missionaries on other ships. In this way, there were altogether 11 Jesuits when the "Amphitrite" docked at Guangzhou on 4 November 1698.[120]

After his return to China Bouvet was no longer at the service of the emperor but was assigned as a teacher to Kangxi's second son, crown prince Yinreng 胤礽 (1674-1725). At the same time, he started working on *Yijing*, even though his interest in this Classic had started soon after his first arrival in Beijing, when he lived at the court in close contact with Kangxi, a keen admirer of the ancient Classic. A key event was the meeting between Yinreng and two Jesuits, Jean de Fontaney and Claude de Visdelou, in June 1693 before Bouvet's return to France. During this meeting, Visdelou showed a great knowledge of the canonical books and of Chinese literature. Asked by the prince about the difference between the Confucian and the Christian doctrines, Visdelou answered that there was no difference between them and that they were mutually compatible. As for *Yijing*,

[119] Witek, *Foucquet*, p. 81.

[120] When the ship docked at Cape of Good Hope, Bouvet invited another two French Jesuits on board who were travelling in another ship. Five other French Jesuit priests and brothers, among whom were Francois-Xavier Dentrecolles 殷弘绪,1644-1741 and Jean-Francois Foucquet 傅圣泽, 1665-1741, arrived in China in July 1699. See: Du Halde, *Lettres edifiantes*, p. 11.

Visdelou considered this as a superstitious book. Yinreng was very pleased with Visdelou's answer, except for his judgement on *Yijing*. He told Visdelou that up to then nobody had really understood the meaning of the book. Bouvet was present at this meeting and recorded it in his "*Journal des voyages*."[121]

Bouvet concluded that *Yijing* was indeed a mysterious book even for the Chinese, among whom it enjoyed special status. But if one would use the Catholic doctrine to explain the book, the Chinese could be more easily influenced.[122] Already during his studies in France, Bouvet had learnt oriental languages, had studied the Jewish-Christian Kabbalah, and followed an allegorical or figurative way to interpret the Bible and Neoplatonism. In China he tried to blend the old European ideas with the doctrine of the Chinese books. What became the real starting point of Bouvet's single-minded interest in *Yijing* was the escalating of the "Chinese Rites Controversy 中国礼仪之争". This became a major issue for Bouvet's development of the theory known as Figurism 索隐主义.

3.1.4. The Chinese Rites Controversy

In 1692 the Kangxi emperor issued his Edict of Toleration, which truly constituted a sign of hope for the Christian religion in China. Just one year later, in 1693, Charles Maigrot 阎当, Apostolic Vicar of Fujian, issued a *Mandatum seu Edictum* against the Chinese Rites and the Jesuits' method of accommodation, or the "rules of Matteo Ricci 利玛窦规矩". The dispute, which could be traced back to Ricci's period, reached new heights. Impelled by powerful cultural and political forces arrayed against the Jesuits, the papacy ruled against accommodation. An extensive investigation by the Holy Office led to the decree of 1704, which was

[121] Collani, Claudia von. (2007). *The first encounter of the West with the Yijing introduction to and edition of letters and Latin translations by French Jesuits from the 18th century.* Monumenta Serica, Vol. 55, p. 240.
[122] Collani, *Joachim Bouvet*, p. 33.

followed by the 1707 Nanjing Decree of papal legate Charles-Thomas Maillard de Tournon 铎罗. The 1704 ruling also served as the basis for the Papal decrees of 1715 and 1742, which banned the Chinese Rites and prohibited further debate.[123]

The Chinese names for God as well as the rituals used to honor ancestors and Confucius were at the core of this 17th century bitter debate. In opposition to the Jesuit position stood a large array of groups that included the Franciscans, Dominicans and the Missions Ètrangères de Paris, who argued that the native Chinese terminology for God and the Chinese rites to ancestors and Confucius violated the teachings of Christianity.[124] In 1700 Kangxi became involved in the Controversy when, at the request of the Jesuits, he confirmed their view that the offerings to Confucius and to ancestors were civil and social rather than religious. In 1706, he declared that Christianity would no longer be tolerated unless practiced according to "the rules of Matteo Ricci" and every missionary in China had to obtain a ticket or *piao* 票 to be allowed to continue to preach. The future of the China missions was severely jeopardized. At this point, in the light of the Chinese Rites Controversy, Joachim Bouvet's intensified his study of *Yijing* and his Figurist thought began to take shape.

When Maigrot's mandate reached Europe, Bouvet was in France as legate of the Kangxi emperor. He counter-attacked, aiming at refuting two main ideas of Maigrot's Mandate, namely the prohibition for Chinese Christians to use the name *Taiji* for the Christian God and the "superstitious" nature of *Yijing*.[125] In a letter dated August 30, 1697, written from Paris-Fontainebleau, he clearly expressed his position and first mentioned the Figurist viewpoint. In spite of the fact that many missionaries thought *Yijing* to be a book full of superstition, he

[123] D.E. Mungello Ed. (1994). *The Chinese Rites Controversy Its History and Meaning*: *An Introduction to the Chinese Controversy*. Jointly publ. by Institut Monumenta Serica, Sankt Augustin, and The Ricci Institute for Chinese Western Cultural History, San Francisco, Nettetal: Steyler Verl., p.4-5.
[124] *Ibid*.
[125] *Biography of Joachim Bouvet SJ, China missionary*, p.3 (http://encyclopedia.stochastikon.com).

believed that he had developed a method to find in it the legitimate principles of Chinese philosophy, which he considered as valid as those of Plato or Aristotle. Bouvet was firmly convinced that he would be able to find these principles by analyzing the mysterious figures of the ancient Classic and that his theory could put an end to all the differences in the Chinese Rites Controversy.[126]

After Kangxi's death Bouvet spent his last years at the court as the last of the former teachers of the emperor. None of his scriptures was published during his lifetime, until they were rediscovered in the 20th century.

3.2. A textual research on Bouvet's 16 Chinese works

There is no consensus in the academic world regarding the authorship of the 16 Chinese manuscripts studied in this thesis. In Yu Dong's *Catalogo delle Opere Cinesi Missionarie della Biblioteca Apostolica Vaticana* (1996), the papers are listed under Section V of her catalogue, a section entirely dedicated to Joachim Bouvet, thus ascribing the authorship of all 16 works to him.[127] Since Dr. Yu Dong's work is a review and development of the earlier catalogue compiled by Paul Pelliot in 1922 and published posthumously in 1997, I have chosen the former as a more reliable source, as it carefully sifts among the various extant copies of the manuscripts. The cover of each of the 16 documents, in fact, carries an archival serial number marked in pencil, most of which refer to the series Borgia–Cinese 317, 317(1)-(16), of the Apostolic Vatican Library, studied by and referred to in Pelliot's *Inventaire Sommaire*, all of which are related to *Yijing*.[128] Other copies, however, differing in various degrees among themselves but with

[126] Collani, *Joachim Bouvet*, p. 34.

[127] Yu, Dong 余冬 (1996), *Catalogo delle Opere Cinesi Missionarie della Biblioteca Apostolica Vaticana (XVI-XVIII SEC.)* 梵蒂崗圖書館館藏早期傳教士中文文獻目錄（十六至十八世纪）, Biblioteca Apostolica Vaticana, Vatican City, p. 9-11.

[128] Paul Pelliot, *Inventaire sommaire des manuscrits et imprimes chinois de La Bibliotheque Vaticane* 梵蒂冈图书馆所藏汉文写本和印本简明目录 p.36.

often overlapping contents, are found in other sections of Borgia-Cinese, such as 316, 380, 469, 361 and so on. All of these are carefully annotated in Yu Dong's catalogue.[129]

The authorship issue mainly involves the name of two other missionaries, Jean-François Fouquet 傅圣泽 (1665-1741) and Joseph Henri-Marie de Premare 马若瑟 (1666-1736). In the bibliography section of his *Biography of Jean-François Foucquet,* John Witek refers all of the manuscripts contained in Borgia–Cinese 317 to Fouquet, leading some scholars to conclude, by comparing Witek's appendix and Pelliot's directory, that most of the *Yijing* works in the Apostolic Vatican Library are actually Fouquet's, with only *Zhouyi yuanyi neipian* 大易原义内篇 belonging to Bouvet.[130] As a matter of fact, in the references section, Witek did not state that works such as 317(1) *Zhouyi yuanzhitan mulu* 周易原旨探目錄 found in Borgia–Cinese 317, was authored by Fouquet: he simply wrote that four pages in the manuscript may come from Fouquet; or 317(5) *Taiji lueshuo* 太極畧說, a draft which may be a copy corrected by Fouquet; or 317(8) *Yixue zongshuo* 易學總說, the subtitle of which is *Yixue waipian* 易學外篇, is probably written by Fouquet; or, finally, 317(3) *Yijing zongshuohui* 易經總說彙 may have been edited by Fouquet, as there are many modifications in it.[131]

Richard Smith quoted and attributed most of the manuscripts in the series Borgia–Cinese 317 to Bouvet;[132] Zhang Xiping and Han Qi shared similar views.

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[129] Yu Dong, *Catalogo*, *Ibid.*

[130] Zhang, Guogang. etc 张国刚等(2001). *Missionaries of Ming and Qing dynasties and European Sinology* 明清传教士与欧洲汉学.Beijing: China Social Sciences Press 中国社会科学出版社, p. 191-192.

[131] Witek, *Foucquet*, p. 434.

[132] Smith, Richard J., (2001). *Jesuit Interpretations of the Yijing (Classics of Changes) in Historical and Comparative Perspective*. Article based on the conference "Matteo Ricci and After: Four Centuries of Cultural Interactions between China and the West," sponsored by the City University of Hong Kong and Beijing University; October 13-16. Idem, (2002). *The Yijing (Classics of Changes) in global perspective: some reflection*. Paper for the Book of Changes World Conference, Taipei, Taiwan, September 28-October 2.

By comparing Yu Dong and Pelliot's directories, Zhang Xiping concluded that there are 16 texts on *Yijing* clearly attributable to Bouvet.[133] Han Qi, on the other hand, reached a more nuanced conclusion when he visited the Vatican Library in 1997. He consulted the manuscripts on *Yijing* of Borgia-Cinese 317 and found that most do not identify the author; some, however, have notes in French, meaning that these particular copies had been prepared for Fouquet and Premare to read. Han Qi concluded that it was more likely that these manuscripts were Bouvet's work, with the exception of *Taiji lueshuo* 太極畧說, which he attributed to Premare.[134] Earlier on, Fang Hao wrote that the Vatican Library stored 14 transcripts of *Yijing* study by western people, mostly related to Bouvet.[135] Since the academic community has not yet reached a unified understanding of the authorship of these 16 manuscripts, this thesis will first offer some elucidations about each of them.

25-1[136]*Tianxue benyi* (*Jing tian jian*) 天學本義(敬天鑒)二卷.(*Original meanings of learning of Heavely-Reflection of Worship Heaven*)

Yu Dong lists *Tianxue benyi* as the first of Bouvet's works on *Yijing*, even though it is not listed in Borgia-Cinese 317. It is actually found in Borgia-Cinese 316 (14) and consists of 99 pages and more than 20669 words. The actual, full title of the manuscript is *Gujin jingtianjian tianxue benyi* 古今敬天鑒天學本義.[137] Pelliot notes that it is the work of Bouvet, who wrote a preface to it in 1707.[138] The text comes in many versions, with different titles, because of constant revision and improvement. Zhang Xiping reports that *Tianxue benyi* was written in 1703, the

[133] Zhang Xi-ping 张西平 (2003). *An instructional examination of the document on Bouvet's research on the Book of Changes in Vatican Library* 梵蒂冈图书馆藏白晋读易经文献初探. Wen Xian, July, No.3, p. 24.
[134] Han Qi 韩琦(2004). *Further Discussion on Bouvet's Study of the Yijing* 再论白晋的《易经》研究. In Rong, Xin-jiang 荣新江, Li, Xiao-cong 李孝聪, eds. The history of Sino-international relationship: New historical document and new question, Beijing: Kexue Press, p. 316.
[135] Fang Hao (1988), *The Bibliography of Catholics in China (M)* 中国天主教史人物传 中） Zhonghua Book Company 中华书局, Beijing, p. 286.
[136] Sort serial numbers according to Yu Dong's directory.
[137] Yu, Dong, *Ibid*., p. 9.
[138] Pelliot, *Inventaire*, p. 35.

42nd year of Kangxi's reign;[139] Collani further informs us that the earliest copies date back to 1699, and contain both Chinese and Latin titles, i.e. *Tianxue benyi* 天学本义 and *Observata de vocibus Sinicis Tien et Chang-ti* 关于华人的"天"和"上帝"两个字的观察.[140] It clearly transpires that *Tianxue benyi* is Joachim Bouvet's work.

26-2 *Yiyin* (*Yikao*) 易引（易考）二卷. (*Introduction to Yijing-Research on Yijing*) The original title should be *Yiyin yuangao* 易引原稿, which is what one finds on the cover of the manuscript. The title given in Yu Dong's directory may refer to a note found in Pelliot, actually related to another document, i.e. *Yikao* 易考, found in Borgia-Cinese 317 (6).[141] For Pelliot, *Yiyin yuangao* is an original copy of the first part of document 317(4),[142] the 易引-此引集中華與西土古傳相考印証 *Yiyin-This collection is the verification of Chinese and Western comparative ancient biographies*, the author of which is Joachim Bouvet. It consists of 44 pages, about 16,364 words and is divided into 9 sections. An old copy of it is Borgia-Cinese 317(6). Much of this manuscript also appears in Yu Dong's 32-8 *Yixue waipian* 易學外篇, which however also contains an appendix titled, *This discussion is about section seven and eight of Yijing study* 此論係易學七節八節, which itself is incomplete and is probably extracted from other manuscripts. A reference to the 50th year of the 'reign of emperor Kangxi' 今康熙五十年辛卯 in the fifth section of *Yiyin yuangao* allows us to date the narrative in 1711.[143] Based on the similar textual contents and the authorship of two related manuscripts, we can reliably conclude that *Yiyin yuangao* 易引原稿 is Bouvet's work.

27-3 *Zeji jingshu tianxue zhi gang* 擇集經書天學之綱. (*Outline of the selected*

[139] Zhang, Xiping (2007). *Conversation between China and the West: The missionaries in early Qing Dynasty and their researches on the Book of Changes*. Front. Hist. China, 2(4), p.471
[140] *Collani, Joachim Bouvet*, p. 55.
[141] It is *Yikao* 易考 and refers to the Borgia-Cinese 317(4).
[142] Pelliot, *Inventaire*, p. 37.
[143] Yu, Dong, 26-2, p.18.

Confucian classics and Heavenly-learning)

This manuscript does not actually have much direct relevance to *Yijing*. It consists of 15 pages and 8,298 words, while its archival number is Borgia-Cinese 317 (15). Yu Dong actually borrowed the title from the subtitle in the text in order to distinguish 27-3 from Borgia-Cinese 316(14): the Chinese title on the cover page of both is the same as *Tianxue benyi* 天學本義. Pelliot notes that *Tianxue benyi* starts with a preface penned by Han Yan 韓琭, the Minister of Rituals 禮部尚书, in 1703, and a foreword by an anonymous author.[144] In fact, the unsigned foreword is the author's preface, and Chen Xinyu attributes this to Bouvet, who wrote it in 1703 and it is the same as the *Gujin jingtianjian tianxue benyi* 古今敬天鑒天學本義 316 (14) which he wrote in 1707.[145] Xu Zongze 徐宗泽 apparently confused two different versions of *Tianxue benyi*. He wrote that *Gujin jingtianjian tianxue benyi* was composed by Bouvet, that it comes with a preface by Han Yan in the 42nd year of Kangxi (1703) and a preface by Bouvet in the 46th year (1707), and that it is an unpublished copy in two volumes.[146] Though the titles are the same, comparison reveals that the two differ in content, but that the author of both is doubtlessly Joachim Bouvet.

28-4 *Zonglun bulie lei luoshu deng fangtufa* 摠論布列類洛書等方圖法. (*General discussion on the ranking methods of squar charts like the Luoshu*)

This manuscript is only five pages long and contains 1,660 words. Yu Dong chose the title of the first section of the document as the title in her directory. Its archival number is Borgia-Cinese 317 (12). Pelliot notes that it is unsigned and that the cover page has the following caption in French, *"Manière d'arranger les quarrées magiques"* (Way to arrange magic squares 魔方排列法).[147] Chen

[144] Pelliot, *Inventaire*, p. 37-38.

[145] Chen, Xinyu 陈欣雨.(2017).*Bai Jin yixue sixiang yanjiu: Yi fandigang tushuguan jiancun Zhongwen yixue ziliao wei jichu* 《白晋易学思想研究：以梵蒂冈图书馆见存中文易学资料为基础》. Beijing: Renmin Press, p.112.

[146] Xu Zongze 徐宗泽 (2010). *The Summaries of Jesuit Translations and Writings during Ming and Qing Dynasties* 明清间耶稣会士译著提要, Shanghai Book Shop Press, Shanghai, p. 98.

[147] Pelliot, *Inventaire*, p. 37.

Xinyu believes that the author cannot be confirmed. Actually, it is an important short essay about *Luoshu* 洛書 or mathematics, and some of its contents appear in the *Yixue waipian* 易學外篇, which leads us to conclude that it belongs to the mathematical interpretation of *Yijing* by Bouvet.

29-5 *Tianxiang bujunqi kao gujing jijie* (*Ju gujingzhuan kao tianxiang buqunqi*) 天象不均齊攷古經藉解（據古經傳攷天象不均齊）. (*Interpretation on Non-equilibrium of astronomical phenomena in ancient calssics*)

Document 29-5 consists of 32 pages and contains 6,271 words. The title on the cover is *Ju gujingzhuan kao tianxiang buqunqi* and its archive number is Borgia-Cinese 380 (7). The dispute over the authorship of this manuscript, mainly focusing on Bouvet and Fouquet, is obvious from the 16 writings, and Yu Dong ascribes it to the former. Yu Dong's directory lists the many versions or codices of the manuscript: they are Borgia-Cinese 317 (13), 317 (14), 380 (6), 380 (7) and 469 respectively. There is an Italian note on Borgia-Cinese 380 (7): "*Con note latine autografe di Foucquet*" (With Latin autograph notes by Foucquet), but this does not fully clarify whether the author is Foucquet.[148] Pelliot does not identify the author and further notes that *Ju gujingzhuan kao tianxiang buqunqi* 317 (13) is unsigned and states that *Tianxiang bujunqi kao gujing jijie,* 天象不均齊攷古經藉解 317 (14) is but another copy of the same work. Additionally, he notes that Borgia-Cinese 380 (5-8) is a Chinese text about ancient China and that the Latin annotations on it were written by Foucquet.[149]

Quoting Witek, Collani states that *Ju gujingzhuan kao tianxiang buqunqi* is the first work of Foucquet, a scholar with greater interest in astronomy and Daoism than Bouvet, and that his work, written in form of dialogue, is an attempt to persuade a Chinese to accept his Figurist theories.[150] Witek actually writes that the text he used is Borgia-Cinese 380 (6), that Borgia-Cinese 380 (7) is its

[148] Yu Dong, *Catalogo*, p. 9.
[149] Pelliot, *Inventaire*, p. 61.
[150] Collani, *Bouvet*, p. 70.

Chinese copy, and that Borgia-Cinese 469, a separate Latin version, is not in Foucquet's handwriting.[151] One cannot conclusively state that *Ju gujingzhuan kao tianxiang buqunqi* 380(7) is the work of Foucquet. One can at least say that it is related to him: being a disciple of Bouvet, his research and results are complementary to those of his mentor. Most of the concepts expounded in the text, such as the notion of *Xiantian*, *Houtian*, 'positioned heaven and earth' and the like, are basically Bouvet's thoughts on *Yijing*. We can, therefore, suppose that this manuscript is fruit of a collaboration between Bouvet and Foucquet.

30-6 *Taiji lueshuo* 太極略說. (*A short description on Taiji*)

Taiji lueshuo, or Borgia-Cinese 317(5), has a total 18 pages and 5,702 words and consists of two parts. Part one is the main body, and includes a supplementary essay, *A proof that one contains three and three is one* 附一含三三為一驗說, while part two is an extract from another manuscript. There is also a dispute on the authorship of this manuscript. Pelliot produced notes without, however, identifying the author.[152] Han Qi suggested that it may be Premare's work.[153] Chen Xinyu agrees, since there is a modification of *Liu shu* 六書 in the header of page 7, which matches the *Liu shu shiyi* 六書实义 of Premare.[154]

This manuscript is a simple exposition of the concept of *Taiji* and its main body is the mathematical interpretation of the *Three-one Taiji* 三一太极 that Bouvet expounded in *Tianzun dibeitu* 天尊地卑圖. The text was repeatedly modified, and its main contents actually appear in other works of Bouvet, for instance in sections 4 and 5 of 32-8*Yixue waipian yuangao* 易學外篇原稿 and sections 7, 8,

[151] Witek, *Foucquet, p.* 175.

[152] 對 Taiji《太極》（第一原則）的简單論述。第 2 個論述是後加上的，在其封面上有 "Ecrit chinois sur la racine quarrée et cube, ie ne le presentai pas à l'emp.r. Par(énin?). ie le fis en 1711. A l'occasion du Tcun Pi Tou du P(ère). B."(平方根和立方根的漢語描述。我並没有呈獻給中國皇帝。巴多明？此文作於 1711 年，同年，白晉神父繪制了《天尊地卑圖》)。該條按語的末尾提到了白晉的《天尊地卑圖》，正是上面 317-4 °最後幾頁中所提的問題。Pelliot, *Inventaire*, p.3.

[153] Han Qi 韩琦 (2004). *Further Discussion on Bouvet's Study of the Yijing* 再论白晋的《易经》研究. In Rong, Xin-jiang 荣新江, Li, Xiao-cong 李孝聪, eds. The history of Sino-international relationship: New historical document and new question, Beijing: Kexue Press, p.316.

[154] Chen, Xinyu, *Bai Jin*, p.107-108.

9 of 34-10 *Yixue zongshuo* 易學總說. The second part is not about *Taiji lueshuo*, but is an extract that also appears in 26-2 *Yiyin yuangao* 易引原稿 and 35-11 *Yijing zongshuo hui* 易經總說彙. Pelliot's French comment referred to above is a description of this second part. Therefore, not only the supplementary essay, but the entire body part of *Taiji lueshuo* should be taken to be Bouvet's work.

31-7 *Shi xiantian weibian shizhong zhi shu you tianzun dibeitu er sheng* 釋先天未變始终之数由天尊地卑圖而生. (*An explanation that the unchanged start-to-finish numbers in Xiantian derive from the Tianzundibeitu*)

There is no Chinese title on the cover page, but only the Borgia-Cinese 317(11) serial number. The text consists of 16 pages and 6,660 words, divided into two articles, each 8 pages long. The first is *Shi xiantian weibian shizhong zhi shu you tianzun dibeitu er sheng* 釋先天未變始终之数由天尊地卑圖而生; the second is *Shi lei luoshu zhi shu xian chuyu tianzun dibeitu* 釋類洛書之数咸出 於天尊地卑圖. Yu Dong chose the former as manuscript title, while Pelliot treated it as an unsigned work.[155] It can be inferred that this is an excerpt of Bouvet's works from the two articles used to explain the numerology of *Yijing*, derived from the *Tianzun dibeitu*.

32-8 *Yixue waipian yuangao* 易學外篇原稿 十三節. (*Original script of 'Outer meanings of Zhouyi study*'-13 sections)

Yu Dong's catalog contains two manuscripts with the same title: 32-8 *Yixue waipian yuangao,* found in Borgia-Cinese 361 (6), and 33-9 *Yixue waipian* 易學外篇 八節, found in Borgia-Cinese 317 (4), the only difference being that the former is a 原稿, i.e. an original manuscript. This 32-8 manuscript was apparently overlooked by Pelliot, who simply listed it under the series Borgia-Cinese 361 as one of various Jesuit manuscripts related to *Yijing* studies,

[155] "Sur 1'Y king. Les images pour le sien tien sortent du Tien tcun ti pi tou. Copié 1713 mois de may. L'emp.r Partant Pour Tartarie" (對《易经》的研究。先天的圖像出自《天尊地卑圖》，1713 年五 月抄錄，皇帝出行（北方）鞑靼). Pelliot, p. 37.

rather than as part of the series Borgia-Cinese 317, where it belongs.[156] 32-8, the *Yuangao*, is actually more important than 33-9.

Yixue waipian yuangao comprises 13 sections for a total of 59 pages and 18,435 words. In terms of contents, the text is closely related to *Yiyin* 易引. In fact, the first section opens with the assertion that "the different situation of the *Three-Yi* 三易 in *Xiantian* and *Houtian* is true as discussed in section one and two of *Yiyin*; hence each of the numbers, images and diagrams of *Three-Yi* must be mutually verifiable".[157] In the second section, starting from *Yiyin*, the author states that "in terms of the third and fourth section of this book, the principle of *Xiantian's* initial creation of the tangible and of the intangible begins from one and completes in three".[158] Not only are there internal cross references, but also content-wise interrelation between the two texts. It is thus plain that the author of these two manuscripts is one and the same person: Joachim Bouvet.

33-9 *Yixue waipian* 易學外篇 八節. (*Out meanings of Zhouyi study*-8 sections)
The serial number of this text in Yu Dong's catalog is Borgia-Cinese 317 (4). What makes it peculiar is the Chinese title – *Yikao* 易考 - on the manuscript's cover page. Pelliot wrote that *Yikao* is a study of the traditional coordination between *Yijing* and the *Bible* authored by Joachim Bouvet.[159] Yu Dong opted for a different title probably because most of its eight sections deal with the contents of *Yixue waipian*.

The *Yikao* is divided into three parts, for a total of 25 pages and 8,939 words. The contents, however, are not about the correlation between *Yijing* and the *Bible*, as affirmed by Pelliot. The first part is actually the first section of *Yiyin* 易引. The

[156] 361: The manuscript. The Sixteen pamphlets are more or less related to *Yijing*. Pelliot, *Inventaire,* p. 57.
[157] 先天後天三易其不同之势若真如易引第一第二節所論則其三易諸数象图一一必當印符相証, in 32-8, p. 2.
[158] 按易引第三節第四節先天初造凡有形無形之道其理始于一而成于三, in *Ibid*, p. 3.
[159] Pelliot, *Inventaire*, p. 36.

second part is similar in content to *Yixue waipian,* although not exactly the same: it is an extract from *Yixue waipian yuangao*. The third part is an appendix containing Kangxi's decrees about Bouvet's studies on *Yijing*. No doubt, *Yikao* is the work of Joachim Bouvet.

34-10 *Yixue zongshuo* 易學總說. (*General discussion on Zhouyi study*)

The Chinese title on the cover page is *Yijing Yi* 易经一 and the serial number is Borgia-Cinese 317 (8). Both Yu Dong and Pelliot used *Yixue zongshuo* as the catalogue title, evidently because it is the heading of the manuscript's first page. The text consists of 17 short essays; it is 50 pages long and contains 16,518 words. Apart from the opening part, all sections relate to the contents of *Yixue waipian*. Pelliot notes that the opening part is the same as the beginning of 317 (3), followed by an original work, the *Yixue waipian,* on the harmony between *Yijing* and western tradition, with frequent quotations from the *Tianzun dibeitu.*[160] The beginning of the article mentions emperor Kangxi and the *Yixue waipian* in the following terms: "One can say that this is a prosperous age, as the emperor has looked kindly upon talent…now I will first discuss the subject matter from the perspective of *Waipian*…",[161] an obvious reference to Bouvet's authorship.

35-11 *Yijing zongshuo hui* 易經總說彙. (*Collection of general discussion on Yijing*)

The archive serial number of the document is Borgia-Cinese 317(3). The full Chinese title on the manuscript cover is 易經總說稾 (*Yijing zongshuo gao)*, and not 易經總說彙 (*Yijing zongshuo hui),* as listed in Yu Dong's catalogue. One must therefore conclude that the contents are an important original draft (稾) and not just a simple collection (彙) of articles. Yu Dong adds also the following note in Italian: "Commentari Generali su *Yi Jing*. Ms. del 1713. Contiene 算法统宗開方求廉原圖-1713 年稿本". Pelliot, on the other hand, simply considers the

[160] Pelliot, *Inventaire,* p. 37.

[161] 幸今盛朝，我皇上天縱聰明…..兹先以外篇言之，嗣以内篇言之 in 34-10, p. 2.

manuscript as an introduction to *Yijing* that includes three fragments; he points to the title *Yijing zongshuo gao* on the first fragment,[162] but makes no reference to the author.

The manuscript contains 3 separate writings, totaling 18 pages and 5,538 words. The second and third texts appear in other manuscripts as well. In particular, the second article 此論係易學七節八節…, including the 算法统宗開方求廉原圖, appears twice as appendices in 26-2 *Yiyin yuangao* 易引原稿 and 30-6 *Taiji lueshuo* 太極略說 respectively.[163] The third article is consistent with the last part of 34-10 *Yixue zongshuo* 易學總說, but is more complete. Chen Xinyu thinks that the manuscript is an excerpt from Bouvet's studies on *Yijing*,[164] but having analyzed its specific content, I have come to a different conclusion regarding the second article, as will be discussed in part 4 of this dissertation.

36-12 *Yigao* 易稿. (*Yijing script*)

This manuscript consists of 2 separate parts, 50 pages in all and approximately 36,311 words. Its archival code is Borgia-Cinese 317 (7). Pelliot does not specify the author but notes that it is an annotation of *Yijing*, divided into *Classic text* 經文 and *Inner meaning* 内義, with one addition, the *Guzhuan yiji lun* 古傳遺跡論, which is a discourse on the historical relics of ancient traditions.[165] Chen Xinyu believes that the likely author of the first article is Bouvet, while the second, given the numerous Taoist quotes, mainly from *Laozi* and *Zhuangzi,* is more likely from the hand of de Prémare.[166] Actually, the first article has no title; it is an annotation and a Catholic interpretation of ten of the first twelve hexagrams of *Yijing*, except the initial hexagrams of Qian 乾 and Kun 坤. The second article, instead, seems to be an appendix to other articles; it mainly uses ancient

[162]《易经》概论。3 個片断。[第 1 個片段上有 *Yijing zongshuo gao*《易經總說稿》]。Pelliot, *Inventaire,* p. 36.
[163] Page 43-45 of (26-2) *Yiyin yuangao* 易引原稿, page 11-18 of (30-6) *Tai Ji Lue Shuo* 太極略說.
[164] Chen, Xinyu, *Bai Jin*, p. 106-107.
[165] Pelliot, *Inventaire,* p. 37.
[166] Chen Xinyu, *Bai Jin,* p. 108-109.

Chinese philology and classics to interpret the *Three-one* / Trinity theory to prove the connection between Catholic doctrine and traditional Chinese thought. Since Bouvet's *Yijing* study is divided into Inner and Outer, with the addition of the *Three-one* theory he proposes in his other writings,[167] these two separate articles should also be Bouvet's.

37-13 *Yiyao* 易鑰. (*Key to Yijing*)

The manuscript, Borgia-Cinese 317 (16), contains 37 pages and approximately 17,343 words. It comes with two subtitles: *Jingtian jianyin* 敬天鑒引 and *Faming tianxue benyi* 發明天學本義. Pelliot notes that it is a key to interpret *Yijing* but does not indicate the writer.[168] Both Collani and Chen Xinyu ascribe it to Bouvet. Collani in particular notes that in the same year Bouvet finished another of his works in Beijing and named it *Yiyao*.[169] As a matter of fact, there are two works titled *Yiyao*, each with a different subtitle and contents. A comparison of the contents allows us to conclude that the *Yiyao* referred to by Collani is not 37-13.[170] Whatever the case, considering both the subtitle and the main concepts expounded in the document, 37-13 *Yiyao* is in all likelihood the work of Bouvet, even though its specific content is not closely related to the *Tianxue benyi*. It can be seen as a general outline of his number-image study of *Yijing*.

38-14 *Yiyao zixu* 易鑰自序. (*Preface of Key to Yijing*)

The manuscript contains two separate articles, for a total of 24 pages and about 25,552 words. Yu Dong uses the subtitle of the first article as the title in her catalog, since the second article has no subtitle. The archival code is Borgia-Cinese 317(2). Pelliot writes that *Yiyao* 易鑰 is a two-paper study of the harmony between *Yijing* and Christianity; the manuscript begins with an

[167] 26-2 *Yiyin yuangao* 易引原稿 317(6) and 30-6 *Taiji Lueshuo* 太極略說 317(5).
[168] Pelliot, *Inventaire,* p.38.
[169] Collani, *Bouvet*, p. 75.
[170] 38-14 *Yiyao zixu* 易鑰自序 317(2).

unsigned preface.[171] Pelliot does not mention the author, while Chen Xinyu names that of the first paper, Joachim Bouvet. The subtitle of the first paper is a clear enough indication that it is the self-preface by the author of *Yiyao* 易鑰, a conclusion reinforced by the similarity of its contents with those of 37-13 *Yiyao*. The second paper, though without a subtitle, appears to be an appendix to other manuscripts: its text and contents refer to the interpretation of *Taiyi* 太一 and the use of some hexagrams to understand the Bible. Undoubtedly, the author of both papers is Bouvet.

39-15 *Zhouyi yuanyi neipian* 周易原義内篇. (*Inner-part of original meanings of Zhouyi*)

The 24 pages and approximately 20,525 words-long Borgia-Cinese 317 (9), the two-part manuscript in question, has no Chinese title on its cover, only an Italian caption, leading Yu Dong to turn to the title of the second part as the entry for her catalogue. Pelliot, instead, chose the title of the first part, *Dayi yuanyi neipian* 大易原義内篇. He further notes,

> It is a study on the original meaning of *Yijing*. First, it gives the textual part of the *Classic (*經文) in successive paragraphs, and then the *Inner meaning (*内義) of it, which is further divided into *Principal* 綱 and *Subordinate* 目 parts (See 317-7). The first caption on the cover: To Pères Foucquet, de Prémare and de Chavagnac of the Society of Jesus. The second caption: Père de Prémare did not see it. By exclusion, this work may have been written by Père Bouvet.[172]

Zhouyi yuanyi neipian 周易原義内篇 is an interpretation of hexagrams *Qian* 乾 and *Kun* 坤 and in this sense it is very similar to and a completion of 36-12 *Yigao* 易稿, which is also an interpretation of the hexagrams, minus *Qian* and *Kun*. Both texts interpret each hexagram in two steps: *Classic text* (with its own *Principal* and *Subordinate* parts) and *Inner meaning*. From the opening of

[171] Pelliot, *Inventaire,* p. 36.

[172] Own translation of *"Dayi yuanyi neipian*《大易原義内篇》: 對 *Yijing*《易经》原始意義的研究。 首先連續分段给出《經文》正文，接着是《内義》。後者又分为《内義綱》和《内義目》(参见 317-7 °)。封面上的第 1 條按語："Aux RR. PP. Foucquet, De Prémare, De Chavagnac, de la Comp. e de Jesu" (給耶穌會傳教士傅聖澤、馬若瑟、沙守信神父)；第 2 條按語："Le P. De Prémare ne la pas veue"(馬若瑟神父没有看到)。用排除法看，該作品或许出自白晉神父之手." Pelliot, *Inventaire,* p. 37.

manuscript 39-15, we conclude that it was completed before manuscript 36-12, of which it is a kind of template.[173] In terms of content, both manuscripts use biblical records to interpret the first twelve hexagrams of *Yijing*, beginning with the first and most important two, *Qian* and *Kun*. In addition, both texts repeatedly mention the *Waipian* 外篇, i.e. the *Yixue waipian* 易学外篇 of Bouvet; thus, in response, this manuscript is titled *Neipian* 内篇. The author is none other than Joachim Bouvet.

40-16 *Zhouyi yuanzhitan mulu* 周易原旨探目錄 理数内外二篇. (*Table of contents to main purpose of Zhouyi-Pinciple and Number*)

The last manuscript in Dr. Yu Dong's catalogue is the Borgia-Cinese 317 (1), which consists of just four pages containing a mere 730 words. Pelliot notes that it is an index (*mulu*) of *Zhouyi yuanzhitan*, that it is about *Yijing* and should be the work of a Jesuit, probably de Prémare.[174] Witek describes it as a list regarding the sources of *Yijing*, four handwritten pages possibly from Fouquet.[175] Han Qi ascribes it to Bouvet, and although the original *Zhouyi yuanzhitan* has not been preserved, its general content can be derived from this index.[176] Chen Xinyu considers Han Qi's conclusion wrong: for him the author is de Prémare. Han discovered that the content of the *mulu* appears in the *Zhouyi lishu* 周易理数, a document included in the series Borgia-Cinese 361, disregarded by Pelliot as a collection of various Chinese manuscripts related to the studies on *Yijing* by Jesuit missionaries. In terms of content, the author of both texts is one and the same.[177] Xu Zongze 徐宗泽 notes the existence of an unsigned copy of *Zhouyi yuanzhitan* in the Vatican library; that the work was presented to Kangxi by Wang Huadao 王化道 and that Bouvet is its likely author.[178] Since *Zhouyi lishu*, to

[173] 乾坤以下諸卦，卦爻經文之列皆同，此于乾坤二卦經文，亦倣同序顺解, in 39-15, p.3.
[174] Pelliot, *Inventaire,* p.36.
[175] Witek *Foucquet, p*. 434.
[176] Han Qi 韩琦(2004). *Further Discussion on Bouvet's Study of the Yijing* 再论白晋的《易经》研究. Rong, , Li, New historical document, p. 317.
[177] Chen, Xinyu, *Bai Jin,* p.104-105.
[178] Xu Zongze 徐宗泽(2010). *The Summaries of Jesuits Translations and Writings during Ming and Qing Dynasties* 明清间耶稣会士译著提要, Shanghai Book Shop Press, Shanghai. p. 99.

which Han Qi refers, is not clearly from de Prémare, and since the division into *Nei* 内 and *Wai* 外 is a well-known theoretical framework of Bouvet, *Zhouyi yuanzhitan mulu* is probably Bouvet's work.

4. Bouvet's theological interpretation of traditional *Yijing* concepts

Textual research on Dr. Yu Dong's catalogue has revealed that Bouvet's 16 manuscripts are all direct studies of *Yijing*, except for 27-3 *Zeji jingshu tianxue zhi gang*.[179] Bouvet's research on *Yijing* was personally directed by Kangxi: it is clearly influenced by the *Tushu* 圖書 characteristics of Song style of *Zhouyi* studies in line with the study approach prevalent in the early Qing dynasty.

Yijing is one of the most important classics in ancient China and for over two thousand years has been listed as the first of the "*Six Classics* 六經" and the "*Thirteen Classics* 十三經"[180]. According to *Hanshu* • *Yiwenzhi* 漢書 • 藝文志, the *Five classics* are the Way of Five Constants, with *Yi* being the original one.[181] In *Sikuquanshu* 四库全书, which is the most comprehensive official encyclopedia of the Qing dynasty, *Yijing* is called the "Head of all doctrines 群经之首", and is listed as first by the sequence of the four categories of *Jing* 经、*Shi* 史、*Zi* 子、*Ji* 集. According to records, in ancient times there were "*Three-Yi*"[182], and during the Western Zhou Dynasty the Grand Diviner, or *Taibu* 太卜, mastered them all; but after the Qin Dynasty, only *Zhouyi* remained. Hence, the study of *Yijing* generally refers to *Zhouyi*, since the other two *Yi* have been lost.[183]

The development of *Zhouyi* is the fruit of the efforts of several generations of sages, the so-called "three sages and three stages of ancient times 人更三圣，世历三古".[184] According to legend, the sage Fu Xi 伏羲 started to create Eight

[179] A summary of the contents of these 16 works can be found in the appendix of this dissertation.
[180] The Six Classics are *Yi* 易、*Shu* 書、*Shi* 詩、*Li* 禮、*Yue* 樂、*Chunqiu* 春秋. Among them, *"Yue"* has been lost, so it is usually called "*Five Classics*". The *Thirteen Classics* were gradually developed from the *Five Classics* of the Han Dynasty and eventually formed during the Southern Song Dynasty.
[181] Ban Gu [Han]. (2000). *Han Shu* 漢書. Zhejiang: Zhejiang Guji Press 浙江古籍出版社, p. 590.
[182] *Lianshan* 連山、*Guizang* 归藏 and *Zhouyi* 周易.
[183] Liu, Shipei.(2006). *Study of Confucian Classics Textbook* 经学教科书. Shanghai: Shanghai Guji Press, p.164.
[184] Ban Gu [Han]. (2000). *Han Shu* 漢書. Zhejiang: Zhejiang Guji Press 浙江古籍出版社, p. 585.

Hexagrams; King Wen of Zhou 周文王, the founder of the Zhou Dynasty, expanded Fu Xi's work to produce Sixty-four Hexagrams and together with his son, Zhougong 周公, interpreted each of them (*Guaci* 卦辞: hexagram statement) and each line (*Yaoci* 爻辞: line statement). This is the process whereby the body text of *Yijing* was completed. Confucius subsequently produced "*Ten Wings* 十翼", which are commentaries on the *Yijing*. Around the early Han period, the '*Ten Wings*' were often called *Yizhuan* 易传, hence, *Zhouyi* generally consists of *Yijing* and *Yizhuan*. Nan Song scholar Zhu Xi 朱熹(1130—1200) wrote,

> Zhou is the name of a Dynasty and *Yi* is the name of the Book. The trigrams were drawn by Fu Xi: they embrace the implication of transaction and changes, i.e. '*Yi*'. The statement of hexagrams and lines was made by King Wen of Zhou and Zhougong(Duke of Zhou), hence the name *'Zhou'*. Since binding the lot was heavy, it was divided into two parts: '*Jing*', the drawing of Fuxi and the statements by King Wen of Zhou and Zhougong. In addition, Confucius produced ten texts of '*Zhuan*', thus *Zhouyi* is made up of twelve parts.[185]

In a narrow sense, *Yijing* is a book of divination while *Yizhuan* is a work which interprets *Yijng*'s philosophical thought.

Initially *Zhouyi* comprised just trigrams; the characters were later added on to interpret the hexagrams and the lines. Sage Fu Xi created Eight Trigrams, which he called *Jing* trigram 经卦, or single trigram 单卦 consisting of three lines. King Wen of Zhou produced Sixty-four Hexagrams, which he called *Bie* hexagrams 别卦, or overlapping trigrams 重卦. Each overlapping trigram consists of six lines. There are only two kinds of lines, a broken one (— —), signifying *Yin*, and an unbroken one (——), signifying *Yang*. The Sixty-four Hexagrams totally make up three hundred and eighty-four lines. *Ying* lines and *Yang* lines, respectively, are one hundred and ninety-two. According to *Xici*, "The successive movement of *Yin*

[185] 周，代名也。'易'，书名也。其卦本伏羲所画，有交易、变易之义，故谓之'易'。其辞则文王周公所系，故系之'周'。以其简帙重大，故分为上下两篇。《经》，则伏羲之画，文王周公之辞也。并孔子所作之《传》十篇，凡十二篇。[Song] Zhu Xi. (2004).*Original Meanings of Zhouyi* 周易本义. Beijing: Jiuzhou Press, p.1.

and *Yang* is called *Dao* 一阴一阳谓之道".[186] In *Zhuangzi, Yi* is said to show the action of *Yin* and *Yang* 易以道阴阳.[187] Therefore, *Zhouyi* can be regarded as a philosophical work that discusses *Dao* through the interpretation of *Yin* and *Yang* changes and action.

The traditional study of *Zhouyi* generally consists of two complementary parts: *Yili* 义理 (Textual meanings) and *Xiangshu* 象数(Image-numerology). Following this pattern, Bouvet's *Yijing* investigation is divided into two sections, "Inner" and "Outer". Evidence of this is the *Zhouyi yuanzhitan mulu* 周易原旨探目錄理数内外二篇, a table of contents which divide Bouvet's study into the 'Inner meanings of *Zhouyi'* 易理内篇 and the 'Outer numbers of *Zhouyi'* 易数外篇.[188] Likewise, in the opening section of *Yixue zongshuo* 易學總說, addressed to Kangxi, the inner and outer approach to the research therein contained is again highlighted: the mystery of interior-*Yi* 内易, or inner meaning, is hard to fathom, but fortunately it can be known through the number-image-diagrams of exterior-*Yi* 外易,

> *Yi* contains all the world's Principles and Learning, which are divided into *Tianxue* 天學 and *Shixue* 世學. *Tianxue* is the Great Way 大道, God's Way 神道 and the inner Learning method 内學心法 hidden behind *Yijing*'s words; the principle of *Shixue*, instead, is the outer learning 外學, i.e. all that is in the geometric numbers and astronomy, *Lülü*, the nature of things shown in the number-image-diagrams of *Yijing*…Principles and numbers, as well as numbers and images, are related and not separate. It is easier to explain the principles by numbers and to interpret numbers by images, but if numbers and images are inadequate, one might as well use diagrams to demonstrate. Knowledge of the subtleties of exterior-*Yi* depends entirely on a careful analysis of the number-image-diagrams of *Yijing.*[189]

Bouvet's inner part specifically studies the principles or textual meaning, while the outer part focuses on the image-number study of *Yijing*, the two being ultimately used to link up with and interpret Catholic theology. The content of the

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[186] *Xici I*: 5
[187] *Zhuangzi* 3.11.1
[188] 40-16, p.1-4.
[189]易则總括學也，理也。约之为两端，一天學，一世學。天學者，大道也，神道也，即内學心法也，其義之精微，盡蘊於易之文字之秘。夫世學者，其理之廣大，品類雖繁，無不具於数幾何，天文律吕格物，盡顯於易之数象図之奥。。。理與数，数與象，自然相関而不相離。因言理莫如数，明数莫如象，数象所不及者，莫如圖以顕之。欲詳易外學之妙，俱在於詳究易数象圖之奥耳, in 34-10, p. 1-4.

manuscripts reveal that Bouvet's main research revolves around the traditional conceptual discussion of cosmology and the origins of *Yijing*, concepts such as *Xiantian* and *Houtian*, *Three-Yi*, and *Taiji*, and so forth, which contain the "subtle knowledge of the beginning and end of heaven and earth 天地始终之精微"[190] and in turn correspond to the Bible's Genesis, the Fall of Man and Salvation in Jesus.

The present chapter focuses on the 'Inner meaning of *Zhouyi'*, i.e. the textual meaning, and analyzes the theological interpretation offered by the author with the key concepts of *Yijing* philosophy as a starting point, in first place *Xiantian* and *Houtian*, combined with the concepts of Three-*Yi* and *Taiji*, elements that form the core philosophical standpoint in his interpretation of the ancient classic.

4.1. *Xiantian* 先天 and *Houtian* 後天

The words *Xiantian* and *Houtian* first appeared in the *Wen Yan* 文言 • *Qian* 乾*,* an article from "*Ten Wings* 十翼"or *Yizhuan* 易传, a work dedicated to the interpretation of *Qian* and *Kun* hexagrams; therein they represent two timings or states of action of the Great man, as we read,

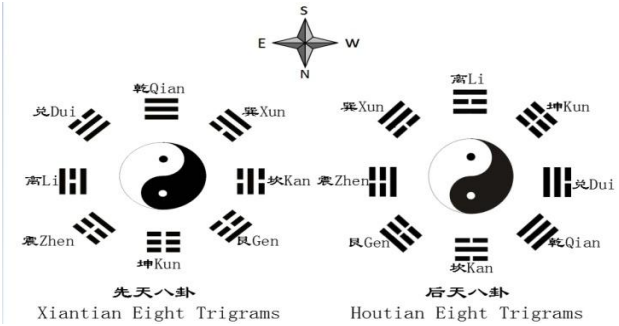
> The Great man (the Sage) is he who is in harmony, in his attributes, with heaven and earth; in his brightness, with the sun and moon; in his orderly procedure, with the four seasons; and in his relation to what is fortunate and what is calamitous, in harmony with the spirit-like operations (of Providence). He may precede Heaven, and Heaven will not act in opposition to him; he may follow Heaven, but will act (only) as Heaven at the time would do. If Heaven will not act in opposition to him, how much less will men! how much less will the spirit-like operation (of Providence)![191]

Hence, the earliest *Xiantian* and *Houtian* concept represents two states that characterize the Sage's action, with *Xiantian* referring to acts taking place before

[190] 26-2 *Yiyin yuangao* 易引原稿, p.1.
[191] 夫「大人」者、與天地合其德，與日月合其明，與四時合其序，與鬼神合其吉凶，先天而天弗違，後天而奉天時。天且弗違，而況於人乎？況於鬼神乎？ *Wen Yan Qian*:23, https://ctext.org/book-of-changes

the change of the heavenly-timing 天时, and *Houtian* referring to acts occurring after the change.[192] This means that the Sage has mastered the law of *Yijing*, and his virtue is consistent with the change of heaven and earth, sun and moon, so that he can not only predict the heavenly-timing, but also act in accordance with it.[193] However, with the progressing of the theory of the eight trigrams of *Xiantian* and *Houtian*, the two concepts no longer referred to the realm of human behavior and came into the category of cosmology and ontology.

There was actually no theory of *Xiantian* and *Houtian Learning* before Shao Yong 邵雍 (1011-1077) of the Song Dynasty, who proposed the *Xiantian* learning of *Zhouyi* 先天易学 to distinguish it from *Houtian* learning. Shao took two paragraphs in the *Shuo Gua* 說卦[194] as his theoretical basis, together with two diagrams (Figure 1 below).



(Figure 1)

Section three of *Shuo Gua* states,

> (The symbols of) heaven and earth received their determinate positions; (those for) mountains and collections of water interchanged their influences; (those for) thunder and wind excited each other the more; and (those for) water and fire did each other no harm. (Then) among these eight symbols there was a mutual communication.[195]

Section five states,

> God comes forth in *Zhen* (to His producing work); He brings (His processes) into full and equal action

[192] *Wen Yan Qian*:23.

[193] Zhu, Bo-kun, *History of Zhouyi Philosophy I*, p.118.

[194] It is one article of "*Ten Wings* 十翼"or *Yizhuan* 易传.

[195] 天地定位，山澤通氣，雷風相薄，水火不相射，八卦相錯。*Shuo Gua*:3, https://ctext.org/book-of-changes

in *Xun*; they are manifested to one another in *Li*; the greatest service is done for Him in *Kun*; He rejoices in *Dui*; He struggles in *Qian*; He is comforted and enters into rest in *Kan*; and He completes (the work of the year) in *Gen*.[196]

Shao Yong explains that the first paragraph of *Shuo Gua* corresponds to the *Xiantian* eight trigrams (left side, figure 1), i.e. Fu Xi's eight trigrams 伏羲八卦, while the second paragraph corresponds to the *Houtian* eight trigrams (right side, figure 1), i.e. the King of Wen's eight trigrams 文王八卦. The former is the main body 体 of Fu Xi *Yi* 易; the latter is the application 用 by King of Wen *Yi* 易.[197]

Shao Yong's theory of *Xiantian* learning is derived from the *Xiantian* diagram, that is, the pattern of four positive trigrams 四正卦, *Qian* 乾, *Kun* 坤, *Li* 离 and *Kan* 坎,[198] which were introduced within the Daoist system of *Zhouyi* study. Shao believes that this pattern of four positive trigrams was drawn by Fu Xi, who initially produced *Yi* without any words: there was one single diagram containing images and numbers. But the principle of the 'myriad things of heaven and earth' is already included, as is the change of beginning and end of *Yin* and *Yang*. Shao proposes that this Fu Xi pattern is the basic principle of *Zhouyi* and that it existed before *Zhouyi*. It is not artificially fabricated by a human hand: it is natural; hence it is called *Xiantian*.[199]

In comparison, the other pattern of four positive trigrams, i.e. *Li* 离, *Kan* 坎, Zhen 震 and Dui 兑,[200] is the King of Wen-*Yi* 文王易[201], which is deduced from Fu Xi, and hence it is called the *Houtian* learning. Shao has interpretations for both types of patterns, although his studies rarely interpret texts of *Zhouyi*, that is, the statements of hexagrams and lines, since he thinks these are the study of

[196] 帝出乎震，齊乎巽，相見乎離，致役乎坤，說言乎兌，戰乎乾，勞乎坎，成言乎艮。*Shuo Gua*:5, https://ctext.org/book-of-changes

[197] [Song]Shao Yong 邵雍, *Huangjijingshi Guanwu waipian* 皇极经世 观物外篇.

[198] Qian 乾, Kun 坤, Li 离 and Kan 坎 stay at four positive directions of South, North, East and West respectively.

[199] Zhu, Bo-kun, *History of Zhouyi Philosophy II*, p.128-129.

[200] Li 离, Kan 坎, Zhen 震 and Dui 兑 stay at four positive directions of South, North, East and West respectively.

[201] The *Yi* was formulated by the King of Wen.

Houtian, while his interest lies in what he called the theory of *Xiantian,* the diagram drawn by Fu Xi.

Zhu Xi summarized Shao's Fu Xi *Xiantian* diagrams into four types, i.e. *Eight Trigrams Order* 伏羲八卦次序图, *Eight Trigrams Direction* 伏羲八卦方位图, *Sixty-four Hexagrams Order* 伏羲六十四卦次序图 and *Sixty-four Hexagrams Direction* 伏羲六十四卦方位图.[202] The third is the famous diagram Bouvet sent to Leibniz in 1701.

Guo Yu 郭彧 commented that there was no clear evidence to support Shao Yong's claim, and that before him, the eight trigrams were not so different from what he proposed.[203] That notwithstanding, Shao's theory was widely recognized and disseminated by most contemporary and later scholars, most notably by Zhu Xi in his work *Original meaning of Zhouyi* 周易本義. Unsurprisingly, *Xiantian* and *Houtian* turned out to be important concepts in Bouvet's interpretation of *Yijing* and the link to his theological thought.

In manuscript 40-16, the *Inner meanings of Zhouyi* are divided into two sections. Section one regards the cause of the loss of the Way 道 and of the ancient learning, suggesting that China and the West share similar traditions and roots, thus enabling the latter – the West - to rediscover the great Way and the accomplishments of the Chinese Sages of old. Section two is about the general instructions of the "Three meanings of *Xiantian* and *Houtian"* 先天後天三義, that is *Xiantian*-un-changed 先天未變實義, *Xiantian*-changed 先天已變實義 and *Houtian*-not-changing 後天不變實義. As his core and primary idea, the contents of these concepts have been thoroughly discussed in other relevant manuscripts of Bouvet's *Zhouyi* study.

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[202] [Song]Zhu Xi. (2004).*Original Meanings of Zhouyi* 周易本义. Beijing: Jiuzhou Press.

[203] [Song]Shao Yong 邵雍, organized by Guo Yu 郭彧整理(2010). *Collection of Shao Yong* 邵雍集. Beijing: Zhonghua Book Company, p.124.

Bouvet first proposed the *Xiantian* and *Houtian* idea in the preface of *Tianxue benyi* (*Jingtian jian*), not strictly a work of *Yijing* study, but rather one that focuses on insightful views of God in the ancient Classics. He explains that "the study of Heaven/Heaven Learning", or *Tianxue* 天學, is the Way of God and a common truth of every human heart.[204] The original meaning of *Tianxue* is the doctrine of heaven worship 敬天 and of heaven service 事天 in ancient classics, which unfortunately had been lost during the Warring States period, but a truth and original meaning was still preserved in the Bible of the Western countries, meaning that the great truths of the Chinese classics and of the Bible are really one and the same.[205] Bouvet goes on to elaborate that *Tianxue* can be divided into *Xian* 先 and *Hou* 後, respectively representing the Principle of *Xiantian* 先天之理 and the Way of *Houtian* 後天之道, both of which were created by God. He further states,

> The principle of *Xiantian* refers to how the Most Divine and Spiritual Creator began to shape the heart of man; with totally unheard of, silent, enlightening action He moved man's heart to conform to His will, and the Unchangeable One opened the door of the Principle [that sustains] nature; The Way of *Houtian* [refers to how] the Creator assumed a body and image to personally re-shape the heart of man with utmost benevolence and righteousness, and through the holy teaching [coming forth from] his mouth leads man to mortify himself and thus recover the heavenly doctrines and open the door to the transcendental.[206]

Bouvet believed that people only knew of *Xiantian*, not the *Houtian,* a situation ultimately not helpful. Hence, in 37-13 *Yi Yao* 易鑰 he produced a *Key to Great Yi* 大易之鑰 to offer an analysis of the original meaning of *Xiantian* and *Houtian*.

A more comprehensive elaboration of *Xiantian* and *Houtian* is found in 37-13 *Yiyao* 易鑰, as well as in its preface 38-14 *Yiyao zixu* 易鑰自序, and in other manuscripts, which offer similar interpretations. The preface, actually a

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[204]天學者何，乃有皇上帝至尊無對全能至神至靈賞罰善惡至公無私萬有真主所開之道，人心所共由之理也，in 25-1, p.1.

[205] *Ibid*., p.1-6.

[206]先天之理乃造物主至神至靈初陶人心之始無声無臭直直默照感動人心率之合於己懷/至一不変之理而開自然而然性理之门。後天之道乃造物主取形取像再陶人心以己躬至仁至義之表/親口聖訓曲曲率人克己復還天理而開超性道之門。*Ibid*., p.6.

'self-preface' addressed to Kangxi, provides a detailed Catholic theological interpretation of *Xiantian* and *Houtian*, explaining how *Yijing* contains the Way of all ancient classics, all of which, in different ways, explain the "doctrine of heaven and of the human heart",天学心学, the great meaning of which, however, was gradually lost. People East and West descend from a common ancestor and are heirs to the same holy doctrine, hence the "doctrine of heaven and of the human heart" that we find in the Bible is no different from what we find in *Yijing*. *Xiantian* and *Houtian* are the core of both traditions, of China's *Yijing* and of the Christian Bible.[207] In order to interpret *Xiantian* and *Houtian* in Explaining how this occurs in the Bible, Bouvet divides his exposition into two parts: *Xiantian* in the Catholic Bible 天主聖經先天之大旨, and *Houtian* in the Catholic Bible 天主聖經後天之大旨.[208] In *Xiantian* he first introduces the Holy Trinity, i.e. the persons of the Father, Son and Holy Spirit and their mutual relationship. He then describes how the Creator God created the universe; how the celestial beings rebelled against God and were hence thrown into hell; how the first human ancestors, Adam and Eve, were driven out of Eden as a consequence of the devil's temptation and their sin, the original sin which contaminated all their descendants. In *Houtian* he narrates the birth of Jesus, his resurrection after death and the teachings he left to humanity on the earth. The two parts of Bouvet's account are thus based on the records of the Old Testament and of the New Testament respectively.

In Bouvet's exposition, the Way of *Xiantian* is the doctrine of the initial creation of heaven, earth, man and all that the universe contains by the Creator God; the Way of *Houtian*, on the other hand, is the doctrine of the coming of the Great Sage from heaven to bring back the virtue of benevolence and righteousness, the matching of heaven-earth, his love and salvation of the people of new birth.[209] What differs between the two is the great fortune that reigned in *Xiantian*

[207] 易之大旨，先天後天而已，天主聖经亦不外于先天后天而已, in 38-14, p. 1-2.
[208] *Ibid.*, p. 3-16.
[209] 先天之道係於造物主初生天生地生人物之理，後天之道乃仁義德配天地，继天立極天降之大聖，所復開之以新民而寵佑四方也，in 37-13, p. 17-18.

and the great transformation brought about in *Houtian*. Catholic doctrine sees *Xiantian* as the union of man's heart with the God's heart from the very beginning of the existence of all things, prior to the damage inflicted by original sin to human nature, when heaven and earth interconnected in a harmonious up-down axis. When sin wounded human nature, under the influence of selfish desire and evil, the inner and outer movements of man's mind and body became confused, much to God's displeasure, leading to his breaking-up with man, to heaven and earth's failure to interconnect and to the loss of *Xiantian*'s goodness. *Houtian* refers to a king born as a man, personally bearing all sins to restore the benevolence, the righteousness and morality of the created model, thus becoming the source of good fortune in *Houtian.*[210] The narrative and the subsequent detailed interpretation obviously refer to Genesis and the records of Jesus in the Bible, as already mentioned in Bouvet's other works, in particular the 26-2 *Yiyin yuangao* 易引原稿.

The contrast between the Way of *Xiantian* and that of *Houtian* is but a general framework in Bouvet's study, within which further distinctions are proposed: *Xiantian* and *Houtian* can be further subdivided into 'Un-changed'未變 (*Xiantian*), 'Changed' 已 變 (*Xiantian*) and 'Not-changing' 不 變 (*Houtian*). *Xiantian*-un-changed represents the beginning of creation by God as an all-harmonious, grand and auspicious scene. *Xiantian*-changed describes the inharmonious scene between heaven and earth after the fall of our ancestors, and *Houtian*-not-changing ensues from the birth of Jesus, his teachings and the salvation he won for mankind. In Bouvet, these 3 phases correspond to the concept of Three-*Yi* 三易 in *Zhouyi* philosophy. Some background philosophical explanation is called for.

Xiantian and *Houtian* are the closest equivalent that Bouvet could find in Chinese culture to match the biblical Old and New Testament structure, and on it ground a

[210] *Ibid.*, p.19.

parallel between *Yijing* and the Bible, unconvincing as it may have appeared to his readers then and now. Through the concepts of *Xiantian* and *Houtian*, Bouvet proposed an unprecedented and completely innovative interpretation in theology, at least as far as China is concerned. In fact, a similar process was conducted by thinkers from the very first years of the Church, which borrowed abundantly from Plato and Neoplatonism in particular, in order to explain the Christian event to non-Jews in philosophical categories they were familiar with:

> The Fathers of the early church sought to explain the striking resemblance between the doctrines of Plato and those of Christianity, principally by the acquaintance, which, as they supposed, that philosopher made with learned Jews and with the Jewish Scriptures during his sojourn in Egypt, but partly, also, by the universal light of a divine revelation through the "Logos," which, in and through human reason, "enlightens every man that comes into the world," and which illumined especially such sincere arid humble seekers after truth as Socrates and Plato before the incarnation of the Eternal Word in the person of Jesus Christ.[211]

Plato's cosmological and anthropological dualism (heaven and earth, soul and body) helped prepare people for Christianity. Not only Augustine of Hippo (354-430) and other Church Fathers in the earliest centuries, but in every age of the history of the church, some of the brightest thinkers, reformation leaders and writers – Anselm (1033-1109), Erasmus (1469-1536), Melanchthon (1497-1560) Jeremy Taylor (1613-1667), Ralph Cudworth (1617-88), or even poet Henry More (1614-87) to name a few - have been "Platonizing" Christians.[212]

Bouvet embarked on a similar process when he discovered, studied, borrowed and adapted to his vision as a missionary the concepts of *Xiantian* and *Houtian* as found in the *Yijing* philosophy of the Song Dynasty: *Xiantian* as the natural, primordial Way of Heaven (天道) and *Houtian* as man's derived way of how to

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[211] W.S. Tyler, *Platonism and Christianity*, in Philip Schaff, ed., *A Religious Encyclopaedia or Dictionary of Biblical, Historical, Doctrinal, and Practical Theology,* 3rd edn, Vol. 3. Toronto, New York & London, 1894. pp.1850-1853. Bibliography on Platonism's influence on Christianity is immense. A summary can be found in John Charles Holoduek, *The Philosophy of Neoplatonism & Its Effects on the Thought of St. Augustine of Hippo,* BA Degree dissertation, Saint Peter's College 2012, pp. 30-48.

[212] Tyler, *Ibid*.

conduct one's life (人道) developed by human mind and heart. He compared and interpreted them, sometimes forcing their meaning, and conceived them as a broad framework representing different stages in human development through which explain to the Chinese the Christian worldview of Creation and Salvation, the Old and the New Testament of Biblical Revelation. Framework apart, there is precious little that matches *Yijing*'s and the Christian vision of cosmos and man. Above all, there is nothing compared to the Jesus event that could explain the existence of a *Xiantian* and *Houtian*. In numerology interpreted in a kaballistic way, Bouvet would 'discover' the key to offer a Chinese answer to that.

The Jesus event is central to Christian doctrine and his birth serves as a watershed between the Old Testament, of which He is the completion, and the New Testament, of which He is the beginning. Through a unique, personal insight, Bouvet used the framework of successive eras to distinguish and represent the different (actually three) stages of *Xiantian* and *Houtian*. The theory of *Xiantian* and *Houtian* in the Song *Yijing* study comes from different directions of the eight trigrams, representing the natural image of the eight trigrams created by Fuxi and the cultural image of the eight trigrams evolved from the King of Wen. There is an obvious lack of logical comparison in trying to put together the two philosophical/theological systems, and this is the source of the understandable conclusion of the comparison being far-fetched. Bouvet's intention, however is use the traditional *Yijing* terms *Xiantian* and *Houtian* to package the Catholic theological doctrine to make it easier for the Chinese to understand, and eventually accept, the Catholic biblical doctrines of Creation, Fall and Redemption.

4.2. Three-*Yi* 三易/三义

The Three-*Yi* mentioned in Bouvet's manuscript actually contains two levels of

meaning, one referring to the three types of *Yijing*, the three divination methods 三易 developed in the course of three different dynasties; the other referring to the three core meanings or philosophical implications 三义 of *Yijing*. The earliest use of *Three-Yi* has been traced back to at least early Zhou Dynasty, with many related issues recorded in *The Rites of Zhou* 周礼. As stated in this classic*, Spring officer Zongbo* 周礼·春官宗伯, "The chief divination official is proficient in three methods of *Zhao* 兆 (Omen)…Three methods of *Yi*: The first is *Lianshan* 连山, the second is *Guizang* 归藏; the third is *Zhouyi* 周易. Its *Jing* 經 (Single) trigrams number eight in all, and its *Bie* 别 (Overlap) hexagrams are sixty-four…Three methods of [explaining] *Dreams.*"[213] Actually, the first two methods (*Lianshan* and *Guizang*) are unclear because they have been lost, and the various explanations offered by later generations are unconvincing, hence there is only one method handed down to us: *Zhouyi*.[214] There was also a special person, known as *Shiren* 筮人, who operated under the chief divination official, in charge of performing the three-*Yi*, the three types of divination known as *Lianshan, Guizang* and *Zhouyi*. [215] This shows that during the early period of Zhou, *Zhouyi* was used as a manual for divination together with two other kinds of *Yi*, the three *Yi* being divination books that used the method of yarrow stalks 筮法. Its overall structure, i.e. the number of *Jing* trigrams and *Bie* hexagrams, is the same in all three types. Hence, the status or importance of these three *Yi* is matched in all three types, even though their names and eras differ. [216]

The three meanings or philosophical implications of *Yijing* emerged also quite early on, and are found in *Yiwei·Qianzaodu* 易纬·乾凿度, vol.1, where Confucius

[213] 大卜：掌三兆之法…掌三易之法，一曰【连山】，二曰【归藏】三曰【周易】，其經卦皆八，其别皆六十有四。掌三梦之法… in *The Rites of Zhou* 3:124, https://ctext.org/rites-of-zhou

[214] Zhu, Bo-kun 朱伯崑. (2009). *History of Zhouyi Philosophy I* 易学哲学史（一）. Beijing: Kunlun Press 昆仑出版社, p.5.

[215] *The Rites of Zhou* 3:129, https://ctext.org/rites-of-zhou

[216] *Lianshan*, *Guizang* and *Zhouyi* represent three divination methods of Xia 夏, Shang 商 and Zhou 周 or Shenongshi 神农氏,Xuanyuan 轩辕氏 and Zhoushi/Wen King of Zhou 周氏文王 respectively. Kong, Ying-da 孔颖达[Tang]. (2009). *Zhouyi Zhengyi* 周易正义. Beijing: China Zhi Gong Press 中国致公出版社, p.6.

is quoted as saying, "… The name *Yi* contains three meanings, 'simple and easy', 'changing' and 'constant'. The principle of *Yi* embraces three things that hence become the moral of the world."[217] The *Qianzaodu* 乾凿度 has more to say about *Yi*,

> Its character is the easy. Its radiance penetrates the four quarters; simply and easily it establishes distinctions; through it, heaven has its brightness. Sun and moon, stars, and regions of the zodiac are distributed and arranged according to it. The soul which permeates it has no gate, the spirit which it shelters has no entrance. Without effort and without taking thought, simple and without error: this is the easy. Its power is change. If heaven and earth did not change, this power could penetrate nowhere. The reciprocal influences of the five elements would come to a standstill and the alternations of the four seasons would cease. Prince and minister would lose their insignia, and all distinctions would be shifted; what should decrease would grow; what should rule would fall. This is change. Its state is constant. That heaven is above and the earth below, that the lord faces south and the vassal faces north, that the father is seated and the son bows before him: this is the constant.[218]

Han dynasty Confucian scholar Zheng Xuan's *Yizan* 易赞 and *Yilun* 易论 are further proofs of the three meanings of *Yi*. Zheng *wrote*, "*Yi* is the one name which contains three meanings. The first is *Yijian* (easy and simple); the second is *Bianyi* (changing); the third is *Buyi* (constant)."[219]Contemporary scholar Lin Zhongjun thinks that in comprehensive terms *Yi* contains three meanings. The first *Yi* is the 'principle of things'. It is the virtue, or Dao which gives birth to myriad things without doing anything. The second *Yi* is 'change' and means interaction and transformation. The last *Yi* is 'constancy' or 'permanence': it indicates the unchangeableness of its constant status.[220]

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[217] 孔子曰：易者，易也，变易也，不易也，管三成为道德苞龠. In *Qianzaodu* 乾凿度, volume 1 卷上. Lin, Zhongjun 林忠军. (2002). *Introductory Reading of "Yiwei"*《易纬》导读. Jinan: Qilu Press 齐鲁书社出版社.

Yiwei 易纬 is a book about *Yijing* study. "Wei 纬" is another interpretation of "Jing 經". "*Yiwei ·Qianzaodu* 周易乾凿度" is an article in the book "*Yiwei*" towards the end of West Han Dynasty. It is referred to as "*Qianzaodu*", combines *Yijing*, Taoism, and Numerology into one and it is a well-preserved work rich with philosophical ideas.

[218] Wilhelm, Hellmut & Wilhelm, Richard. (1995). *Understanding the I Ching: The Wilhelm Lectures on the Book of Changes*. New Jersey: Princeton University Press, p.23.

[219] 易之为名也，一言而函三。易简，一也；变易，二也；不易，三也。In Liu, Shi-pei 劉師培. (2006). *Study of Confucian Classics Textbook* 经学教科书. Shanghai: Shanghai Classics Publishing House 上海古籍出版社, p.168.

Zheng Xuan 郑玄 (127–200) was an influential Chinese commentator and Confucian scholar near the end of the Han Dynasty.

[220] Lin, Zhongjun 林忠军. (2002). *Introductory Reading of "Yiwei"*《易纬》导读. Jinan: Qilu Press 齐鲁

The explanation of the three meanings in *Yiwei* finds its roots in *Yizhuan* • *Xici* 易传 •繫辞 as does the account offered by Zheng Xuan. A *Xici vol. I* 繫辞上 passage recites, “The *Qian* knows through the easy, the *Kun* can do things through the simple. What is easy is easy to know; what is simple is easy to follow… By means of the easy and the simple we grasp the laws of the whole world”.[221] Another passage from *Xici vol. II* 繫辞下 states, “The *Qian* is decided and therefore shows men the easy. The *Kun* is yielding and therefore shows men the simple.”[222] These two passages explain how the ‘easy and simple’ rule the *Yi*. A third passage from *Xici* explains the changing and movement of *Yi* , “Its Dao is forever changing, alteration, movement without rest, flowing through the six empty places, rising and sinking without fixed law, firm and yielding transform each other, they cannot be confined within a rule, it is only change that is at work here.”[223] The *Xici* further states,

> Heaven is high, the earth is low; thus, the *Qian* and the *Kun* are determined. In correspondence with this difference between low and high, inferior and superior places are established. Movement and rest have their definite laws; according to these, firm and yielding lines are differentiated. Events follow definite trends, each according to its nature. Things are distinguished from one another in definite classes. In this way good fortune and misfortune come about.[224]

These words indicate the determining laws and the constancy of the Dao. As we have seen, the three meanings of *Yi* were not coined by the *Yiwei* but result from the elaborate synthesis and summary of the thought of *Xici*, a text which Bouvet referred to in his study of *Yijing*.

As seen, the Three-*Yi*, one of two important concepts in traditional *Zhouyi* philosophy, is the product of an elaboration from three generations/dynasties and

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书社出版社, p.31.

[221] 乾以易知，坤以简能。易则易知，简则易从。。。易简，而天下之理得矣。*Zhouyi ·Xici I*:1

[222] 夫乾，確然示人易矣。夫坤，隤然示人简矣。*Zhouyi ·Xici II*:1.

[223] 爲道也屡遷，變动不居，周流六虚，上下无常，刚柔相易，不可爲典要，唯變所適。In *Zhouyi ·Xici II*: 8.

[224]天尊地卑，乾坤定矣。卑高以陳，貴賤位矣。動静有常，剛柔斷矣。方以類聚，物以群分，吉凶生矣。*Zhouyi ·Xici I*: 1.

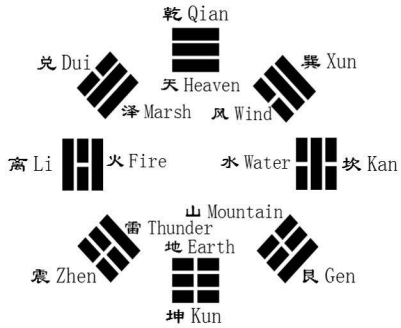
carries in itself three implications of *Yijing*, which Bouvet used to make a comparative illustration and interpretation of his Catholic biblical theology. He teaches that all things in the universe are encompassed in three types: Heaven 天，Earth 地 and Man 人, which in turn correspond to pure spirit 纯神, pure form 纯形, and a fusion of the two 兼神形, and at the same time match the concepts of *Xian* 先, *Hou* 後 and *Zhong* 中, and the three sets of the threefold principles of *Yi*-learning 易学, namely *Xiantian* 先天*, Houtian* 后天*,* and *Three-Yi* 易简, 变易, 不易; *Tianhuang* (King of Heaven)天皇, *Dihuang* (King of Earth)地皇, and *Renhuang* (King of Man)人皇; *Lianshan* 连山, *Guizang* 归藏, and *Zhouyi* 周易. Bouvet then uses biblical doctrines to discuss these main concepts which he introduced, equating them to the scenes of 'supreme good fortune' and 'perfect harmony of all things' that came into being by the will and action of the one God at the beginning of *Xiantian* together with the *Yi of Simplicity* 易简, *Lianshan* and *Tianhuang*. Later, human ancestors were tempted by the devil to disobey God, leading to disharmony between heaven and man, which corresponds to the *Yi of Change* 变易, *Guizang* and *Dihuang*. Finally, the Son of God came down to save humanity, thus restoring the 'supreme good fortune' that is equivalent to the *Yi of Constancy* 不易, *Zhouyi* and *Renhuang*.[225] On the basis of this, Bouvet further elaborates each of the Three-*Yi* in *Xiantian* and *Houtian,* matching each of them with the theological meanings in the Bible.

Yijian-Lianshan 易简-*連山*

Bouvet begins his elaboration with the first of the *Three-Yi,* i.e. the supreme good fortune of *Xiantian*, *Yijian* and *Lianshan*. The first hexagram of *Lianshan* is *Gen* 艮. In Zheng Xuan's interpretation *Lianshan* symbolizes the clouds of the mountains, which are boundless.[226] Bouvet explains the meaning of the *Gen* 艮 trigram and of the *Dui* 兑 trigram, which lay opposite to it, in *Fuxi*'s eight trigrams positional chart (see Figure 2 below), as follows,

[225] 26-2, p. 3-4.

[226] 《連山》者，象山之出云，连连不绝, in Kong, Ying-da, *Zhouyi Zhengyi*, p.6.



(Figure 2)

> The *Gen* trigram symbolizes the mountain, quiescent and motionless, its shape like an upside-down bowl, which is the natural meaning of an empty vessel…The *Dui* trigram symbolizes the marsh, which means flowing and having a gap at the top. Grace from heaven flows down in the direction of *Gen*, an empty vessel facing up. It is a natural image of the juncture of up and down, the interchange of mountain and marsh, of heaven giving and earth receiving. God's heart is benevolent and gives grace to the people; the people humbly raise their eyes. Shaozi said that in *Fuxi's* eight trigrams position, the interconnection of eight trigrams results in the 64 hexagrams which are called the *Xiantian* learning.[227]

Through the interpretation of images and positions of the trigrams of *Dui* and *Gen,* this passage implies the harmonious relationship between the Creator and his creation. The passages that follow elaborate the concept of beautiful harmony of *Xiantian,* with the celestial beings, i.e. the angels, and the progenitor of the human race being modest and self-conscious, revering the Creator and accepting His grace without complacency, further verifying his explanation by quoting from the Chinese ancient classics.[228]

Bianyi-Guizang 變易-*归藏*

Bouvet elaborates to some degree the second of the *Three-Yi*, i.e. the evil and ominous elements of *Xiantian*, *Bianyi* and *Guizang*. The first hexagram of *Guizang* is *Kun* 坤, and *Guizang* symbolizes that everything is return and hidden

[227] 艮山也止而不動本有覆碗之状碗覆乃器空虚自然之義也…兑澤也上缺流也兑天澤既缺下流正对于艮乃空虚上仰之器明為上下交山澤通氣天施地承帝心仁爱弘流之澤通下下人虚心仰上恒受固存自然之象也邵子曰伏羲八卦之位八卦相交而成六十四卦所謂先天之学也, in 26-2, p. 26-27.
[228] 26-2, p. 28-29.

in it.[229] He describes how the rebellion of the highest of the celestial beings soon turned the jubilation of good fortune of *Xiantian* to evil:

> Evil began with the chief reprobate Lucifer, the highest of the celestial beings of Nine Heavens, leading a rebellion against the Lord, like a dragon, with wide open eyes, yet without ears, able to listen through its horn, proudly flying in the sky.[230]

In Chinese classics, in parallel with the Bible story of Lucifer's rebellion, he finds *Gong Gongshi* 共工氏 and *Chi You* 蚩尤 as representatives of the evil side. Lucifer was eventually defeated by Michael 彌額爾, the highest of the good celestial beings; as a result, the proud angel and his cohorts were sent into hell and became devils. In the Chinese classics, *Gong Gongshi* and *Chi You* were defeated by *Zhu Rong* 祝融 and *Xuan Yuanshi* 軒轅氏 respectively.[231] Bouvet concludes with a description of how the snake, the rebellious celestial being, lured the first humans into disobeying God by eating of the fruit of the forbidden tree, and how all of these elements are found in Chinese classics.

Buyi-Zhouyi* 不易-*周易

Finally, Bouvet tells the story of Jesus,[232] the son of God made man who came to teach and save humanity and restore happiness. The first hexagram of *Zhouyi* is *Qian* 乾, with *Zhouyi* symbolizing the universal and all-inclusive Way of *Yi*.[233] He explains how the unfortunate changes of *Xiantian* brought about by man's sin damaged the world; how man's loss of life divine was the fault of the one human progenitor; how the *Houtian* reopened, the birth of a new people eventually brought back happiness and the everlasting peace of the kingdom of heaven, bestowed by the benevolence, justice and virtue of the only Primordial Holy One

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[229] 《归藏》者，萬物莫不归藏于其中, in Kong, Ying-da, *Zhouyi Zhengyi*, p.6.

[230] 其变之凶始于元恶巨憝乃九部天神中一上品最神明者名露即拂爾（译名带光）出首叛逆忘己忘主妄恃己明任智自神不安子臣之分如龍目明无耳以角聽異傲亢逆登飛與帝天角, in 26-2, p. 30.

[231] *Gangjian* 綱鑑, *Shiji* 史记, *Shujing* 书经, *Guliang* 穀梁, *Annotations on the Thirteen classics* 十三经注 and the Mingyi 明夷 hexagram of *Yijing*.

[232] Jesus is called Original Sage, or Primordial Holy One 元聖 in the text.

[233] 《周易》者，易道周普，无所不备, in Kong, Ying-da, *Zhouyi Zhengyi*, p.6.

元聖 endowed with two natures, divine and human.[234]

A member of the Holy Trinity, the Primordial Holy One, the Supreme Eternal Son, was sent to the world. Having overcame all difficulties he established himself as a teacher of all ages: the One-Three Creator deeply cares about the fall of *Xiantian*, intensely dislikes thoroughly-evil demons and commiserates human suffering brought about by our progenitor lured by the devil. The Son of God, born of a virgin in the ancient Jewish Nation, lived on earth for thirty-three years, during which time he showed his great and exhaustive devotion to benevolence, righteousness, loyalty and filial piety, teaching the people and finally giving his life. He rose again from the dead, ascended into heaven, is seated at the right hand of God the Father almighty and is empowered to judge the living and the dead. He instructed his 12 apostles and 72 disciples to go forth and preach to all the nations of the world, which thus regained its goodness. From then on, the good go to heaven and the evil to hell and the *Houtian* kingdom is stable and secure, never changing, i.e. in a state of Constancy 不易, of *Zhouyi* 周易 and the *Yi* of the Sages 聖人之易. Bouvet supported his narrative, as before, with a large amount of quotations from the ancient Chinese classics for verification.[235]

Beyond that, Bouvet also used the theoretical significance of combining the theories of Three-*Yi* in *Xiantian* and *Houtian* to interpret the issue of the uneven movement of the astronomical phenomena.

The non-equilibrium of the astronomical phenomena 天象不均齊

In the fifth manuscript, starting from the uneven movement of the *Wuwei* 五緯,[236] Bouvet discusses, why the various astronomical phenomena are in a situation of

[234] 畧詳先天人性变易损壞世乱人類之命已丧之凶原由一人祖所起後天復開再生新民终辛得真福無疆天國永寧之吉係于惟一仁義德全至尊卑天人二性之元聖所復, in 26-2, p.33.
[235] 26-2, p.34-36.
[236] *Wuwei* 五緯, also known as the five stars（五星）, are: *Taibai* 太白 (Venus), *Suixin* 岁星 (Jupiter), *Chenxing* 辰星 (Mercury), *Yinghuo* 荧惑 (Mars) and *Zhenxing* 镇星 (Saturn). They respectively correspond to Metal, Wood, Water, Fire and Earth.

non-equilibrium as evidenced in the ancient Chinese classics.[237] He explains that the chaotic variation of the astronomical phenomena does not affect just the *Wuwei*. Other stars as well, even the sun and the moon, behave in a bizarre and unpredictable way, so that even the most sophisticated measuring instruments available today are not guaranteed to be accurate in the future. And he quotes the *Yijing* to clarify that the confusion of the astronomical phenomena does not pertain to the scene of creation but is a consequence of the great change that affected the universe. [238]

Bouvet attempts to prove that evidence of the great change observable in astronomical phenomena, all of which is caused by change brought about by man,[239] can be found in the ancient Chinese classics and that the theory of *Xiantian* and *Houtian* in *Yijing* can be taken as the general evidence of this. The *Yijing* describes how the *Xiantian* went through a great change to become the *Houtian*; it is a great mistake to see the *Xiantian*, as some do, as existing before creation, before "Heaven-earth" had come into being. Quoting the sentences in *Shuogua* 說卦[240] (already quoted in earlier pages), he thus explains the proper understanding of *Xiantian* and *Houtian* and deduces that *Xiantian* in *Yi* does not happen/occur before heaven and earth, but at the beginning of creation.[241] The difference between *Xiantian* and *Houtian* is then illustrated by two different orientation charts of the eight trigrams (see Figure 3 below).

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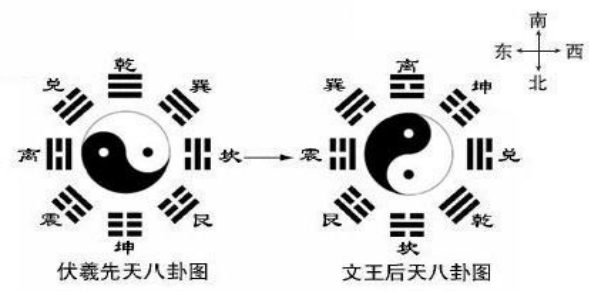
[237] 據考古經古传，由五緯行度之不齊，詳解諸天象，何以不均齊, in 29-5, p. 1.
[238] 法象莫大乎天地，縣象著明，莫大乎日月, in *Xici I:*11.
[239] "Scribes in ancient Classics not only recorded changes in astronomical phenomena, how heavenly phenomena change top-down and earthly phenomena change bottom-up; physical changes also occur, and the reason for this is change in man: isn't this a proof of the cosmic great changes?" 典籍所载者，不獨言天象之變也，天象變于上，地势變于下，物亦為變，而其故皆由人之變，豈非寰宇大變之驗, in 29-5, p. 3.
[240] *Shuo Gua*:3,5.
[241]"天地定位，山澤通氣，雷風相薄，水火不相射，八卦相錯"。非先天之學乎。"天之主宰（帝）出乎震，齊乎巽，相见乎離。致役乎坤，說乎兑，戰乎乾，勞乎坎，成言乎艮"。非後天之學乎。是知易所謂先天者，非指天地以前也，乃開闢之初。in 29-5, p. 4.



(Figure 3)

Bouvet goes on to explain that the astronomical phenomena occurring in *Xiantian* and *Houtian* are different but not mixed, and this can be inferred from *Xici*. According to *Xici*, he deduces that "Heaven and earth in *Xiantian* are positioned, while Heaven and earth in *Houtian* have no definite position but rather modify it".[242] He also quotes records in ancient classics and the transformation of *Yin* and *Yang* in *Yijing* to explain that "There is a shortage of heaven in the northwest, and a shortage of earth in the southeast" as evidence of the great changes that have occurred in the world.[243]

Bouvet further tackles the interpretation of the differences between *Xiantian* and *Houtian* and their meaning from a human perspective. According to *Yijing*, as mentioned, heaven and earth in *Xiantian* are positioned, *Qian* and *Kun* are united: they all exist naturally without acting, and everything goes well without reverse.[244] Water and fire are an easy to understand example of how things were in *Xiantian*: water and fire, per se, are the most obvious mutually inhibiting and harmful of all elements, yet, in *Xiantian,* they do not damage each other, they are complementary. These are water and fire: all other elements in *Xiantian* are unopposed to each other; the universe is naturally harmonious and so are human beings: man possesses simplicity, the virtue of *Yijian* 易简, and conforms to the meaning of the *Gen* trigram of *Liansha*n 連山.[245] Other classical works also

[242] 先天天地定位，後天天地必不定位而易位, in 29-5, p.6.
[243] 天不足西北，地不满东南. Classics quoted are: *Xunzi* 荀子, *Huainanzi* 淮南子, *Wenzi* 文子, *Liezi* 列子, *Shuowen* 說文, *Shiji* 史記, *Chuci* 楚辞.
[244] 皆無為自然，顺而無逆, in 29-5, p. 10.
[245] 29-5, p.11.

describe *Xiantian* scenes of peace and harmony, such as the *Supreme One* theory 至一 in *Zhuangzi.*[246] In contrast to this is the age of decadence of *Houtian*, when the *Yin-yang* harmony turns into a harsh scene, called the *Guizang* 歸藏. Therefore, by "observing the great changes that occurred in human beings, in created things, in heaven and earth in the universe, one can realize that the movement and position of the astronomical phenomena have also changed."[247]

He describes the great changes that occurred in the myriad things of the universe since the changes induced by man, who did not conform to the principles of Heaven. It states, "All things can be governed when they conform to the principles of Heaven, or else things will turn ominous, and this is certainly so. Since subjects disobey the will of Heaven, right and wrong will occur here and will become increasingly obvious, and the *Dao* will suffer damage."[248] He points the finger at the human progenitor as the root of all human failures and sufferings and explains the presence of evil in human heart.

Finally, Bouvet describes how the Creator saves our corrupt world by sending down the Great Sage 大聖, a "mediator between heaven and earth in a state of moderation and harmony",[249] as recorded in the ancient classics. The Great Sage is described as "The head of humanity, the highest standard in human ethics, the hope of mankind, the one to be awaited by true Confucian scholars of a hundred generations… whom all ancient classics call Holy Sage, God, Ruler, Sovereign, Master, Great man, Most faithful and holy one, all of these."[250] Only "when the Great *Dao* had been abandoned did benevolence and righteousness

[246] Supreme One, a state or situation of highest harmony. In *Zhuangzi*:2:3:2.
[247] 知寰宇天地人物之大變，则愈知天象之行度位次亦皆變易, in 29-5, p.13.
[248] 顺天理则治，逆之则凶，當然之则也。因下民方命，是非生焉，是非之彰也，道之所以虧也, in 29-5, p.14.
[249] 參天地致中和, in 29-5, p. 28.
[250]大聖也，为人類之首，人倫之至，萬夫之望，百代真儒之所需待者。。。。。凡古經稱為聖，為神，為后，為君，為師，為大人，為至誠至聖者，皆是也, in 29-5, p. 28.

appear",[251] hence "If the Great *Dao* had not been abandoned, how would benevolence and righteousness appear? These only emerge after virtue has declined".[252] Evidently, the descent of the Great Sage as the benevolence and righteousness of *Houtian* is the consequence of the decline of virtue in *Xiantian* and he is none other than Jesus Christ. He concludes that "when the new creation by the Great Sage is complete, heaven and earth are positioned, equilibrium of all images is re-attained, the myriad things are in order and the scenery of great harmony of *Xiantian* reappears in heaven and on earth."[253]

When approached in the perspective of traditional *Zhouyi* study, the *Yi* of three generations/dynasties and the three meanings of *Yi* appear as completely different concepts. The former (the *Yi* of three generations/dynasties) refers to the categories of the history of *Yijing* study; that said, one should keep in mind that *Zhouyi*, but *Lianshan* and *Guizang* have been lost and appear in relevant ancient classics as mere records. The latter, i.e. the three meanings of *Yi*, being important concepts, have had a significant impact on the development of *Zhouyi* philosophy. The Confucian master of Eastern Han, Zheng Xuan used the three meanings in his *Yi Lun* 易論; Kong Yingda of Tang also adopted them in the preface of his *Zhouyi Zhengyi* 周易正義 and even the textual meaning school of the Song and Ming dynasties used the theory to propose the metaphysics of "Heaven unchanged and the Dao also unchanged".[254] The notion of *Xiantian* and *Houtian* learning is a late product of the *Tushu* study of *Zhouyi*, of the Neo-Confucianism of the Song Dynasty. The three concepts of *Yi*, the *Yi* of three generations/dynasties and the three meanings of *Yi,* had never before been combined for interpretation in traditional *Zhouyi* study, something actually impossible to do within the rigorous classical approach. Thus, the use of this combination and interpretation of the three states of the world, linked to the

[251] 大道癈，有仁義, in *Daodejing*:18.
[252] 大道不癈，安取仁義，德衰，然後有仁義, in 29-5 p. 32.
[253] 大聖再造之能成，天地定位，萬象皆均，萬物皆齊，先天太和大顺之境復见於天地间矣, *Ibid.*
[254] 天不變，道亦不變, in Zhu, Bo-kun, *History of Zhouyi Philosophy I*, p.181.

concept of God and Catholic theology, is even clearer evidence of Bouvet's original product and of his creative mind. Not only that, but he also successfully added another important concept in Chinese philosophy, that of *Taiji*, to set the seal on his theoretical foundation and the general outline of *Tianxue* in order to explain the "subtlety of the beginning and end of heaven and earth". No wonder Mungello sees Bouvet as an extremely creative thinker, as former he writes,

> Two variable factors in historical evaluation are external influence and individual creativity. Creativity is particularly variable because creative thinkers will sometimes think creatively merely to spite the weight of the past.[255]

4.3. *Taiji* 太極

Taiji 太極, the Great Ultimate, is not only a basic concept in *Zhouyi* study, but also one of the most important concepts in ancient Chinese philosophy, one that mainly refers to the realm of cosmology and ontology, used to explain the origin of the world. The term "*Taiji*" is found in both *Yizhuang* and *Zhuangzi* as a key concept shared by both Confucianism and Daoism. According to *Yizhuan*, the word *Taiji* first appeared in *Xici*,

> Therefore in (the system of) the *Yi*, there is the *Taiji*, which produced the two elementary Forms (*Yin* and *Yang*). Those two Forms produced the Four emblematic Symbols, which again produced the eight Trigrams.[256]

And, in *The Great Master* chapter of *Zhuangzi* 庄子 • 大宗师, we read,

> The Dao…It was before the *Taiji* and yet could not be considered high; It was below all space, and yet could not be considered deep; It was produced before heaven and earth, and yet could not be considered to have existed long; It was older than the highest antiquity, and yet could not be considered old.[257]

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[255] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 311.
[256] 是故《易》有太極, 是生两儀, 两儀生四象, 四象生八卦, in *Xici I*:11.
[257] 夫道…在太極之先而不为高, 在六極之下而不为深; 先天地生而不為久，長於上古而不為老。。。in *Zhuangzi*, 1:6:3.

Some scholars believe that the thought of *Yizhuang* was influenced by the *Zhuangzi*, one reason being the later completion of the former. Based on Zhu Bokun's comments on *Taiji*, Chen Guying suggests that *Xici* had been deeply influenced by Daoism, and in particular by the thought of *Zhuangzi*.[258] Zhu asserts that the term "*Taiji*" was only found in the *Great Master* chapter *of Zhuangzi* in pre-Qin literature. He states,

> The *Taiji,* which in *Zhuangzi* refers to the highest limit of space while in *Yizhuan* it refers to the 'numbers of Dayan'大衍之数 or the undivided status of odd-even, is the root of trigrams. *Zhuangzi*'s is the original meaning, which was later "borrowed" by *Yizhuan* to interpret the divination method.[259]

Zhuangzi's *Taiji* concept comes first, but it is still a fuzzy, undeveloped notion without a clear philosophical explanation, mentioned simply in order to describe the existence of Dao. In *Yizhuan*'s *Xici,* instead, *Taiji* is seen as illuminating the formation process of *Yin-yang* and of the eight trigrams: concisely put, *Taiji* is not only the first link in the production of eight trigrams, but also the ontological cause of the generation and existence of heaven and earth because of the symbolic meaning of the eight trigrams. Zhu's assertion that *Yizhuan*'s is a "borrowed" concept is just an inference, but this does not affect the particularity and importance of the *Taiji* concept in Chinese philosophy, especially in the philosophical study of *Zhouyi*.

In fact, in the development history of *Zhouyi, Taiji* carries very rich meanings. Beginning from the pre-Qin period, many Chinese scholars produced profound interpretations of the *Taiji* concept, reaching the highest development during the Song dynasty. In traditional Confucian classics, *Taiji* has been seen as *Pole star* 北辰, *Vital energy* 元气, *Chaos* 混沌, *Tai Yi* 太一, *Nothing* 无, *Undivided-one* 未分之一, *Heart/Mind* 心, *Dao* 道, *Principle* 理 and so on, and its interpretation evolved from the realm of cosmology to that of ontology, from the origin of the universe to

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[258] Chen, Guying 陈鼓应.(1991). *Xici* of *Yizhuang* is influenced by the thought of *Zhuangzi*《易传·系辞》所受庄子思想之影响. The study of philosophy, vol. 4, p.51-58.

[259] Zhu, Bo-kun, *History of Zhouyi Philosophy I*, p.58.

the nature of being.

Zhang Liwen and Ge Ronjin have produced detailed studies regarding the connotations of *Taiji,*[260] but Zhao Zhongguo thinks that the two scholars did not systematically conduct their research to include the field of *Zhouyi* study, which he did, asserting that there are 13 different meanings of *Taiji* in the traditional study of *Zhouyi* pertaining to 4 areas: cosmological horizons, ontological horizons, the method of producing the eight trigrams and the process of practicing divination.[261] The study of *Zhouyi* in Song dynasty, a new and important period for the development of *Zhouyi* study, and the advent of *Taiji* diagram 太极图，brought the *Taiji* theory to its highest progress, greatly influencing Confucian thought and *Zhouyi* study in Ming and early Qing dynasty. It became naturally unavoidable for the Jesuit missionaries living in China to be dragged into in-depth discussions and even heated arguments on the concept of *Taiji*.

Matteo Ricci, the Jesuit missionary pioneer, was a resolute opponent of the doctrine of *Taiji*. Rather than to the *Taiji* concept as such, his was opposition to Song Neo-Confucianism. His *Tianzhu shiyi* 天主实義 contains many in-depth debates on *Taiji*. For instance, he believes that the *Taiji* theory of Song Confucianism is inadequate, and so he claims,

> When a doctrine is reasonable, a gentleman would not oppose it; now the interpretation of *Taiji* is hardly reasonable. I see the diagram of *Wuji Taiji*, which but uses the odd and even as a theory: where is the meaning of image? We can and do know that *Taiji* did not beget heaven and earth.[262]

[260] Zhang, Liwen 张立文(1988). *History of the category of Chinese philosophy Dao of Heaven* 中国哲学范畴发展史（天道篇）. Beijing: Renmin university Press. Ge，Ronjin 葛荣晋. (2001). *A general discussion on category of Chinese philosophy* 中国哲学范畴通论. Beijing: Capital Normal University Press.

[261] Zhao, Zhongguo 赵中国. (Nov. 2013). *The Change of Taiji's Meaning in Traditional Yi-ology* 传统易学论域中太极之义的变迁. Journal of Henan University (Social Science), vol. 53, No.6.

[262]凡言与理合，君子無以逆之，太极之解，恐难谓合理也。吾视夫无极太极之图，不过取奇耦之像言，而其象何在？太极非生天地之实可知也。Zhu, Weizheng. (2001). *The Collection of Matteo Ricci's Chinese Literatures* 利玛窦中文著译集. Shanghai: Fudan University Press 复旦大学出版社.

Yang Honsheng thinks that when Matteo Ricci considered God [and not *Taiji*] to be the the driving force of the universe, he actually implied his criticisms of the thinking behind *Yijing* and of its universal outline. Yang further elaborates,

> According to *Yijing*, the universe itself has its own mechanism and creative ability, so "matter" itself can be said to be spiritual. This is a natural spirituality that aggregates *Yin* and *Yang* to produce infinite combinations. In this regard, the *Taiji* theory of Song Confucianists is actually a more philosophical play of the *Yijing* cosmology. From the perspective of the Neo-Confucianists, the theory of "There is the *Taiji* in the system of *Yi* 易有太极" is based on the combination of symbols. It is not difficult to imagine that for Matteo Ricci, the concept of *Taiji* seems so weird because he cannot imagine the world as a product of the evolution of a kind of symbol.[263]

Not only Ricci, but other Italian contemporary missionaries in China expressed their views or joined disputes on *Taij* to varying degrees, holding basically similar opinions. Nicolò Longobardi 龙华民, Ricci's successor in Beijing, even incorporated the *Taiji* into religious categories for debate. In two representative works, *Soul and Body* 灵魂道体说 and *Discuss some issues on Chinese Religion* 论中国宗教的若干问题, he criticized the *Taiji* theory of Song Confucianism, warning that concepts such as *Li* 理 or *Taiji* could not possibly be compared to the Christian concept of God. Distancing himself from his predecessor, Longobardi paid more attention to highlighting the differences of Chinese thought with the Christian message, and emphasized that on some key issues, the two were incompatible.[264] Giulio Aleni 艾儒略, yet another contemporary Jesuit, perceived *Taiji* just as being equivalent to the concept of Principle 元质 in Western philosophy, and rejects it saying,

> The interpretation of *Taiji* by the Confucianists is nothing more than *Li* (principle) and *Qi* (vital energy): what in your country you call *Taiji* is what we call *Principle* in our State. A principle is but the material from which everything is created, one of the four causes (material cause) of heaven and earth, how can it be Lord? Or how could one sacrifice to it? Laughable! If people understood that *Taiji* is but a principle and one of four causes, they would then conclude that a Principle is unlike Lord of Heaven; they know that *Taiji* begets the two-elements (*Yin* and *Yang*), hence, the reason can be seen why

[263] Yang, Hon-sheng. (2003). *Theories on Yi by the Jesuit missionaries in China at the turn of the Ming and Qing dynasties* 明清之际在华耶稣会士之易说. Studies of *Zhouyi*, No. 6, 2003 (62), 41-51.
[264] *Ibid*., p. 44.

ancient people did not sacrifice to *Taiji*.[265]

Like Matteo Ricci, rather than studying the value and the ideological significance of *Yijing*, both Longobardo and Aleni concentrated on opposing the Neo-Confucian theory of *Taiji*, firmly believing that the Neo-Confucianism of the Song scholars was no longer the true Confucianism of old. Joachim Bouvet, departed from such line of thought and held totally different opinions on and interpretations of the *Taiji* concept.

Bouvet proposes that the concepts of *Taiji* (Great Ultimate)太極 and *Taiyi* (Great One)太一 as two terms that refer to God. *Taiyi's* meaning is elicited from words, from Chinese characters, while *Taiji* is interpreted through graphs. In the traditional study of *Zhouyi*, *Taiyi* is also an interpretation of *Taiji*, which started in the Han dynasty and eventually was related also to the concept of Dao.[266] Bouvet discovered in traditional Chinese culture that the monarch in ancient times would sacrifice to *Taiyi* in spring ultimately dedicated to *Haotian Shangdi* 昊天上帝 as the most important and oldest of customs. He also found the records of sacrifices to *One-Three* 一三, which were performed in the same way, and suggested that ancient China already had knowledge and understanding of the Triune God before the birth of Jesus Christ. In an important letter he wrote to Leibniz, he explained these amazing findings in detail,

> This is a truth that is otherwise clearly established in the classical books of China, since one reads in the Record of Ritual [i.e., *Liji* 禮記] this passage: *Taiyi fen er wei tiandi* [i.e., 太一分而為天地; lit., as to *Taiyi,* when it is divided it becomes heaven and earth], that is, the very great unity or three times great or to say it even better the Triune unity (for these two hieroglyphs *Taiyi* include all these three senses) is the principle of heaven and of earth. But in order to show that this *Taiji*, or this great unity of which the *Record of Ritual* speaks, is a genuine, intelligent, all powerful unity and the same thing as *Shangdi* [i.e., 上帝], sovereign lord of heaven and of earth, it suffices to say that one reads in the *Shiji* [i.e.,史记, *Records of the Grand Historian*] which is an ancient book of annals highly esteemed and written before

[265]今观儒者之解太极不出理气二字，则贵邦所谓太极，似敝邦所谓元质。元质不过造生万物之材料，不过天地四所以然之一端，安得为主？又安得而祭之事之也哉。噫嘻！人苟知太极之即元质，又察之此四者，而知元质之异于天主，则可通太极生两仪之解，而古人不祭太极，其故并可见矣。*Ibid*.

[266] Zhu, Bo-kun, *History of Zhouyi Philosophy I*, p.73.

> the birth of Jesus Christ, that in ancient times one sacrificed and offered up victims of the first order to *Taiyi*, that is *Uni maximo* [i.e., highest one], in the *jiao* [i.e.,郊], the place reserved for the sacrifices to *Shangdi*. To this I might add that it is reported in a ritual nearly as ancient, that one formerly sacrificed in the same way to *yi san* [i.e.,一三, lit., one, three], that is to *Uni Trino* [i.e., triune unity]. This shows, Monsieur, that the ancient Chinese had knowledge not only of God as Creator and as the principle of all natural things, but also of the exquisite mystery of the very holy Trinity.[267]

In manuscript 26-2 *Yi yin*, Bouvet asserts that the *One-Three* 一三 is the essence or the first principle of all things in *Xiantian*. He draws a parallel between *One-Three* and the Christian doctrine of the Triune God and explains his *One-Three* theory is derived from the records of *Yizhuan* 易傳, *Liyun* 禮運 and some ancient proverbs.[268] *Yizhuan* affirms that "*Yi* contains *Taiji,* which produces the two elementary forms" of *Yin* and *Yang*. *Liyun* states that "*Rite* 礼 certainly stems from the *Great One*, which in turn is divided into heaven and earth". *Guyu* affirms that the "*Great One* contains three, and the *Taiji (*or *Great Ultimate)* also contains three".[269] These subtle meanings find a parallel in Catholic teachings and the mysteries revealed in the Bible, including the guiding principle of the Jewish-Christian Kabbalah 秘学纲领: these are all summed up in the chart which 'begins from one and ends with ten', the core of which 'begins from one and ends with three', the *Sanji sancai* diagram 三極三才圖 (three primary forces) of Moses.[270]

Bouvet clarifies why the *One-Three* is the root of all things, and further explains that all things belong to two categories, spirit 神 and form 形: the spirit is profound, subtle and honourable; it is heaven and Yang; the form, instead, is broad, vast and humble; it is earth and Yin[271]. Separately, spirit and form can also be divided into Yin and Yang. The spirit can be divided into pure spirit and a combination of

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[267] Letter I: 4 November 1701, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

[268] 26-2 *Yi yin*, p. 6.

[269] 易有太極是生两儀; 礼必本于太一分而為天地; 太一函三太極函三, in 26-2, p. 6.

[270] Moses 梅瑟 or 摩西, Old Testament leader who led the nation of Israel out of Egypt and promulgated the law of God. The Chinese translation 三極三才 is Bouvet's. These figures and charts belong to the mystical system of the Hebrew Kabbalah, which will be discussed along with the specific diagrams in the mathematical part of next chapter.

[271] 将神形相比而論之神体精微尊也為天為阳形体廣大卑也為地為陰, in 26-2, p.11.

spirit and form: the former is odd; it is Yang and belongs to the category of celestial beings. The latter is even; it is Yin and belongs to the category of the human soul. The form can further be divided into squares and circles: the former are Yin and earth because they are quiet; the latter are Yang and heaven because they move easily. Similarly, he also uses the example of the pottery-making process to explain the work of the One-Three Creator, and concludes that all things come from the authority, birth and completion of the One-Three, One origin and Two elements 一本二元.[272]

"One origin and Two elements" is an important and core concept in Bouvet's study of *Yijing*. It had never been proposed by any missionary scholar before him, nor has it aroused the special attention and further research by scholars after him. This concept belongs to neither the traditional *Zhouyi* nor to Western philosophy, but is rather a concept obviously influenced by *Taiji Yin-yang* thinking, combined with Trinitarian Catholic theology and characterized by Bouvet's Figurist thought. In his cosmological or metaphysical interpretation, "One origin and Two elements" represents the *Taiji* (本), *Yin* and *Yang* (元) in *Yijing*, and, at the same time, the Father (本), Son and Holy Spirit (元) of the Bible. In Bouvet's mathematical interpretation of *Yijing* image-numerology, it refers to numbers 1, 2 and 3 to form triangular algebra and geometric figures, as we shall see in Chapter 5. It is a challenge to the pervasive philosophical dualism of Catholic scholasticism, or a new interpretation from a gentile, i.e. non-Christian point of view, which is compatible both with the concept of *Yijing* and that of the Triune God for the purpose of advancing the Jesuit mission in China. But the difference is that *Yin-Yang* and *Taiji* are not juxtaposed. Neither pure *Yin* nor pure *Yang* can represent *Taiji*, and while the Son and Holy Spirit are of the same substance as the Father, at the same time they are three different Persons 位格. Yin and Yang come in no particular order; they are roots, transform each other, oppose and complement each other. The Son and the Holy Spirit are not created, both are

[272] 萬物皆由一三乃一本二元所命所生所成, in 26-2, p.12.

from the Father: the Son is generated from eternity, while the Holy Spirit is the eternal love that flows between Father and Son as they delight in each other. Their relationship is of a personal nature and it can in no way be described as a 'philosophical relationship', no matter how special, like the one between *Yin* and *Yang*.

In the philosophical system of *Yijing*, *Taiyi* is an interpretation of *Taiji*, and both ultimately refer to *Dao*. *Ji* (极) and *Yi* (一) are similar; their existence can be interpreted as being the state or vitality of chaos in undivided heaven and earth. From the perspective of cosmology or ontology, they are the origin of the universe, heaven-earth and myriad things, which is a role similar to that of God, creator of all things, in the West. In Bouvet's theological interpretation of *Yijng*, this is where the two concepts come closest. A fundamental difference, however, remains in that *Taiji/Taiyi* (or the One) represent a state or vital energy (气), which is invisible and spontaneously self-evolving, while God is a personal Creator, tangibly and actively creating the world, and all it contains, from nothing. Evidently for his theological purposes, however, Bouvet ignored this difference.

Another important concept Bouvet picked as his theoretical foundation is the relationship between 'one' and 'two' and 'three', which in turn can suggest a close link of *Taiji* with the Catholic doctrine of the Trinity. The 'two' of *Taiji* represents *yin* and *yang*, both relatively independent but interdependent and transformative; the second person in the Trinity represents the Holy Son, born of the Father and being of the same substance. The 'three' of *Taiji* means Heaven, earth and mankind, while the third person in the Trinity represents the Holy Spirit, who coexists with the Father and the Son. In the process of evolution, or the correlation of one, two and three, the *Taiji* produces or gives birth to the *Yin* and *Yang*, a generative action, the result of which two distinct yet complementary types of vital energy, while the relationship within the Trinity, descending from the Father, results in the existence '*ab aeterno'* (from eternity) of persons that are

consubstantial, the same as the Father.

The concepts of 2 and 3 in *Taiji* and the Trinity are completely different: while the former is a philosophical concept, the latter belongs to a theological, revealed category; while the former is a natural vital energy, the latter, together with the Father, are part of the Godhead. A comparison can only be limited to the parallel between the two sets of the numbers, which, however, as mathematical concepts, have the possibility of standing comparison due to abstraction and general algorithms. To explain the reasonsableness of his comparison between *Taiji* and Trinity, Bouvet chose diagrams and numbers as being more intuitive rather than attempting to compare pure concepts. As the common fruit of Confucianism and Taoism, the *Taiji* diagram has also become his interpretative tool, successfully helping him to come on the scene.

If Bouvet's interpretation between *Taiyi* and Creator mainly comes from the meanings of Chinese characters, *Taiji* was used to interpret and connect with the Creator are more from the aspect of images, numbers and diagrams. He believes that *Taiji* and Dao are consistent, in particular, the symbol or shape of *Taiji*, that is, the circle/round, which is the symbol of Almighty God. He learned from the exposition of Pythagoras, Plato and Diogenes that in Egypt, the virtues and magical powers of God are often symbolically represented in geometric figures, as especially did Hermes, the Greek messenger god, who tried to express the essence of God in circles since the circle is the simplest but at the same time the perfect expression of the essence of God.[273]

The round *Taiji* found by Bouvet, a geometric figure representing God, is actually a *Taiji* diagram, which represents the ultimate and highest unity in Chinese culture and consists of Yin and Yang poles. According to the Song Neo-Confucian doctrine, *Taiji* is an empty circle, half of which is white Yang, and

[273] Collani, *Joachim Bouvet*, p. 148.

the other half is black Yin, which rules the metaphysical world.[274] Theoretically, *Taiji* and the *Taiji* diagram are two different concepts. The former only appears in the text of *Xici* of *Yizhuan,* not represented by diagrams. The *Taiji* diagram, instead, is a product of the *Tushu* study of *Zhouyi* in the Song Dynasty. Confucian scholar Zhou Dunyi 周敦颐(1017-1073) is credited with first drawing a *Taiji* diagram 太極圖 and providing an interpretation of it, but academics now generally believe that it actually comes from Daoist sage Chen Tuan 陈抟 (871-989). Bouvet follows the research example of Song *Yijing*, using images, numbers, and diagrams to interpret the relationship between *Taiji* and God, indeed a much better approach than Ricci's. Although the latter objected to confusing *Taiji* with God, Bouvet was not alone in his interpretation: in their commentaries on the *Analects*, Jesuits Prospero Intorcetta 殷铎泽 (1621-1696) and Ignacio da Costa 郭纳爵(1599-1666) expressed their belief that *Taiji* and *Taiyi* and the God of Christianity carried similar meanings, a point of view later accepted by Fouquet.[275]

Bouvet held that *Taiji* represents not only the one God, but also the Trinity. The circle has no boundary and no end point, while its center can be anywhere and its range is endless, which hence is the most suitable symbol of the Trinity. Furthermore, there is a cycle of darkness and brightness, Yin and Yang on the diagram which is the image of God. Bouvet states that "the Way contains one Yin and one Yang, the Way stands on one, one and one are two, two and one are three, one-two-three combined together, only One is also Three, the essence of all things, the only God almighty, utterly divine, all-wise and *Sancai sanji"*.[276] And he goes on quoting from the Bible and ancient Chinese classics, the commentaries on *Yijing*, *Laozi*, *Huainanzi* and *Zhuangzi,* to explain the idea of Trinity and of *Taiji* containing three in one.

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[274] *Ibid*.
[275] Witek, *Foucquet*, p. 189-190.
[276]一阴一阳之謂道，道立于一，一與一為二，二與一為三，一二三同合相参，惟一為三而為萬有之本，乃全能至神至明三才三極惟一主宰是也, in 26-2, p.7.

Bouvet links the concept of *Taiji* and Three-*Yi* to develop a new interpretation of Three-*Taiji*: *Lianshan Taiji* 連山太極, *Guizang Taiji* 归藏太極 and *Zhouyi Taiji* 周易太極, which correspond to Heaven, Earth and Man respectively. He quotes from the *Xici*, "the movements which take place in the six lines (of the hexagram) show the Way of the Three-*Ji*/Powers 六爻之動，三極之道也"[277] and elaborates,

> *Yi* contains *Taiji*, since there are Three-*Yi*: 'simple and easy', 'changing' and 'constant', there are three *Taiji*, which represent Heaven, Earth and Man respectively…Knowing that one *Zhouyi* does not have three *Taiji*, the above three *Taiji* diagrams are not related to one *Zhouyi*. The top one is the bright-heaven and pure Yang, and represents the good virtue of *Lianshan Taiji*; the bottom one is dark-earth and pure Yin, and represents the bad virtue of *Guizang Taiji*; the middle one is mixed bright and dark, Yin and Yang, and represents the constant of *Zhouyi Taiji*.[278]

Alongside the above interpretation of the textual meanings of *Taiji*, Bouvet created a diagram - the *Tianzundibeitu* 天尊地卑圖[279] - the core of his number-image study of *Yijing* to interpret the connection between *Taiji* and the Triune God by means of mathematics and geometry. He believes that the circle represents the most perfect and simple symbol of unity, while the triangle represents the essential symbol of the trinity of God. These two diagrams symbolize God in any place, but the secrets hidden behind these diagrams have been forgotten: the mysterious knowledge of all the secrets is to be found in the Catholic doctrine.[280] He proposed that "the numbers and images in *Yijing* are actually rooted in *Taiji*, which is one, not two".[281] In 30-6 *Taiji lueshuo*, he introduced the concepts of three *Taiji* and the *Tianzundibei* diagram, providing an interpretation by numbers:

> The Confucianists of old discussed *Taiji*: some said that *Wuji* generates *Taiji,* some said that *Taiji* contains three, some spoke of chaos-*Taiji*. Though there are these three notions, the meanings are

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[277] *Xici I*:2.

[278] 易有太极，既有易简、变易、不易之三易，则各有其太極，共三个太極而已，天地人三才各一太極, 知一周易無三太極，则上三太極圖非係于一周易也，上者天明纯阳，乃德明連山易之太極也，下者地暗纯阴，乃德昏归藏易之太極也，中者明暗阴阳，乃分幽明不易之太極也。in 26-2, p.3.

[279] The original diagram will be showed in the next chapter.

[280] Collani, *Joachim Bouvet*, p. 151.

[281] 大易数象實本於太極，夫本一不二, in 30-6, p.1.

> not different: *Taiji* is one and is merely distinguishable as hidden or evident, derived or underived. To know it, you have to know the *Tianzundibei* diagram. According to an old saying, numbers begin with one, achieve with three, end with ten, and these are all numbers one finds in the *Tianzundibei* diagram. One is the symbol of *Wuji* generating *Taiji*, three is the symbol of *Taiji* containing three, ten is the symbol of chaos-*Taiji*.[282]

The content of the 'Outer numbers of *Zhouyi*' 易数外篇, i.e. the numbers, images and diagrams Bouvet used to interpret *Taiji*, will be further discussed in the next chapter, which deals with his mathematical interpretation of *Yijing*.

The theories of *Xiantian* and *Houtian*, Three-*Yi* and *Taiji* are not only important concepts in traditional study of *Zhouyi*, but also important research categories of ancient Confucian classics and Chinese philosophy studies, whose main objects are related to the philosophical categories of cosmology and metaphysics. Bouvet uses and combines both to bolster his interpretation of *Yijing*, verifying it with Catholic biblical theology, which constitutes the core theoretical basis of his *Yijing* study and undoubtedly creates a new interpretational model for a traditional *Yijing* study. In addition, in his 'Inner meanings of *Zhouyi*' 易理内篇 Bouvet adopts the traditional study style of textual meanings of *Zhouyi*, which not only takes the objects and images that the eight trigrams symbolize, but also the implications of the eight trigrams, Three-*Yi* and *Taiji* to interpret the theological truth of the Old and New Testament: a Western scholar inheriting the thoroughly Chinese traditional study paradigm of *Zhouyi*. In the end, however, his 'Inner meanings of *Zhouyi*', that is the use of the textual meaning of *Zhouyi* to link up with biblical theology, which eventually faced a double opposition: it was accepted neither by the Holy See nor by Chinese scholars.

On the one hand, the Provincial Superior of the French mission in China, Fr. Francois-Xavier Dentrecolles 殷弘绪 (1664-1741), issued a series of bans

[282] 故先儒之論太極者，或謂無極而太極，或謂太極含三，或謂混沌太極，其說雖有三，意實不異，意既不異，則太極惟一而已，獨有蘊顯之別，未衍已衍之分耳，何由而知之，由天尊地卑圖知其然也。古云，数始於一，成於三，終於十，即天尊地卑圖全数也。一也者，無極而太極之象也。三也者，太極含三之象也。十也者，混沌太極之象也, in 30-6, p.1.

regarding contacts between Bouvet and Kangxi: when discussing *Yijing* with the emperor, he could only do so about contents pertaining to physics or mathematics; under no circumstances would he be allowed to discuss the metaphorical sacred meanings of the ancient classics, i.e. their religious component, nor could he induce the emperor to ask him question in this regard. Any works Bouvet wished to give Kangxi had to be first scrutinized by Fr. Cyr Contancin 龚当信 (1670-1732), superior of the Beijing Jesuit community, to make sure that there was no direct or indirect mention of religious issues. The Superior also warned Fouquet that his work in Beijing was limited to assisting Bouvet in collating and editing his views on the physics and mathematics of *Yijing*. Dentrecolles did this because he thought that if the figurist missionary, i.e. Bouvet, convinced Kangxi that the ancient Chinese books already contained Revelation about the true religion the missionaries had come to preach about, it would have been a self-defeating breakthrough since the emperor – and he had got wind of this - would regard missionary activity in China as superfluous.[283]

On the other hand, in the perspective of traditional Confucian classics studies, Bouvet 's theological interpretation at the textual meaning level of *Yijing* was still 'foreign' and not easy to be accepted by Kangxi and by scholars in general. Taking the *Tianxue benyi* as an example, Zhang Xiping has the following comments to offer,

> Bouvet's work was reasoned in a Western way, even though expressed in the Chinese language. It expatiated on subjects such as Eden, Original Sin and Redemption by God in a Chinese way. Referred to the understanding of Chinese classics, *Tianxue benyi* was but a limited collection of Chinese folk sayings with sparse quotations from Chinese classics. Its structure, though, was still completely based on Western theology and had little to do with Chinese thought and philosophy.[284]

Zhang's comments underscore the reason for why Bouvet's "Inner meanings" study of *Yijing* failed to satisfy Kangxi: the interpretation put forward by the

[283] Witek, *Foucquet*, p. 162-164.
[284] Zhang, Xiping, *Conversations between China and the West*, p. 488.

French missionary lacked deep understanding of Confucianism and did not conform to the traditional interpretation of *Yijing*, the reasoning over its textual meaning in particular. Upon receiving He Su 和素[285] and Wang Daohua's 王道化 joint memorial to the throne, Kangxi criticized Bouvet dismissing his work as improper and self-righteous. It was not based on the great meanings which the learned early scholars had established but a mere patchwork of quotations from the Classics.[286] Later, He Su conveyed orally his opinion to Kangxi about Bouvet's research.

> I and my colleagues kept some paragraphs of Bouvet's writing, thinking that his writings should be good. When we read them, however, we were surprised that they could not be interpreted. Your Majesty's decree showed grace and tolerance. We have never studied the *Book of Changes* before, but when we were faced with difficult sentences, we would be able to grasp their meaning by consulting the notes. Bouvet's writing, instead, and the tables he had made, we could not understand. His tables are like patterns or emblems of cults, though I do not grasp the mystery of them: I do not think they are reasonable. Besides, he quoted from Chinese classics to explain Western religion. Your Majesty has already judged this as ridiculous, and we could not understand him either. That is why we stopped reporting Bouvet's *Yijing* study progress to Your Majesty. We are waiting for Your Majesty's return to Beijing and to read it by himself." Kangxi concurred with He Su's comments, and remarked: "I agree.[287]

Was Bouvet's venturing into the uncharted terrain of *Yijing*'s "Inner meanings" a personal illusion of a missionary under pressure to justify his raison d'être and, in final analysis, a waste of time? The core or purpose of Figurism is to discover the hidden mysteries of God in ancient books or cultures of other nations. There are two keywords here, one is 'to discover' and the other is 'hidden'. Both indicate that this is not easy and requires hard work with various possible methods. Bouvet found that discovering the secrets of God in *Yijing* depended mainly on his creative comparative study. His work, in fact, did not substantially follow Western research paradigms, but was rather carried out in accordance with the

[285] He Su 和素(1652-1718)，a Qing dynasty Manchurian scholar at Kangxi's court and a famous Manchu translator.

[286] Kangxi's criticism: 覽博津书，渐渐杂乱，彼只是自以为是，零星援引群书而已，竟无鸿儒早定之大义。Collani, *Joachim Bouvet*, preface to Chinese version, p. 21, in *Kangxi chao manwen zhupi zouzhe quanyi* 康熙朝满文朱批奏折全译, p.722.

[287] Zhang, Xiping, *Conversations between China and the West*, p.489, in *Kangxi chao manwen zhupi zouzhe quanyi* 康熙朝满文朱批奏折全译, p. 735.

official study method of *Zhouyi*. Due to religious and official Confucian ideological concerns, neither the Holy See nor Chinese scholars, represented by Kangxi, did recognize, even less accept Bouvet's 'Inner meaning', that is the 'innovative' theological interpretation of *Yijing*, a rejection quite understandable in the historical setting of his time. Even today, many Chinese and Western scholars take Bouvet's interpretation of how the *Yijing* mysteriously shadows core Catholic doctrines as an *'ad hoc'* explanation dictated by necessity but believe it to be quite far-fetched to try to match concepts straight out of *Yijing* with the theological meaning of the Bible.

How to make Western Catholic tenets and Chinese *Yijing* concepts peacefully coexist, or even integrate with each other, is a major and difficult issue even today. Bouvet's Catholic theological interpretation of traditional *Yijing* concepts itself highlights the fact that further research is needed into the subject, as there are many hurdles that both the Chinese and the Western thinker have to face and overcome if the results are to be deemed satisfactory and reasonably accepted. The *Xici* states that the benevolent see something and call it benevolence, the wise see that same thing and call it wisdom 仁者见之谓之仁，知者见之谓之知.[288] This saying suitably applies to the contents of *Zhouyi,* which can be regarded as a matter of opinion and studied from different angles. Bouvet, too, had his own unique interpretation of *Yijing*, but his greatest contribution should be seen in his study methodology, a sort of early form of comparative philosophy, a science that appeared centuries later, and not just in its one-to-one comparison of textual contents. Comparative philosophy is different from philosophical comparison, and its primary purpose is not to analyze the similarities and differences between two or more different philosophical texts or systems, but to promote the development of philosophical thought.[289] Li

[288] *Xici I*: 5

[289] Zhang, Zhiwei (May, 2008). *How the Trans-Cultural Dialogue of Philosophies is Possible: A Brief Discussion on Some Theoretical Problem of Comparative Philosophy*. Academic Monthly, Vol. 40, No.5, p. 33-39

Chenyang states,

> I do not believe that the primary goal of comparative philosophy is to prove one view right and others wrong…If in comparative philosophy the emphasis is upon philosophizing as the processing of ideas and beliefs, not in philosophies as a collection of static end products, then criticizing views as "right" or "wrong" may not be as important or as interesting as explaining both their evolutionary development and their implications for the future.[290]

In Li's view, comparative philosophy serves as a bridge across different green lands of cultural traditions. While a bridge does not close the gap between them, it enhances understanding and communication between cultures.There is no doubt that Bouvet's interpretation methodology is of great significance to the mutual understanding between the cultures of two completely different worlds; by discovering and proposing overlapping cultural meanings, his research methods succeed in bridging to a certain extent the diverse interpretations of life and world.

Kangxi's thumbs-down to Bouvet's research on the "Inner meanings" of *Zhouyi* was not a wholesale rejection of his study. While Bouvet could not possibly compete with Chinese scholars regarding the literary interpretation of the Classics, he managed to win recognition for his exploration and explanation of his number-image-diagrams approach to *Yijing*, his 'Outer numbers of *Zhouyi*' 易数外篇, that is, the use of Western mathematics – a field where he could stand his ground - to interpret *Yijing* through diagrams, a method valued by both Kangxi and contemporary scholars.

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290 Li, Chenyang (1999). *The Tao Encounters the West: Explorations in Comparative Philosophy*. State University of New York Press, p.6

5. Bouvet’s mathematical interpretation of *Yijing*

There is a big, ongoing debate in the field of the methodologies of comparative philosophy in modern times. Although this debate had not started in Bouvet's era, some contemporary scholars may still raise the question whether his study method could be regarded as comparative work. Broadly speaking, comparative work is not necessarily cross-cultural, but cross-cultural or multicultural study inevitably involves comparative work. The simultaneous mutual spread and exchange of Chinese and Western cultural and academic thought began when the western Jesuit missionaries came to China at the waining of the Ming Dynasty. Their mission primarily aimed to convert the Chinese to Catholicism rather than to conduct pure academic exchanges, although they introduced western science and technologies, including philosophy, in abundance when spreading the Christian faith. At the time, there was no term such as ‘philosophy’, or the concept of Western philosophical thought, in Chinese academic categories and circles: the prevailing path to knowledge was the study paradigm of traditional ancient classics. This means that the essence of the initial cultural or academic exchanges between China and the West originated from the encounter between Western theology and Chinese ancient classics. This “Theology-Classics Study 神经学” belongs to cross-cultural or multicultural study and its study approach necessarily comes in two steps, translation of classics being the first, followed by comparison between the different traditions.

Beginning with Matteo Ricci, Jesuit missionaries to China systematically produced two-way translations of classics and othe books as part of the cultural and academic exchanges between China and West. Translation itself is the use of one language to understand another language. It is not just a simple conversion of different characters, but also involves the rational reading of different cultures, traditions, values, and even beliefs, in order to approximate

ideas across the two cultures. This process is already itself a kind of comparative work, or at least it carries in itself a preliminary form of cross-culture comparative study. In this sense and on this first count, Bouvet's work too can certainly be considered a comparative study, as his contribution goes beyond translation, but a further comparative interpretation of the two different academic traditions, values, and beliefs between China and the West, and attempts to make them understand each other and even merge with each other, must be conducted.

One issue in this respect is that of methodological commensurability: whether and how comparison between different philosophical traditions, in Bouvet's case Western theological doctrine and Chinese *Yijing*, can be conducted. Incommensurability originates from the concept of mathematics.[291] Its extension to philosophy represents the difference between two paradigms (as in Thomas Kuhn), for which no objective comparison can be drawn, or there is no common language to share. Instead, when expressing the relationship between two things with the same attributes or essence, one can say that "the two can be commensurable."[292] Incommensurability exists in various forms, but there is no general answer on how much agreement or disagreement is to be found between complex and heterogeneous traditions such as the Chinese and Western ones. Some philosophers are of the opinion that there is incommensurability or incomparability of methodology between the two and argue that the questions and answers in one tradition cannot sustain meaningful statements in the other tradition. There can be no cross-traditional reference to a common subject matter and to a truth about that subject matter that is independent of the basic conceptual vocabulary and theories and justificatory practices of a particular tradition.[293] Those who argue in this sense tend to be radical and to completely

[291] The term 'incommensurable' derives from a mathematical use, according to which the side and diagonal of a square are incommensurable in virtue of there being no unit that can be used to measure both exactly. https://plato.stanford.edu/entries/thomas-kuhn/

[292] Ruth Chang.(1997). *Incommensurability, Incomparability and Practical Reason*. Cambridge: Harvard University Press, p.1.

[293] See Rorty, 1989, and Shweder, 1989 in Comparative Philosophy: Chinese and Western, in

deny the similarity of a common subject matter featured in two different traditions. In Bouvet's case, the concepts of God in theology and *Taiji* in *Yijing,* although they do not entirely overlap, can both be used to comparatively discuss the origin of the myriad things and of universe from the perspective of cosmology and ontology, notwithstanding the fact that the terms used in the two traditions differ. So, on this count too Bouvet's work can be regarded as comparative philosophical work, especially considering the fact that a definition of it has to be 'broad': in a broad sense, cross-cultural philosophy is comparative in nature. But if a comparison appears to be not possible because of linguistic or conceptual hurdles, which better or more appropriate theological term or concept should Bouvet use to interpret *Taiji*, considering that sometimes the case for incommensurability is made by pointing to the pervasive and central presence of a term in one tradition for which no equivalent term can be found in another tradition? Aaron Stalnaker (2006) proposes a comparative methodology involving "bridge concepts" that facilitate exploration of such simultaneous divergence and convergence.[294] Bouvet's approach to his cross-cultural study of the *Yijing* is to appeal to a tool that he regarded as neutral to both traditions. He used numbers and mathematics as a bridge to link and interpret Theology and *Yijing*, to argue that the image-numerological contents of the Chinese classic are 'figures' of God's revealed truth for Salvation. From his perspective, if both sides can be mapped on a neutral plain, then we find parallels and commonalities between them.

Recalling the main contents of the above 16 manuscripts, it can be seen that Bouvet's study of *Yijing* follows the ancient traditional study paradigm prevalent in China, which is to interpret *Zhouyi* starting from the following four aspects: textual meaning 理, image 象, number 数 and diagram 图. The last three are the most important and are used the most in his study, but in contrast to tradition, he

https://plato.stanford.edu/entries/comparphil-chiwes/

[294] *Ibid.*

proposed that numbers should precede images and that Creation of the world be based on mathematics. Just as Galileus wrote that “the book of nature is written in mathematical language”[295] so did Bouvet believe that an all-important theory of mathematics was hidden behind the patterns and numbers of the *Yijing*. The true ‘secrets’ of *Yijing* could be explained through the analysis of those numbers. These ‘secrets’ were related to Creation, Salvation, the Holy Trinity and even the birth and presentation of Jesus Christ. He thought that the meaning of *Yijing* should be divided into ‘internal’ and ‘external’. He alleged, in fact, that by applying the so-called “Hieroglyphics philosophy”[296] to Chinese classics one would discover that they contain a dual meaning. While the external meaning referred to the external form of symbols that appear in a kind of natural and scientific form, the original truth was actually hidden in or behind the numbers. The ‘external’ truths merely constitute the foundation of all knowledge, since the Creator created “all things by measure, number and weight”.[297] On the other hand, the ‘internal’ meanings of *Yijing* pertain to theological truths. These truths can lead people to perceive God’s invisible presence.[298] Just like in St. Paul’s words, through tangible things, man can perceive the Lord’s sacred but intangible nature. In *Yijing*, these tangible things are called “The myriad Images”, or 万象.

Bouvet proposed that the symbolic system of *Yijng* is the most ancient form of Chinese ideograms in their simplest form, a combination of broken (— —) and unbroken (——) lines and affirmed the then widespread view that there was a connection between Chinese characters and ancient Egyptian hieroglyphs.

> I have no doubt that we will succeed one day in making a perfect analysis of them and in breaking them down perhaps to the hieroglyphic characters of the Egyptians, and that it will be demonstrated that one

[295] In 1623 Galileo published *The Assayer* dealing with the comets and arguing they were sublunary phenomena. In this book, he made some of his most famous methodological pronouncements including the claim that the book of nature is written in the language of mathematics. Galileo Galilei, in *Stanford Encyclopedia of Philosophy*, https://plato.stanford.edu/entries/galileo/

[296] Pictographic philosophy 象形哲学.

[297] *The Book of Wisdom*, 11:20.

[298] *Romans*, 1:20.

> and the other both were the script used among the learned before the flood.[299]

In fact, the link between Chinese characters and Egyptian hieroglyphs is central to the Hermetic tradition, often known as the doctrine of 'Ancient Theology', the leading proponent of which in the 17th Century was the German Jesuit and polymath, Athanasius Kircher, S.J. (1602-1680).[300] Bouvet's Figurist approach to Chinese writings and literature was obviously influenced by this tradition and confirmed it. Fu Xi was credited with inventing the trigrams of *Yijing*: the ancient sage's thought and tradition furnished the Jesuit scholar with "the true key" for unlocking the *Yijing*.[301] Commenting on his letter to Leibniz, Mungello compares Kircher's earlier view and Bouvet's recently acquired stance as follows,

> Joachim Bouvet made claims for the legendary Chinese inventor of language, Fu His [Xi], which were similar to the claims made for Hermes Trismegistus as inventor of the hieroglyphs. But whereas Kircher viewed the Egyptian hieroglyphs as the oldest language in the world, Fr. Bouvet judged the Chinese Classic *I ching* (Book of changes) of Fu Hsi to be the oldest written work. Just as Kircher saw the hieroglyphs as containing a secret, divining significance, Bouvet saw the diagrams of the *I ching* as containing a key to reducing all phenomena of the world into quantitative elements of number, weight and measure.[302]

In his reply, Leibniz offered a different point of view,

> I do not know what to say about the hieroglyphs of the Egyptians, and I find it hard to believe that they have any relationship to those of the Chinese. For it seems to me that the Egyptian characters are more commonplace and bear too much resemblance to perceptible things, such as animals and other things, and by consequence to allegories, whereas the Chinese characters are perhaps more philosophical and appear to be based on more intellectual considerations, as might come from number, order, and relations; thus, they are nothing but disassociated strokes that do not point to any resemblance with any particular sort of things. I know that some have believed that the Chinese were a colony of the Egyptians, based on the supposed agreement of the characters, but this has no likelihood at all.[303]

Leibniz's concluding remarks are those of a free-thinking mind, commendable

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[299] Letter E: 28 February 1698, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

[300] Kircher attempted to demonstrate that Chinese characters were derived ultimately from Egyptian hieroglyphs. On Ancient Theology, or *Prisca theologia*, see further down on p. 100. Also https://priscatheologia.com

[301] Letter E: 28 February 1698, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

[302] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 31.

[303] Letter J: 18 May 1703, Leibniz to Bouvet, https://leibniz-bouvet.swarthmore.edu/letters/

and sharp at the same time, but he was comparing hieroglyphs, a form of basically undeveloped pictograms, with the sophisticated Chinese writing which had developed into a system incorporating ideas and sounds, something that had not escaped the great German thinker. Bouvet, trapped by his Biblical tradition, could not but agree with Kircher that the link between Chinese characters and Egyptian hieroglyphs could not be totally excluded. Bouvet's conclusion appears more reasonable if it is considered from the perspective of his Figurist approach, but there is no such proposition in his writings that the Egyptian script derived from the Chinese writing. Unlike the Egyptian hieroglyphs, the image symbolic system in *Yijing*, including its line-patterns, hexagram-patterns, hexagram order and orientation, has in itself a strict self-inference mechanism. In this point, it is consistent with the arithmetic system composed of Arabic numerals, the system of propositional calculation in mathematical logic and the system of predicate calculus. On the whole, the images of hexagram and the lines of *Yijing* are a very special symbolic system, which is deep and multi-dimensional. Not only does this symbolic system allow to reasonably infer within each dimension, but also to switch and communicate between its various dimensions. This has created a holographic effect with a strong conception and interpretation ability, which is inherently more versatile than the axiomatic system of Western geometry of both ancient and modern times.[304] Whatever the case, the image system of *Yijing* hexagrams has played an extremely important role in the studies by Leibniz and Bouvet; in particular, the latter believes that Fu Xi's hexagram, as a perfect symbol, can be used to show the most abstract principles of all knowledge in the world, and he can cleverly use numbers to analyze and find all the secrets, or a reliable and lighter path to the world's mysteries.

[304] Zhang, Xianglong. (2003). *Images, Numbers and Characters: The Influence of Zhouyi Jing, Pythagorean School and Leibniz on the thinking model of Chinese and Western philosophy* 象、数与文字——《周易 经》、毕达哥拉斯学派及莱布尼兹对中西哲理思维方式的影响. Door of Philosophy 哲学门, Vol. 1, p.1-27.

As the initiator of Figurism, Bouvet controversially used the Bible to interpret the part of textual meanings or internal meanings of *Yijing*. According to both current literature and historical records, at the time his interpretation was recognized neither in the East nor in the West and was eventually banned by the Holy See.[305] However, his interpretation of images, numbers and diagrams with Western mathematics established a new study model, which not only won the approval of Emperor Kangxi but also provided reference to other scholars. This forms the specific object of the present chapter of this dissertation.

We already referred to an imperial edict appended to 33-9*Yixue waipian* 易學外篇(八節) which refers to some comments proffered by Kangxi after he read Bouvet's commentaries on *Yijing*. The emperor exclusively refers to his interchange with Bouvet on his studies and the mathematical issues discussed therein. For instance, regarding the "numbers Bouvet had made" to explain the 6th day 初六 in the calendar, Kangxi felt they were "very clear to understand, not an easy result to achieve";[306] commenting on the 9th day 初九, Kangxi mentioned his role in arranging the exchange of *Zhouyi* diagrams between Li Guangdi and Bouvet.[307] The imperial edict also mentioned the *Tianzundibeitu* 天尊地卑圖, *Dayantu* 大衍圖, *Luoshu oushu fangtu* 洛書耦数方圖, all of which were mathematical studies on image-number-diagrams of *Yijing* produced by Bouvet. On *Tianzundibeitu* in particular, the graph which is perhaps the most important part of his research, Kangxi showed great interest and mentioned it several times in his imperial comments. Kangxi even believed that the origin of mathematics was related to *Zhouyi* and he once told Li Guangdi, "Have you ever talked with

[305] "The Rites Controversy was responsible for stifling one of the most creative movements (Figurism) among Jesuit missionaries of the late 17th and early 18th centuries...The extent to which the prohibition on the discussion of Figurist ideas has caused the results of Figurist research to lie unread in archives for nearly three centuries has only recently become clear…The essenticals of the Heavenly Learning, begin to reveal contacts and relationships between Bouvet and Chinese scholarship which had been suppressed by the Rites controversy ban on discussion of such ideas." D.E. Mungello Ed. (1994). *The Chinese Rites Controversy Its History and Meaning*: *An Introduction to the Chinese Controversy*. Jointly publ. by Institut Monumenta Serica, Sankt Augustin, and The Ricci Institute for Chinese Western Cultural History, San Francisco, Nettetal: Steyler Verl., p.10-11.

[306] 白晋作的数甚是明白,难为他…

[307] 33-9, p. 22-24.

other officials about the mathematical thoughts in *Yijing*? Western mathematics is quite similar to the numbers of *Yijng*." [308] All this is evidence that the mathematical approach plays an all-important role in Bouvet's systematic interpretation of the *Yijing*.

Kangxi's understanding and mastery of western mathematics and geometry in *Yijing* was entirely achieved through the help of Bouvet and his colleagues. As one of the King's five mathematicians, Bouvet benefited from a rigorous and systematic education in mathematics at the Jesuit school of La Fléche before he was selected to go to China, including arithmetic, geometry, astronomy, music, and so on, all of which belong to mathematical disciplines in Church-run schools. Not every missionary of his time could rely on such a variety and depth of knowledge as Bouvet did. In addition to mathematics, geometry and astronomy, he had a profound understanding of the Jewish Kabbalah, [309] of the Hieroglyphics of ancient Egypt and of the philosophy of Plato and Pythagoras:[310] these formed the mathematical foundations of his study on numbers, first, and images and diagrams of *Yijing*, the Figurist research method he helped initiate in China.

5.1. Western philosophy of mathematics

The Figurist way had a very old history in the West as a traditional method in Biblical research, a method which could be traced back to the Jewish exegetical

[308] 爾曾以《易》数与众講論乎？算法与《易》数吻合 quoted in Zhang, Xiping. (2007). *Conversations between China and the West: The missionaries in early Qing Dynasty and their researches on the Book of Changes*. Front. Hist. China, 2 (4), p. 483.

[309] The Kabbalah/Cabala is an esoteric method, discipline, and school of thought that originated in Judaism.

[310] In an essay, Bouvet points out that his work was blessed by God since he hold the special upbringing of Hebrew mysticism and Pythagorean, Platonic philosophy, which are the true components of Hieroglyphic intelligence of China. See: Paul A, Rule. (1986). *K'ung-tzu or Confucius? The Jesuit Interpretation of Confucianism*. Sydney, Boston: Allen & Unwin, p. 156.

tradition and which mainly stems from Typology, Allegories, *Prisca Theologia*[311]and the Judaeo-Christian Kabbalah 犹太基督神秘教义喀巴拉.[312] According to Collani, Paul Beurrier (1608-1696) and Athanasius Kircher SJ (1602-1680), two scholars who backed the Kabbalah, *Prisca theologia* and the Figurist method, had a great influence on Bouvet's academic thought. Both argue that not only did pagan philosophers, such as Zoroaster, Hermes Trismegistus, Orpheus, Pythagoras, Thales, Plato and others have an understanding of God and the Holy Trinity, but that the ancient Chinese were also among those who gained the true knowledge of God.[313] More importantly, all this knowledge is hidden in or behind the numbers, and becomes evident with the help of the numbers, just as the wisdom of the ancient Hebrew Kabbalah is hidden behind figures. It is, therefore, impossible to understand the wisdom of God without the aid of mathematics.

5.1.1. The mystical system of the Hebrew Kabbalah

Kabbalah, otherwise spelled Kabalah, Cabala or Qabala, also known as 'Hebrew mysticism' or 'occult knowledge', is a Hebrew word originally meaning 'Received' or 'Tradition'. It refers to a whole set of mysticism developed within Judaism before the advent of Christianity. Kabbalah, in fact, is the ancient， secret Jewish tradition of mystical interpretation of the Bible that deals with the essence of God, a tradition first transmitted orally and using esoteric methods that reached the height of its influence in the later Middle Ages. The Kabbalists believe and claim that is was received by Moses on Mount Sinai directly from God and was secretly transmitted from generation to generation up to the present. Most of this

[311] The term ***prisca theologia*** appears to have been first used by Marsilio Ficino in the 15th century. Ficino and Giovanni Pico della Mirandola endeavored to reform the teachings of the Catholic Church by means of the writings of the *prisca theologia*, which they believed was reflected in Neoplatonism, Hermeticism, and the Chaldean Oracles, among other sources.
[312] Collani, *Joachim Bouvet*, p. 1-11.
[313] *Ibid.*, p. 127.

transmission, they claim, was oral, handed down from father to son and from teacher to disciples.[314] The Zohar, a collection of written, mystical commentaries on the Torah, is considered to be the underpinning of Kabbalah. In the first stage of this transmission,

> Moses received [*kibel*] the Torah on [Mount] Sinai and transmitted it to Joshua, who [transmitted it to] to the Elders [of Israel]…What Moses 'received' on that occasion is kabbalah-tradition, which in this context acquired the particular meaning of sacred tradition of divine origin, part of which is found in writing (scriptures), and part transmitted orally from generation to generation by the religious leaders of the Jewish people.[315]

As there are many hundreds of works that are part of Kabbalah, it is actually not easy to give it a precise definition since it has been used in a wide variety of ways from its early beginning. Kabbalah could be considered as the tantric branch of Judaism, something likely to be understood by only small numbers of people who possess specialized knowledge or interest in the topic.

In a sense, the Kabbalah coincides with Bouvet's Figurism: both aimed at revealing the hidden mysteries in the Bible. The Kabbalistic system arose in the 12th century and began to integrate into Christian theology as early as the Middle Ages. It was transformed from a uniquely Jewish religious tradition into a European concept, integrated with Christian theology, philosophy, science, and magic, at the end of the fifteenth century.[316] The Renaissance saw the birth of Christian Kabbalah. Interest grew among some Christian scholars in what they saw to be the mystical aspects of Judaic Kabbalah, which were compatible with Christian theology. At one point, between 1450 to1480, it almost became one of the compulsory courses for European scholars: at that time, many Christians, even those who staunchly opposed it, showed a tolerant attitude, because they believed that it could facilitate Jewish conversion to Christianity, as all the

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[314] Dan, Joseph. (2006). *Kabbalah: A very short introduction*. Oxford University Press, New York, p.3.
[315] *Ibid*, p.2.
[316] *Ibid*., p.61.

Christian Holy mysteries had been predicted in the Kabbalah. In order to reveal these Holy mysteries, it was necessary to use an allegorical approach, the intersection of Allegories, Typology, *Prisca Theologia* and Kabbalah.[317] The numerology of Kabbalah, used by mainstream Jesuit scholars such as Athanasius Kirscher to interpret the Scriptures, was part of Bouvet's early cultural baggage and it naturally became an important tool for his mathematical interpretation of *Yijing*.

Kabbalah numerology is based off old Jewish mysticism, specifically the Hebrew alphabet. It suggests that God created the world out of 32 mysterious paths of wisdom, that is, the10 basic numbers and 22 letters of the Hebrew alphabet. The 10 basic numbers, called *Sefiroth*, imply that the denary (10) system is primary to the structure of the universe.[318] Bouvet discovered the relationship between the trigrams of Fu Xi and ancient Jewish numerals and the mysterious Kabbalah numerals, and the unity of the trigrams; and these two well-known numeral systems convinced him that the origin of the *Yijing* could not be superstitious.[319] Bouvet believed that the diagram of Fu Xi's system was a universal symbol invented by some extraordinary genius in antiquity, such as Mercury Trismegistus, to represent to the eyes the most abstract principles of all the sciences.[320] He suggested as possible that the numbers of the system of Fu Xi are in accord with the numerical system of the ancient Hebrews; he argued that if Fu Xi's numerical system agreed with the numbers of the sabbatical (7) and jubilee (50) years of the Hebrews, as well as with the mysterious numbers of the ancient Kabbalah, then the importance of Fu Xi's system would be confirmed.[321] Mungello explains that Bouvet had elaborated a mystical mathematical vision, but that this let him facing a chasm of heterodoxy,

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[317] Collani, *Joachim Bouvet*, p.7.
[318] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 317.
[319] Collani, *Joachim Bouvet*, p.39.
[320] Letter G: 8 November 1700, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/
[321] Mungello, *Curious Land*, p. 317.

> Fu Xi's diagrams were seen as a numerological metaphysics or general method of knowledge for reducing all things to the quantitative elements of number, weight and measure. According to Bouvet, the method of Fu Xi's diagrams followed rules of three sorts of numerical progressions, as well as the rules of proportion and geometry and laws of statics. The result made rational the works of the Creator.[322]

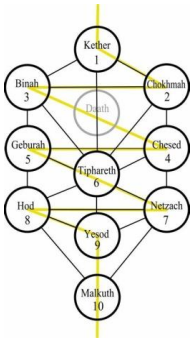
Bouvet affirmed that all religious secrets are contained in mathematics, without which it was impossible to understand the wisdom of God; but mathematics and arithmetic must be understood in a divine and exalted sense. He believed that the wisdom of the ancient Hebrew Kabbalah was concealed in these numbers. He wrote,

> The ancient Arabs, Egyptians, Indians, Greeks and Chinese have long expressed the secrets of religion in numbers, in order to hide these sacred things from the eyes of the secular. Only over time did the true meaning of these numbers disappear, and only among the Hebrews and Chinese did this remain for a relatively long time. And if the ancestors used numbers to hide the secrets of God, then nature, in turn, could use mathematics to decipher them, as it did in the Hebrew Kabbalah.[323]

In particular, in the year 1724 Bouvet wrote an essay on Kabbalah, the *Specimen elementorum arithmeticae formalis et symbolicae, in vetustiori Sinarum traditione faeliciter detectae* (Some examples of numeral forms and symbols that were fortunately found in ancient Chinese traditions) 中国古代传统中有幸被发现的一些数字形式和象征的范例, which contained much mathematical analysis and interpretation.[324] After 1720, when the first papal decree had been issued condemining the Chinese Rites, Bouvet wrote the *Travail de 200 pages,*[325] in which he drew a comparison between the *Taiji* concept and the "*Ain suph*"[326] of the Jewish Kabbalah and established his own theory accordingly. He argued that both concepts are very similar in contents and that *Taiji* is as important to the Chinese as *Ain suph* is to the Hebrews as the origin of the 10 spherical bodies

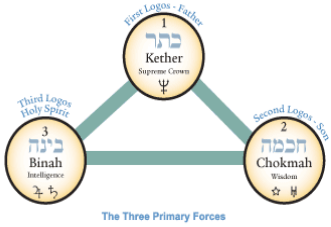
[322] Mungello, *Curious Land*, p. 316.
[323] Collani, *Joachim Bouvet*, p.130.
[324] *Ibid*., p.98.
[325] Chinese title:200 页的研究关于在《易经》的一个发现.
[326] According to Kabbalah, *Ain suph* means the God who is overflowing or diffusing himself. *Ain suph* is not the Creator, but the God of peace, the God before the self-revelation, before the creation. Therefore, it is only the symbol of the absolute, the symbol of the possible God, the origin of the higher self and its manifestation. See: Collani, *Joachim Bouvet*, p.149.

(zehn Sephirot).[327]



（Jewish Kabbalah 10 spherical bodies）

Bouvet had earlier claimed that the mystery of the unity of the Holy Father and the Son and the Holy Spirit in the Trinity of God can be seen in the equilateral triangle.[328] In his manuscripts on *Yijing*, he specifically mentions the *Sanji sancai* diagram 三極三才圖 (three primary forces), the "Diagram of Moses' secret knowledge" 每瑟秘學圖,[329] which derives from the top 1, 2 and 3 of the 10 spherical bodies, the Kabbalah triangle.



（Kabbalah triangle）

Bouvet's lifelong quest was to discover these figures of God and thus unravel the mystery of *Yijing*. Besides the Jewish Kabbalah, Bouvet was convinced that the numerical system in *Yijing* was also very similar to that of Pythagoras and Plato, which also constituted part of the important theoretical foundation in his mathematical interpretation of *Yijing*.

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[327] *Ibid*., p.150.
[328] *Ibid*., p.62.
[329] In 26-2, *Yi yin* (*Yi kao*) 易引（易考）, p.6.

5.1.2. The mathematical philosophy of Pythagoras and Plato

Bouvet personally believed that Fuxi's number system in the *Yijing* and the system of Plato and Pythagoras were consistent with each other, even as other scholars were of the opinion that the philosophy of the two Greek thinkers was no longer understood at least since the time of Cicero.[330] In fact, Bouvet's mathematical interpretation of *Yijing* was based on a reappraisal of the mathematical philosophy of Pythagoras and Plato, in particular arithmetic and geometry. According to Plato's philosophy, mathematics is the real, valid training to understand the universe itself rather than the observation of its superficial phenomena. Rationalism, an enduring philosophical school, originated from Plato and is characterized by its attempt to extend the known mathematical methodology to the whole field of knowledge.[331] Plato's mathematical philosophy was widely influenced by his predecessor, Pythagoras, enabling what came to be known as 'Platonism' to gradually attain a leading role in mathematical practice, a role that peaked later, in the 19th century. Prior to that time, the backbone of mathematics was Euclidean geometry, and this naturally led Bouvet and fellow missionary Jean-Francois Gerbillon to use Euclid's *Elements of Geometry* – which had already been translated into Chinese by Matteo Ricci and Xu Guangqi - as a manual to teach Kangxi geometry in the Manchu language.

Western mathematics and philosophy were born in ancient Greece, where philosophy was closely linked to mathematics from the beginning. The Pythagorean school was the first to propose the systematic thought of mathematical philosophy. Pythagoras teaches that "all things are numbers", through which he interprets the universe and its laws of change. He proposes the number as the origin of all things: numbers generate all things and the rule of the

[330] *Ibid*., p. 39.
[331] [U.S] Stewart Shapiro, translated by Hao, Zhaokuan and Yang, Ruizhi (2014). *Mathematical Philosophy* 数学哲学. Shanghai: Fudan University Press, p.3.

numbers governs all things. Furthermore, he thinks that 'One' is the most sacred of numbers and the origin of all things. One generates Two and the latter generates all other numbers. The numbers generate the dot, the dot generates the line, the line generates the surface, the surface generates the body and the body generates all things.[332] Bouvet found similar ideas in the *Yijing* and in the *Daodejing*, where from a cosmological perspective all things are numbers. A passage in *Xici I* reads,

> Therefore in (the system of) the *Yi*, there is the *Taiji*, which produces the two elementary Forms (*Yin* and *Yang*). Those two Forms produce the four emblematic Symbols, which in turn produce the eight Trigrams. The eight Trigrams serve to determine the auspicious and the inauspicious, and from this determination is produced the great business (of life).[333]

Daodejing also says, "The Dao (Way) produced One; One produced Two; Two produced Three; Three produced All things."[334] In cosmology, the two classics construct their model based on numbers, a model that is close to the philosophical thought of Pythagoras, even though not so clearly and systematically elaborated.

When Plato spoke of mathematics, he usually thought of arithmetic and geometry, primarily plane geometry. When speaking of numbers Plato usually, if not always, had in mind the series of positive integers: (1), 2, 3,…The division of these into the two alternating series of odd and even numbers: (1), 3, 5,…; 2, 4, 6,…, in Plato's eyes apparently was more fundamental than any other division. Accordingly, he often spoke of arithmetic as the science of odd and even numbers.

Anders Wedberg believes that the position of integer 1 appears to have been

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[332] Zhang Jingzhong; Peng Xicheng. (2010), *Mathematical Philosophy* 数学哲学, Beijing, Beijing Normal University Press, p. 2.

[333] 是故，易有太極，是生兩儀，兩儀生四象，四象生八卦，八卦定吉凶，吉凶生大業, *Xici* I:11, http://ctext.org/zh, modified.繫辞上 One part of *Yizhuang*, http://ctext.org/book-of-changes/ xi-ci-shang

[334] 道生一，一生二，二生三，三生万物,*Daodejing.* 42, http://ctext.org/zh.

somewhat ambiguous in Greek mathematics. It was often assumed that 2 is the first number. The reason was that number was thought to be a "plurality of units", or the "measure" of such a plurality, and 1 unit of a given kind is not yet a plurality. He elaborates that in accordance with this view, Plato speaks of "number and the one", in book VII of the *Republic*, as if 1 were not a number on a par with 2, 3,…; and in the *Phaedo*, he apparently identifies the series of odd numbers with: 3, 5,…However, it appears that the Greeks, including Plato, were not infallibly consistent on this point. Wedberg argues,

> In the same chapter of his *Physics* we find Aristotle saying both that "the smallest number, in the strict sense of the word 'number' is one (or two)". In book VII of the *Laws* Plato likewise forgets the doctrine that 1 is not a number, when he discusses man's fate if "ignorant of what is one, or two, or three, or—in short—the even and the odd, totally unable to count". The view that 1 is not a number seems to have remained, on the whole, a philosophical idea without influence upon Greek arithmetic itself. In arithmetical calculations and deductions 1 was usually admitted on a par with the numbers: 2, 3, …[335]

Undoubtedly, Plato was strongly influenced by Pythagoras' doctrine, and their thoughts of 'One" were given a further theological, and in the case of *Yijing* philosophical, interpretation by Bouvet based on the mathematical philosophy of the two.

Although Plato often draws a very sharp distinction between arithmetic and geometry, it seems quite obvious that his very conception of arithmetical numbers retained a geometrical element, not clearly recognized by himself. For the Pythagoreans, whose views exercised a large influence upon Plato's entire thought, the numbers: (1), 2, 3,… were probably identical with arrangements of points in space. Plato opposed this view, and his opposition let him to a radical separation of arithmetic from geometry. But, nevertheless, something of the Pythagorean view probably remained with Plato. The ideal, indistinguishable and indivisible "units", which in his opinion form the basic subject-matter of arithmetic,

[335] Anders Wedberg. (1955). *Plato's philosophy of mathematics*. Almqvist & Wiksell Stockholm, p. 23-24.

seem to be the ghosts of the Pythagorean points.[336]

Bouvet explains that “One is the origin of all numbers, Two is the beginning of all even numbers and Three is the beginning of all odd numbers”.[337] There is no such mathematical interpretation in traditional *Yijing* studies. In all probability Bouvet derived it from Pythagoras’ theory of numbers. In his *Metaphysics* Aristotle states,

> Contemporaneously with these philosophers and before them, the so-called Pythagoreans, who were the first to take up mathematics, not only advanced this study, but also having been brought up in it they thought its principles were the principles of all things…Evidently, then, these thinkers also consider that number is the principle both as matter for things and as forming both their modifications and their permanent states, and hold that the elements of number are the even and the odd, and that of these the latter is limited, and the former unlimited; and that the One proceeds from both of these (for it is both even and odd), and number from the One; and that the whole heaven, as has been said, is numbers.[338]

Pythagoras sees number 10 as an extremely mysterious, sacred and perfect number since 1+2+3+4 is 10, which constitutes harmonious music. He invented the calculation of pebbles arrangement (put one pebble in the first line and put one more in each next line, and you get a “Triangle” number), four lines of the triangle just contain 1, 2, 3 and 4. Similarly, in the diagram of *Yijing*, the numbers of *Hetu* 河图 are arranged from 1 to 10, which represent the numbers of heaven and earth 天地之数[339] from beginning/generation to completion/perfection. As a mathematical interpretation tool, Bouvet’s *Tianzundibeitu* 天尊地卑图 also embodies the idea of Pythagoras’ mathematics and geometry.

5.2. Mathematical interpretation -*Tianzundibeitu* 天尊地卑圖

[336] *Ibid*., p. 25

[337] 一为万数之本，二为诸偶数之始，三为诸奇数之始, in 太極畧说, Borgia Cinese 317(5).

[338] Metaphysics, Book A:5. Online reference: Aristotle – *Metaphysics* [Translated by W. D. Ross]

[339] 天一，地二，天三，地四，天五，地六，天七，地八，天九，地十。

The study of *Yijing* in the early Qing dynasty was deeply influenced by the Song dynasty school. Kangxi highly praised the Neo-Confucianism of Cheng-Zhu 程朱 and believed in Zhu Xi's interpretation of *Yijing*. Internally, the emperor approved the compilation of *Rijiang Yijing jieyi* 日講易經解义 as the palace manual to be used daily by imperial court members and ministers for their study, whose academic objective fully respected Zhu Xi's *Yijing* thought. With wider society in mind, he ordered Li Guangdi to compile the *Zhouyi zhezhong* 周易折中 to represent the official *Yijing* interpretation, which took Zhu Xi's *Zhouyi benyi* 周易本義 as its core program, complemented with other theories on *Yijing*. Bouvet served the imperial court and his study of *Zhouyi* was carried out under the guidance of Kangxi. We can therefore see, quite unsurprisingly, that his *Zhouyi* study follows the official *Yijing* theory of Zhu Xi. As a master of Neo-Confucianism, Zhu Xi inherited and developed the *Yijing* study and its philosophy as developed and handed down by the North Song dynasty (960-1127), and particularly absorbed the views of the image-numerology school represented by Shao Yong 邵雍,[340] that greatly influenced Bouvet.

5.2.1. Image-numerological study of *Yijing*

The work of *Zhouyi* was the result of the efforts by several generations of sages. Since the ancient sage Fu Xi began to produce the eight trigrams, King Wen of Zhou, the founder of the Zhou dynasty (1046-771 BC), juxtaposed the eight trigrams and the sixty-four hexagrams and produced the 'statements' of the hexagrams and their lines (*Yijing*), while Confucius composed the "Ten Wings[341](or *Yizhuan*)". Traditionally, since the Han dynasty (206 BC – 220 AD),

[340]Shao Yong, courtesy name Yaofu, named Shào Kāngjié was a Chinese philosopher, cosmologist, poet and historian who greatly influenced the development of Neo-Confucianism in China during the Song dynasty.

[341] Confucius wrote "Ten Wings 十翼" commentaries on the *Zhouyi*. Around the early Han period, the "Ten Wings" were often called *Yizhuan* 易传. Ten Wings 十翼：*Tuan* 彖(I, II)、*Xiang* 象(I, II)、*Xi Ci* 系

the study of *Zhouyi* has been divided into two opposing schools of thought: the *Xiangshu* (Image-numerology) school 象数派 and the *Yili* (Textual meaning) school 义理派; during the Qing dynasty, the scholars of the *Siku* Institution 四库馆, famous for compiling the *Siku Quanshu* 四库全书, classified all the studies of *Yijing* as two schools and six groups.[342] However, these concepts of images, numbers and textual meanings of *Zhouyi* were originally derived from *Yizhuan*. Zhu Bokun affirms that from the beginning of *Yizhuan*, in the interpretation of the images and statements of the hexagrams and lines already existed an antagonism between the 'images-adopting theory' 取象说 and the 'textual meaning-adopting theory' 取义说. He elaborates,

> The 'images-adopting theory' takes the objects and images that the eight trigrams symbolize to interpret the images and statements of the hexagrams and lines of *Zhouyi*. For instance, it treats the *Qian*[343]乾 trigram as heaven and treats the *Kun*[344]坤 trigram as earth, or it treats the *Qian* trigram as *Yang-qi* (vital energy) 阳气 and treats the *Kun* trigram as *Yin-qi* 阴气. However, the 'textual meanings-adopting theory' takes the implications of the eight trigrams and sixty-four hexagrams to interpret the images and statements of the hexagrams and the lines. For instance, it treats the *Qian* trigram as strong and energetic and treats the *Kun* as feminine and soft.[345]

In *Yizhuan* these two theories are not in contrast but complementary to each other, however the term 'image-numerology' tends to confuse the relationship between image and number.

The concepts of image and number are related but should not be confused. According to *Zuozhuan* • *Lord Xi, Year 15* 左传 • 僖公十五年 (645 BC), "*Gui* (Tortoiseshell) divinates by image, *Shi* divinates by number 龟,象也;筮,数也."[346]

辞(I, II)、*Wen Yan* 文言、*Xu Gua* 序卦、*Shuo Gua* 说卦、*Za Gua* 杂卦.

[342]"故《易》之为书，推天道以明人事者也。《左传》所记诸占，盖犹太卜遗法。汉儒言象数，去古未远也。一变而为京、焦，入于禨祥，再变而为陈、邵，务穷造化，《易》遂不切于民用。王弼尽黜象数，说以老庄。一变而胡瑗、程子，始阐明儒理，再变而李光、杨万里，又参证史事，《易》遂日启其论端。此两派六宗，已互相攻驳。"Ji, Yun 纪昀[Qing].(2000). 四库全书总部提要 经类一 ·易类一.Shijiazhuang: Heibei People Press, p. 50.

[343] Qian ☰ (乾), the first of the eight trigrams.

[344] Kun ☷ (坤), the second of the eight trigrams.

[345] Zhu, Bokun 朱伯崑.(2009). *History of Zhouyi Philosophy* 易学哲学史. Beijing:Kunlun Press, p.43.

[346] https://ctext.org/chun-qiu-zuo-zhuan/xi-gong-shi-wu-nian/zh

Zhouyi belongs to *Shi*, as it uses the number of divinatory 'yarrows' to predict good or bad luck. The numbers of *Zhouyi* refer mainly to the numbers of heaven and earth 天地之数 and the numbers of *Dayan* 大衍之数 in *Yizhuan*. In the history of *Zhouyi* development, numerology can be divided into two schools, the Han and the Song dynasty schools, even though the study paradigms of the two are completely different, in particular the *Tushu* (diagram) 图书 study of *Zhouyi* from North Song, which was based on the image-number study of *Zhouyi* and was generally accepted by Neo-Confucianists.

In fact, to be precise, the research and interpretation of *Zhouyi* by traditional Confucian scholars should be divided into the three aspects of 'textual meaning', 'image-number' and '*Tushu*' (diagram), which formed three different interpretative systems. Qu Wanli 屈万里 said that the study of *Zhouyi* of earlier dynasties had been changed several times…but while there are many studying styles, only three kinds were recognized: image-number, textual meaning and *Tushu*.[347] Zheng Jixiong 郑吉雄 further elaborates,

> Although the study of diagrams was mainly based on image-numerology, the image-numerology of diagrams applied by Song Confucians was different from that of Han Confucians. Moreover, the image-numerology of Han Confucians and the study of diagrams by Song Confucians have better be dealt with separately.[348]

Chen Tuan 陈抟 started the image-numerological school of *Yijing* studies during the Song dynasty and from him it spread to *Liu Mu* 刘牧, *Zhou Dunyi* 周敦颐 and *Shao Yong* 邵雍. They all belong to the school of image-numerology, yet the school was internally divided into image and mathematical schools. *Liu Mu* highly praised *Hetu* and *Luoshu*; *Zhou Dunyi* focused on image and proposed the *Taijitu* 太極圖 theory; *Shao Yong* emphasized numbers and raised the *Xiantian* theory

[347] 历代《周易》之学，凡经数变： […]惟例变虽多，然综其大别，则不过象数义理图书三者而已 Qu Wanli 屈万里. (1985). *The Review of Zhouyi in Pre-Qin, Han and Wei dynasties* 先秦汉魏易例评述. Taipei: Taiwan Student Book Company, p.1.

[348]图书学固然主要建基于象数，但事实上宋儒图书之学的象数与汉儒的象数两者即颇不相同，而汉儒的象数之学与宋儒的图书之学彼此不能相互涵括，分列应该较为清楚. Zheng, Jixiong. (2008). 易图像与易诠释. Shanghai: East China Normal University Press, p.1.

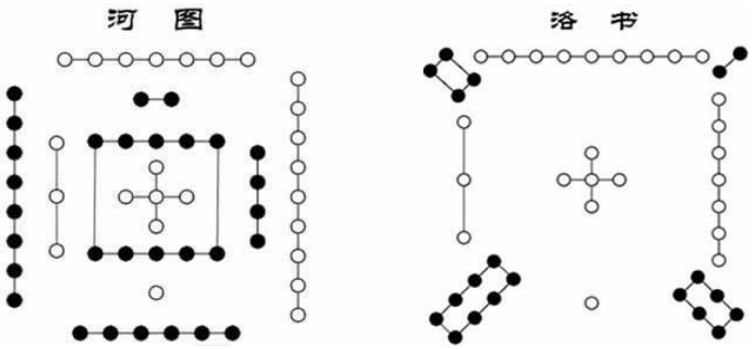
先天學說, which became known as the 'School of mathematics'. The Song image-numerological school was also called the '*Tushu* study' 圖書之學 because it presented various diagrams to interpret the principles of *Zhouyi*. Compared with the Han version, the Song image-numerology study generally avoids and excludes the theory of *Yin-yang* disasters and interaction between Heaven and Man, and further adds philosophical reflections to Han image-numerology, particularly as regards mathematics, eventually forming a school of mathematics in *Zhouyi* study.[349] Bouvet's mathematical interpretation of *Yijing* followed the Song *Tushu* study school of *Zhouyi*, and in this sense, he could well be regarded as the founding figure of the mathematical school in the Western studies of *Yijing*.

The school of *Tushu* study highly praises *Hetu* and *Luoshu* and interprets *Zhouyi* principles accordingly. *Xici* states that, "*Tu* (the diagram) appeared in the Yellow River area and *Shu* (the writing) appeared along the *Luoshui* river, the sages produced *Yi* according to these two 河出圖，洛出書，聖人則之."[350] Incidentally, this text is also the theoretical basis of *Zhouyi* study, as advocated by the Song *Tushu* school. In fact, the records and legends of *Hetu* and *Luoshu* have a long history and have been recorded in the *Shangshu*[351] and the *Analects*[352] of Confucius early on. However, the point to notice is that up to the Song Dynasty all the relevant records of *Hetu* and *Luoshu* had only text, no diagrams.

The diagrams of *Hetu* and *Luoshu* in the Song Dynasty were influenced by the 9 numbers of the 'Nine Palaces pattern' or 九宫图 and by the 10 generating numbers of Wu Xing 五行[353], and they were drawn by combining the numbers of heaven and earth and the numbers of *Dayan* 大衍之数 recorded in *Xici*. These

[349] Zhu, Bokun. (2009). *History of Zhouyi Philosophy II* 易学哲学史（二）. Beijing Kunlun Press, p.8-9.
[350] 《周易・繫辭上》
[351] 大玉、夷玉、天球、河圖，在東序。《尚書・周書・顧命》
[352] 子曰：鳳鳥不至，河不出圖，吾已矣夫！《論語・子罕》
[353] Five elements or Five phases: Wood、Fire、Soil、Metal、Water.

two diagrams first appeared in Liu Mu's *Yishu gouyin tu* 易数钩隐圖, which treats forty-five as *Hetu*, and fifty-five as *Luoshu*. Later, Zhu Xi and Cai Yuanding 蔡元定 (1135-1198)[354] revised and interchanged these two diagrams, regarding the former diagram as *Luoshu* (45) and the latter as *Hetu* (55) and they have been circulated to this day as follows:



(*Hetu*) (*Luoshu*)

In both diagrams, the dots refer to numbers, white for odd numbers (1, 3, 5, 7, 9), representing Yang and Heaven, black for even numbers (2, 4, 6, 8, 10), representing Yin and Earth. In Xici, these numbers are the numbers of heaven and earth.

The theory of *He-Luo* studies, developed by Liu Mu 刘牧, is based on the concept of abstract numbers and constructs its own pattern with the arrangement and combination of natural numbers to explain the world, hence it belongs to the 'mathematical school' within the image-numerology school of *Zhouyi*. However, it differs from Shao Yong's later mathematical study paradigm in that Liu Mu uses the generating numbers of *Wu Xing* as the core to derive a world model rather than interpreting *Zhouyi* philosophy with a mathematical concept, which is precisely the characteristic of Shao's *Zhouyi* study.

[354] He was a famous Neo-Confucian in the Southern Song Dynasty and one of the main founders of Zhu Xi's Neo-Confucianism.

Shao Yong's study of *Zhouyi* developed the mathematical aspect of Chen Tuan's 陈抟 image-numerological school. Without ignoring discussion on the images of hexagrams, he rather delved into the changes of hexagram images on the basis of odd and even numbers, and advocated the idea that 'numbers generate images 数生象', which Song scholars then called mathematics.[355] As a typical *Zhouyi* philosopher, Shao said that those who master *Yijing* do not need to quote the interpretation as long as they can 'use *Yi*' as, for instance, Mencius did.[356] The phrase 'use *Yi*' here refers to his study of image-numerology as the center, deducing a set of philosophical systems, especially regarding the pattern of cosmic motion and change, predicting future events, and thus creating the school of mathematics in Song and Ming philosophy, which thus had a certain influence on the philosophical development of the two dynasties.[357]

The basic rules of Shao's mathematical interpretation can be seen from his theory on the formation of the eight trigrams and sixty-four hexagrams ('The myriad things of heaven and earth' 天地万物). He wrote,

> *Taiji* is separated and the two elementary forms are established…Therefore, one is divided into two, two into four, four into eight, eight into sixteen, sixteen into thirty-two, thirty-two into sixty-four.[358]

Mathematically, this is a multiplication, a multiple of 2, or two cubed. That is, 8 (trigrams) is 2 to the 3rd power and 64 (hexagrams) is 2 to the 6th power. Neo Confucianist Cheng Hao程顥 (1032-1085)[359] called the rule "*Double method*加一倍法" and later Zhu Xi called it "*One into two*一分为二" method. Shao's method, which puts the evolution of odd and even numbers first, is used to explain the

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[355] Zhu, Bo-kun, *History of Zhouyi Philosophy II*, p.127.

[356] 知易者，不必引用講解，始為知易。孟子著書未嘗及易，其間易道存焉，但人見之者鮮耳。人能用易，是為知易，如孟子可謂善用易者也。[Song]Shao Yong, *Guanwu Waipian* 观物外篇

[357] Zhu, Bo-kun, *History of Zhouyi Philosophy II*, p.129.

[358]太極既分，两儀立矣。。。是故一分為二，二分為四，四分為八，八分為十六，十六分為三十二，三十二分為六十四。In *Guanwu Waipian* 观物外篇

[359] Cheng Hao was a famous Northern Song Dynasty Neo-Confucian and founder with his younger brother Cheng Yi 程颐 of Neo-Confucianism.

formation of the sixty-four hexagrams' numbers and images and to further discuss the formation and structure of the universe. It evolved by splitting 'One' into one odd and one even, and then adding one odd and one even successively.[360] Hence, 'One' is the root of the various images and numbers, Shao Yong's *Taiji* as well as Bouvet's Creator.

Shao Yong believes that 'The myriad things of heaven and earth' had their origin from the universe itself, i.e. from *Taiji*, which is also a mathematical "One". He explains that *Taiji* is one, unmovable and generates two, hence two is Divinity（Spirit）神. Divinity generates numbers, numbers generate images and images generate the material forms.[361] Here the concept of Deity refers to the changing of *Yin* and *Yang*, odd and even numbers, rather than the God/god in religion, which can also be regarded as an intrinsic motivation for the evolution of the universe. Regarding the number "One" and two, Shao further puts forward the following philosophical interpretation,

> One, is the beginning of numbers but it is not a number, so 2x2 is 4, 3x3 is 9, 4x4 is 16, 5x5 is 25, 6x6 is 36, 7x7 is 49, 8x8 is 64, and 9x9 are 81; but one is immutable.[362]

This means that "One" is not a number, but rather the root of numbers. Counting starts from two, and a series of changes in the numbers then occurs successively, but "One" remains unchangeable. Shao further explains that "*Yi,* hence, generates numbers via number two […]: "One" is not a number but produces all numbers".[363] Numbers start changing with two, but as there is no two without one we come to understand why "One" is the root of numbers.[364]

The basic characteristic of Shao Yong's *Xiantian Zhouyi* theory is to think of

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[360] Zhu, Bo-kun, *History of Zhouyi Philosophy II*, p.139-140.

[361]太极一也，不动；生二，二则神也。神生数，数生象，象生器。In *Guanwu Waipian* 观物外篇

[362]一者，数之始而非数也，故二二為四，三三為九，四四為十六，五五為二十五，六六為三十六，七七為四十九，八八為六十四，九九為八十一，而一不可變也。*Ibid*.

[363]故易以二而生数，以十二而起，而一非数也，非数而数以之成也。*Ibid*.

[364] Zhu, Bo-kun, *History of Zhouyi Philosophy II*, p.175.

numbers as something that determines the essence of things, and to make it infinitely mysterious. This is quite similar to the “number is the first principle” of the Pythagorean school in ancient Greece. The similarity of the two lies in the power of deification of numbers, and the difference is that Shao regards numbers as the law of *Taiji* deification of the universe itself.[365] In fact, Shao’s mathematical model had a huge impact on Bouvet. However, few scholars in academia directly associate Bouvet’s *Yijing* study with Shao Yong, although they may already know that the diagram the former sent to Leibniz is actually Shao's masterpiece. In one edict, Kangxi precisely mentioned Shao Yong (Kangjie) as an example when he was instructing Bouvet on how to read *Yijing*.

> On the 5th day of July, the Emperor asked, “How is Bouvet’s study and interpretation of *Yijing* going? ... Take Shao Kangjie as an example: he was a famous expert in the textual meanings of *Yijing*, but some records of his divination cases were entirely written by his disciples rather than by his will. Consequently, if Bouvet does not check these various references, how can he find the evidence supporting those records and understand the theories Shao’s intended?[366]

This is clear evidence that Kangxi was well aware of the importance and influence of Shao Yong’s *Zhouyi* theory to support Bouvet’s interpretation of *Yijing* and gave pertinent guidance. Shao Yong got a Western disciple, in that his proposition that “numbers generate images” became the corner stone for Bouvet's mathematical interpretation of *Yijing* philosophy.

Like *Shao Yong*, also Bouvet proposed that number comes first, that it is prior to the image, with the difference, however, that his numerology refers to the use of

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[365] Tang, Bingbang 唐明邦.(1998). *Biography of Shao Yong* 邵雍评传. Nanjing: Nanjing University Press, p.141.

[366] Full-text: 七月初五日，上問 白晋所釋易經如何了。欽此。王道化囬奏。今現在觧算法統宗之攢九圖聚六圖。等因具奏。上諭 朕這幾月不曾講易經。無有閑着。因查律吕根原。今將黄锺等陰陽十二律之尺寸積数。整音半音。三分損益之理。俱已了然全明。即如箫笛琵琶絃子等類。雖是頑戲之小樂器。即損益之理。查其根原。亦無不本於黄锺所出。白晋釋易經。必將諸書俱看。方可以考駁。若以為不同道。則不看。自出己意敷衍。恐正書不能完。**即如邵康節。乃深明易理者。其所言占駁。乃門人所記。非康節本旨。若不即其数之精微以考查。則無所倚。何以為憑據。**尔可對白晋說。必將古書书细心較閱。不可因其不同道則不看。所釋之書。何時能完。必當完了才是。欽此。41-17.*Shangyu* 上諭(康熙).

triangle and geometry as in Western mathematics. To be precise, the theory of *Yijing* study put forward by Bouvet is philosophical principle (textual meaning), number, image and diagram, in this sequence. In the *Yixue zongshuo*, he proposes that the image derives from the number, that the number moves according to the image, and that the 'numbers without image and before the image' are the origin of all images.[367] He further elaborates,

> The principle of *Shixue* is broad, although the categories come in many varieties all of which are in the geometric numbers, in astronomy and in Lülü. The nature of things shown in the number-image-diagrams of *Yijing.* Numbers are associated with images and the two never exist apart from the principles; measuring the number-images of things, one can then understand their principles… "Principles and numbers, and numbers and images, are related and not separate. It is easier to explain the principles by numbers and to interpret numbers by images, but if numbers and images are inadequate, one might as well use diagrams to demonstrate. Therefore, scholars of old and of today who study the diagram of *Zhouyi* all rely on numbers and images.[368].

It is, hence, clear that Bouvet's mathematical interpretation of *Yijing* belongs to the category of the image-numerology school and holds that all the 64 hexagrams and 384 lines actually are numbers and images.

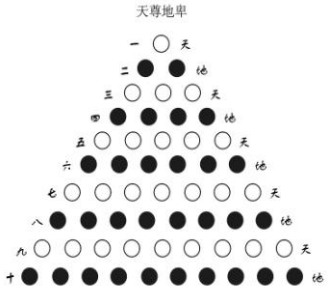
5.2.2 *Tianzundibeitu* 天尊地卑圖

In order to better explain his intuition, Bouvet interpreted *Yijing* by diagrams just as the *Tushu* 图书 study of *Zhouyi* had done before him in the Song dynasty. On the basis of concepts such as *Taiji*, *Xiantian*, *Houtian*, *Hetu* and *Luoshu*, which are representative of traditional *Yijing* diagrams, Bouvet came up with a new interpretative model of the *Yijing* diagram based on Western mathematical theories, and called it *Tianzundibeitu* 天尊地卑圖, a complex idea that is not only

[367] 象由数而出,数因象 而行. 数无象而先于象,为万象所寓而出之原, in 34-10, p.3.
[368]世學者，其理之廣大，品類雖繁，無不具於数幾何，天文律吕格物，盡顯於易之数象圖之奥。数與象相関不離理也，測其数，度其象，則可通其理。。。理與数，数與象，自然相関而不相離。因言理莫如数，明数莫如象，数象所不及者，莫如圖以顕之。所以古今言易圖者，無不以数象言之，*Ibid*., p. 2-4.

the core content of his image-numerological studies, but also the highest guiding ideology behind his mathematical interpretation of *Yijing*.

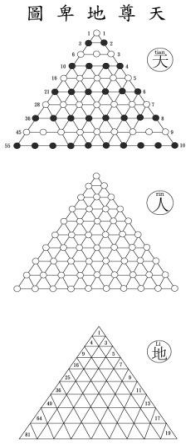
The name *Tianzundibei* 天尊地卑 is taken from the opening words of *Yizhuan Xici I*: “Heaven is high and earth is low, *Qian* and *Kun* are determined in accordance with this. High is honorable and low is humble, the position of trigrams and their lines have their places assigned accordingly”.[369] Based on this idea, Zhang Li 张理 of the Yuan Dynasty produced this diagram in his *Dayi xiangshu goushentu* 大易象数钩深圖 as follows:[370]



Bouvet used the same name, but created his own diagram, reproduced in the next page, that is different from the one produced by Zhang Li, particularly where Bouvet produces a mathematical interpretation, while Zhang Li does not go beyond the image explanation of trigrams *Qian* and *Kun*. In addition, according to *Qindin siku quanshu huiyao* 欽定四库全书薈要, the synopsis of *Dayi xiangshu goushentu* 大易象数钩深圖 states that this diagram focuses purely on the *Xiantian* Study by Chen Tuan; that Zhu Xi called it ‘the other school outside *Zhouyi*’; and that it began with just a few copies… which were recorded in *Dao Zang*.[371] There is no evidence so far that Bouvet had access to Zhang’s diagram, nor did Kangxi ever mention Zhang’s work.

[369] 天尊地卑，乾坤定矣。卑高以陈，贵贱位矣, *Yizhuan* 易傳 *Xici I* 繫辞上:1.
[370]自一至十，天尊于上，地卑于下。尊者，乾之位，故乾为君，为父，为夫。卑者，坤之位，故坤为臣，为母，为妇。皆出于天尊地卑之义也。故曰：天尊地卑，乾坤定矣。[宋]刘牧，[元]张理，[元]雷思齐(2015).*Yi xue xiang shu tu shuo si zhong* 易学象数图说四种. Beijing: Hua Ling press, p. 149-150.
[371] 此圖纯主陈抟先天之学，朱子所謂易外别传者也。其书初少传本…均从道藏录出, *Ibid*., p.143.

Bouvet asserts that *Tianzundibeitu* is the model of all numbers and images: the traditional *Yijing* studies of *Xiantian, Taiji*, *Hetu* and *Luoshu* all derive from this diagram. In order to connect his diagram to the numbers of the *Taijitu*, *Hetu* and *Luoshu*, he produced detailed calculations by geometry and micro circles regarding the corresponding numbers of these graphs, and subsequently linked them to the contents of the Catholic faith. In his imperial edicts Kangxi mentions the *Tianzundibeitu*, arguably one of Bouvet's most important works, times and times again: the diagram features in documents collected in the Vatican Library and the Jesuit Archives in Rome, while Claudia von Collani selected it as a centerpiece illustration for her biography of Bouvet.



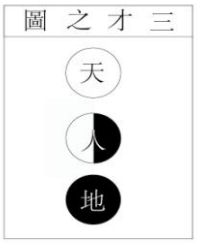
(*Tianzundibeitu*)

The theoretical basis of *Tianzundibeitu* derives mainly from *Yizhuan* and the theories therein included about the 'Three Powers' or *San Cai* 三才說,heaven, earth and man, and the 'Numbers of heaven and earth' 天地之数. In Bouvet's mathematical interpretation of the origin of number-images is invariably attributed to numbers 1, 2 and 3, the so-called 'One-Origin and Two-Elements'一本二元. *Xici II* affirms,

> The *Yi* is a book of vast knowledge and great scope, embracing everything. In it, one finds the Way of Heaven, the Way of Man, and the Way of Earth. It then takes these Three Powers and doubles them till they amount to six (lines). What these six lines show is the Way of the Three Powers.[372]

[372]《易》之為書也，廣大悉備，有天道焉，有人道焉，有地道焉。兼三才而兩之，故六。六者，非它也，三才之道也。*Yizhuan* 易傳 *Xici* II 繫辞下：10.

The *San Cai* diagram 三才圖 in Zhang Huang's 章潢[373] *Tushupian* 圖書编 is the image basis of Bouvet's *Tianzundibeitu,* together with the corresponding *San Cai* theory, cited many times by Bouvet in his manuscripts. Zhang Huang affirms that the diagram, reproduced here below, symbolizes the *San Cai* of heaven, earth and man each of which corresponds to a *Taiji*.[374] Bouvet explains that 'Heaven-at-the-top' is bright as it is pure *Yang*, it represents the *Taiji* of *Lianshan*, and it also symbolizes the *Xiantian* un-changed 先天未變; 'Earth-at the-bottom' is dark as it is pure *Yin*, it represents the *Taiji* of *Guizang,* symbolizes *Xiantian*-changed 先天已變. In it, Man-at-the-centre is half-bright half-shadow as he is *Yin-yang*, and symbolizes the *Taiji* of *Zhouyi* and *Houtian*-unchanging 后天不變.[375]



图二十三 《三才之图》

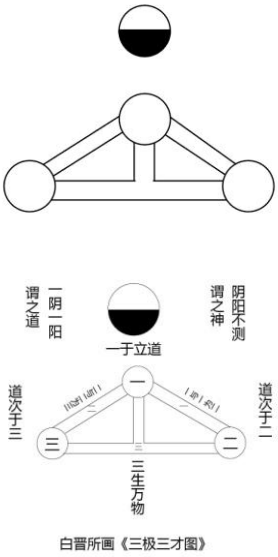
Bouvet uses the *San Cai* or Three Powers of heaven, earth and man as respectively corresponding to a range of concepts related to *Yijing* study, i.e. *Xiantian*, *Houtian*, *Three-Yi*, *Taiji* and others, in order to finally connect with the doctrine of the Holy Trinity. Seen in greater detail, these concepts share the same three perspectives, which in mathematical terms means that they all comprise the number 3, namely 1, 2 and 3.

三才	**三皇**	**三易**	**三义**	**三变**	**三天**	**三本**	**三宗**	太極	一三
天	天皇	连山	易简	未变	先天	数（算数）	神	函三	Holy
地	地皇	归藏	变易	已变	中天	量（几何）	形	太一	Trinity
人	人皇	周易	不易	不变	后天	衡（輕重）	兼神形	函三	三位一体

(See: List of classical Chinese terms with English translation often used in this dissertation in page v)

[373] Zhang Huang 章潢（1527-1608）Ming dynasty well-known *Yijing* and neo-Confucianist scholar.
[374] 此圖象天地人三才各一太極,Online source: 欽定四库全书 子部 *Tu shu bian* 圖書编,Vol.7,p.82.
[375] (26-2) *易引原稿,* p.4；(34-10)*易学总說,* p. 6-7.

When applying the principle that number “begins with one, achieves in three and ends at ten” 数始于一，成于三，终于十, Bouvet reduced the concrete contents to the abstract numbers and further constructed his own model of number-image interpretation. He drew the *Sanji Sancai tu* 三極三才圖 to establish that the *One-three* 一三 , the Creator, being the ‘One-Origin and Two-Elements’一本二元, is the foundation of all things.



白晋所画《三极三才图》

According to the above *Sanji Sancai* diagram, the three circles are *Sanji*, while the three lines forming the triangle are the images of *Sancai*. *Ji* is odd-number, and relies on the essence of the spirit 神 and *Yang*. *Cai* is the quality of geometry and the three *Cai*-lines have measurable qualities; they rely on the breadth of shape and *Yin*. *Sanji* and *Sancai* combine to form the 1-3 and symbolize the Trinity. They split into six, which is the movement of the six lines of the hexagram. Hence, the Dao ‘stands with 1 and achieves at 3’, which is the *One-Origin and Two-Elements*.

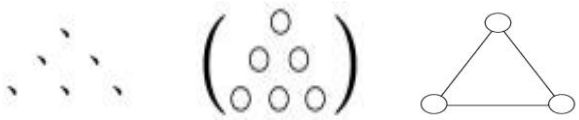
The mathematical basis of *Tianzundibeitu* is attributed to numbers 1 to 10, the numbers of heaven and earth, as stated in *Xici I*,

Heaven-1 earth-2, heaven-3 earth-4, heaven-5 earth-6, heaven-7 earth-8, heaven-9 earth-10. The

> numbers belonging to heaven are five, and those belonging to earth are also five…the heavenly numbers amount to 25, the earthly numbers to 30, the numbers of heaven and earth combined amount to 55.[376]

Numbers begin with 1, achieve at 3 and end at 10, and these are the full numbers of *Tianzundibeitu*. The concepts of *Xiantian*, *Taiji*, *Hetu* and *Luoshu* are all approached through the algorithms and the triangle geometry of these 10 numbers, which also derive from 1-2-3, the 'One-Origin and Two-Elements'.

The Way of number begins with the 'extreme one' 至一, which is neither odd nor even, but the root of all odd and even numbers. It continues with 2, which is the beginning of all the even numbers, and achieves at three, which is the beginning of all the odd numbers. 1, 2 and 3 are represented by a graph as 3 rows and 6 dots (Fig. 1) or 3 rows and 6 circles (Fig. 2), called *Sanji*. Both the essence and the breadth of the numbers and images of *Xiantian Zhouyi* 'begin with 1 and achieve at 3'. Numbers 1, 2 and 3 are so intersecting as to form a *Taiji* of numbers and images (Fig. 3).



1 2 3

Hence, the origin of number and image is to be attributed to 1-2-3, the essence of *Sanji* and 1-2-3, the breath of *Sancai*, the so-called 'One-Origin and Two-Elements'.

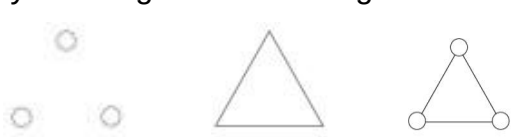
Number and image in the juxtaposed chart differ in many respects: the former refers to 1, 2, 3, 4 and so forth, not connected to each other into a graph of white and black micro-circles, but representing heaven and *Yang*. Image refers to 2, 3 and so forth multiplied by themselves equaling 4 and 9, etc. which are connected

[376] 天一地二，天三地四，天五地六，天七地八，天九地十。天數五，地數五，天數二十有五，地數三十，凡天地之數，五十有五, in *Yizhuan* 易傳 ·Xici I 繫辞上：9.

into odd-even squared geometries forming a triangular shape demarcated by micro-circles and representing earth and *Yin*. The “square has angles, while the micro-circles have no angles but have poles 方有角圆无角而有極”,and although both juxtaposed graphs have three sides, they differ in that one has three-poles 三極 and the other has three-angles (triangle) 三角. The combined chart, resulting from the juxtaposition of the three-poles and the triangle graphs, is the number-image of *Taiji* diagram of *Yijing*.

Hence, the number-image of *Yijing* is based on *Taiji*, which can be divided into hidden-evident 蘊顯, underived-derived 未衍已衍, numbered from 1 to 10. According to the *Tianzundibeitu*, 1 is the image of ‘*Wuji er Taiji’* 無極而太極, 3 is the image of ‘Three-containing *Taiji’* 太極含三 and 10 is the image of ‘Chaos-*Taiji’* 混沌太極. *Wuji er Taiji* refers to Heaven-1 and is represented by a circle, which is self-rooted and self-based, neither *Yin* nor *Yang*, neither odd nor even, invisible and imageless, pure and only, the fundament of *Yin-yang*, firm and gentle, number (quantity) and size (geometry). The ‘Three-containing *Taiji’* is still one 太極含三為一, the ‘Three-one *Taiji* 三一太極*’*, which is divided into the underived and the derived diagrams.

The underived diagram is formed by three micro-circles of heaven-1 on top and earth-2 at bottom as in Fig. 1.1. The three circles mean heaven, star and spirit, but three points when connected by a straight line are hidden, as in Fig. 1.2, the straight lines become the source of a square, and square means earth, object and man. Together they form Fig. 1.3 as the origin of heaven-image and

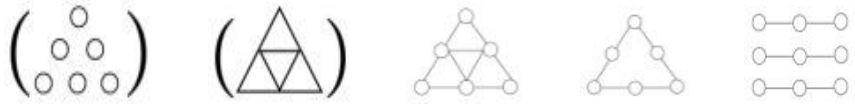


1.1 1.2 1.3

earth-shape. In mathematical term, the three-poles of the micro circles (Fig. 1.1) are not imaged, so 1 is 3 and 3 is 1. One is the foundation of all numbers but 2 is the origin of the *Yin* numbers and 1 and 2 give birth to 3, which is the origin of the

Yang numbers. In geometry, the three points of the straight line (Fig. 1.2) are not shaped, so 1 is also 3 and 3 is also 1. One point is the foundation of geometry, two points are the origin of the geometric breadth and three points are the origin of the geometric thickness. The number and geometry equally start from 1 and achieve at 3, which is the underived theory of 'One-Origin and Two-Elements and Three-Powers'一本二元三才.

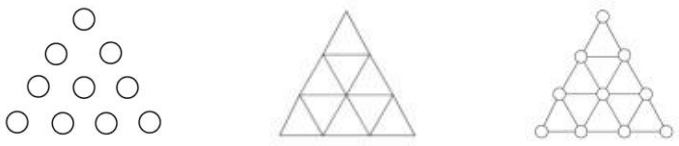
According to heaven-1, earth-2 and heaven-3 in the *Tianzundibeitu*, the derived diagram (Fig.3.3) is divided into heaven-image (Fig. 3.1) and earth-shape (Fig. 3.2); the latter is hidden in the former and the two become one (Fig. 3.3) which is the root of circle-motion 圆动 and square-static 方静, and respectively contain the



3.1 3.2 3.3 3.4 3.5

'One-Origin and Two-Elements' of heaven-image and earth-shape, numbers and geometry. In addition, seen from the three edges of chart Fig. 3.4, the theory of 'Containing-three *Taiji'* appears more obvious and the three-odd, three-even and six-lines of trigrams *Qian* and *Kun* in *Yijing* are also contained in Fig. 3.5.

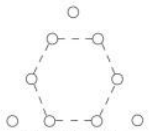
The *Chaos-Taiji* refers to heaven-1, earth-2, heaven-3 and earth-4 in *Tianzundibeitu*. It is the image of *Sanji* and heaven-round (Fig. 4.1 below), which corresponds to the 10 numbers of *Hetu* and the middle three layers with 9 triangles as earth-squares (Fig. 4.2 below), which corresponds to the 9



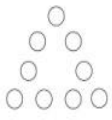
4.1 4.2 4.3

numbers of *Luoshu*. The two figures conjoin into a form of *He-Luo* 19 (Fig. 4.3),

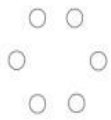
which corresponds to the togetherness of sun and moon in the calendar and is the Chaos-*Taiji* diagram of undivided heaven and earth. The diagram consists of three-poles and triangles, and contains heaven-round, earth-square and *He-Luo*, the three being the original *Taiji* diagram of the number-image in *Yijing*.



The diagram of 'Three-poles and Triangle' 三極三角圖 also contains the *Yin-yang* harmonious numbers of *Yijing*. 9 and 6 are related numbers, based on 3 and 2, that is the most beautiful ratio of *Yin-yang* interaction, which also is the general principle of *Lülü* 律吕.[377] Numerically, 3 was assigned to heaven, 2 to earth, and from these came the other numbers 参天两地而倚数, as mentioned in the *Shuo Gua* 說卦;[378] it is precisely the 2 : 3 ratio, based however on number 3. Mathematically, number 3 is the common divisor of 9 and 6; 3 x 3 = 9, odd and *Yang* also, and 2 x 3 = 6, even and *Yin* too. In the Three-poles chart, there is no micro-circle at the center, purposely left empty for respect to the Heart of heaven-earth (the *Dao*); the remaining micro-circles are *Yang*-9, its own image of Three-poles (Fig. 5.1 below). This same *Yang*-9 diagram embraces the *Yin*-6 inside as the image of Six-poles, which become visible when the outer Three-poles are removed (Fig. 5.2). In the triangle diagram, there are 9 triangles, the square of 3 (Fig. 5.3);



5.1



5.2

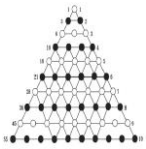
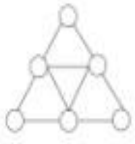
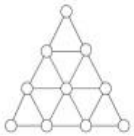
5.3

5.4

the diagram embraces the 6 triangles inside as the image of a hexagon, which becomes visible when removing the outer three triangles (Fig. 5.4). Hence, the interaction between heaven and earth, the Two elementary Forms 两儀 and among the Four emblematic Symbols 四象 of *Yijing* co-exist in this diagram.

[377] Bamboo pitch-pipes used in ancient China as a kind of music theory.
[378] https://ctext.org/book-of-changes/shuo-gua

The *Tianzundibeitu* consists of 10 layers of black and white micro-circles from heaven-1 to earth-10, and contains the full numbers of *He-Luo* (Fig.6.1), which is derived from the original graph of number-image (Fig. 6.2) and *Taijitu* (Fig. 6.3).

6.1 6.2 6.3

The numbers of the ten layers add up to 55, which is the total number of *Hetu*, while the nine layers, i.e. excluding the bottom layer, add up to 45, which is the total number of *Luoshu*. The sum of the two charts is the natural order of one *Tianzundibeitu*, which is composed of Heaven-round and Three-poles on the outside, and Earth-square and the triangle on the inside. Compared to the two separate diagrams, the *Hetu* and *Luoshu* merge into one *Tianzundibeitu,* which symbolizes the good fortune and positive image of *Xiantian* un-changed.

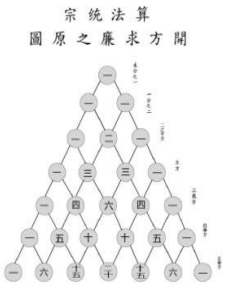
Tianzundibeitu is an expression of the original foundation of mathematics. In its external form it differs from the so-called Western mathematical *Jiegenfang* 借根方,[379] but the proportion and usage of the numbers in it are the same. It is a representation, a general drawing of the 'extraction of root' according to the traditional Chinese method of the *Kaifang qiuliantu* 開方求廉圖,[380] introduced in the '*Arithmetic Compendium of China'*中華算法统宗, published during the Ming Dynasty.[381]

[379] It was also known as *Jiegenfang* ratio 借根方比例, the Western algebraic equation was introduced in early Qing dynasty.

[380] It was first solved in 黄帝九章算法细则 as the root operation by Jia Xian 贾宪, a mathematician in the Northern Song dynasty. Yang Hui 杨辉, a mathematician in the Southern Song dynasty included it as 開方作法本源图 in his work,详解九章算法 so it can be spread. The French mathematician Blaise Pascal (1623-1662) discovered this rule in 1654, so this table is also called Pascal's triangle but Chinese scholars called it the Jia Xian triangle or the Yang Hui triangle.

[381] Its full title 新编直指算法统宗, is a classic of ancient Chinese mathematics, written by Chen Dawei 程大位 (1533-1606)in the Ming dynasty.

The ‘Undivided One’未分之一 at the top of the *Kaifang qiuliantu* is the root of all



numbers, even though it is not one of them, and symbolizes the Creator giving birth to and transforming the myriad things[382], Himself being without beginning. One splits into two and gives birth to each ‘1’ figure on the left and right sides of the second layer. The left 1 and right 1 of the second layer respectively give birth to the left 1 and right 1 of the third layer, and the left 1 and right 1 add up to form the 2 at the centre of the third layer, followed by the fourth layer and so on. Hence, the third layer adds to 4, the fourth layer to 8, the fifth layer to 16, the sixth layer to 32 and the seventh layer to 64, and the layers are, successively, the square of 2, the cube of 2, the third power of 2, and so on to infinity. The same is true of 64 hexagrams (2-4-8-16-32-64) in the *Yijing*, which was also called Shao Yong’s “*Double method”* 加一倍法. Li Guangdi added this diagram in his *Zhouyi Zhezhong* 周易折中 stating that “the diagram uses the ‘Double method’ extracted from mathematics, which in mathematical terms is known as the “Ratio of *Kaifang qiulian*.”[383]

Beginning with the Pythagorean theory of number origin in ancient Greece, a theoretical system with mathematical philosophical thinking as the core was established, which proposed mathematics as being the origin and structure of everything. Plato subsequently put forward the notion that mathematics is the real training to understand the universe in its essence and not just its surface phenomena. Since then, mathematics has been closely linked with philosophy, the two being characterized by mutual compenetration and tolerance. Some philosophies can be explained by numbers, in particular the ontological and epistemological questions concerning mathematics. In a philosophical perspective, the value of Bouvet’s mathematical interpretation method lies in its

[382] 30-6, p.15.
[383] 此图用加一倍法,出于数学中,谓之開方求廉率,[Qing]Li Guangdi. (2008). *Zhouyi Zhe Zhong* 周易折中. Bashu Book House, Chengdu, p. 598.

attempt to establish a brand-new approach in two different traditions, which offer a comparative interpretation of metaphysics, ontology and epistemology in two entirely different cultures and beliefs, causing him to be considered the first person in history to use a western perspective and scientifically introduce mathematical methods to interpret the *Yijing* philosophy. The numerological reading, i.e. numbers and images that go with them, that Bouvet chose as an alternative approach, allowed him to discover similar tools in the Bible (with its related Kabbalah tradition) and in *Yijing* that would help him to explain cosmological and human reality, thus making the two books compatible to a certain extent. In his interpretation of the similarities, he found sufficient argument to conclude that *Yijing* alludes to the truths revealed through biblical tradition, and this for him was a veritable step forward in attaining his objective as a missionary, i.e. find a common language, that of number-image, to evangelize Chinese culture. It is precisely because of his mathematical approach that he found in the traditional Chinese *Yijing* philosophy of image-numerology, in particular the numerological study of Shao Yong, a theoretical basis that is comparable to the western Pythagorean and Platonian mathematical philosophy, that 'the number is the origin of all things'. Because of his work in the regard, Bouvet actually is the first heir of Shao Yong's mathematical school of *Yijing* philosophy and, in his own right, the pioneer of the *Yijing* numerological school in the West.

Bouvet divided his interpretation of *Yijing* into *Inner* and *Outer* sections, the former being the theoretical basis for theology, the latter a mathematical application. This distinction is entirely sourced from the study model of Song Shao Yong's "*Guanwupian* 观物篇", a famous work which he divided into a "*Neipian* 内篇 and a *Waipian* 外篇", the former emphasizing the principles of *Yijing*, the latter *Yijing*'s numerological study. Compared to the textual readings school, Bouevet's mathematical readings approach had the great advantage of obtaining easier recognition and acceptance by the two different traditions he

was comparing, the Catholic and the Chinese one, particularly in the historical environment of his time, when western Catholic beliefs and teachings were obscure for and rejected by traditional Chinese culture, always wary about sources of possible conflict. Emperor Kangxi, on the other hand, was very interested in and open to western science and technology.

The benefits of Bouvet's division into the internal and external parts are twofold: on the one hand, it complied with the study paradigm recognized by the official *Yijing* philosophy in the early Qing dynasty; on the other, which is even more important, it allowed him to use western scientific tools as a bridge to help link and comparatively interpret *Yijing* and Catholic theology. He used mathematics as a neutral tool to bridge two different cultures and, in the process, he created a new interpretative model in traditional image-numerological study of *Yijing*. Mathematics is a basic tool in humans' best efforts to understand the world. As already mentioned, Galileus, whose greatest contribution was the "mathematization" of science, wrote that "the Book of nature is written in the language of mathematics, and its characters are triangles, circles and othe geometric figures"[384]; which demonstrates the lofty status of mathematics in understanding the scientific/philosophical cause of the world. The argument here may involve one issue related to the construction of the social character of philosophy of scientific knowledge, that is whether mathematics is neutral to culture or is culturally conditioned. Neutral, in this context, means that the concept of mathematics itself is "neutral", but it does not rule out that the interpretation of mathematical concepts could be, and often are, "culturally contaminated ". The most basic research objects of mathematics are numbers: one, 二, and 3…No matter in what language they are written, its calculation of quantity (operational rule and results) is the same, only the meaning attributed

[384] See p. 99, note 292 and Peter Lynch in the Irish Times, Feb. 18, 2018 souced on Sep 13, 2020 https://www.irishtimes.com/news/science/the-book-of-nature-is-written-in-the-language-of-mathematics-1.3388465

to them can have or express cultural differences.

The cultural factor is a prominent issue in contemporary philosophy of science. Since 1980, interest in developing philosophical accounts of scientific knowledge that incorporate the social dimensions of scientific practice has been on the increase. Among various modeling approaches in addressing the social character of knowledge, one set of issues that has yet to give rise to extended philosophical reflection is the question how civilizational differences are expressed in scientific work.[385] Philosophers of science have generally seen scientific knowledge as standing apart from traditional knowledge and as distinct from it. Arun Bala has argued that the roots of modern science are "dialogical" — that is the result of a long-running dialogue among ideas that came to Europe from a wide diversity of cultures through complex historical and geographical routes.[386]

In his work, Bala introduced the views of social anthropologist David Hess on mathematics. Hess articulated a multicultural perspective on the history of science that traces the roots of modern science to non-Western cultures.

> Hess also considers the numerous and complex multicultural exchanges that took place in mathematics among different cultures over long historical periods. These led to significant mathematical achievements that were inherited by Europe and played a crucial role in the modern Scientific Revolution. There were the mathematical contributions of Egypt and Mesopotamia to Greek science, and the Arabic synthesis of the geometrical tradition of the Greeks with the algebraic and arithmetical traditions of Babylonia, India, and China. Hess also considers the influence of the Kerala School of mathematics in India during the medieval period that approached discoveries close to the calculus, although he acknowledges that the question of whether they influenced Europe continues to generate controversy. He concludes that cultures from Egypt and Mesopotamia to the Arabic world, India, and China made important contributions to the mathematical tools that made modern science possible.[387]

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[385] https://plato.stanford.edu/entries/scientific-knowledge-social/#ModSocChaKno

[386] Bala, Arun. (2008). *The Dialogue of Civilizations in the Birth of Modern Science*, New York, NY: Macmillan, p.2.

[387] *,.,* p.37.

Hess argues that we should replace the term “Western science” by the term “modern science” or “cosmopolitan science”, since it absorbed contributions from many cultures. In his multicultural perspective, mathematics is ‘cultural’, in the sense that it is a fusion of many different cultural traditions. From a different angle, though, mathematics is ‘neutral’ precisely because it is cosmopolitan, and its laws are universal.

Bernard Paul Sypniewski proposes that a "universal" is some idea that may occur to any member of any culture at any time and applies to everyone, everywhere. Mathematics is seen as ‘the’ universal par excellence, as a form of thought that knows no cultural boundaries or biases. Philip E.B. Jourdain (in Newman, 1956: 71) wrote that, as study mathematics, we arrive at seeing that the nature of Mathematics is independent of us personally and of the world outside, and we can feel that our own discoveries and views do not effect the Truth itself, but only the extent to which we or others see it.[388] The claim is that if anything is universal, mathematics is universal: 2 + 2 = 4 is true everywhere, any time.[389]

Mathematics is regarded as a special and abstract scientific language： conceptual as it may be, it does provide powerful methodology and tools for studying the natural sciences of ‘real’ nature and the social sciences of ‘real’ human society. It is a discipline that uses symbolic language to study concepts such as quantity, structure, change, and space; it is a kind of formal science， meaning a science whose main research object is abstract form, such as logic, mathematics, calculation theory, communication theory, statistics, etc. In addition, the use of words and language in mathematics, its content, theorems, definitions, and calculation results are all internationally unified standards. The history of

[388] Jourdain, Philip E. W. (1956) "*The Nature of Mathematics*," in: Newman, Vol. 1.

[389] Sypniewski, Bernard Paul. (2005). *CHINA AND UNIVERSALS: LEIBNIZ, BINARY MATHEMATICS, AND THE YIJING HEXAGRAMS*, Monumenta Serica, Vol. 53, pp. 287-314.

Chinese and Western mathematics offers an example of this: Song dynasty Yang Hui's triangle 杨辉三角 and Blaise Pascal's triangle are identical as theorems and geometry, but Pascal came up with his proposition 393 years later.[390] The same occurred with "Gou Gu's theorem 勾股定理" in geometric theory:[391] it was discovered by Shang Gao 商高 during the Western Zhou Dynasty (1100-771 BC), while in the West, the first to put forward and prove this theorem was the Pythagorean School (Pythagoras 570-495 BC) of ancient Greece, and is thus known as Pythagoras' theorem. Bouvet used these two theorems as theoretical foundations in his manuscripts and mathematical interpretation; they appeared, as well, in Li Guangdi's work on *Zhouyi*.

Bouvet was trained as a mathematician and mastered a mathematical knowledge that derived from different traditions before he came to China, but he did not unceremoniously push them through to his Chinese audiences: he rather chose a collaborative approach with the existing Chinese tradition. In fact, the mathematical philosophy he used in interpreting *Yijing* coincides with Shao Yong's philosophy of numerological theory, and some basic mathematical methods he used are also reflected in traditional Chinese mathematical operations. One may, therefore, say that his mathematical solution is a further a proof that mathematics is neutral, a universal law which can and did bridge two traditions.

Bouvet's study methodology of *Zhouyi* is known as Figurism, which is a method of interpreting the Bible for the purpose of missionary work that departs from the

[390] Yang Hui's triangle, also known as Jia Xian's triangle, is a geometric arrangement of binomial coefficients in the triangle. It appeared in the book "Detailed Explanation of Nine Chapter Algorithms 详解九章算法" written by Yang Hui, a mathematician in the Southern Song Dynasty in 1261. In Europe, Pascal (1623-1662) discovered this law in 1654, so this table is also called Pascal's triangle. Pascal's discovery was 393 years later than Yang Hui's and 600 years later than Jia Xian's.

[391] The Gou Gu Theorem or Pythagorean Theorem is a basic geometric theorem, which means that the sum of the squares of the two right-angled sides of a right-angled triangle is equal to the square of the hypotenuse. The theorem is one of the important mathematical theorems discovered and proved by man in the early days. It uses algebraic ideas to solve geometric problems. One of the most important tools of this is also one of the bonds that combine numbers and shapes.

perspective of 17th century Catholic tradition. While other Ming and Qing missionaries before him labored at translations of Chinese Classics into Latin and Western Classics into Chinese, Bouvet concentrated on a comparative study between Chinese and Western cultures, which we might call a precedent of comparative or cross-cultural philosophy *ante litteram,* given the fact that this is a relative newcomer to the field of philosophy, as it appeared two centuries later.[392]

Chinese thought has had a profound influence on 17th and 18th centuries European Enlightenment, when many outstanding thinkers consciously or unconsciously engaged in research under the influence of knowledge, ideas and information fed from the East. Comparative studies of Eastern and Western thought, however, were carried out in a generally sporadic and preliminary way based on comparative analysis of local customs and lifestyle.[393] Bouvet was obviously a special case. His work, which can veritably be regarded as the first serious comparative study of Chinese and Western wisdom, was completed in China in the most orthodox academic setting and atmosphere, even though ultimately it was underestimated by most people.

Comparative philosophy brings together philosophical traditions that have developed in relative isolation from one another and that are defined quite broadly along cultural and regional lines — Chinese versus Western, for example.[394] Li Chenyang regards comparative philosophy as an effort at 'Bridge-building' and believes that the greatest value of comparative philosophy is that it gives us different perspectives and sheds new light on issues in any

[392] Comparative philosophy—sometimes called cross-cultural philosophy—is a subfield of philosophy in which philosophers work on problems by intentionally setting into dialogue sources from across cultural, linguistic, and philosophical streams. Comparative philosophers most frequently engage topics in dialogue between modern Western (for example, American and Continental European) and Classical Asian (for example, Chinese, Indian, or Japanese) traditions, but work has been done using materials and approaches from Islamic and African philosophical traditions as well as from classical Western traditions (for example, Judaism, Christianity, Platonism). https://www.iep.utm.edu/comparat/#H1

[393] Peng Yue (1995). *An Overview of the Development of Western Comparative Philosophy* 西方比较哲学发展概述. Journal of Guangdong Social Science, Vol. 4.

[394] Comparative Philosophy: Chinese and Westernhttps://plato.stanford.edu/entries/comparphil-chiwes/

particular tradition, and it can help open our minds and generate new and creative insights.[395] Western mathematics is the 'bridge' Joachim Bouvet painstakingly attempted to built. As a tool deprived of any religious or cultural ideology, Western mathematical concepts (such as algebra and geometry) can connect traditional Chinese *Yijing* wisdom with Western Catholic theological belief. If Bouvet's 'Inner meanings of *Zhouyi*', i.e. his theological interpretation of *Yijing* eventually met with rejection across the cultural divide, his 'Outer numbers of *Zhouyi*', that is his mathematical interpretation of *Yijing*, was acceptable to both China's imperial court and the Roman Curia. This is because mathematical language is the same all over the world.

Bouvet's study of *Zhouyi* follows the research approach of the image-number and diagram of *Zhouyi* in the Song dynasty and interprets his own *Zhouyi* thought comprehensively from the perspectives of textual meaning, number, image and diagrams. Equally, Bouvet understands the *Zhouyi* concepts of *Xiantian*, *Taiji*, *Hetu* and *Luoshu* in their Song dynasty interpretation by combining the theories expounded in the traditional *Zhouyi* texts, such as *Sancai*, the numbers of heaven- earth, etc., but the mathematical theories and tools of his main interpretive method, *Tianzundibeitu,* were Western arithmetic and geometry. The theoretical basis of Bouvet's mathematical interpretation of *Zhouyi* combines the two aspects of Chinese and Western philosophical traditions. One is the mathematical philosophical theory represented by Pythagoras and Plato, the other is the Song numerological school of *Zhouyi* represented by Shao Yong. Although different in their external form, internally they both take numbers as the first principle of all things. In fact, mathematics, as a neutral interpretative tool, has helped build a bridge between Western Christian culture and Chinese

[395] Li, Chenyang. (1999). *The Tao Encounters the West: Explorations in Comparative Philosophy*. State University of New York Press, p.5.

Confucian tradition. The ultimate intention of Bouvet was to evangelize, but the mathematical method of interpretation he applied in his studies of *Zhouyi* actually had a more profound impact on Western and Chinese scholars of his time than the Catholic doctrine he wanted to spread.

6. The influence of Bouvet's mathematical interpretation

The study of *Zhouyi* by missionaries in the late Ming and early Qing dynasties was a significant component of the spreading of Chinese studies into the West. While other missionaries before or after him, lacking an adequate key to the interpretation, mainly focused on the translation of and introduction to this important Classic, Bouvet chose an entirely different path and his study of *Zhouyi* undoubtedly produced results of the highest academic level: he was unique in his times, in that he could not only expertly make use of traditional Chinese study paradigms to approach *Yijing* but he could also apply Western mathematical tools and offer innovative interpretations as no one had managed to do. His scholarly work significantly contributed to the development of Chinese and Western studies on *Zhouyi*. Compared to other Chinese Classics, especially the Confucianian ones, *Zhouyi* did not attract enough attention in Western academic circles at that time, with one notable exception: Gottfried Wilhelm Leibniz (1646-1716) and his binary system. Many comprehensive studies were produced by both Western and Chinese scholars on Leibniz and most of them, quite predictably, dwell on Bouvet's scholarly research on *Yijing* and on the German philosopher's correspondence with the French missionary.

6.1. Bouvet's *Yijing* study and Leibniz

Because of his deep interest in China, Leibniz knew almost everyone of the well-known Jesuits associated with the China mission, chief among them Athanasius Kircher (1602-1680), the scientific mentor of many China missionaries, and frequently corresponded with quite a few Jesuits at the service of the Chinese imperial court: Joachim Bouvet was one of them. Bouvet first heard of Leibniz in 1697, while on his mission to Europe, when fellow Jesuit

Antoine Verjus[396] gave him a copy of the German philosopher's just published *Novissima Sinica*[397] 中国近事. After reading the book, on 18 October 1697 Bouvet wrote to Leibniz, expressing his admiration for the publication and enclosing a copy of his *Portrait historique de l'Empereur de la Chine*.[398] This meant the beginning of the correspondence between the two scholars, with at least 15 letters exchanged over a period of ten years, until 1707.

Leibniz was obviously eager to know all about China: 9 of the 15 letters exchanged, were from him written to Bouvet. His purpose in keeping a correspondence with the French missionary was to satisfy his craving for knowledge about one great nation among the many disparate nations that, in his view, ought to be brought together to make an intellectually unified Christian world.[399] Hence, once he received the first letter from Bouvet he promptly replied, in December 1697, with a list of queries about China and appeals to bring Chinese wisdom to Europe. He asked for facts about the Chinese characters and for the Lord's Prayer in as many Asian languages as Bouvet knew. In addition, Leibniz sent three letters in succession in the following three months so that it was not until the eve of his departure for China that Bouvet had time to reply on 28 February 1698 at La Rochelle. In this letter, Bouvet hinted that his approach to Chinese writings was established by linking the Chinese characters with the Egyptian hieroglyphs. More importantly, he first mentioned Fuxi and the lines (*Yin* and *Yang*) of the trigrams in *Yijing* without elaborating, claiming, however, that the perfect system of Chinese philosophy had been lost long before Confucius. He wrote,

> If I had had a bit of leisure I would have provided a solution to the riddle of the Chinese characters, that

[396] The Jesuit Antoine Verjus (1632-1706), Leibniz had sent him several books of *Novissima Sinica*, one of which the latter passed on to Bouvet.
[397] Gottfried Wilhelm Leibniz, *Writings on China*, translated by Daniel J. Cook and Henry Rosemont, Jr. Chicago: Open Court, 1994. 157pp.
[398] Collani, *Joachim Bouvet*, p. 35-36.
[399] Richard M. Swiderski, *Bouvet and Leibniz: A Scholarly Correspondence*. Eighteenth-Century Studies, Vol. 14, No. 2 (Winter, 1980-1981), pp. 138.

> is, an analysis of the first characters of this nation composed of small whole and divided horizontal lines, whose invention they attribute to Fuxi and for which I believe to have found the true key. These characters…had been composed with marvelous ingenuity and represent in a very simple and natural manner the principles of all the sciences; or rather, it is the consummate system of a perfect metaphysics, of which the Chinese, it seems, lost the knowledge a long time before Confucius.[400]

This was the first time Leibniz had ever heard of these, but it was not to be the last.

The 6 letters Bouvet replied to Leibniz mainly discussed the *Yijing* and his Figurist method. In his letter dated 8 November 1700, Bouvet started with an encomium of the *Yijing* and linked *Yijing* with Western philosophy. He wrote,

> *Yijing* is the most ancient work of China and perhaps of the world and the true source from which that nation had drawn all of its sciences and customs…In addition, the singular relation that this numerical system seems to me to have in its entirety and in its particulars to that of Pythagoras and Plato, rather poorly understood since the time of Cicero since this great orator, as well-versed as one might believe in this sort of philosophy, when wishing to highlight the obscurity of something, said: *id numero Platonis obscurius* [i.e., more obscure than Plato's number]; this relation, I was saying, gives me to believe that they are in effect the same system, and that the numbers of Fuxi's system are the [same] numbers as Plato's system, wherein Cicero had found such great obscurity.[401]

Judging from the content of the Bouvet-Leibniz correspondence, the former was mainly anxious to give an introduction of his Figurist views, i.e. his discovery of the mysteries of the Biblical God in Chinese characters, ancient classics, and in particular in *Yijing* and its system of images and numbers. He believed that when interpreted 'in his way', this would help the Chinese to understand and convert to Christianity. Bouvet was more at pains to illustrate his exciting findings to Leibniz than to discuss the specific mathematical philosophical theories and propositions behind them, although he did mention that the numerical system of *Yijing* is the same as that of Pythagoras and Plato. But no discussion ensued, and no further comparison was drawn regarding these different mathematical concepts, other than Leibniz's binary system.

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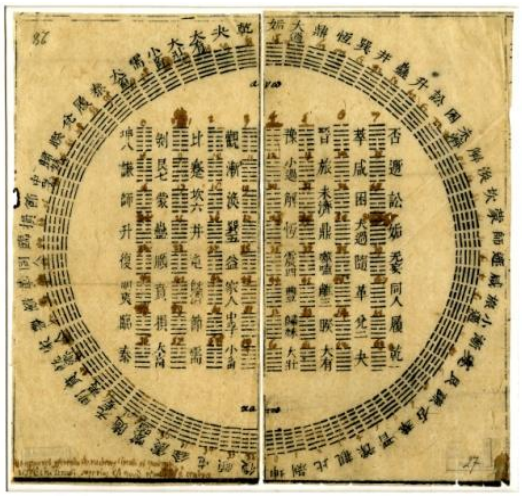
[400] Letter E: 28 February 1698, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/
[401] Letter G: 8 November 1700, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

Bouvet's letter of 4 November 1701 from Beijing, in response to a letter from Leibniz on 15 February of the same year, was to become especially famous and important. In his letter, Leibniz revealed for the first time his theory of binary arithmetic for which he offered a detailed analysis, wishing that Bouvet would present it to the emperor. He wrote,

> I do not know whether in writing to Your Reverence I formerly mentioned the new numerical calculus which I invented not for common usage but for the theory of science, for it opens a vast field for new theorems and, above all, this calculus gives an admirable representation of Creation. It is that following this method, all numbers are written by the co-mingling of the unit [i.e., the number one] and zero, much the same as creatures coming uniquely from God and nothingness… something that could be turned to advantage on your side. If it is necessary to give some sort of framework and semblance to this numerical invention in order to present it to the emperor and for it to be better appreciated, you will know what is necessary for that better than ever could I.[402]

Bouvet speedily replied with a long letter in which he enclosed a copy of *Xiantian cixutu* 先天次序图 or *Natural Hexagrams Order*, which is such that both the circular and square arrangements of the 64 hexagrams yield a perfect correspondence to a binary system.[403] The diagram actually should be attributed to the work of Shao Yong rather than Fuxi, but it does not affect Bouvet's wish to demonstrate that the Leibniz's binary system and the *Yijing* are identical.



[402] Letter H: 15 February 1701, Leibniz to Bouvet, https://leibniz-bouvet.swarthmore.edu/letters/
[403] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology.* Honolulu: University of Hawaii Press, p. 319.

Bouvet found the binary arithmetic in the Shao Yong arrangement of the 64 hexagrams of *Yijing*, so that Leibniz could prove then that already emperor Fuxi ca. 3000 years BC had described the secrets of creation in the hexagrams, which proved the practicability of the systems.[404] He wrote,

> wherein the ancient sages of China found the very same analogy as is found in numbers, in which the entire science was founded on a system which is in no way different from your numerical table that you establish as the foundation of your numerical calculus, from which you pass, like the Chinese, from the generation of numbers to the production of things, keeping the same analogy in the explanation of the one and the other…that this table, without changing anything in it, is the same as the system of the *gua* [i.e.,卦] or same lines of Fuxi, the principle of the philosophers of China.[405]

In addition to referring to Leibniz' numerical table with its double geometrical progression that corresponds to the system of Fuxi, Bouvet suggests that were Leibniz to continue his binary arithmetic from the fifth degree to the sixth degree, substitute broken and unbroken lines for 0 and 1 respectively, and then curve the result into a circular form, the result would correspond to the circular arrangement found in Fuxi's *Xiantian Cixu*.[406] He wrote,

> I request you to extend your numerical table (which in your letter is only continued up to the 5th degree of the double geometric progression, that is up to the number 32), to extend, I am saying, your table up to the 6th degree of this same progression, that is up to the number 64, or rather only to the number 63, since 63 along with the zero which is at the beginning of the progression makes 64. Your table, being extended by one half by the addition of this degree of the double progression…then compare this model with the circular Chinese model which I am sending you and see if you notice any difference there, and see if you do not discover in it the same marvelous harmony that is found in your table.[407]

Bouvet's letter reflects an intense stimulation which had come from his discovery that an eminent European savant had independently developed a mathematical system which confirmed his Figurist views. He was truly excited over this "marvelous similarity" that Leibniz dyadic and his own views had with the true philosophy of ancient China. Bouvet saw a particular link in this forgotten ancient

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[404] Copyright © by Stochastikon GmbH (http://encyclopedia.stochastikon.com)
[405] Letter I: 4 November 1701, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/
[406] Mungello, D. E. (1977). *Leibniz and Confucianism: The Search for Accord*. Honolulu: University of Hawaii Press, p. 49-50.
[407] Letter I: 4 November 1701, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

philosophy between the science of numbers and "physics or the science which teaches the principles and causes of generation and of corruption of all things."[408]

The significance of Bouvet's letter of 4 November 1701 did not escape Leibniz's scholars, among whom there is still an ongoing debate about the significance and the degree of influence that Chinese thought had on his philosophy, especially whether the binary arithmetic he discovered was inspired by *Yijing*, and possibly by the *Xiantian Cixu* that Bouvet sent him. This particular issue sparked an open debate in the early 20th century and many scholars are still interested in it. To be precise, the *Xiantian Cixutu* provided Leibniz with a strong proof, the significance of which is supportive of his binary theory, not a groundbreaking contribution. As Mungello suggests, the Chinese influence on Leibniz was more corroborative than germinal.[409] Without reviewing the various arguments espoused, what may not be neglected is that few scholars debate this issue from the perspective of Bouvet. Based on Franklin Perkins description of this significant event as he discusses the Bouvet-Leibniz correspondence[410], it may well be argued that it was Bouvet who first discovered the binary law in *Yijing*.

The sequence in the correspondence and related events is, in fact, quite telling. At first Bouvet replied Leibniz with a letter enclosing the *Xiantian Cixutu* after receiving and reading the latter's letter about binary arithmetics. Bouvet offered three suggestions including one about extending Leibniz's numeral system from 32 to 64. Leibniz's second submission to the Paris Academy in 1701 - he had failed in his previous attempt - was successful, which should be attributed to the

[408] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 318.
[409] Mungello, D. E. (1977). *Leibniz and Confucianism: The Search for Accord*. Honolulu: University of Hawaii Press, p. 15.
[410] Perkins, Franklin. (2004). *Leibniz and China: A commerce of Light*. Cambridge: Cambridge University Press.

Xiantian Cixu and suggestions of Bouvet. Perkins writes,

> Bouvet was convinced that the hexagrams represented a binary arithmetic, and after he announced this to Leibniz in 1701, Leibniz was also convinced. In 1703, Leibniz sent the article, *"Explication de l'arithmétique Binaire,"* to the Paris Academy. The article included an explanation of binary arithmetic and its connection to the hexagrams.[411]

Perkins does not mention the reason for the first rejection of Leibniz's paper, *Essay d'une nouvelle Science des Nombres* in early 1701, but Bernard De Fontenelle's main reason for politely declining at that time was that he did not see any use for the binary system.[412] Bouvet's letter of 4 November 1701 reached him only on 1 April 1703; he wrote back without delay because he had finally found a great use for binary arithmetic, although he made no explicit reference to the fact that his paper had been rejected. He wrote,

> It is a very surprising thing that it perfectly matches my new manner of arithmetic…For much more than 20 years I have had in mind this arithmetic by 0 and 1, in which I foresee marvelous means for advancing the science of numbers to a perfection which surpasses anything we have [yet attained] for it; but I held back from coming forward with it until I was prepared to show at the same time its great advantages…and I am delighted that [I have done so] precisely at a time when you were at a point to be able to put it to such good use as deciphering this ancient monument of China.[413]

Leibniz's *Explication de l'arithmétique Binaire* appeared in a 1703 edition of *Mémoires de l'Académie des sciences.* His essay begins with a brief presentation of his dyadic or binary mathematics, which he calls a "double geometrical progression". There follows a presentation of some similarities between his dyadic and the 4000-year-old lines of Fuxi, and his material for this is taken almost entirely from Bouvet's letters, particularly that of 4 November 1701.[414] One can confidently conclude that the influence of *Yijing* was decisive in helping Leibniz affirm or establish his binary arithmetic, and that it was Bouvet

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411 *Ibid*., p.117-118.

412 Zhu, Xinchun; Zhu, Guangyao. (May, 2011). *The Influnce of Yijing and Priority of Leibniz*《易经》的"影响"与莱布尼兹的"优先权". Journal of Changchun University of Science and Technology (Social Sciences Edition), Vol. 24, No. 5, p.21-23. Bernard le Bovier de Fontenelle (1657-1757), Secretary General of the Académie de France from 1697.

413 Letter J: 18 May 1703, Leibniz to Bouvet, https://leibniz-bouvet.swarthmore.edu/letters/

414 Mungello, D. E. (1977). *Leibniz and Confucianism: The Search for Accord*. Honolulu: University of Hawaii Press, p. 60.

who first came across the rule of binary system in the *Yijing*.

While his previous reply to Leibniz was still on its way – the German philosopher received it in April 1703 – Bouvet sent his last letter, a much briefer one, on 8 November 1702. Without a reply from Leibniz, Bouvet did not continue discussing about the connection between *Yijing* and binary arithmetic, but mentioned his new discoveries,

> That almost the entire system of true religion is found enclosed in the classics of the Chinese, and that the principle mysteries of the Incarnation of the Word, of the life and death of the Savior and the principal functions of His holy ministry are contained as if by prophesy in these precious monuments of Chinese antiquity.[415]

Somewhat inexplicably, Bouvet stopped his correspondence, and Leibniz' four consecutive letters of 1704, 1705, 1706 and 1707 went unanswered. Mungello suggests that a probable reason for Bouvet's silence is that Jesuit attempts to discourage further public discussion of Rites Controversy had in the meantime reached China.[416] In the absence of further evidence there is no way to establish whether this was the reason; we cannot, however, but notice one particularly interesting piece of news that Leibniz mentioned in his last two letters on June 1706 and 13 December 1707, about sixteen Chinese manuscripts he had received. He wrote in 1706,

> I received sixteen Chinese manuscripts and I cannot doubt that they come from you, but I have not received any letter which speaks of them. Thus, I do not at all know what they are and for me it is a hidden treasure. However, I must no longer postpone giving you my very humble thanks, and to beseech you to give me some enlightenment on the above and to explain to me their subject matter or the titles while indicating, if this an easily be done, the first characters of each of them so that I can correlate your explanations to the manuscripts themselves.[417]

And in 1707, he brings up the matter once again,

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[415] Letter K: 8 November 1702, Bouvet to Leibniz, https://leibniz-bouvet.swarthmore.edu/letters/

[416] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology*. Honolulu: University of Hawaii Press, p. 326.

[417] Letter N: ? June 1706, Leibniz to Bouvet, https://leibniz-bouvet.swarthmore.edu/letters/

> It has been some time since I received 16 Chinese books, and I do not at all doubt that they are a present which you sent me, for which I am infinitely obliged to you…I wrote to you about them a very long time ago, but I do not know whether the letter was delivered to you in this time of war and disorder. Thus, I repeat to you the request to let me know that these books contain.[418]

It is tempting to believe that the 16 Chinese manuscripts referred to in both letters are in fact Bouvet's 16 Chinese manuscripts kept in the Vatican library, but further study is needed to determine whether this is the case. One, however, cannot but notice that some of Leibniz' later works on China deal with topics very familiar and dear to the French missionary, in particular his *Remarks on Chinese Rites and Religion* (1708), and *Discourse on the Natural Theology of the Chinese* (1716).[419]

In fact, Bouvet's scholarly work on *Yijing* and his Figurist theories spread to Europe through Leibniz rather than the Catholic Church. Mungello regards the correspondence between Bouvet and Leibniz in the year 1701-1702 as representing the culmination of ideas which were developed essentially in the seventeenth century.[420] Historically, however, more attention has been paid to Leibniz than to Bouvet, whose contribution to the connection between *Yijing* and binary arithmetic was sadly overlooked then and now as his works were later banned by the Holy See in the wake of the Chinese Rites Controversy. Conversely, Bouvet continued his *Yijing* study with the encouragement of emperor Kangxi after his last letter to Leibniz in 1702, and his mathematical interpretation directly influenced the scholars of *Yijing* study in his life time and later through Kangxi, in particular, Li Guangdi and his *Zhouyi Zhezhong*.

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[418] Letter O: 13 December 1707, Leibniz to Bouvet, https://leibniz-bouvet.swarthmore.edu/letters/

[419] While Leibniz published his *Novissima Sinica in 1697/1699*, and *On the Civil Cult of Confucius* in 1700), his *Remarks on Chinese Rites and Religion* came in 1708, and *Discourse on the Natural Theology of the Chinese* in 1716. Gottfried Wilhelm Leibniz, *Writings on China*, translated by Daniel J. Cook and Henry Rosemont, Jr. Chicago: Open Court, 1994. 157pp.

[420] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology.* Honolulu: University of Hawaii Press, p. 326.

6.2. Bouvet and Chinese scholars of *Yijing*

In terms of history of Chinese Confucian classics, Song Neo-Confucianism declined but the *Textual Research* 考据學 or *Shi Xue*[421] (*Practical Learning* 实學) gradually rose in the early Qing dynasty, especially during the Kangxi reign. The *Shi Xue* aims to restore the original appearance of the ancient classics, precisely in reaction to Song Neo-Confucianism. As for *Yijng* study, some scholars carried on the textual discrimination and liquidation of the Song study of *Yijing* from the perspective of literature research and falsification. Representative figures and influential works include Huang Zongxi 黄宗羲 (1610-1695)'s *Yixue xiangshulun* (*Discussion on the images and numbers of Yijing* 易学象数論) and Hu Wei 胡渭(1633-1714)'s *Yitu mingbian* (*Elucidation of the diagrams of Yijing* 易圖明辨). These works systematically exposed the relationship between the *Yijing* study of *Tushu*, *Xiantian* and Daoism, and pointed out that they were not the original appearance of *Zhouyi* classics. These discussions indicated the beginning of the shift of *Yijing* study among contemporary Chinese literati although the official ideology still praised the Neo-Confucianism of Cheng-Zhu, and the Song *Yijing* tradition had not been interrupted. Heretofore, there is no evidence to prove that Bouvet had access to these scholars or that he was influenced by their views on *Yijing*. As a servant of the Kangxi court, his study of *Yijing* still followed the official orthodox *Yijing* thought of Zhu Xi. Mungello, in fact, wrote,

> …yet Bouvet gives little indication of having been in touch with such contemporary interest…Consequently, it appears that Bouvet had limited contact with the critics of Neo-Confucianism and did not understand that the Prior to Heaven hexagram order, which he believed to be the work of the ancient Fu Hsi, was probably the unique rearrangement of the Neo-Confucianist Shao Yung.[422]

In contrast, Mungello believed that Bouvet was more influenced by western ideas

[421] *Shi Xue* pays attention to the textual exegesis of Confucian classics and the textual research of historical deeds, and disapproves of the study style in Song learning, which is to take the text literally and to talk about the theory without referring to the historical reality. Refer to Zhu, Bokun. (2009). *History of Zhouyi Philosophy IV* 易学哲学史（四）. Beijing: Kun lun Press, p.258.

[422] Mungello, D. E. (1977). *Leibniz and Confucianism: The Search for Accord*. Honolulu: University of Hawaii Press, p. 62-64.

than by the *Yijing* study of Chinese scholars, even though he noticed Witek's finding of the contact between Bouvet and Li Guangdi. He wrote,

> …to date, little evidence has been uncovered that Bouvet was substantially influenced by the work of Chinese scholars on the *I ching*. Instead, the influence of Bouvet's European background and particularly Hermetism[423] appears to have been far more significant. And yet, Fr. Witek recently discovered a point of contact between Bouvet and Chinese scholarship (Li Guangdi).[424]

Mungello's suggestion is untenable, since it is obvious that Bouvet's mathematical interpretation of *Yijing* was influenced by the numerological thought of Shao Yong through reading the works of Zhu Xi. The Song scholar Wei Liaoweng[425](魏了翁, 1178-1237) also said,

> The *Yijing* thought of Zhu Xi got much from Shao Yong; no one will ever understand *Qimeng* and *Benyi* without reading Shao's *Yijing* study first.[426]

More important, however, is the reverse: Bouvet's works had a significant impact on Qing dynasty *Yijing* study and mathematics, in his life time and later on. Because of the mathematical interpretation of *Yijing* provided by Bouvet, Kangxi was the first scholar to connect Western mathematics with *Yijing* study: he believed that mathematics originated from *Yijing*, which used numbers to illustrate philosophy. On the 50th year of his reign (1711), while conversing about mathematics with Zhao Hongxie 赵宏燮, the Governor of Zhili 直隶总督, Kangxi asserted that "the all mathematical theories are from *Yijing*, even the European ones. European mathematics are originally from China, and are called algebra 阿尔朱巴尔, meaning 'from the Orient'."[427] Ten years later, on the 60th year of Kangxi's reign (1721), the *Shuli jingyun* 数理精蕴[428] was completed, which

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[423] Hermetism is a religious, philosophical, and esoteric tradition based primarily upon writings attributed to Hermes Trismegistus ("Thrice Great"). These writings have greatly influenced the Western esoteric tradition and were considered to be of great importance during both the Renaissance and the Reformation.

[424] Mungello, D. E. (1985/1989). *Curious Land: Jesuit Accommodation and the Origins of Sinology.* Honolulu: University of Hawaii Press, p. 327.

[425] Wei Liaoweng was a famous Neo-Confucians and minister in the Southern Song dynasty.

[426] 朱文公《易》，得于邵子为多，盖不读邵《易》，则茫不知《启蒙》、《本义》之所作。[Qing]Li Guangdi, (2008). *Zhouyi zhezhong* 周易折中. Chengdu: Bashu press, p.517.

[427] Zhang, Xiping. (2007). *Conversations between China and the West: The missionaries in early Qing dynasty and their researches on the Book of Changes.* Front. Hist. China, 2(4), p.478.

[428] The《御制数理精蕴》commonly known as 《数理精蕴》,was written under the order of Kangxi

inherited the views of Kangxi that mathematics originated from the *Hetu* and the *Luoshu*. The first chapter of *Shuli benyuan* 数理本原 begins by saying, "According to the textual research of old, the diagram comes from the Yellow-river and the book comes from the Luo-water, the eight trigrams were born and the nine categories of laws were established, and so mathematics began to work."[429] Thereafter, this view had a certain impact on the study of *Yijing* and mathematics in the Qing dynasty.

Bouvet's Western mathematical methodology applied to *Yijing* directly influenced the *Yijing* study of other scholars through Kangxi emperor ever since the latter discussed Bouvet's works with the imperial academicians, especially with Li Guangdi. In their writings, Witek and Collani both refer to the fact that Bouvet and Li Guangdi communicated about the *Yijing* study, and the works of former deeply influenced the latter. An excerpt of the imperial edict of Kangxi shows how the exchange on *Yijng* between Bouvet and Li Guangdi was mutually recognized.[430] Li Guangdi not only agreed with Bouvet, especially on the mathematical manifestation of a world that began as a perfect state, and believed that the missionary's methodology was important for rediscovering the truth hidden in ancient Chinese mythology, but he also absorbed Bouvet's views into his own research.[431] What both Witek and Collani refer to as Li Guangdi's "own research", *Zhouyi zhezhong*, was actually deeply influenced by Bouvet.

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emperor in the Qing dynasty. It is an encyclopedia of mathematics integrating western and Chinese mathematics, which is divided into two parts and attached tables.

[429] 奥稽上古，河出图，洛出书，八卦是生，九畴是叙，数学于是乎肇焉。《御制数理精蕴》上编，《数理本原》.

[430] "奏初九日、恭接得上發下大學士李光地奏摺一件、并原圖一幅、說册一節、即與白晋看、據白晋看、捧讀之下、稱深服大學士李光地、精通易理、洞晓曆法。。。據白晋称今所進之此一節、與囲復大學士者、大概多有相同、此節乃随所釋易經應用之次序、前與大學士者、乃應其所問也、謹此。" (33-9) *Yi Kao*, p.23.

[431] Witek John W., S.J.魏若望 (2006). *Controversial Ideas in China and in Europe: A Biography of Jean-Francois Foucquet, S. J. (1665-1741)* 耶稣会士傅圣泽神甫传：索隐派思想在中国及欧洲. Translated by Wu, Li-wei. Henan: Daxiang Press 大象出版社.P.188-189; Collani, Claudia von, *P. Joachim Bouvet S.J. - Sein Leben und Sein Werk* 耶稣会士白晋的生平与著作, translated from German by Li Yan (2009), Daxiang Press, Henan, p.72-73.

As a representative work of the official *Yijing* study, *Zhouyi zhezhong* was compiled by Li Guangdi under the order of the Kangxi emperor, and was completed in 1715 with a preface penned by Kangxi himself. The compilation of this book was to reconcile the different theories of *Yijing*, in particular the image-numerology school and textual meaning school, but it actually praised and spread the *Yijing* study of Zhu Xi. In his preface, Kangxi wrote,

> The *Yijing* study contains everything without omission, but its subtlety has not been regained after the Qin and Han dynasties. Since the Song dynasty, all five scholars of Northern Song expounded the mystery of *Yijing*, but only Zhu Xi combined the image-numerology and textual meaning, which differs from the former study approach, and in the last 500 years no other scholar managed to do the same.[432]

In addition to inheriting Zhu Xi's *Yijing* thought, Li Guangdi also absorbed the study method of Bouvet's mathematical interpretation of *Yijing* through Kangxi. Since Bouvet's study of *Yijing* coincided with the compilation of *Zhouyi zhezhong*, his study manuscripts were handed over to Li Guangdi on time, just when Kangxi emperor received them. According to his memorial to Kangxi, Li Guangdi states,

> I, Li Guangdi, sincerely report: On the 8th day of this month, His Majesty sent three Western diagrams and one description to me. I've been looking at them over and over again and came to the conclusion that they are roughly the same root as proportional numbers, but the use of *Xiantian* double methodology I had never heard before; it corresponds to the eight trigrams and the sixty-four hexagrams and this is particularly ingenious.[433]

The Western diagrams here are undoubtedly Bouvet's study results on *Yijing* and the specific contents refer to his mathematical interpretation.[434]

In his *Zhouyi zhezhong*, Li Guangdi not only made use of Western mathematical theories and geometric operations to interpret the textual meanings, but also of

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[432] 易学之广大悉备，秦汉而后无复得其精微矣！至有宋以来，周邵程张阐发其奥，唯朱子兼象数天理，违众而定之，五百余年无复同异。[Qing]Li Guangdi, (2008). *Zhouyi zhezhong* 周易折中. Chengdu: Bashu press, p.1.

[433] 臣李光地謹奏：本月初八蒙皇上發出西洋圖三幅，圖說一篇，命臣觀看，钦此。臣反覆累日，得意指，大抵與比例数同根，而用先天加倍之法，則從前所未聞，其與八卦、六十四卦之位相應處，尤为奇巧。康熙朝汉文硃批奏折汇编 第八册 康熙五十 六年十一月至康熙六十一年十二月止 p.1711.

[434] Han Qi 韩琦(2004). 科學與宗教之间：耶稣会士白晋的《易经》研究. Chinese University of Hong Kong Press, p.423.

the image-numerology of *Yijing*. Coming to the textual meaning, he first tried to interpret the second-Six line of *Kun* hexagram in terms of dot, line, face and body in Western mathematical concepts.[435] He stated,

> The *Qian* serves as the circle and the *Kun* serves as the square, the square is the virtue of *Kun,* which corresponds to the circle, therefore, one speaks of the most quiet and squared virtue…Six-two has the pure virtue of *Kun* and the square is its nature, but for those who start with the 'straight' and end with the 'great', the square things must begin with a 'straight' as the root and end with the 'great' as the utmost. Therefore, mathematics has the so-called line and body: if the line is not straight, one cannot obtain a square surface, since the product of square surface can become the great of body. *Kun* only takes the virtue of *Qian* as the virtue, therefore the 'straight' becomes the 'square', and the 'square' becomes the 'solid', which follows the nature of the heaven principles and nothing is added to it, therefore it said that [even] without learning, [it is] in every way advantageous.[436]

Coming to image-numerology, in addition to Zhu Xi's *Yixue qimeng* 易學啟蒙, Li Guangdi also attached the diagrams of *Qimeng fulun* 啟蒙附論 to his *Qimeng*. In the preface he wrote for *Zhouyi zhezhong*, the *Fanli* 凡例, Kangxi gave the following explanation,

> *Qimeng* is a book written by Zhu Xi, consistent with *Benyi*…hereby appended to the book is the full copy of *Qimeng* according to the ancients 'meaning of' right book and left picture. In addition to lecturing, I have been studying the image of the calendar and the Nine Chapters on the Mathematical Art for many years and I now know clearly that they are from *Yijing*. Therefore, from the origin of *Hetu* and *Luoshu*, the position of *Xiantian* and *Houtian* to the method of Dayan calculation, I describe and analyse them with an attachment after *Qimeng*, namely, *Qimeng fulun*.[437]

As a work of image-numerology of *Yijing*, the *Qimeng fulun* differed from the previous *Yijing* works as it mainly interpreted the knowledge of geometry and mathematics. The introductory paragraph reads as follows,

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[435] The second Six line statement: 六二，直方大，不习无不利。

[436] 乾为圆则坤为方，方者坤之德，与圆为对者也，故曰至静而德方。。。六二得坤德之纯，方固其质也，而始曰'直'终曰'大'者，盖凡方之物，其始必以'直'为根，其终乃以'大'为极。故数学有所谓线而体者，非线之直，不能成面之方。因面之方而积之，则能成体之大矣。坤唯以乾之德为德，故因'直'以成'方'，因'方'以成'大'，顺天理之自然，而无所增加造设于其间，故曰'不习无不利'。

[437] 《启蒙》为朱子成书，与《本义》相表里。。。。。。今以《启蒙》全编，具载书后，庶几古人右书左图之意。朕讲学之外，于历象、九章之奥，游心有年，涣然知其不出易道。故自河洛本原，先后天位置，以至大衍推迎之法，皆稍为摹画分析，敷畅厥旨，附于《启蒙》之后，目曰《启蒙附论》。[Qing]Li Guangdi, (2008). *Zhouyi zhezhong* 周易折中. Chengdu: Bashu press, p. 9.

> Zhu Xi wrote the *Qimeng* because scholars who studied the image-numerology of *Yijing* mostly gave farfetched interpretations without ground or evidence. However, as a book, *Yijing* had been composed for image-numerology, which thus cannot be omitted…here a selection of diagrams and numbers is provided, the subtlety of whose intricacy and changes is enough to illustrate some of the meanings that Zhu Xi did not touch upon, hence diagrams and graphs are attached separately to illustrate this.[438]

The entire *fulun* consists of various diagrams and graphs interpreted through mathematical and geometric operations, including the *Four methods of addition and subtraction of Luoshu* 洛书加减四法, *Sixteen methods of multiplication and division of Luoshu* 洛书乘除十六法, *Luoshu Gougu chart* 洛书勾股图, *He-luo undivided and unchanged square and triangle chart* 河洛未分未变方图与三角图, *The original chart of Dayan round-square* 大衍圆方之原, *The original chart of Dayan Gougu* 大衍勾股之原, and *The double variation chart* 加倍变法图, and so on.[439] The *Qimeng fulun* compiled by Li Guangdi was revised many times by Kangxi[440] and most of the diagrams it contains, as previously mentioned, come straight from Buovet's mathematical interpretation of *Yijing*, such as *Dayan tu* 大衍图, *Oushu fang tu* 耦数方图, and *Tian zun di bei tu* 天尊地卑图.[441] And there is another direct evidence from the foreword that Li Gong 李塨 (1659-1733) wrote to Yang Mingshi 杨名時(1661-1737), the latter being Li Guangdi's disciple who also participated in the compilation of *Zhouyi zhezhong*. Li Gong wrote, "…I knew when you worked in the *Nanshufang*, the court asked you about Western triangle algorithm to be attached to *Zhouyi.*"[442] Here, the Western triangle algorithm refers to the prototype of the *Tianzun dibeitu*, the Pascal's triangle method[443],

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[438] 朱子之作《启蒙》，盖因以象数言《易》者，多穿穴而不根，支离而无据。然《易》之为书，实以象数而作，又不可略焉而不讲也。。。。。。今摭图书卦画蓍数之所包蕴，其错综变化之妙，足以发朱子未尽之意凡数端，各为图表而系之以说。。。。。。*Ibid*, p.576.

[439] *Ibid*, p.576-598.

[440]"臣承修《纂纂周易折中》，现在彙萃古今二百餘家，逐一編摩，就臣愚陋所见，精加採集，陸續缮稿進呈，恭候皇上裁削，惟是象数精微。。。。。。前所進啟蒙附論一册，經面求聖明改定再三。。。。。。" Refer to 康熙朝汉文硃批奏折汇编 第八册 康熙五十 六年十一月至康熙六十一年十二月止 p.1712.

[441] Cfr. Page 99. Kangxi showed Li Guangdi the mathematical interpretation charts made by Bouvet, encouraging them to communicate with each other.

[442] 吾嘗知公在南書房，朝廷出西洋三角算問公，将附《周易》後。Han Qi 韩琦(2004). 科學與宗教之间：耶稣会士白晋的《易经》研究. Chinese University of Hong Kong Press, p.425.

[443] In mathematics, Pascal's triangle is a triangular array of the binomialcoefficients. In the Western world, it is named after Frenchmathematician Blaise Pascal, although other mathematicians studied it centuries before him in India, Persia (Iran), China, Germany, and Italy.

which was also included in the *Qimeng fulun*.

Taking all the above into account, one can see that Bouvet's mathematical interpretation of *Yijing* had a direct influence on the compilation of *Zhouyi zhezhong*. Zhu Bokun believes that *Zhouyi zhezhong* academically has no creative value, and is a merely informative compilation of *Yijing* commentaries from various schools of thought.[444] As he wrote this, however, Zhu neglected the content of Bouvet's mathematical interpretation, which, although it followed the study paradigm of image-numerology prevalent in Song and Ming dynasties, first introduced Western mathematical concepts as study tools that completely parted way with previous studies of *Yijing*. More importantly, this content was later rediscovered by the Qing arithmetic scholars and was included in the mathematical works as the part of the mathematical research of *Yijing*.[445] It can be said that the mathematical interpretation of *Yijing* pioneered by Bouvet began to connect *Yijing* studies with Western mathematics. It not only innovated the traditional image-numerology study of *Yijing*, but indirectly it also profoundly influenced the development of *Yijing* in the 18th and 19th centuries.

The success of Bouvet's comparative work is its pioneering nature: he was the first scholar in history to plant a seed and lay the groundwork for a cross-cultural methodological search for harmony between the two different traditions of China and the West, and to achieve this, he used a new approach with a neutral language to directly interpret, not just translate, Chinese traditional texts. However, it must be admitted that his success was limited due mainly to the historical environment of his time. He sowed the seeds, they blossomed, but it was 'a flash in the pan' which bore no immediate fruit. Except for a few

[444] "此书同明朝官方颁布的《易经大全》一样，乃资料性的诸家易说汇编，除保存宋明以来各家易说的片断史料外，在学术上并无创建。" Zhu Bokun. (2009). *History of Zhouyi Philosoph IV* 易学哲学史（四）. Beijing: Kun lun Press, p.5.

[445] Han Qi 韩琦(2004). 科學與宗教之间：耶稣会士白晋的《易经》研究. Chinese University of Hong Kong Press, p.429.

philosophers, his contributions did not receive enough attention from western academic circles due to the Holy See's ban of the Chinese Rites; nor did it directly affect the religious conversion of Chinese people, Bouvet's ultimate goal, since his study was meant only for the imperial court. Kangxi and Li Guangdi both recognized his mathematical methodologies of interpreting *Yijing* and borrowed from it, but His Imperial Majesty was focused exclusively on the knowledge and application of western science and technology, and on proving the eastern origin of western learning, rather than the spread of Christian beliefs in China.

With the passing of time and the Holy See's lifting of the ban on the Chinese Rites, the indirect recognition of Bouvet's academic efforts and the revival of Sinological studies, the French scholar-missionary's long-standing academic contributions are being progressively revealed, gradually being seen as an essential reference and guiding significance for current cross-cultural comparative studies by Chinese and Western philosophers, in particular in the area of global study of *Yijing*'s thought. In the past, the development of Chinese philosophy progressed along with the development of *Yijing* study. In the current era of globalization, the study of *Yijing* eagerly needs an injection of new research methodologies and paradigms to help promote further reflection and the development of Chinese philosophy, the more so when the vast majority of Chinese scholars persist in following the study paradigm of traditional classics and draw a clear line between Chinese and western philosophy. They do not believe in cross-contamination of approaches, that the concepts, theories and research methods or theories of western philosophy can fruitfully be applied to the study of *Yijing*. This actually restricts the development of the study of *Yijing* today, depriving it of innovative drive and contemporary outlook. Western philosophers, too, especially when compared with those applying themselves to the study of other traditional Chinese texts, have paid insufficient attention to the study of *Yijing*, unable to recognize its intrinsic value and biased against the

philosophical nature of this ancient classic, in particular of image-numerological study. The *Yijing* and its study are still a far cry from the heyday when they first spread to the West; there are not many scholars nowadays who specialize in *Yijing* and innovative works and methods on it are rare and far between.

As for Bouvet's work, research paths can be diverse: scholars may either focus on the philosophical interpretation of *Yijing*'s the theological categories, or on the metaphysics of mathematics and the ontological and epistemological similarities and differences between Chinese and Western philosophy, or still on the philosophical concepts of *Taiji* and *Yin-Yang*. More important, though, is Bouvet's research methodology. As a missionary and scientist, Bouvet compared worldviews and tried to implant the Christian faith deeply into Chinese philosophy and culture. In this respect, his theories were indeed "revolutionary", far exceeding the boundaries of recognized theology, and at that time unacceptable to most church leaders and theologians alike. However, one of the important meanings of cross-cultural comparative study is its 'reference' value, since " the stone from other mountains can be used as jade 他山之石可以攻玉", as a Chinese saying reminds us. Bouvet's Figurist method of comparison can be considered a case unique in itself, but its value is not limited to that. It gives Chinese and Western researchers a model of comparison to interpret the *Yijing* from another angle, an approach which also can apply to comparative work in other different traditions and philosophical ideas.

7. Conclusion

Joachim Bouvet, “the only European who had at least some idea about China”,[446] eventually passed away in Beijing in 1730, eight years after the death of the Kangxi emperor. Historical materials about his relationship with the successor, emperor Yongzheng 雍正, are very scarce. Most of Bouvet’s works laid buried in European ecclesiastical archives, proscribed as they were until the 20th century. Now, with the emergence of new historical evidence and the lifting of the ban on the Chinese Rites, historians are paying greater and greater attention to the French missionary, undoubtedly one of the main historical figures in the early Qing dynasty. Up to now, most of the studies in Chinese and Western academic circles have been focusing on his Figurist thought from the historical perspective of the communication between China and the West or the Westward spread of *Yijing*, rather than the study of *Yijing* itself, let alone his mathematical interpretation. This may perhaps find an explanation in the fact that the 16 Chinese manuscripts kept in the Vatican Library have yet to be officially published, although some scholars have noticed and produced some initial introductory works.

This thesis has attempted to make a preliminary analysis and study of these 16 Chinese manuscripts from the perspective of traditional *Yijing* studies, in an effort to evaluate their importance and standing in this particular field of research. The manuscripts clearly attest to the fact that Bouvet’s study of *Yijing* follows the study paradigm of the Song dynasty, including an analysis of the textual meaning, image-numerology, and diagrams. From these he differed in that he very

[446] Chen, Yuan: *The Relationship documents between Kangxi and Rome envoys* 康熙与罗马使节关系文书. See: Matteo Ripa. (2004).*Memoirs of Father Ripa, during his Thirteen Years Residence at the Court of Peking in the Service of the Emperor of China* 清廷十三年：马国贤在华回忆录. Translated by Li, Tian-gang. Shanghai: Shanghai Guji Press 上海古籍出版社, p.166.

originally introduced the concept of Western mathematical operations and geometric figures to interpret *Yijing*. His Figurist interpretation of the textual meaning received a double rejection, from the Holy See on the one side and the scholars of Kangxi court on the other; but his study on image-numerology and diagrams unexpectedly won the approval and the support of the Chinese authorities and directly influenced the official interpretation of *Yijing* at that time. One can thus certainly conclude that Bouvet developed a Western image-numerology school, or rather the mathematical school of *Yijing*, and his mathematical interpretation not only established a new study methodology for *Yijing*, but also discovered mathematics as a neutral philosophy, which could be used to interpret, reconcile and draw cultures worldwide near to Catholicism, the ultimate reason why Bouvet joined the China Jesuit mission, even though rooted in completely different milieus and philosophical systems.

As a missionary, Bouvet failed in his effort to spread the Catholic faith through the study of *Yijing*, on the one side because the Holy See worried about the weakening of its authority, and on the other because Kangxi and most Chinese scholars did not accept the religious interpretation underlying Bouvet's works. But there is no denying that the Figurist seed had been planted, a seed that notably bore fruit in the Second Vatican Council (1962-1964). In the Decree *Ad Gentes* we find the following quote,

> … the young churches, rooted in Christ […], take to themselves in a wonderful exchange all the riches of the nations […]. They borrow from the customs and traditions of their people, from their wisdom and their learning, from their arts and disciplines, all those things which can contribute to the glory of their Creator, or enhance the grace of their Savior, or dispose Christian life the way it should be.[447]

To achieve this, the Second Vatican Council stimulated intercultural theological reflection in dialogue with local philosophy and seek new ways to attain truth contained in biblical revelation,

[447] *Ad Gentes,* Ch. 3, Art. 22.

> … it is necessary that in each major socio- cultural area, such theological speculation should be encouraged, in the light of the universal Church's tradition, as many submit to a new scrutiny the words and deeds which God has revealed, […]. Thus it will be more clearly seen in what ways faith may seek for understanding, with due regard for the philosophy and wisdom of these peoples; it will be seen in what ways their customs, views on life, and social order, can be reconciled with the manner of living taught by divine revelation.[448]

Undoubtedly, Bouvet has set a good example as an evangelizer eager to reach out to non-Christian cultures in their own terms and invite them into the Catholic fold. His approach can be effective among Chinese Christians in particular, and in general to encourage Christians to reach out to people in other cultures as well. Even though *Yijing* is the origin of traditional Chinese culture, of it is often said that "even though they use it daily, people still do not know it 百姓日用而不知."[449] *Yijing* is not a religion, but it deeply affects the daily life of every Chinese. Bouvet, a foreigner, relentlessly sought to penetrate its mysterious wisdom: his comparative illustration and interpretation of Catholic biblical theology and *Yijing* have an inspirational and practical significance beyond the practical results that cannot be ignored in the spread of the Christian faith today, particularly so for Chinese Catholicism and its ongoing, crucial evangelizing mission. In a sense, his comparative method is an expression of the enculturation of Catholicism in China. It is no exaggeration to say that his method not only can shed light on an important issue, namely how to interpret and build Catholic faith within China's unique traditional culture, but it can also help overcome an ongoing conflict or suspicion, i.e. whether Chinese Catholics can profitably study and learn from *Yijing*. At least from an academic point of view, the answer is that it is entirely possible and even necessary.

This thesis will not delve upon such interesting themes. Mine is but a starting point for further research on Bouvet's *Yijing* study, which still awaits an in-depth exploration in many of its aspects. The 16 Chinese manuscripts contain a host of

[448] *Ibid*.
[449] *Xici I*: 5

valuable materials, each of which can be studied independently. In addition, Bouvet's approach has a potential reference value for present day Chinese Catholicism, which still struggles to find acceptance in mainstream Chinese society: an intercultural approach could lead to a better mutual understanding and rapprochement between the Chinese government and the Holy See, as their present efforts in dialogue grapple with widely differing ideological positions.

Appendix

The main contents of Bouvet's 16 Chinese manusripts

1. 25-1*Tianxue benyi* (*Jingtian jian*) 天學本義(敬天鑒)二卷

This ninety-nine-page work consists of five parts, including the author's preface,[450] the first half of the volume 上卷,[451] the excerpts from the *Guwen yuanjian* 古文淵鑒,[452] the other half of volume 下卷[453] and a postscript, *Jingtian jianba* 敬天鑒跋.[454] As one of Bouvet's earliest personal works, it was written to show that the ancient Chinese had a very clear understanding of God or 上帝, so it focuses more on insightful views of God in the ancient Classics than on a complete study of *Yijing*. That said, both his preface and the text are evidence that Bouvet gives much attention to *Yijing*.

The beginning of the preface explains that *Tianxue* 天學 is the Way of God 有皇上帝之道[455] and a common truth of every human heart. The original meaning of *Tianxue* is the truth of heaven worship 敬天 and service 事天 in ancient classics, which unfortunately had been lost during the Warring States period. Bouvet quotes texts from *Shujing Daquan* 書经大全, *Yijing Daquan* 易经大全 and*Thirteen classics* 十三经 to prove that the truth of the Lord was lost after the Qin dynasty, and in particular from Lai Zhide's work on *Yijing,* which states that "since the death of Confucius *Yi* 易 had ceased to be and the *Yi* of the Four Sages had been lost for more than two thousand years like a long night".[456]

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[450] *Gujin jingtian jian tianxue benyi zixu* 古今敬天鑒天學本義自序, p. 1-7.
[451] *Gujin jingtian jian tianxue benyi* 古今敬天鑒天學本义上卷, p. 8-83.
[452] *Ibid*., p. 83-86.
[453] *Ibid.*, p. 86-96. This part is supposed to be the second half, 下卷, although there is no clear text before it.
[454] *Ibid.*, p. 97-99.
[455] 有皇上帝 first appeared in the *Zhengyue* 正月 chapter of the *Book of Poetry* 诗经.
[456] 自孔子没而易已止,四聖之易如长夜者二千餘年 in 25-1, p. 3. Lai Zhide 来知德（1525-1604）, Ming dynasty neo-Confucianist and *Yijing* scholar.

Bouvet proposed that the people of the north, south, east and west were born of the same great Heavenly Father-Mother, being but one family with teachings that are the same. The essence of *Tianxue* in Chinese classics had been lost but the truth and original meaning was still kept in the Bible of the Western countries. In order to rediscover the truth of *Tianxue*, the author selected and interpreted the Chinese classics and proverbs according to biblical Revelation to prove that the great truths of the Chinese classics and of the Bible from the West are really one and the same 中華經典與西土聖經 其大本原真惟一無二. At the end of his preface, Bouvet first proposed the concept of *Xiantian* 先天 and *Houtian* 後天. He thinks that *Tianxue* consists of the principle of *Xiantian* 先天之理 and the Way of *Houtian* 後天之道，both of which were created by God. He produced a *Key to great Yi* 大易之鑰 to analyse the original purpose of *Xiantian* and *Houtian*, not here but in 37-13 *Yi Yao* 易鑰.

There are thirty-seven sections in the first half of the book. Bouvet produced a comparative chart in which he placed a set of doctrines of the Lord of Heaven side by side with selected corresponding Chinese classics. To exemplify, the first on the left (right in the manuscript) is: “There must be an invisible and uncreated Ruler of all things in the universe”; on the right (left in the manuscript) we find corresponding concepts from the *Book of poetry* 詩, *Yijing* 易, *Rijiang* 日講,[457] the *Doctrine of Mean* 中庸 and the *Book of Rites* 禮. Other sections include the *Analects* 论语, *Mencius* 孟子, *The Great Learning* 大学 etc. Most quotations, however, are derived from the hexagrams of *Yijing*.

Section 節	Teachings of the Lord of Heaven 天主道理	Corresponding concepts in *Yijing* 易经
1	宇宙之内必有一自有無形無像造天地萬物之主宰	*Shuogua* 说卦: God goes out from Zhen 帝出乎震; *Xici I* 系辞上: 易有太极是生两儀
2	天下萬民皆由一元祖父母所生故天下为一家	*Xugua* 序卦: 有天地然後有萬物有萬物然後有男女

[457] Daily lectures on Classics, or 經書日講, at Kangxi’s court.

7	诚正中皆上主所命之理	*Zhongfu hexagram* 中孚卦:中孚以利贞乃应乎天也
9	上主乃萬物之本萬民之大父母至尊無對自天子以至於庶人所當敬畏報本者惟一而已矣	*Huan hexagram* 涣卦: 先王以享於帝; *Ding hexagram* 鼎卦：聖人亨以享上帝
12	聖德者凡事告於上主敬祭祷而求永命真福者必以诚心為主	*Jiji hexagram* 既济:東隣殺牛不如西隣之禴祭實受其福
13	谷酒犧牲礼樂燔柴堂墓祭祀之大用原特為敬上主若濫用而無節大皆天命	*Yu hexagram* 豫卦: 先王以作樂崇德殷薦之上帝
15	上主非以言示人惟以物以事以時以民示己意亦有時以夢示之	*Bo hexagram* 剥卦: 君子得輿民所载也
21	上主至公無私至尊無親然萬民之衆或克敬為善者或先不善而後惟感上主默照寵佑動心之机悔悟改恶者上主無一不眷而親之	*Yu hexagram*・The Six line 豫卦・上六：冥豫成有渝无咎
23	非上主之寵佑人不能明理為善而得福至於恶與祸皆惟人所自為所自召不可歸於氣数但生前之時上主所降之灾猶可轉若既终之後人所自召者萬不可究	*Xiaoguo hexagram*・The Six line 小过卦・上六: 弗遇過之飛鳥離之凶是謂災眚
24	凡有罪之人賴上主寵佑認己罪告解不論而自新復己元善则上主之心亦囲而赦之由此罪人可善终而復己福之元吉也	*Yi* said 易曰: 不遠復無祗悔元吉
25	人不善上主先以真福之逸率之若仍不善絶己於上主之心上主不忍絶之暫以灾異警其悔改终 不竣上主無奈震怒絶其永命以罰之也	*Yi hexagram* 益卦: 益之用凶事无咎
26	雷風等变皆自原罪始上主用之以儆恶勸善恶人不敬惧之實有可畏善者乃敬惧之然無可畏	*Zhen hexagram* 震卦: 震驚百里不丧匕鬯
30	凡人獲罪於天即属上主凶罰之中矣若未絶世尚賴其天所降聖德者可以動天而轉其命之凶	*Gou hexagram* 姤卦: 有陨自天 *Xici I：12* 系辞上第十二章: 易曰自天祐之吉無不利子曰祐者助也天之所助者順也
31	普世諸臣諸君之权皆上主所賦故諸民諸臣忠君者諸君諸臣爱民者惟一天命之理也	*Lin hexagram* 臨卦:咸臨吉無不利未順命也 *Yi hexagram* 益卦: 王用享於帝吉
34	凡人或自始至於终為善或先不善然後悔悟而终為善者皆為敬主為有德有義人也终後上主一定憐之以永吉而福其命若己善不终而有辜者此為不敬主為无德不義人也终後上主一定不憐之不但絕己永命亦致至畏之天罰於己躬即敬主與不敬主真福真祸之机也	易元吉在上大有慶也

From *Guwen yuanjian* 古文淵鑒,[458] only six concepts were selected, mainly in opposition to Buddhism. They are: *Jisi fangshu zou* 祭祀方术奏 of Gu Yong 谷永,[459] *Qingchu shijiao* 請除釋教 of Fu Yi 傅奕,[460] *Lun fogu biao* 論佛骨表 of Han Yu 韓愈,[461] *Yu Lü weizhong shu* 與吕微仲書 of Zhang Zai 张載,[462] *Hui*

[458] *Guwen yuanjian* 古文淵鑒, also called *Yuan jian gu wen xuan* 淵鑒古文选, is a collection of ancient texts from the previous dynasties in 64 volumes, selected and reviewed by Kangxi and edited by scholar Xu Qianxue 徐乾学.

[459] Gu Yong 谷永 was an officer in the Western Han dynasty; he wrote for and submitted his work to emperor Cheng of Han 汉成帝.

[460] Fu Yi 傅奕 was an astronomer in the Tang dynasty; before he died, he proposed that Buddhism be banned.

[461] Han Yu 韓愈 was a famous scholar in the Tang dynasty; he was demoted because of his opposition to the 'Buddha bone greeting'.

[462] Zhang Zai 张載 was a famous scholar in the Northern Song dynasty.

fosi zhi 毁佛寺制 of Emperor Wuzong of Tang 唐武宗[463] and *Zheng ming* 正命 of Wang Ling 王令.[464] Kangxi contributed a comment after each selection.

Part two of the volume comes after the six excerpts from *Guwen yuanjian*, yet without the two characters 下卷, *Xiajuan,* as might be expected. *Shangjuan* collects selected scriptures, *Xiajuan* contains mainly selected folk proverbs, divided into Minsu 民俗, or folk sayings, and Shisu 士俗, or scholars' sayings. The sayings may differ yet carry the same meaning. Take the title 'Ruler' as an example: the folk saying would call the Ruler *Lao tian ye* 老天爺 while the scholars' saying would call Him *Tian lao ye* 天老爺. In addition, a relevant text from the Classics is quoted, thus obtaining a set of three sentences. For example, the first topic states that there must be a Lord in the heavens 天必有主; the three sentences on the left respectively are 天上有老天爺做主 (folk saying), 上有青天 (scholars' saying) and 有皇上帝 (quotation from the Book of Poetry). Altogether there are forty-one topics. They are:

1 天必有主	2.造生万有	3.至尊無對	4.無所不在
5.生民大父	6.養民大母	7.無所不知	8.無所不见
9.無所不聞	10.明别善悪	11.毫釐不差	12.無以欺之
13.心本仁爱	14.至公無私	15.賞罰不类	16.好謙悪傲
17.不善嚴之	18.其筭無錯	19.其意深奥難測	20.為民立君
21.生宰萬有故称君父	22.天主大父理嘗敬之事之	23.掌永罰之权不可不畏	24.無辜者無有可畏
24（2）.負屈苦者可呼上主而發真誓	25.生天地人物之主乃萬恩之原無不報之	26.主恩至大無以報之	27.主福圓满惟以恒心之正時時事事報之
28.凡苦無非上主之命	29.為免其苦必呼祷之	30.大父仁爱之心不負人望	31.事事告之
32.天旱不雨祷之於主	33.民餓祈谷於大父	34.普世皆上主大父之子民彼此相欺即欺上主大父	35.生死主定
36.事之成败俱由上主	37.主居在上事事必顺其命	38.天上為善人靈歸之所	39.人君盡敬上主爱下民之正道德成必獲寿福無疆
40.上主尊號不可勝纪概以天主	41.普世君臣士民皆當以拜祭之礼敬之事之		

[463] Li Yan 李炎, emperor Wuzong of Tang 唐武宗 who believed in Taoism and demolished all Buddhist temples.

[464] Wang Ling 王令 was a poet of the Song dynasty.

The *Jingtianjian ba* 敬天鑒跋, the postscript, clarifies that the scriptures and the folk proverbs may be different but, in reality, carry the same meaning, in that all testify to the existence of the one God of the universe and his just reward of good and punishment of evil. The recovery of the original meaning of *Tianxue* allows the author to conclude that the doctrines of ancient, true Confucianism and the great truths of the Catholic Church are the same.

2. 26-2 *Yi yin* (*Yi kao*) 易引（易考）二卷 317（6）

The title on the cover of the manuscript is *Yiyin yuangao* 易引原稿 (*Original manuscript of the introduction to Yi*) and the subtitle, which is found at the beginning of the first page, is *Yiyin: this introduction is a collection of the mutual examination and verification of Chinese and the Western ancient classics*.[465] There are nine sections, but the last two pages actually do not belong to this article.

Sections 節	Titles 标题
1	揔論先天後天三易之綱
2	分論先天後天三易之綱
3	明先天萬有之本原
4	明一三何以為萬有之本
5	明一三造物主初造萬有何時何由何序
6	明造物主造宇宙之原旨
7	畧詳三易之第一乃先天易简連山之元吉
8	畧詳三易之第二乃先天变易歸藏之否凶
9	畧詳先天人性变易损壞世乱人類之命已丧之凶原由一人祖所起後天復開再生新民终辛得真福無疆天國永寧之吉係于惟一仁義德全至尊至卑天人二性之元聖所復
--	此論係易學七節八節：一明凡有角邊之数象皆生于天尊地卑之圖，一解此圖内含有開诸方之本（in the last 2 pages）

[465] 易引-此引集中華與西土古傳相考印証, in 26-2, p. 1.

The first section is a discussion of the general concepts of *Xiantian*, *Houtian* and *Three-Yi*. Since ancient times, China has fortunately kept the original diagrams and texts of the *Yijing* hexagrams; similarly, the ancient graphs, classics and language of the West actually reflect the charts and texts of *Yijing* and the tiny secrets of the world from start to end that come to us from two ancient countries, Judaea 大秦如德亞國 and Egypt 厄日多国, the sources of all Western learning. It introduces two significant historical documents, namely, the Septuagint version of the Bible 七十士译本[466] and the Nestorian Stele 景教碑[467] to illustrate the spreading of the Bible and the introduction of Christianity in China. On the basis of this, the author concludes that all things of the universe are encompassed in three types: Heaven 天，Earth 地 and Human Beings 人, which correspond to pure spirit 纯神, pure form 纯形, and a fusion of the two 兼神形, and at the same time match the concepts of *Xian* 先, *Hou* 後 and *Zhong* 终 and the three sets of the threefold principles of *Yi*-learning 易学, namely *Xiantian* 先天, *Houtian* 后天, *Three-Yi* (易简, 变易, 不易); *Tianhuang* 天皇, *Dihuang* 地皇, *Renhuang* 人皇; and *Lianshan* 连山, *Guizang* 归藏, *Zhouyi* 周易.

Section two uses biblical doctrines to discuss the main concepts introduced in the first section, equating them to the scenes of ‘supreme good fortune’ and ‘perfect harmony of all things’, which came into being by the will and action of the one God at the beginning of *Xiantian* together with the *Yi of Simplicity* 易简, *Lianshan* and *Tianhuang*. Later, humanity’s ancestors were tempted by the devil to disobey God, leading to disharmony between heaven and man, which corresponds to the *Yi of Change* 变易, *Guizang* and *Dihuang*. In the end, the Son of God came down to save humanity, thus restoring the ‘supreme good fortune’ that is equivalent to the *Yi of Constancy* 不易, *Zhouyi* and *Renhuang*.

[466] At the request of king Ptolemy II Philadelphus of Egypt (285-246 BC), the high priest of Jerusalem sent 72 interpreters to Egypt to translate the Scriptures into Greek. This Greek version of the Bible, known as the Septuagint, was generally accepted by both Jews and Christians.

[467] The full Chinese name is 大秦景教中国流行碑. The stele describes the spread of Nestorianism during the Tang dynasty. The inscription recounts the fall of humanity, the birth of the Messiah, the works of the Savior, etc.

Section three explains the *One-Three* 一三 principle，the essence or the first principle of all things in *Xiantian*. This gives Bouvet the opportunity to draw a parallel between *One-Three* and the Christian doctrine of the Triune God. The *One-Three* theory is derived from the records of *Yizhuan* 易傳, *Liyun* 禮運 and some ancient proverbs.[468] *Yizhuan* affirms that "*Yi* contains *Taiji,* which produces the two elementary forms" of *Yin* and *Yang*. *Liyun* states that "*Rite* 礼 certainly stems from the *Great One*, which in turn is divided into heaven and earth". *Guyu* 古语 asserts that the "*Great One* contains three, and the *Taiji (*or *Great Ultimate)* also contains three".[469] These subtle meanings find a parallel in Catholic teachings. The mysteries revealed in the Bible, including the guiding principle of the Jewish-Christian Kabbalah 秘学纲领, are all summed up in the chart which begins from one and ends with ten, the core of which begins from one and ends with three, the *Sanji sancai* diagram 三極三才圖 (three primary forces) of Moses.[470] Furthermore, there is a cycle of darkness and brightness, Yin and Yang on the diagram which is the image of God. Bouvet states that "the Way contains one Yin and one Yang, the Way stands on one, one and one are two, two and one are three, one two three combine together, there is only one three, the essence of all things, the only God almighty, utterly divine, all-wise and *Sancai sanji"*.[471] The text goes on quoting from the Bible and ancient Chinese classics, the commentaries on *Yijing*, *Laozi*, *Huainanzi* and *Zhuangzi,* to explain the idea of Trinity and of *Taiji* containing three in one.

The fourth section clarifies why the *One-Three* is the root of all things, and it further explains that all things belong to two categories, spirit 神 and form 形: the spirit is profound, subtle and honourable; it is heaven and Yang; the form, instead,

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[468] 26-2 *Yiyin*, p. 6.

[469] 易有太極是生两儀；礼必本于太一分而為天地；太一函三太極函三, in 26-2, p. 6.

[470] Moses 梅瑟 or 摩西, Old Testament leader who led the nation of Israel out of Egypt and promulgated the law of God.

[471]一阴一阳之謂道，道立于一，一與一為二，二與一為三，一二三同合相参，惟一為三而為萬有之本，乃全能至神至明三才三極惟一主宰是也, in 26-2, p.7.

is broad, vast and humble; it is earth and Yin[472]. Separately, spirit and form can also be divided into Yin and Yang. The spirit can be divided into pure spirit and a combination of spirit and form: the former is odd; it is Yang and belongs to the category of celestial beings. The latter is even; it is Yin and belongs to the category of the human soul. The form can further be divided into squares and circles: the former are Yin and earth because they are quiet; the latter are Yang and heaven because they move easily. Finally, the Author uses the example of the pottery-making process to explain the work of the One-Three Creator, and concludes that all things come from the authority, birth and completion of the One-Three, One origin and Two elements.[473]

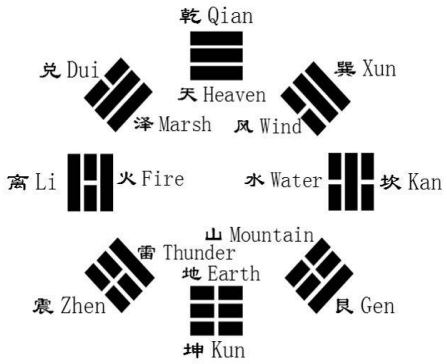
The fifth section calculates that, according to the records of the ancient Jewish Nation which differ from the Chinese ancient records, the One-Three Creator made all things nearly 7300 years before the 50th year of emperor Kangxi (A.D.1711).[474] By referring to the round chart of the 64 hexagrams, Bouvet attempts to unify the Chinese and Western reckoning of the beginning of the world. The creation process of all things by the Creator is actually six days. In the first three days, the act by which Yin and Yang, heaven and earth, day and night, the four elements and the four directions, and the ground vegetation are created is called "the small accomplishment by *Yi"*. In the following three days, the creation of the sun, moon and stars, the order of time and dates and month and year, the birth of birds and fish and all things, is called "the great accomplishment by *Yi"*.[475] This 6 days biblical creation process by the Creator equates with the primordial creation of *Xiantian*, the re-creation of *Houtian* and "the sun going rising and setting, thus completing the six stages" 大明终始，六位時成 of the

[472] 将神形相比而論之神体精微尊也為天為阳形体廣大卑也為地為陰, in 26-2, p.11.
[473] 萬物皆由一三乃一本二元所命所生所成, in 26-2, p.12.
[474] 26-2, p.18.
[475]先三日内判陰阳造天地分晝夜生四行定四方命地生草木諸類即易所謂小成也後三日内生日月星辰日明晝月明夜以定時日月歲流行迭運之序生羽毛鱗介諸類萬物成矣即易所謂大成也，in 26-2, p.18-19.

Yijing. [476] In biblical terms, one thousand years are one day, hence the 6 days of *Yijing*'s *Houtian* are six thousand years. The biblical seventh day of rest also coincides with the "Hebdomadal Reiteration"七日来復 of *Yijing* .[477]

The sixth section discusses the Creator's original goal of creating the universe. Numerous quotes from *Shujing*, *Yijing*, *Mencius*, *Huainanzi*, *Daodejing* and other ancient classics aim to show that, at the beginning of creation, the Creator was benevolent, that both human and celestial beings shared his blessings, and that their eventual goodness or wickedness, good fortune or misfortune were of their own making.[478]

The seventh section elaborates to some extent the first of the *Three-Yi,* i.e. the supreme good fortune of *Xiantian*, *Yijian* and *Lianshan*. To start with, it explains the meaning of the *Gen* 艮 trigram, the first hexagram of *Lianshan*, which lay opposite to the *Dui* 兑 trigram on *Fuxi*'s eight trigrams positional chart.



It states,

> The *Gen* trigram symbolizes the mountain, quiescent and motionless, its shape like an upside-down bowl, which is the natural meaning of an empty vessel…The *Dui* trigram symbolizes the marsh, which means flowing and having a gap at the top. Grace from heaven flows down in the direction of *Gen*, an empty vessel facing up. It is a natural image of the juncture of up and down, the interchange of mountain and marsh, of heaven giving and earth receiving. God's heart is benevolent and gives grace to the people; the people humbly raise their eyes. Shaozi said that in *Fuxi*'s eight trigrams

[476] The *Tuanci* 彖辞 of the Qian hexagram 乾卦
[477] The *Tuanci* 彖辞 of the Fu hexagram 復卦
[478] 26-2, p. 22-26.

position, the interconnection of eight trigrams results in the 64 hexagrams which are called the *Xiantian* learning.[479]

Through the interpretation of images and positions of the trigrams of *Dui* and *Gen* this passage implies the harmonious relationship between the *One-Three* Creator and creation. The passages that follow elaborate the concept of beautiful harmony of *Xiantian,* with the celestial beings, i.e. the angels, and the progenitor of the human race being modest and self-conscious, revering the Creator and accepting His grace without complacency, and further verify this by quoting from the Chinese ancient classics.

Section eighth elaborates to some degree the second of the *Three-Yi*, i.e. the evil and ominous elements of *Xiantian*, *Bianyi* and *Guizang*. It describes how the rebellion of the highest of the celestial beings of Nine Heavens soon turned the jubilation of good fortune of *Xiantian* to evil: “Evil began with the chief reprobate Lucifer, the highest of the celestial beings of Nine Heavens, leading a rebellion against the Lord, like a dragon, with wide open eyes, yet without ears, able to listen through its horn, proudly flying in the sky.”[480] Drawing a parallel with the Bible story, in Chinese classics we find *Gong Gongshi* 共工氏 and *Chi You* 蚩尤 as representatives of the evil side. Lucifer was eventually defeated by Michael 彌額爾, the highest of the good celestial beings; as a result, Lucifer and his cohorts were sent into hell and became devils. In the Chinese classics, *Gong Gongshi* and *Chi You* were defeated by *Zhu Rong* 祝融 and *Xuan Yuanshi* 軒轅氏 respectively.[481] This section concludes with a description of how the snake, the rebellious celestial being, lured the first humans into disobeying God by eating of the fruit of the forbidden tree, and how all of these elements are found in Chinese

[479]艮山也止而不動本有覆碗之状碗覆乃器空虚自然之義也…兑澤也上缺流也兑天澤既缺下流正对于艮乃空虚上仰之器明為上下交山澤通氣天施地承帝心仁爱弘流之澤通下下人虚心仰上恒受固存自然之象也邵子曰伏羲八卦之位八卦相交而成六十四卦所謂先天之学也, in 26-2, p. 26-27.

[480] 其变之凶始于元恶巨憝乃九部天神中一上品最神明者名露即拂爾（译名带光）出首叛逆忘己忘主妄恃己明任智自神不安子臣之分如龍目明无耳以角聽異傲亢逆登飛與帝天角, in 26-2, p. 30.

[481]*Gangjian* 綱鑑, *Shiji* 史记, *Shujing* 书经, *Guliang* 穀梁, *Annotations on the Thirteen classics* 十三经注 and the Mingyi 明夷 hexagram of *Yijing*.

classics.

The ninth and final section tells the story of Jesus,[482] the son of God made man who came to teach and save humanity and restore happiness. The subtitle specifies that this section intends to explain how the unfortunate changes of *Xiantian* brought about by man damaged the world; how man's loss of life divine was the fault of the one human progenitor; how the *Houtian* reopened, the birth of a new people eventually brought back happiness and the everlasting peace of the kingdom of heaven, bestowed by the benevolence, justice and virtue of the only Primordial Holy One 元聖 endowed with two natures, divine and human.[483]

A member of the Holy Trinity, the Primordial Holy One, the Supreme Eternal Son, was sent to the world. Having overcame all difficulties he established himself as a teacher of all ages: the One-Three Creator deeply cares about the fall of *Xiantian*, intensely dislikes thoroughly evil demons and commiserates human suffering brought about by our progenitor lured by the devil. The Son of God, born of a virgin in the ancient Jewish Nation, lived on earth for thirty-three years, during which time he showed his great and exhaustive devotion to benevolence, righteousness, loyalty and filial piety, teaching the people and finally giving his life. He rose again from the dead, ascended into heaven, is seated at the right hand of God the Father almighty and was empowered to judge the living and the dead. He instructed his 12 apostles and 72 disciples to go forth and preach to all the nations of the world, which thus regained its goodness. From then on, the good go to heaven and the evil to hell and the *Houtian* kingdom is stable and secure, never changing, i.e. in a state of Constancy 不易, of *Zhouyi* 周易 and the *Yi* of the Sages 聖人之易. The narrative was supported, as before, with a large amount of quotations from the ancient Chinese classics for verification.

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[482] Jesus is called Original Sage, or Primordial Holy One, 元聖 in the text.

[483] 此節畧詳先天人性变易损壞世乱人類之命已丧之凶原由一人祖所起後天復開再生新民终辛得真福無疆天國永寧之吉係于惟一仁義德全至尊卑天人二性之元聖所復, in 26-2, p.33.

3.27-3 *Zeji jingshu tianxue zhi gang* 擇集經書天學之綱

This 4 parts work is just 15 pages long, and includes a preface by Han Yan 韓琰, the Author's foreword, *Selected Confucian classics* 擇集經書天學之綱卷上 in the first of two parts and *Selected sayings matching the classics* in the remaining part 擇集俗語符合經書天學之綱卷下. Han Yan 韓琰 penned a short preface in his capacity as Minister of Rituals 禮部尚书 and director of the Jing Yan Lecture Office 經筵講官, presenting the book as a collection of classics and commentaries as well as of saying and dialects, for the purpose of worshipping heaven and teaching posterity.[484] It is an official preface, signed in the first month of the 42nd year of Kangxi (1703).[485] The Author's unsigned and undated foreword that follows is very similar in content to, though much shorter than Bouvet's preface to *Gujin jingtianjian tianxue benyi* 古今敬天鑒天學本義.

The text is divided into two parts, the first of which contains *Selected Confucian classics* 擇集經書天學之綱 divided into 19 subtitles, all centered on the interpretation of Heaven 天 in the Chinese context. The main contents are similar to the first half volume of the *Gujin jingtianjian tianxue benyi*, except that it uses the term Heaven 上天 instead of Lord 上主, as shown below:

1.稱赞上天之文	2.天有主宰至尊無對
5.上天无形其视聽聞言之神無所不在	6.上天為君父師掌握命令之權
9.欽敬上天之命時時事事向一無二身代眾罪動天惟聖德知之能之	10.君民皆當敬事上天惟聖德郊祀燔柴用犧牲穀酒樂以祭之
13.上天為百禄萬恩之主禱求宜也	14.上天降災警惡不可不畏
17.上天知人心善悪賞罰至公無私	18.悖亂荒淫不敬而違天命者自絕于天必受永罰極苦

This first part mainly interprets the position of Heaven and his relationship with

[484] 此書薈萃經傳下及于方言俗語然其旨一本於敬天亦可以垂教遠裔 in 27-3, p.1.
[485] 27-3, p.2.

man in the Chinese context, drawing comparisons with Catholic thought. It departs from the *Gujin jingtianjian tianxue benyi* in that it does not often quote from the *Yijing* but relies mainly on other thirteen Confucian classics as proofs. It aims at rediscovering the original intention of 'Heaven worship' and the original meaning of 'Heaven learning' to demonstrate the homology between China and the West, that is to "know the purpose for which Heaven is discussed in the classics, and how to see the wonder of the Creator's divine semblance".[486]

Part two is the *Selected sayings matching the classics* 擇集俗語符合經書 天學之綱, a collection of folk sayings accompanied by corresponding Confucian classics as mutual proof. In addition to the contents mentioned in the subtitle, it also contains *Minsu* 民俗, *Shisu* 士俗 and *Jingwen* 經文, forming a total of 41 subtitles that are exactly the same as those in the *Gujin jingtianjian tianxue benyi* part two. They are:

1.稱呼上天	2.天有主宰	3.天無二尊	4.上天生萬物	5.上天生人	6.上天為民立君
7.人人皆敬上天	8. 人 人 皆 當服事上天	9.上天命人愛人	10.上天無所不在	11. 上 天 無所不知	12.上天至公
13. 上 天 無目而视極明	14.上天無耳而聽極聪	15. 上 天 所看最真	16.瞞不得上天	17. 上 天 有賞	18.上天本爱人
19. 上 天 嚴人惡	20.上天惡傲	21. 上 天 養人	22.謝上天之恩	23. 人 莫 能報上天	24. 人 苦 歸 于 上天
25. 遇 苦 當顺上天之命	26. 仰 天 安 慰人心	27. 仰 天 警惕人心	28.仰天明白己心	29. 皇 祈 上天垂憐	30.貧富在上天
31. 上 天 之命難测	32.上天之命不差	33. 成 败 在上天	34.生死在上天	35. 禱 告 于上天	36.求雨于上天
37. 求 粮 于上天	38.敬天牌位	39. 敬 天 之礼	40.求福于上天	41. 求 壽 于上天	

The main point of this second part is that the "oral tradition is still present in folk sayings, and there it is even more discernible than in the Classics".[487] In conclusion, it once again clearly proposes that the *Tianxue benyi* 天學本義, the original meaning of knowledge from Heaven is to be found in Classics and folk

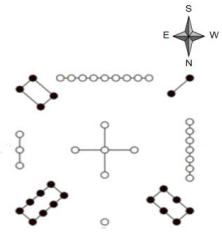
[486] 明知經文論上天之旨而如见造物主神容之妙, in 27-3, p.3.
[487] 口傳之真尚存于士民之俗语較書傳更為明顕, in 27-3, p.4.

sayings. Hence, to know *Tianxue* one should not only strive to understand the meaning of ancient Classics, but also to know folk sayings; and the reappraisal of the study of *Xiantian* should be pursued in the light of the study of *Houtian*.[488]

4. 28-4 *Zonglun bulie lei luoshu deng fangtufa* 摠論布列類洛書等方圖法

This relatively short fourth manuscript mainly discusses the ranking method of square charts like the *Luoshu*. It consists of three sections and begins with an introduction of *Luoshu*:

> The *Luoshu*, formed by threesomes of three figures, is the square chart of the Nine Palaces. Its numbers begin with one and end with nine; seen diagonally and frontally, in a front view there are three rows both vertically and horizontally; in a diagonal view, the four corners are linked by two lines. Totally there are eight lines, each with three numbers, and each adding up to ten and five. This is the secret of the *Luoshu* square chart.[489]



4	9	2
3	5	7
8	1	6

(*Luoshu* 洛书)　（Numbers of *Luoshu*）

This is the basic chart, from which other square charts may be derived, with four, five and even up to ten thousand lines, as long as the numbers in each diagonal and frontal line are equal, thus producing a square chart in the same mold as *Luoshu*. The square charts derived from the diagram and image of *Luoshu* come either in odd or even numbers, resulting in two types of grids.[490]

According to both Chinese and Western records, there are totally eight groups of this kind of square charts, consisting of four odd numbers and four even

[488] 27-3, p.15.
[489] 洛書者，乃以三数自乘，为九宫之方图也，其数始于一，终于九，以斜正观之，正者縱横各分三行， 斜者四隅合為二行，以斜正計之，共為八行，每行数各有三位，共成一十有五，合之皆为相等，此即洛書方圖之秘旨也, in 28-4, p.1.
[490] *Ibid.*

numbers:

> The charts with four odd numbers consist of three rows and three columns, five rows and five columns, seven rows and seven columns and nine rows and nine columns; the charts with four even numbers consist of four rows and four columns, six rows and six columns, eight rows and eight columns and ten rows and ten columns. In the charts with odd numbers, the rows and columns are all odd in number, so the number of lines is the same. Naturally they have to be viewed in single lines. Likewise, in the charts with even numbers, the rows and columns are all in even numbers, and the number of lines is the same, which naturally should be viewed in double lines.[491] (My translation)

Positioning numbers in this type of square charts derived from *Luoshu* is easy and simple, and it is explained in sections two and three of the manuscript, which illustrate the natural method of odd numbers and even numbers.

5. 29-5 *Tianxiang bujunqi kao gujing jijie (ju gujingzhuan kao tianxiang buqunqi)* 天象不均齊攷古經藉解（據古經傳攷天象不均齊）

The subtitle of the fifth manuscript is, that according to the ancient Chinese classics, starting from the uneven movement of the *Wuwei* 五緯,[492] an explanation is given on why the various astronomical phenomena are in a situation of non-equilibrium.[493] The entire text consists of six pairs of questions and answers and is supported by quotations from ancient Chinese classics, in particular the *Yijing*. The first question raised is that the scholars of the past had been unable to understand how come the movement of the “Five stars”, the *Wuwei,* is both complex and irregular, and yet at the same time the whole creation operates with median regularity. Although the *Wuwei* have a certain constant movement that can be traced, still in their movements one can detect all sorts of random variables. The Author’s answer is that the chaotic variation of the

[491]而方圖凡属奇数者，其縱横行数，多寡皆奇，故其行数相等之自然，當以单行观之也，方圖凡属偶数者， 其縱横行数，多寡皆偶，故其行数相等之自然，當以雙行观之也, in 28-4, p. 2.

[492] *Wuwei* 五緯， also known as the five stars（五星）, are: *Taibai* 太白 (Venus), *Suixin* 岁星 (Jupiter), *Chenxing* 辰星 (Mercury), *Yinghuo* 荧惑 (Mars) and *Zhenxing* 镇星 (Saturn). They respectively correspond to Metal, Wood, Water, Fire and Earth.

[493] 據考古經古传，由五緯行度之不齊，詳解諸天象，何以不均齊, in 29-5, p. 1.

astronomical phenomena does not affect just the *Wuwei*, other stars as well, even the sun and the moon, behave in a bizarre and unpredictable way, so that even the most sophisticated measuring instruments available today are not guaranteed to be accurate in the future. And he quotes the *Yijing*[494] to clarify that the confusion of the astronomical phenomena does not pertain to the scene of creation but is a consequence of the great change that affected the universe.

The second pair of question and answer intends to prove that evidence of the great change observable in astronomical phenomena, all of which is caused by change brought about by man,[495] can be found in the ancient Chinese classics and that the theory of *Xiantian* and *Houtian* in *Yijing* can be taken as the general evidence of this. The *Yijing* describes how the *Xiantian* went through a great change to become the *Houtian*; it is a great mistake to see the *Xiantian*, as some do, as existing before creation, before "Heaven-earth" had come into being. Quoting the *Shuogua* 说卦, the Author thus explains the proper understanding of *Xiantian* and *Houtian*:

> (The symbols of) heaven and earth received their determinate positions; (those for) mountains and collections of water interchanged their influences; (those for) thunder and wind excited each other the more; and (those for) water and fire did each other no harm. (Then) among these eight symbols there was a mutual communication.
>
> Is this not *Xiantian* learning?
>
> God comes forth in *Zhen* (to His producing work); He brings (His processes) into full and equal action in *Xun*; they are manifested to one another in *Li*; the greatest service is done for Him in *Kun*; He rejoices in *Dui*; He struggles in *Qian*; He is comforted and enters into rest in *Kan*; and He completes (the work of the year) in *Gen*".
>
> Is this not *Houtian* learning? So, we deduce that *Xiantian* in *Yi* does not happen/occur before heaven and earth, but at the beginning of creation.[496]

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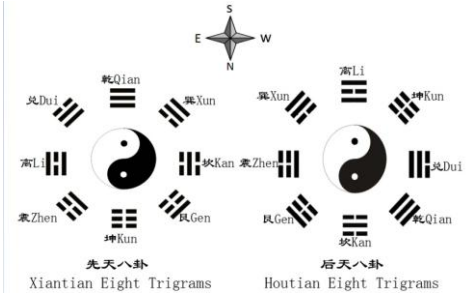
[494] 法象莫大乎天地，縣象著明，莫大乎日月, in *Xici I:*11.

[495] "Scribes in ancient Classics not only recorded changes in astronomical phenomena, how heavenly phenomena change top-down and earthly phenomena change bottom-up; physical changes also occur, and the reason for this is change in man: isn't this a proof of the cosmic great changes?" 典籍所载者，不獨言天象之變也，天象變于上，地势變于下，物亦為變，而其故皆由人之變，豈非寰宇大變之驗，in 29-5, p. 3.

[496]"天地定位，山澤通氣，雷風相薄，水火不相射，八卦相錯"。非先天之學乎。"天之主宰（帝）出乎震，齊乎巽，相见乎離。致役乎坤，說乎兑，戰乎乾，勞乎坎，成言乎艮"。非後天之學乎。是知易所謂先天者，非指天地以前也，乃開闢之初。*Shuogua*, one of "*Ten Wings* 十翼", is also

The difference between *Xiantian* and *Houtian* is then illustrated by two different orientation charts of the eight trigrams.



The third question goes on to explain that the astronomical phenomena occurring in *Xiantian* and *Houtian* are different but not mixed, and this can be inferred from *Xici* 系辞. According to *Xici*, "Heaven and earth in *Xiantian* are positioned, while Heaven and earth in *Houtian* will not be definite position but rather modify it."[497] It quotes records in ancient classics and the transformation of *Yin* and *Yang* in *Yijing* to explain that "There is a shortage of heaven in the northwest, and a shortage of earth in the southeast" - 天不足西北，地不满东南 - as evidence of the great changes that have occurred in the world.[498]

The fourth question tackles the interpretation of the differences between *Xiantian* and *Houtian* and their meaning from a human perspective. According to *Yijing*, as mentioned, heaven and earth in *Xiantian* are positioned, *Qian* and *Kun* are united: they all exist naturally without acting, and everything goes well without reverse – 皆無為自然，顺而無逆.[499] Water and fire are an easy to understand example of how things were in *Xiantian*: water and fire, per se, are the most obvious mutually inhibiting and harmful of all elements, yet, in *Xiantian,* they do not damage each other; they are complementary. These are water and fire: all other elements in

---

called *Shuoguazhuan* 说卦传. English translation by James Legge. Cfr. https://ctext.org/book-of-changes/shuo-gua

[497] 先天天地定位，後天天地必不定位而易位, in 29-5, p.6.

[498] Classics quoted are: *Xunzi* 荀子, *Huainanzi* 淮南子, *Wenzi* 文子, *Liezi* 列子, *Shuowen* 說文, *Shiji* 史記, *Chuci* 楚辞.

[499] 29-5, p. 10.

Xiantian are unopposed to each other; the universe is naturally harmonious and so are human beings: man possesses simplicity, the virtue of *Yijian* 易简, and conforms to the meaning of the *Gen* trigram of *Liansha*n 連山.[500] Other classical works also describe *Xiantian* scenes of peace and harmony, such as the *Supreme One* theory 至一 in *Zhuangzi.*[501] In contrast to this is the age of decadence of *Houtian*, when the *Yin-yang* harmony turns into a harsh scene, called the *Guizang* 歸藏. Therefore, by "observing the great changes that occurred in human beings, in created things, in heaven and earth in the universe, one can realize that the movement and position of the astronomical phenomena have also changed".[502]

The fifth section describes the great changes that occurred in the myriad things of the universe since the changes induced by man, who did not conform to the principles of Heaven. It states, "All things can be governed when they conform to the principles of Heaven, or else things will turn ominous, and this is a certainly so. Since subjects disobey the will of Heaven, right and wrong will occur here and will become increasingly obvious, and the *Dao* will suffer damage."[503] The Author points the finger at the human progenitor as the root of all human failures and sufferings and interprets evil in human heart according to the thought of late West Han dynasty Taoist scholar Yan Junping.[504]

The final section describes how the Creator saves our corrupt world by sending down the Great Sage 大聖, a "mediator between heaven and earth in a state of moderation and harmony",[505] as recorded in the ancient classics. The Great Sage is described as "The head of humanity, the highest standard in human

[500] 29-5, p.11.
[501] Supreme One, a state or situation of highest harmony. In *Zhuangzi*:2:3:2 https://ctext.org/zhuangzi/zh
[502] 知寰宇天地人物之大變，则愈知天象之行度位次亦皆變易, in 29-5, p.13.
[503] 顺天理则治，逆之则凶，當然之则也。因下民方命，是非生焉，是非之彰也，道之所以虧也, in 29-5, p.14.
[504] Yan Junping 嚴君平 (86 B.C.-10 A.D.), alias Zhuan Junping 庄君平, Taoist scholar and thinker in the late West Han dynasty, authored a famous work: *Laozi Zhigui* 老子指归.
[505] 參天地致中和, in 29-5, p. 28.

ethics, the hope of mankind, the one to be awaited by true Confucian scholars of a hundred generations… whom all ancient classics call Holy Sage, God, Ruler, Sovereign, Master, Great man, Most faithful and holy one, all of these."[506] Only "when the Great *Dao* had been abandoned did benevolence and righteousness appear"[507]，hence "If the Great *Dao* had not been abandoned, how would benevolence and righteousness appear? These only emerge after virtue has declined - 大道不癈，安取仁義，德衰，然後有仁義. Evidently, the descent of the Great Sage as the benevolence and righteousness of *Houtian* is the consequence of the decline of virtue in *Xiantian* and He is none other than Jesus Christ. It concludes that "when the new creation by the Great Sage is complete, heaven and earth are positioned, equilibrium of all images is re-attained, the myriad things are in order and the scenery of great harmony of *Xiantian* reappears in heaven and on earth".[508]

6.30-6 *Taiji Lueshuo* 太極略說

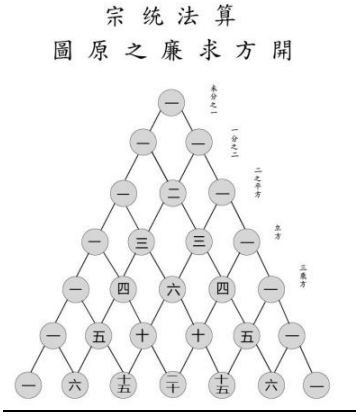
Taiji, the Great Ultimate, is such an important concept in *Yijing* that the first part of *Taiji Lueshuo* begins with a famous quote from the *Xici*: "In *Yi* there is the Grand Ultimate, which produces the two elementary Forms."[509] One concludes that "the numbers and images in *Yijing* are actually rooted in *Taiji*, which is one, not two". [510] The Author then introduces the concepts of three *Taiji* and the *Tianzundibei* diagram, and interprets them by numbers:

> Confucianists of old discussed *Taiji*: some said that *Wuji* generates *Taiji,* some said that *Taiji* contains three, some spoke of chaos-*Taiji*. Though there are these three notions, the meanings are not different: *Taiji* is one and is merely distinguishable as hidden or evident, derived or underived. To know it, you have to know the *Tianzundibei* diagram. According to an old saying, numbers begin with one, achieve with three, end with ten, and these are all numbers one finds in the *Tianzundibei*

[506]大聖也，为人類之首，人倫之至，萬夫之望，百代真儒之所需待者。。。。。凡古經稱為聖，為神，為后，為君，為師，為大人，為至誠至聖者，皆是也, in 29-5, p. 28.
[507] 大道癈，有仁義, in *Daodejing*:18.
[508] 大聖再造之能成，天地定位，萬象皆均，萬物皆齊，先天太和大顺之境復见於天地间矣，in 29-5, p. 32.
[509] 易有太極,是生两儀, in *Xici I:*11.
[510] 大易数象實本於太極，夫本一不二, in 30-6, p.1.

diagram. One is the symbol of *Wuji* generating *Taiji*, three is the symbol of *Taiji* containing three, ten is the symbol of chaos-*Taiji*.[511]

In the remaining part the Author uses mathematics to interpret the three *Taiji* theory according to the *Tianzundibei* diagram (a detailed discussion of this in the next chapter). On page 7 there is an appendix entitled “Attached is a proof that one contains three and three is one” - 附一含三三為一驗說. On page 10a of the manuscript, one finds an original drawing, the *Suanfa tongzong kaifang qiulian zhi yuantu* 算法统宗 開方求廉之原圖, reproduced here below. The final section contains what appear to be excerpts from other manuscripts, regarding the extraction of roots in mathematics.[512]



7.31-7 *Shi Xiantian weibian shizhong zhi shu you tianzundibeitu er sheng* 釋先天未變始终之数由天尊地卑圖而生

The manuscript contains two articles: “An explanation that the unchanged start-to-finish numbers in *Xiantian* derive from the *Tianzundibeitu”* and “An explanation that the numbers of the *Luoshu*-type derive from the *Tianzundibeitu”*.[513] The derivation of the start-to-finish numbers in *Xiantian* is

[511] 故先儒之論太極者，或謂無極而太極，或謂太極含三，或謂混沌太極，其說雖有三，意實不異，意既不異，則太極惟一而已，獨有蘊顯之別，未衍已衍之分耳，何由而知之，由天尊地卑圖知其然也。古云，数始於一，成於三，終於十，即天尊地卑圖全数也。一也者，無極而太極之象也。三也者，太極含三之象也。十也者，混沌太極之象也, in 30-6, p.1.

[512]此論係易學七節八節: 一明凡有角邊之数象, 皆生於天尊地卑之圖, 一解此圖内,含有開諸方之本, *Ibid*., p. 12-17.

[513] 釋先天未變始终之数由天尊地卑圖而生 and 釋類洛書之数咸出於天尊地卑圖.

inferred from a mathematical perspective and verified by selected quotations from the ancient classics. Mathematically, the scene of *Xiantian*-unchanged means that heaven and earth are a completeness in themselves and, that being so, everything is perfect, “naturally beginning with one and ending with ten”. In *Tianzundibeitu*, the diagram is Heaven-one 天一 and Earth-ten 地十, from top to bottom, naturally positive. This not only shows the good fortune of *Xiantian*-unchanged and heaven and earth positioned, but also manifests its image. Although the number hierarchy of *Tianzundibeitu* is the opposite of the *Hetu* format, the same numbers refer to the same realities: thus, heaven is one, three, five, seven, nine, i.e. odd numbers; earth is two, four, six, eight and ten, i.e. even numbers. Hence *Tianzundibeitu* and *Hetu* share the complete set of start-to-finish numbers, which give birth to the same complete set of numbers we discover in *Xiantian*-unchanged, and this too is the conclusion of mathematical calculation.[514]

The numbers of *Tianzundibeitu*, beginning with one and ending with ten, from top to bottom, are multiplied by each of the five numbers of heaven and each of the five numbers of earth according to their given order, and the result obtained is 3,628,800[515] and this is the *Xiantian*-unchanged and the entire set of start-to-finish numbers of heaven and earth. Through mathematical calculation, one can also verify that the total of 3,628,800 days is identical to the reigns of *Tianhuang* 天皇 and *Dihuang* 地皇 when these mythical emperors, Fuxi 伏羲 and Shennong 神农 governed the world as recorded in ancient classics;[516] and the reigns of *Tianhuang*, *Dihuang* and *Renhuang* 人皇 are also counted on the basis of the numbers of the *Hetu* format.[517]

[514] 31-7, p.1-2.
[515] Heaven 1×earth 2×heaven 3×earth 4×heaven 5×earth 6×heaven 7×earth 8×heaven 9×earth 10 = 3,628,800 (days).
[516] Gangjian 綱鑑, Daquan 大全, Zhengshi 正史
[517] 31-7, p. 3-7.

In the second article, the Author demonstrates that all the numbers that fall under the *Luoshu*-type come from the *Tianzundibeitu* and coincide with the auspicious-inauspicious secret of *Yijing*. He argues that the practice of tying knots in ancient times is about the generation of odd-even numbers, and not just the recording of big and little events, as most people seem to think. The *Tianzundibeitu,* from top to bottom, from inside to outside, generates two other diagrams made of tied knots: they are the Astronomical outline chart 上古结繩而治天文大綱圖 and the Geographical outline chart 上古结繩而治地理大綱圖. Bouvet explains the first chart as follows:

> Watching the astronomical outline chart from the centre to the outside, one finds that there are 60 layers with a hexagon inside，giving 36 (=4*9) as the number of *Taiyang* 太陽, and 24 (=4*6) as the number of *Taiyin* 太陰, the two numbers adding up to 60. Additionally, 28 (=4*7) is the number of *Shaoyang* 少陽, and 32 (=4*8) the number of *Shaoyin* 少陰, the two also adding up to 60. So, the *Tai* and *Shao* numbers of Heaven and Earth, *Yin* and *Yang* are all here.[518]

For the other chart the following explanation is offered:

> Reading the geographical outline chart from top to bottom, one finds 100 positions encompassed within three external poles, the positions adding up to 55 for *Hetu*, 45 for *Luoshu*, equaling 100, and this is the number 10 multiplied by itself.[519]

Putting one and two together, the secret number of the two combined diagrams is 160. The *Luoshu*-type numbers, concludes the manuscript, come from these two diagrams and their difference can be interpreted by mathematics applying the principles of *Yijian* 易简 and *Bianyi* 變易.[520]

8.32-8 *Yixue waipian yuangao* 易學外篇原稿 十三節

This manuscript is the most important among Bouvet's collection, because it

[518] 天文大綱圖内中向外觀之則有六十層而内具六極状者以四九三十六為大陽之数四六二十四為大陰之数合之則為六十又四七二十八為少陽之数四八三十二為少陰之数合之亦為六十是則天地陰陽太少之数畢具於此故也, *ibid*, p. 9.

[519] 地理大綱圖自上而下観之則有一百位而外有三極之状者以河圖五十五之数合洛書四十五之数則成一百為十数自乘之方故数也,*ibid*.

[520] 31-7, p. 9-16.

contains the most complete version discovered so far recording the Author's path and emphasis in his study of *Yijing* and represents the core idea of his mathematical interpretation of the Classic. The text contains 13 sections:

1. 此節求先天後天三易各数象圖之本原
2. 此節明先天数象之本原
3. 此節詳論易数象圖之原本而明先天太極之圖達於天地之心
4. 此節明易数象太極之圖由何原何本而出
5. 此節釋係前易数象本原太極之疑
6. 此節明係先天易数象原本圖諸何以相次遞貫盡于河洛二圖而通乾坤三爻之總数
7. 此節明天尊地卑之圖何以渾天圓地方而為陰陽刚柔諸数象生生変化成律吕之宗[521]
8. 此節畧明諸天圓地方陰陽刚柔之数所生変化何以由天尊地卑始于一終於十而出
9. 此節發明先天天尊地卑圖陰陽方圓之十根實為天地律吕之宗由
10. 此節明天地律吕音樂之道總歸於一本二元不外於天尊地卑之圖
11. 此節發明先師天尊地卑之圖與每瑟秘學之圖所以相同之槩
12. 此節發明始于一終於十之圖為天地陰陽諸数合齊之宗盡歸於中五中六乃先天後天宗會之原
13. 此節明知以先天變易奇圓圍三天尊地卑原正之圖分為二圖 同變為方陰陽不和而成 後天上下失正天地缺折萬物歸藏之象

1. 此節求先天後天三易各数象圖之本原

   This section seeks the origin of each number/image/diagram of *Xiantian, Houtian* and *Three-Yi*

The first section uses the odd-even, *yin-yang* and auspicious-inauspicious categories to describe the three stages of *Xiantian-Houtian-ThreeYi* and the origin of numbers, images and diagrams of these three stages.

[521] Bamboo pitch-pipes used in ancient China, here meaning ancient music theory.

2. 此節明先天数象之本原

This section illustrates the origin of *Xiantian*'s number-images

The second section argues that the subtlety of numbers and vastness of images both begin at one and complete at three, a principle that applies also to the tangible and intangible, so the root of the numbers and images of *Xiantian* are numbers 1, 2 and 3, the so called "One origin - Two elements" 一本二元.

3. 此節詳論易数象圖之原本而明先天太極之圖達於天地之心

This section details the origin of *Yijing*'s number/images/diagram and explains how the *Xiantian Taiji* diagram reaches the heart of Heaven-earth.

The third section describes in detail the formation of "Heaven-earth" 天地, Round-square 圆方, Number-images 数象, the Tripolar-Triangular Chart 三極三角圖, which is the original chart of the number-images, the *Taiji* of *Yijing* , the two composites of the Heaven Round - Tripolar Chart 天圓三極圖 and of the Earth Square - Triangular Chart 地方三角圖. Of the two charts, the former begins at 1 and ends at 10, which corresponds to the *Hetu*, while the latter begins at 1 and ends at 9, which corresponds to the *Luoshu*, the combination of two being 19. The two combined charts form the original *Taiji* chart, the center of which is seen by the Sages as the heart of Heaven-earth: that center is the only Supreme Emperor.

4. 此節明易数象太極之圖由何原何本而出

This section shows from which source the number-images *Taiji* diagram issues.

The fourth section illustrates how, although the *Taiji* chart is the inclusive outline of the two above charts, i.e. the "number-images" and the "round-square", actually it is not the origin of the number/image/diagram. In number-images, the origin of *Taiji* is the "Three-containing Great One" 函三太一. "The Great One of

old mixed two and three, thus starting up heaven-earth, *Yin-yang*, odd-even, number-symbols and giving origin to the *Taiji* diagram".[522] According to the "Three-heaven and Two-earth" 叁天两地 concept, "Qian-heaven" 乾天 is the sequence of three odd numbers containing nine, and "Kun-earth" 坤地 is the sequence of three even numbers containing six; the number of "Outside-heaven" 外天 is six and the number of "Inside-earth" 内地 is four. This explains why "the full numbers of the original diagram find completion at "Heaven-nine", "Earth-four" and "Middle-six".[523] The ratio of six to nine and four to six is 2:3; this same ratio fuses *Yin-yang* to form the union of *Lülü* 律吕.

5. 此節釋係前易数象本原太極之疑

   This section explains the above-mentioned doubt regarding *Yijing's* number-images of the original *Taiji*

The fifth section uses the question-and-answer format to clarify doubts arising from the previous section, regarding the origin of "number-images" being based on *Taiji*. The text also discusses the "number-images" root of Two-*Yi*, *Lianshan* and *Guizang,* which is the diagram of "Heaven-six and Earth-four" 天六地四 and "Heaven-nine and Earth-four" 天九地四 in section four. The former represents *Xiantian's* supreme good fortune of *Lianshan*, the latter the great ferocity of *Guizang*.

6. 此節明係先天易数象原本圖諸何以相次遞贯盡于河洛二圖而通乾坤三爻之總数

   This section explains why *Yijing*'s number/images original diagram in *Xiantian* is the total of the sequence of numbers in the two *Hetu-Luoshu* diagrams, which is the same as the total number of the three lines in the *Qian* and *Kun* triagrams.

[522] 古之太一渾二三乃天地陰陽奇偶諸数象之始而為太極圖之本, in 32-8, p.10.
[523] 其圖之全数盡於天九地四中六, in 32-8, p.13.

The sixth section discusses the relationship between the *Tianzundibeitu* and the *Hetu* and *Luoshu*. The *Tianzundibeitu* is what Confucius' *Yizhuan* 易传 says regarding "Heaven-one" to "Earth-ten",[524] which contain the full numbers of *Hetu* and *Luoshu*. The *Tianzundibeitu* is cumulatively formed by layers of black and white micro-circles: layer one to ten counts for 55 of the accumulation number, the same amount as in *Hetu,* and layer one to nine amounts to 45, the same number as in *Luoshu*. In fact, "the *Tianzundibei* chart contains both *Hetu* and *Luoshu,* mixes 'Heaven-earth' and is the root of all numbers in *Yin-yang*, Square-round."[525]

7. 此節明天尊地卑之圖何以渾天圓地方而為陰陽刚柔諸数象生生変化成律吕之宗

This section explains why the *Tianzundibeitu* mixes "Heaven-round" and "Earth-square" and gives birth to all the numbers [that make] *Yin* and *Yang* being hard and soft and turns into the principle of *Lülü*

Section seven then proceeds to calculate the square and cube of the figures of *Hetu* and *Luoshu*. Furthermore, according to the reciprocal increase and decrease of *Yin-Yang* and *Qian-Kun*, the 9 in *Tian-yang* 天阳 and *Di-gang* 地刚 turns into the 6 in *Tian-yin* 天陰 and *Di-rou* 地柔. According to the theory of Three-Heaven and Two-Earth 叁天两地, the ratio of 2:3 is the most beautiful proportion of *Yin-Yang* interaction, which is the general principle of *Lülü* 律吕 in *Yijing*: hence, the *Tianzundibeitu* is the root of the science of numbers, i.e. mathematics.

[524] Heaven-one 天一, earth-two 地二, heaven-three 天三, earth-four 地四, heaven-five 天五, earth-six 地六, heaven-seven 天七, earth-eight 地八, heaven-nine 天九 and earth-ten 地十.
[525] 故天尊地卑一圖兼河洛渾天地而為陰陽方圓諸数之宗, in 32-8, p. 21.

8. 此節畧明諸天圓地方陰陽刚柔之数所生変化何以由天尊地卑始于一終於十而出

This section briefly explains why all the changes generated by the numbers in Heaven-round, Earth-square and *Yin-yang,* strong or weak, stem from *Tianzundibeitu, "*starting with one and ending with ten"

The eighth section proves mathematically why the change of numbers of "Round-heaven" 天圓 and "Square-earth" 地方, "*Yin-yang*" 陰阳 and "Strong-soft" 刚柔 , come from the one-to-ten series of numbers in the *Tianzundibeitu*. One-to-ten (1,2,3,4,5,6,7,8,9,10) is the *"Yin-yang"* and "Odd-even" number, the root of all "Number-images" of "Heaven-earth" and "Square-round". From the discussion of heaven and earth by adding the figures in the one-to-ten sequence, it produces the square numbers of "Round-heaven", "Square-earth" and "Odd-even", as well as the numbers of "Heaven-earth" *Liuhe* 六合, a concept commonly used to mean 'up and down and around', a movement generally referring to "Heaven and earth" or the universe. The following step shows how the square becomes the cube, and how reversely the cube becomes the square of "Round-heaven", 'Tripolar *Yin-yang'* 三極, again to see how the process of the transition from good to bad took place.

9. 此節發明先天天尊地卑圖陰陽方圓之十根實為天地律吕之宗由

This section explains that the 10 stems of *Yin-yang* and square-round of *Xiantian Tianzundibeitu* veritably are the antecedents of "Heaven-earth *LüLü"*

Section nine is mainly about how the numbers of square and cube of the ten roots (One-to-ten) of *Tianzundibeitu* are harmonized and become the principle of *LüLü*.

Take 4, 9 and 6 as an example: 4 and 9 are the square numbers of "heaven-three" and "earth-two", while 6 in between 4 and 9 is the common divisor.

In the case of music, or two pipes 管 or two strings 弦 instruments, the length of the former and the thickness of the latter correspond to the disproportion of "heaven-9" and "earth-4"; when "middle-6" is introduced in between, that will make the beauty of *LüLü* because of the interactive harmony and unity of the upper, middle and lower. Taking the cube as another example, 8 and 27 are the cubic numbers of "heaven-3" and "earth-2", but 12 and 18 are their common divisors, and this is true for all figures from 1 to 1000.

10. 此節明天地律吕音樂之道總歸於一本二元不外於天尊地卑之圖

This section explains how the Way of "Heaven-earth" and *LüLü* music always pertain to the "One origin and Two elements" principle and are not separate from the *Tianzundibeitu*

Section ten further explains that "the Way of heaven-earth and *LüLü*-music always belongs to the "One-origin and Two-elements" 一本二元 principle in the *Tianzundibeitu"*.

> According to the previous discussion, the Way and the principles of all learning are the same as those of mathematics. Hence, the previous principle of mathematics always belongs to "One-Two-Three", the so called "One-origin and Two-elements" of mathematics. Therefore, the "One-origin and Two-elements" that "heaven-earth *Lülü"* belongs to, is the same as "One-Two-Three". Accordingly, the harmony of music "heaven-earth *Lülü"* is all rooted in *Tianzundibei*, which begins at one and ends at ten.[526]

The *Tianzundibeitu* differs in style from the *"*Diagram of Moses' secret knowledge" 每瑟秘學圖, but the principle is much the same, which is that "all begin at one, complete at three on top and end at nine, ten at the bottom". The sequence of numbers holds true also for *Xiantian* 's positiveness 先天之正[527] in *He-Luo* and connects the harmonious and fantastic numbers of *Xiantian*

[526] 按前論凡學之道之理與数學之道理相同所以據前数學之道理既總歸於一二三所謂数學一本二元故天地律吕所歸之一本二元亦同於一二三盖據兹所論音樂天地律吕之和既盡宗於天尊地卑乃始于一终於十, in 32-8, p. 38.

[527] This means that the natural order of *Xiantian* should be from top to bottom.

Lianshan and *Houtian Zhouyi*.

11. 此節發明先師天尊地卑之圖與每瑟秘學之圖所以相同之槩

This section discovers in a general way why the *Tianzundibeitu* of the Masters of old and the diagram of “Moses’ secret knowledge” are the same

The eleventh section takes up from the previous one to focus on the similarities between the *Tianzundibeitu* and the *“*Diagram of Moses’ secret knowledge”. First, the number sequence of both diagrams “all begin at one, continue at two and complete at three”, “end at heaven-9, earth-10” and, at the same time, holds “round-heaven and square-earth”, which is the positiveness of the full numbers of *Xiantian He-Luo*. Second, both diagrams homologize the 10 “heavenly stems” 天干 and 12 “earthly branches” 地支, obtaining a sum of 22, which is the total number of “Heaven and earth”. In addition, both the top and the bottom of the diagram are ten layers and the total number of them is 55, which is the limit number of *Tianzun* and *Dibei*, up-down, harmony-unity. Finally, the number sequence of the two diagrams is similar to the numbers of *Dayan* 大衍 and 64 hexagrams of *Zhouyi*.

12. 此節發明始于一終於十之圖為天地陰陽諸数合齊之宗盡歸於中五中六乃先天後天宗會之原

This section discovers that the diagram “beginning with one and ending in ten” is the origin of the harmony of all numbers of “Heaven-earth” and *Yin*-yang and returns to middle-5 and middle-6 and thus is the origin of *Xiantian* and *Houtian*

Section twelve explains that the diagram of “beginning at one and ending at ten” is the root of number harmony of “Heaven-earth *Yin-yang*”, which pertains to middle-5 and middle-6. “Odd-even” numbers and “heaven-earth” numbers are five in each case, i.e. 1,3,5,7,9 for heaven, and 2,4,6,8,10 for earth. The middle

number for heaven is 5, which is 2+3, and the middle number for earth is 6, which is 2x3. Therefore, 5 and 6 together are the numbers of the harmonization of "Heaven-earth *Yin-yang*". The composite number of middle-5 and middle-6 is 11, which is the root of "Heaven-earth", the "Four symbols", *"Yin-yang"* and *"Tai-shao"* - 天地四象陰阳太少 - [528] used to calculate the Calendar and the intercalation of Sun-moon 日月历法闰法.

13. 此節明知　以先天變易奇圓圍三天尊地卑原正之圖　分為二圖 同變為方陰陽不和 而成後天上下失正　天地缺折　萬物歸藏之象

This section clearly explains how the odd-round three-side-enclosed *Xiantian-Bianyi* original *Tianzundibei* diagram is divided into two square charts, *Yin-yang* are in disharmony and turn into *Houtian*'s upper-lower loss of positiveness, Heaven-earth are imperfect, and all things turn into the image of *Guizang*

The thirteenth and final section compares the different positioning of numbers in the ancient records of *Hetu* and *Luoshu* to expain that these are no longer the original and positive diagrams of *Xiantian* but rather the fierce image of *Guizang* in *Xiantian,* after the great change. In the original and positive diagram of *Xiantian*, 1 and 6 are on top, 2 and 7 are at the bottom, 3 and 8 are on the right, 4 and 9 are on the left, 5 and 10 are in the middle: this is the exact reversal of *Hetu*. By way of comparison and interpretation of the different charts, the text concludes that the ancient records of *Hetu* and *Luoshu* reveal the disharmonious image of *Xiantian*'s heaven-earth, a consequence of the great change. However, "the Sage creates the *Yi* " 圣人作易 on the basis of the two distorted charts to open the way to a new birth of the people of *Houtian* and restore the positiveness of *Xiantian*. Therefore, generations of people await the Sage to recover the good fortune of *Xiantian.*[529]

[528] *Tai-yin* 太陰, *Tai-yang* 太阳, *Shao-yin* 少陰, *Shao-yang* 少阳
[529] 32-8, p. 59.

9.33-9 *Yixue waipian* 易學外篇 八節

The title of the manuscript is *Yikao* 易考: it is a collection of eleven articles which include a first section on *Yiyin* 易引(#1), nine articles on *Yixue waipian* (#2-10) and several imperial edicts of emperor Kangxi as an appendix (#11). They are:

1. 易引：此引集中華與西土古傳相考印証[530]。
2. 易學外篇首節：此解易数象圖本于河洛。
3. 易學外篇二節：此解先天未变連山易数象圖，本于天尊地卑，河洛未分，圓正三極之圖。
4. 三節：此解天尊地卑圖，脩太極天地陰阳刚柔，通生生变化，而為乾坤三奇三偶，六爻三極之道，所出之原。
5. 易學外篇四節：无小标题。
6. 易學外篇五節（上）：此解八卦既小成，先师因衍其三爻，推至于六爻，成六十四卦，先天方圓二圖之大成。
7. 易學外篇五節（下）：此解先师作易畫卦，所以直由天尊地卑圖，而衍推至于乾坤各六爻，成先天六十四卦方圓二圖。
8. 易學外篇：易数象圖總說
9. 一二三為易数象圖原本
10. 一三未衍為蕴易数象圖之本
11. 附錄：康熙上谕

Content-wise, this text mainly illustrates Bouvet's idea of his number-image-diagram study of *Yijing*. Compared with the 13 sections of *Yixue waipian yuangao* introduced above, the content appears to be an extract of the former, hence the core ideas of the two are basically the same. The first article affirms that the numbers-images-diagrams of *Yijing* are rooted in *Hetu* and *Luoshu* according to the records in *Yizhuan* and analyzes the differences of Three-*Yi* (*Lianshan*, *Guizang*, *Zhouyi*) in *Xiantian* and *Houtian.*[531] The second article explains that the numbers-images-diagrams of *Lianshan* in *Xiantian*-unchanged are based on the *Tianzundibeitu*, which represents the integrity of heaven and earth and symbolizes the prosperous time of *Xiantian* and the celebration of good

[530] The main content of this section has been previously described in p. 1, 26-2 *Yiyin* 易引.
[531] 33-9, p.4.

fortune. The third article affirms that the *Tianzundibeitu* is the root of *Qian* and *Kun*, “Three-odd and Three-even”, “Six lines and Three-poles”. These are derived from the inner, central and outer portion of *Tianzundibeitu* and, taken collectively, they proportionately form “Heaven-9 and Earth-6”, “3-Heaven and 2-Earth”.

Article four has no subtitle. It explains that the *Xiantian* eight trigrams of *Yijing* derive from the inner, central and outer portion of *Tianzundibeitu*. The processing of “one-odd and one-even” in the inner layer results into the Two-Forms 两仪, i.e. the *Yin* and *Yang;* the processing in the central layer results into the Four Symbols 四象, and at the outer layer the Four Symbols turn into Eight Trigrams.[532] Article five states that, from the limited success 小成 of Eight Trigrams, “*Xiantian* square-round” charts themselves flowing from the three lines (the trigrams), the Sages derived the six lines (the hexagram) and achieved the great success 大成 of the 64 hexagrams. Furthermore, each of the six lines of *Qian* and *Kun*, the “square-round” charts of *Xiantian*’s 64 hexagrams, are derived by Sages directly from the *Tianzundibeitu.*[533]

The remaining three articles are devoted to the exclusive study of number-image-diagrams of *Yijing*. Article eight, 易数象圖總說,[534] explains that *Yi*-study is divided into study of internal [meaning] and external [phenomena] and that the study of number-image-diagrams is part of the latter. In addition, *Yi* can be classified into *Xiantian* and *Houtian,* and carries the different characteristics of the Three-*Yi*. The *Xiantian*, *Houtian* and Three-*Yi* need to have their own different numbers-images-diagrams, all of which derive from *Hetu* and *Luoshu*. Article nine, 一二三為易数象圖原本,[535] proposes that One is the origin of numbers, Two and Three are two elements as *Yin-yang*. As “One-origin and Two-elements” 一

[532] 33-9, p.11.
[533] 33-9, p.12-15.
[534] 33-9, p.16.
[535] 33-9, p.18.

本二元, numbers 1,2,3 are not only the root of number-image-diagrams of *Yijing* but also the root of the numbers generated by "Heaven-earth", *Yin-yang* and "Odd-even". Article ten, 一三未衍為蘊易数象圖之本,[536] gives two kinds of micro-circle arrangements to illustrate that the "Un-derived One-three" 一三未衍 is established for containing the root of number-image-diagrams of *Yijing*.

10.34-10 *Yixue zongshuo* 易學總說

This text is similar to the previous one because, apart from the beginning section which is an overview of Bouvet's study of *Yijing*, other sections still contain studies of *Yixue waipian.* as follows:

1. 易學總說
2. 易學外篇：易数象圖總說
3. 釋易分先天後天而函三義之略
4. 易學外篇首卷：釋先天未變之原義
5. 釋河洛合一天尊地卑圖，為先天未變易数象圖之原
6. 釋天尊地卑圖，為諸地形立方，諸天象類於洛書方圖之原
7. 釋天尊地卑圖有先天未變数象圖之太極
8. 釋太極函三，三才已衍，外未顯於形象之圖
9. 釋混沌太極
10. 釋始於一成於三終於十之圖中華與西土大概不相異也
11. 釋天尊地卑圖渾合陰陽刚柔生生變化通易天圓地方二圖為乾坤三奇三耦六爻三極一道之原
12. 釋圓方二圖，八卦各三爻為小成，由天尊地卑圖衍出之所以然
13. 釋先天易圓方二圖，六十四卦各六爻為大成，由天尊地卑圖衍出之所以然
14. 釋先天易大成圓方二圖六十四卦對待之序俱係天尊地卑貴賤位矣自然之正
15. 釋天尊地卑圖之数為天曆地律之根本
16. 釋天尊地卑圖為音樂律吕之本
17. 釋易卦爻之数由天尊地卑圖所衍而出

This manuscript is dedicated to emperor Kangxi and deals with the study of number-image-diagrams in *Yixue waipian*. Section one gives an introductory exposition of *Yijing* study; it states that *Yi* contains all the world's Principles and

[536] 33-9, p. 20.

Learning, which are divided into *Tianxue* 天學 and *Shixue* 世學. *Tianxue* is the Great Way 大道, God's Way 神道 and the inner Learning method 内學心法 hidden behind *Yijing*'s words; the principle of *Shixue*, instead, is the outer learning 外學, i.e. all that is in the geometric numbers and astronomy, Lülü (the pitch standards), the nature of things shown in the number-image-diagrams of *Yijing*. Numbers are associated with images and the two never exist apart from the principles; measuring the number-images of things, one can then understand their principles.[537] The last paragraph is then addressed to Kangxi to introduce the later sections of *Waipian*.[538]

The next part to the end of the document belongs to the research of *Yixue waipian*. It refers to the study of number-image-diagrams of *Yijing*, in particular the diagrams, since there are 11 paragraphs mentioning and providing an interpretation of *Tianzundibeitu*. The titles of this text are different from the previous two manuscripts, 32-8 and 33-9, but the contents overlap in many ways.

The second essay, although very short, is especially important as it carries the theoretical basis of the study of number-image-diagrams in *Yijing*. It points out that the mystery of interior-*Yi* 内易, the inner meaning, is hard to fathom, but fortunately it can be known through the number-image-diagrams of exterior-*Yi* 外易. It states,

> Principles and numbers, and numbers and images, are related and not separate. It is easier to explain the principles by numbers and to interpret numbers by images, but if numbers and images are inadequate, one might as well use diagrams to demonstrate. To know the subtleties of exterior-*Yi* all depends on a careful analysis of the number-image-diagrams of *Yijing.*[539]

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[537] 数與象相関不離理也，測其数度其象，则可通其理矣, in 34-10, p. 2.

[538] *Ibid*, 幸今盛朝，我皇上天縱聰明，學貫古今内外，五十餘載，日專務道之本，躬著述經書，格物窮理，洞徹曆数律吕之原，理學文章悉備，而天下惟一人，親教臣工，考較易學之原，詳究奥秘之旨，而全體大用，無不明矣，允有帝天之深意存焉，謹遵聖教，竭盡鄙誠，是以分為易學内外二篇，将先天未變，先天已變，周易不變之旨，謹釋之以備較閱之便，兹先以外篇言之，嗣以内篇言之。

[539] 理與数，数與象，自然相関而不相離。因言理莫如数，明数莫如象，数象所不及者，莫如圖以顯之。欲詳易外學之妙，俱在於詳究易数象圖之奥耳, in 34-10, p. 4.

At this point, in part three, the Author offers what he calls an interpretation 釋. Right at the beginning, he explains the three meanings of *Yi*: “Easy and simple” 易简; “Changing” 變易 and “Constant” 不易, and its classification either as *Xiantian* and *Houtian*, a division further extended to *Xiantian*-unchanged 先天未變, *Xiantian*-changed 先天已變 and *Houtian*-unchangeable 後天不變.[540] Sages had produced three diagrams precisely to show and symbolize the distinction of these three meanings.

Part four explains the original meanings of *Xiantian*-unchanged: it is short, of no more than 200 words, and it describes the all-harmonious, grand and auspicious scene of *Xiantian*-unchanged. Part five states that *Tianzundibeitu* combines *Hetu* and *Luoshu* in one, and this is the origin of number-image- diagrams of *Xiantian*-unchanged. According to the first section of *Xici,* the *Tianzundibeitu* pattern begins at top-one and ends at bottom-ten and contains the *Luoshu* (1-9/45) as well as the *Hetu* (1-10/55).[541] The pattern can be studied from top to bottom and from middle to side. The *Luoshu* is the birth-origin of number-images and the *Hetu* is their change-origin.

Part six explains that number 55 in *Tiandi Dayantu* 天地大衍圖 is the full number of the union of “heaven-earth”, which results from the positioning of the Micro-circles, the Three Poles and Heaven-image 微圓三極天象 and the Containing-square, Triangle and Earth-shape 容方三角地形 in *Tianzundibeitu*.[542] The Containing-square number accrual of *Dayantu* is 3025, which is the sum of the cubes of each number from 1 to 10, and is the square of number 55, forming the Square-image and Square-shape of the full number of

[540] 34-10, p. 5. The meanings of the 先天未變，先天已變，後天不變 have been described in detail in the previous articles.
[541] 天尊地卑，乾坤定矣。卑高以陳，贵賤位矣。動静有常，刚柔断矣。方以類聚，物以羣分，吉凶生矣。在天成象，在地成形，變化見矣。
[542] *Rongfang* 容方 is a mathematical concept, the largest square in a triangle.

Heaven-earth. The *Dayantu* derives from the good fortune of *Xiantian*-unchanged *Tianzundibeitu* but it is not auspicious, because it is square-dominant and purely strong. In addition, the sequences of the accumulation of all square charts similar to *Luoshu* are shown in *Tianzundibeitu*, sequences that can be extended to infinity, such as the micro-circles of *Dayantu* which are 56 and their derivates can reach 100 and beyond. Verified by calendar-study 历法, the resulting combined number of *Dayantu,* Three Poles and Heaven-image is 1,596, which is 532x3 and the '19 of months' (月之十九/一章) times 28 (days). That said, one can easily understand that the *Tianzundibeitu Dayantu* is the root of the ancient calendar.[543]

The next three parts (7-9) illustrate the theory of the three-way interpretation of *Taiji* in *Tianzundibeitu*.[544] Both the main theoretical framework and the contents of these three sections are consistent with 30-6 *Taiji Lueshuo* 太極略說, previously discussed, from which many words and entire paragraphs are borrowed. Incidentally, this is perhaps the main argument proving Bouvet's authorship of 30-6 *Taiji Lueshuo* 太極略說.

Part seven states that *Tianzundibeitu* must contain *Taiji,* as it is the root of *Xiantian*'s number-image-diagrams. Although classical Confucian texts offer three interpretations of *Tianzundibeitu*, their meaning remains by and large the same. In *Tianzundibeitu*, the "Heaven-one" at the top and "Earth-two" are three micro-circles forming a triangle; at its centre there is a "Containing-square-Triangle", which is the foundation of Heaven-image and Earth-shape. This unified pattern shows the number and geometry that "begins with 1 and completes at 3", the *Sancai* 三才 or "One Origin-Two Elements", the principle of nature. Part eight offers an interpretation of the "Three-containing *Taiji"*. At the top of *Tianzundibeitu*, 1, 2 and 3 are represented by six micro-circles (Fig. 1) and the

[543] 34-10, p.13-14.
[544] 其一無極而太極，其二太極函三也，其三混沌太極也, in 34-10, p.15.

"Containing-square" is formed by four triangles (Fig. 2): they are Heaven-6 and Earth-4, 10 being the full number of heaven and earth. The

1 2 3

combination of the two basic diagrams becomes the "Three-containing *Taiji"*, the *Sancai*-derived diagram (Fig. 3). The micro-circles in this diagram begin with 1 and develop to 3 and, at the same time, contain the square-4, which by itself is enough to know "heaven-earth and square-circle" as well as "movement-quietude and *Yin-yang",* and this is the "One Origin-Two Elements" of both "number and geometry" and the "*Sancai* derived truth". Part nine provides an interpretation of Chaos-*Taiji*, the number of which is 19 (10 from *Hetu*, 9 from *Luoshu*), corresponding to the integrated number of 7 days and 12 months. The one micro-circle at the centre of the diagram is the "Heart of heaven-earth", which symbolizes "God, the only self-reliant, the vital principle giving birth to life, not confined to yet inseparable from the image, the Lord of Creation, having these among other prerogatives".[545] Therefore, the three theories on *Taiji* just expounded are all attributes of the one *Taiji*, and the visible or invisible, derived or underived, different but united, the traits of *Sancai*, which are sequentially found in *Tianzundibeitu.*[546]

Part 10 explains that the diagram that "begins with 1, completes at 3 and ends at 10" is the *Tianzundibeitu* of *He-Luo* in Chinese culture, which – and this is the link Bouvet had been seeking - is consistent with the root *"*Diagram of Moses' secret knowledge"，coming from the West, from the ancient Jewish nation. Although the two diagrams are understandably different in form, their numbers, sequences, principles, their use and the Way in them are actually the same.[547] The next four

[545] 乃帝惟一自立，而為生生之神機，不囿於象，不離於象，而與造化主宰於其中也，in 34-10, p. 22.
[546] *Ibid.*, p. 23.
[547] 其式雖异，其数其序其道其理其用實相同無異, in 34-10, p. 25.

parts (11-14) content-wise are basically consistent with the four sections of 33-9*Yixue waipian* previously described. They focus on the interpretation of square and round charts, *Qian-Kun* trigrams and hexagrams, three-odd and three-even and six lines of *Yijing*, all of which derive from *Tianzundibeitu.* Part 14, in particular, explains that the sequence of the two square-round charts of the 64 hexagrams is the natural positive of *Tianzundibeitu* and points out that the *Xiantian* square chart produced by Shao Yong 邵雍 does not represent the *Xiantian*-unchanged square chart, which is good fortune, but rather the *Guizang* chart of *Xiantian*-changed.

Parts 15 and 16 separately discuss the astronomical calendar and the laws of ancient music. The first of the two explains that the numbers of *Tianzundibeitu* are the root of the astronomical calendar and of geographical law. In *Tianzundibeitu*, the five odd numbers 1,3,5,7,9 represent Heaven and *Yang;* the five even numbers 2,4,6,8,10 represent Earth and *Yin*. Number 5, the median odd number, is the sum of 2 and 3 and represents the 5 tones, the root of the astronomical calendar;[548] number 6, the median of the even numbers, is 2 multiplied by 3 and represents the 6 pitches, the root of geographical law.[549] Part 16 is similar in content to section 9 and 10 of 32-8 *Yixue waipian yuangao*. It provides an elucidation on the proportion of harmonious numbers in *Tianzundibeitu* as the root of ancient music, the *Lülü.* It further explains that the number representing the great and the small achievement [550] in *Yijing* hexagrams and lines all derive from *Hetu*， based, however, on *Tianzundibeitu*. Mathematically calculated, the small achievement number of the 8 trigrams is 1,440, and the great achievement number of the 64 hexagrams is 11,520.

[548] 五音 (the five tones) are：宫、商、角、徵、羽
[549] 六律：黄钟、太簇、姑洗、蕤宾、夷则、亡射, these are the 6 Yang pitches of 12 pitches.
[550] 大成小成, cfr. above

11.35-11 *Yijing zongshuogao* 易經總說稾

Although this text consists of a mere three separate articles, it is very important since each article is actually an original draft later copied and attached as an appendix to other manuscripts. In Chen Xinyu's opionion, the *Yijing zongshuogao* is an excerpt from a transcription of Bouvet's *Yijing* works. The first article, *Yixue zongshuo* 易學總說, is similar to the opening part of 34-10 *Yixue zongshuo* 易學總說.[551] The following is to be noted: it may be a slip of the pen that Chen Xinyu wrote "*Yijing* 易經" ***zong shuo*** rather than "*Yi xue* 易學" ***zong shuo***. More important, though, is that the entire article – and this may be inferred from the many corrections in the manuscript – has been subjected to significant modifications, additions and deletions. Furthermore, simply looking at the content, 35-11 is much longer than 34-10 and itself is a relatively complete treatise on the structure of *Yijing*. One should conclude that the first article in 35-11 is more likely an original draft than just a transcript of an excerpt of 34-10 or other work.

The *Yijing zongshuo* devotes almost half the space to introduce the relationship among principle, number, image and diagram. It points out that all four exist in *Yijing*, are not separate and, in sequence, they give birth to the following element, the principle to number, the number to image and the image to diagram.[552] Of the four, principle is the most important, while number, image and diagram are tools 筌蹄,[553] ultimately to recognize and seek the heart and meaning of the Sages. The text then explores the concepts of *Xiantian*, *Zhongtian* and *Houtian* and the theories of *Three-Yi* that symbolize *Heaven*, *Earth* and *Man*, as

[551] Chen, Xinyu 陈欣雨. (2017). *Bai Jin yixue sixiang yanjiu: Yi fandigang tushuguan jiancun Zhongwen yixue ziliao wei jichu*《白晋易学思想研究:以梵蒂冈图书馆见存中文易 学资料为基础》。 Beijing: Renmin Press, p.121.

[552]夫易之為經也。有理焉。有数焉。有象焉。有圖焉。圖不離象。象不離数。数不離理。理生数。数生象。象生圖。35-11, p.1.

[553] 筌, a fishing tool made by bamboo and grass; 筌蹄, a tool or device. "荃者所以在魚，得魚而忘荃；蹄者所以在兔，得兔而忘蹄；言者所以在意，得意而忘言。吾安得夫忘言之人而與之言哉！" (*Zhuangzi*:3:4). It's important to note the significance of the allusion to the 外物 chapter of the *Zhuangzi* here—tools that are ultimately to be forgotten once the greater principle is attained.

'un-changed', 'changed' and 'not-changing'. The article finally explains that number 数, measure 量 and weight 衡 are the principles to research *Yijing*; they separately correspond to Heaven, Earth and Man and these three are used as outside tools to illuminate the Way to the inside.

The Author of the second article[554] might not be Bouvet, even though the article appears as an appendix in at least two of his other manuscripts. It opens with the following words:

> Read sections seven and eight of *Yixue waipian* for what it says about *Tianzundibeitu*, that it is the root of images of the ten thousand numbers. That is a very good point. The explanation is very detailed, however, the truths and reasons contained therein are boundless and their use unlimited, the deeper the study the more truths will emerge. Hence, I hereby express again my humble opinion in order to make clear how to go about it.[555]

The question arises as to who has read section 7, 8 of *Yixue waipian* and who gives the evaluation: 此說甚好!. It is obviously not Bouvet, who is the author of the *Tianzundibeitu*; nor, judging by the tone, does it seem to come from emperor Kangxi. The four words 復出管见 indicate that this person is familiar with Bouvet's work on *Yijing,* and that it is not the first time he expresses an opinion. The author might well be Li Guangdi 李光地,[556]or someone else at court who read the works of Bouvet.

The second article gives a mathematical interpretation of the *Tianzundibeitu* in the section seven and eight of *Yixue waipian*. The text states,

> Now, this type of number-image always belongs to two kinds, the 'flat' image and the 'tridimensional' image. To the flat image belong the three-corners three-sides, four-corners four-sides and so on. Tridimensional images are the cube, the three powers, the four powers and so on. Hence, the explanation of afore-mentioned two mathematical principles, and how they are provided within the

[554] The full title is 此論係易學七節八節:一明凡有角邊之数象皆生於天尊地卑之圖一解此圖内含有開諸方之本

[555] 讀易學外篇七節八節内所云天尊地卑之圖。為萬数之象之宗。此說甚好。其發明指點亦既詳.悉但此圖之理無窮。而作用無盡。愈窮究則其理愈顯。因復出管见。以明其用之之法焉, in 35-11, p. 7.

[556] Li Guangdi 李光地（1642-1718）, famous Confucian scholar and minister in the Kangxi period. He was familiar with Bouvet and took part in the latter's discussion of *Yijing* with emperor Kangxi.

ancient diagram.[557]

Compared to other manuscripts, this article stands out as a pure study in mathematics focusing on geometry and algebra, the fruit of a research on the *Tianzundibeitu* by someone else. In terms of content and writing style, this is not a typical work by Bouvet.

The title and content of the third article[558] is basically the same as the last topic of 34-10 *Yixue zongshuo* 易學總說, except that here there is more literary interpretation, which leads one to conclude that, compared with the latter, this is more like an original draft.

12.36-12 *Yigao* 易稿

This manuscript is actually a collection of two completely separate and unconnected articles. The first one is the annotation and interpretation of the first ten of the 64 hexagrams in *Yijing* according to the *Xugua* 序卦: Zhun 屯, Meng 蒙, Xu 需, Song 訟, Shi 师, Bi 比, Xiaoxu 小畜, Lu 履, Tai 泰, Pi 否.[559] For each hexagram an interpretation is offered, divided in two parts, the Original text 經文 and its Inner meaning 内意. The Original text contains the hexagram pattern 卦畫, the hexagram name 卦名, the statement of hexagram and lines 卦辞和爻辞, *Tuanci* 彖辞 and *Xiangci* 象辞,while the Original meaning is a Catholic interpretation of the text.

In the Inner meaning part, Bouvet mainly relies on the story of the original sin of Adam and Eve in the Old Testament and on the coming of Jesus as Saviour in the New Testament to interpret the ten hexagrams and each of their lines. Each

[557] 今因数象之類，總歸於二、即平面象與形象是也。平面象如三角三邊四角四邊之等象。形象如立方，三乘方四乘方等。是故将二種数學之理鮮明，如何畢具在古圖之内, in 35-11, p. 7.
[558]釋易卦爻之数由天尊地卑圖所衍而出, in 35-11, p. 15-18.
[559] *Xugua* is part of *Yizhuan* and represents the consequential and causal relationship among the 64 hexagrams in *Yijing*.

piece of interpretation opens with a similar content, that the creation of the human ancestors by the Creator God was a good and auspicious setting, the *Xiantian*. The interpretation of the *Zhun* 屯 hexagram, for instance, begins with a narrative of *Xiantian*'s great good fortune at the beginning of heaven and earth, when man had not yet incurred condemnation;[560] similarly, in hexagram *Meng* 蒙, we find a description of the great fortune of when our human ancestors in *Xiantian* initially led good, illustrious and virtuous lives.[561] The interpretation of the other eight hexagrams follow the same pattern, albeit with slightly different words. The *Rijiang Yijing jieyi* 日讲易经解义, states that hexagrams *Qian* and *Kun* concern the great beginning of heaven and earth, while hexagrams *Zhun* and *Meng* deal with the great beginning of humans and created things.[562] This is supposedly the reason why the first article does not interpret hexagrams *Qian* and *Kun*, but only the ten other hexagrams, thus placing the creation of man as the opening of each interpretation.

Fu guzhuan yijilun 附古傳遺跡論, the second article, which occupies pages 19-29, is actually a treatise with its own specific content. In fact, it appears to be an appendix to some other work. It is a study in philology and traditional classics offering a detailed interpretation of the *Three-one* concept to lead to the Catholic doctrine of the Holy Trinity, attempting to confirm that all Chinese people actually know the holy doctrine of the Lord of Heaven, which is not just a western religion, but a truth also granted to the Sages of old.[563] Actually not new: most of the contents of this article have already appeared in Bouvet's 26-2 *Yiyin yuangao*.

[560] 先天人祖未獲罪于天地之初時真大幸
[561] 先天人祖有元良明德之初時大幸
[562] 乾坤者，天地之太初也。屯蒙者，人物之太初也 [清] Niu niu, etc 牛钮等 (2012). *Rijiang Yijing jie yi* 日讲易经解义. Haiko: Hainan Press, p.608.
[563] 中華人士皆知天主聖教非惟吾西土之教，實亦先聖相授受之真傳而必不可不从者也, in 36-12, p. 50.

13.37-13 *Yiyao* 易鑰

Even though the two subtitles of this text, *Jingtian jianyin* and *Faming tianxue benyi* 敬天鑒引,發明天學本義 closely resemble two previous manuscripts, i.e. 25-1 *Tianxue benyi* (*Jingtian jian*) 天學本義(敬天鑒) and 27-3 *Zeji jingshu tianxue zhi gang* 擇集經書天學之綱, most of its space is dedicated to the Catholic interpretation of the concept of *Taiji* and *Taiyi* and to provide a theoretical framework of number-image-diagram in *Yijing* in the form of questions and answers. All of these contents have been covered in the previous texts.

This text also begins posing the question what is *Tianxue* 天學為何, much as in the other two versions of 天學本義. The answer is that *Tianxue,* or Heaven-learning, leads people's hearts to know the rule and follow the mandate of Heaven on their Way to the Great Origin, a concept that was recorded in *Yijing* and other ancient classics for handing down to later generations as teachings.[564] However, this main idea of *Yijing* and other classics had been lost for a long time. Since the death of Confucius, the ancient learning has fallen into a long night for more than 2,000 years, and although many scholars scrambled to interpret the books that survived the burning in the Qin dynasty, they failed to discover and illustrate the original meanings of Heaven-learning 天學. Western scholars can now make up for the shortfall of Chinese scholarly work by drawing on the Bible. All the people of the world descend from the same ancestors and hence all are brothers and one family, and all are born of and taught by the one God, the great father-mother and master, so the doctrine of all nations is but one, the same as the holy Catholic doctrine.

The text proposes that the main purpose of the ancient classics is nothing more than the study of heaven and mind. Since ancient times, scholars who love

[564] 率人心以明天理，顺天命而向大本之道,即先师所錄於易等經，以垂后世之教也, in 37-13, p. 1.

Heaven-learning and cultivate their morality, regulate their family and govern their country have always taken Heaven worship 敬天 as their foundation but have reached a different understanding of heaven. Some hold that there is a visible heaven in the sky; some think of it as a principle 理, while others believe that there is the Dao, the mind, the *Taiyi* or *Taiji* and so on. In the Bible, instead, Heaven refers to the Creator of all things in the universe, the Great One, the wisest and supremely intelligent and the great source of all things. And this is the Trinity,[565] the God of Holy Scriptures. Much space in this passage is given to explain the Trinity, especially the relationship among Father, Son and Holy Spirit, concluding that the Trinity is the same as the "*Three-Ji Three-Cai"* 三極三才 (heaven-earth and man), the same as the "Three-containing *Taiji Taiyi"* 含三太極太一 and the sayings of *Laozi* in ancient Chinese tradition.[566]

Starting from basic numbers 1, 2, 3, the paper proposes the concept of *One-origin Two-elements* 一本二元 as the principle governing *Xiantian*. Among numbers, 1 is the origin, 2 and 3 are *Yin-yang*'s two elements, odd-even numbers. In the Holy Trinity, the first, the Creator, is the omnipotent, the one origin of all things, the second and third are the most omniscient, most holy elements. In 'shape and vital energy' 形氣, the amount of all vital energy is attributed to 1, 2, 3 *in solidum* as "1 origin and 2 elements" of all odd-even numbers; the geometry of all shapes, however, is attributed to 1, 2 and 3 dots as the "1 origin and 2 elements" of all round-square shapes and images.[567] In mathematics, dots, lines and surfaces are connected into a graph, which not only contains the total of *Xiantian Hetu* and *Luoshu* numbers forming the "Ten-points, Three-poles, Six-directions and Nine-locations diagram - 十点三極六合九方之圖 - but which also represents the Triune God, and the overall image of all things.

[565] Father, Son and Holy Spirit 圣父，圣子，圣神.
[566] 道生一，一生二，二生三，三生万物. *Laozi*:42. Cfr. 37-13, p. 6-11.
[567] *Ibid.*, p. 6-12.

The article then offers a comparative interpretation of the concept of *Xiantian* and *Houtian* in *Yijing* and the Bible. It puts forward the idea that Emperor *Sanyi* 三一帝, worshipped by the emperor in the southeast suburbs of the Capital since ancient times to express gratitude for the grace of birth of all things, is none other than the Creator God, the Holy Trinity, mentioned in Bible records, the origin of all created things.[568] According to Catholic doctrine, *Xiantian* is understood as the union of the human heart with the heart of God from the very beginning of all things before the damage caused by original sin to human nature, when heaven and earth intersected in an up-down axis. When sin wounded human nature, the inner and outer movements of mind and body became confused under the influence of selfish desire and evil, the Lord detested it and broke up with man, heaven and earth failed to meet and the good of *Xiantian* was lost. *Houtian* refers to a king born as a man, personally bearing all sins to restore the benevolence, the righteousness and morality of the created model, thus becoming the source of fortune in *Houtian.*[569] The narrative and the subsequent detailed interpretation obviously refer to Genesis and the records of Jesus in the Bible, as already mentioned in 26-2 *Yiyin yuangao* 易引原稿.

The text further attempts to demonstrate that the Catholic doctrine of *Xiantian* and *Houtian* can be verified in *Hetu* and *Luoshu,* and in the text of numbers and images in *Yijing*. Although *Hetu* is simply an orientation chart from 1 to 10, the numerical order of its *Yin-yang*, South-North and East-West dualism actually contains a divine intentionality, to identify the origin of *Xiantian* and *Houtian*. According to the inner numbers of *Hetu*, North-1 is positioned below, South-2 above, East-3 on the left and West-4 on the right. However, the author proposes that in the harmonious and natural image of *Xiantian* actually the arrangement should be North-1 above representing the dignity of heaven and the origin of all odd-even numbers, South–2 below, representing the nature of positive heaven,

[568] 原無異于天主聖經所錄造物主三位一體為天地萬物之本, in 37-13, p. 18.
[569] *Ibid.*, p.19.

East-3 on the right as a throne and West-4, as a sign of humility, on the left, representing the nature of square-earth. The same is true for the outer numbers 6, 7, 8 and 9. Hence, the ancient *Hetu* chart shows the celestial beings, the fallen angels, and man condemned for having offended heaven, the above and the below not in harmony, and thus depict the negative image where heaven and earth are inverted and fail meet.[570] Fortunately, the median number five of *Hetu*, the center of the universe, can communicate with *Yin-yang* and cooperate with the virtues of heaven-3 and earth-2, to make up for the deficiencies of heaven-earth and re-establish the natural image of *Houtian* from *Xiantian*.

Numbers 5 and 6 are, respectively, the median of the five odd *Yang* numbers and of the five even *Yin* numbers in the *Hetu* chart. The text states,

> Number 5 is the sum of earth-2 and heaven-3, of which it is born and is the root of the 'generating numbers' of heaven-earth. Number 6 is the product of earth-2 and heaven-3, the achievement and the ending of the 'achieved numbers ' of heaven-earth … according to the astronomical calendar, the median 5 of the *Yang* numbers in *Hetu* is the longitude and the median 6 of the *Yin* numbers is the latitude, 5x6=30, which conforms to the monthly numbers of *Taiyin* and *Taiyang* .[571]

The text further proves the numbers of heaven and earth by referring to the Pythagorean theorem in Euclid's *Original Geometry* 几何原本. Applying the theorem's "hook (Gou 勾) - 3 (vertical cathetus), strand (Gu 股) - 4 (horizontal cathetus) and string (Xian 弦) - 5 (hypothenuse)" 勾三股四弦五, we get the virtue of earth-2 and heaven-3 matching *Houtian*'s median 5, which is precisely the virtue of *Xiantian*'s Heaven-3 earth-4. In addition, 5, the ratio of 2 : 3, conforms to the *Yin-yang* of music, which is the virtue of heaven-earth Lülü 天地律吕. Number 5 is also the foundation of *Yijing* numbers in *Houtian*. Hence, Heaven-3, Earth-4, and Man-5 天三地四人五, hook-strand-string 勾股弦 forming a triangle, all clearly match Heaven, Earth and Man, and this is the great harmony and

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[570] 37-13, p. 25-26.

[571] 五由地二天三合而生，即五主生而合天地諸生数之本。六由地二天三相乘而成，即六主成而為易天地合諸成数之末...據天文曆法，河图内阳数中合之五為綜，陰数中合之六為衡，相乘得三十，乃合太陰太阳中月之数, *Ibid.*, p. 28-31.

natural image of *Yijing.*[572]

14.(38-14)*Yiyao zixu* 易鑰自序

The text contains two separate articles. The opening part of the first, a self-preface to the *Yiyao* similar to the *Yiyao* itself, explains that *Yijing* contains the Way of all ancient classics, that all attempt to interpret the "study of heaven and of the human mind", 天学心学,but its great meaning was lost after the death of Confucius and the burning of all books in the *Qin* dynasty. Since people East and West descend from a common ancestor and have inherited the same holy doctrine, the "study of heaven and of the human mind" that we find in the Bible is no different from what we find in *Yijing*: the main points of study of both traditions focus on *Xiantian* and *Houtian.*[573] In order to interpret *Xiantian* and *Houtian* in the Bible, the text is then divided into three parts: 1. the main points on *Xiantian* in the Catholic Bible 天主聖經先天之大旨; 2. the main points on *Houtian* in the Catholic Bible 天主聖經後天之大旨 and 3. the Incarnation of God and his achievement to save and change the world 天主降生拯世变化萬方之功.[574] The first two parts are discussed in detail in the previous manuscripts, while the third is a mere six lines long, not in any way expanded: this paper, therefore, does not seem to have been written for publication.

The second article has no title and begins with an exposition of *Taiyi* 太一:

> *Taiyi* is the foundation of odd-even numbers in *Yijing,* and the *Taiji* is the origin of square-round images in *Yijing*, since numbers precede images and images depend on the numbers, so, the *Taiji* is based on the *Taiyi*. And the myriad changing numbers and images generated by *Yi* belong to the *Taiyi*.[575]

Seen through the spectrum of Catholic doctrine, the *Taiyi* is the Creator, the Holy

[572] 37-13, p. 32-34.
[573] 38-14, p. 1-2.
[574] *Ibid.*, p. 3-16.
[575]太一乃易奇偶諸数之本,太極乃易两儀方圆萬象之本,考之于理数先于象而象倚于数…故太極本于太一,則易之生生变化萬数萬象原從而盡归于太一而已, in 38-14, p. 17.

Trinity who rules the myriad things in heaven and on earth. On this assumption, the Author interprets the doctrine of creation and restoration in *Xiantian* and *Houtian* by the trigrams and hexagrams in *Yijing*.

The primordial ancestor heart, ears and eyes, which in Bouvet's view symbolize the Holy Trinity, correspond to *Xiantian*'s eight trigrams of *Fuxi* 伏羲, meaning that both form the Way of *Xiantian*. First, the primordial ancestor's eyes symbolize the water, or *Kan* 坎, correspond to the fire, or *Li* 離, of God's eyes and belong to the Son of the God, so *Yijing* says that water/*Kan* and fire/*Li* do each other no harm 水火不相射 and the right location of the trigram is West-*Kan* and East-*Li*. Second, the ancestor's ears symbolize the wind, or *Xun* 巽, correspond to the thunder, or *Zhen* 震, God's order to the Holy Spirit, so *Yijing* says that thunder/*Zhen* and wind/*Xun* clash against each other 雷風相薄 and the right location of the trigram is Southwest-*Xun* and Northeast-*Zhen*. Third, the ancestor's heart symbolizes the mountain, or *Gen* 艮, corresponds to the marsh, or *Ze* 澤, God's kind heart and belongs to the Father, so *Yijing* says that mountain/*Gen* and marsh/*Ze* interchange their influences and the right location of the trigram is Northwest-*Gen* and Southeast-*Ze*. Last, the spirit/神 of the ancestor's heart, eyes and ears is humble and conforming to all goodness; the most wise and most Holy Trinity is symbolized by *Kun* 坤 and *Qian* 乾, so *Yijing* says that heaven and earth are positioned 天地定位 and the right location of the Trigram is above-*Qian* and below-*Kun*. According to these, the Way of *Xiantian* works.[576]

Then, the author uses some hexagrams from *Yijing* to find a match with the biblical narrative of original sin committed by humanity's ancestors, Adam and Eve, and the advent of Jesus as Saviour. One example: the mutual conversion between the *Pi* 否 hexagram and the *Tai* 泰 hexagram corresponds to the

[576] *Ibid.*, p.18.

disobedience of our ancestors against God and the salvation brought by Jesus leading to the transition from *Xiantian* to *Houtian*. The article also cites the description of the mythical *Qilin* 麒麟 in the *Erya* 爾雅, *Huainanzi* 淮南子 and *Chunqiu* 春秋 to symbolize the coming of Jesus. Other hexagrams used in the article include *Xian* 咸,*Yi* 益, *Xu* 需 and *Zhongfu* 中孚. In particular, the *Xu* 需 hexagram means 'waiting' and the Chinese character 儒/Confucianism consists of the two characters 人/man and 需/wait, and thus represents the waiting for the coming of Jesus Christ.[577]

15.(39-15) *Zhouyi yuanyi neipian* 周易原義內篇

The manuscript is divided into two parts, *Dayi yuanyi neipian* 大易原義內篇 and *Zhouyi yuanyi neipian* 周易原義內篇, of which the former is a mere two page-long and mainly deals with the correspondence between the doctrine of *Three Yi* 三易 and the records of Genesis, the original sin and the advent of Jesus Christ as recorded in the Bible. If the first of the two parts is regarded as an overview, then the second is meant to use the hexagrams *Qian* 乾 and *Kun* 坤 to interpret these biblical data.

Qian and *Kun* not only are the gateway to all hexagrams; they are also the two most important of the 64 hexagrams of *Zhouyi*. In the Confucian *Ten Wings* 十翼, the *Wenyan* 文言 part is devoted to expounding the meanings of these two hexagrams. Like with the other ten hexagrams examined in 36-12*Yigao* 易稿, this text also divides the *Inner meaning* into a *Principal* 綱 and a *Subordinate* 目 to interpret biblical data in greater detail. Concretely, the hexagram *Qian* gives special attention to the interpretation of God's Son, who is seemed in the image of the dragon and whose manifold significance is described according to the different periods represented by the six lines. The hexagram *Kun*, on the other

[577] 38-14, p.19-24.

hand, emphasizes the correspondence between original sin committed by humanity's ancestors and the salvation won by the Son. Unfortunately, apart from these two manuscripts, Bouvet's interpretation of the remaining 52 hexagrams is not found in the Chinese collections of the Vatican Library.

16.(40-16) *Zhouyi yuan zhi tan mulu* 周易原旨探目錄 理数内外二篇

This text is only a table of contents divided into two parts, the 'Inner meanings of *Zhouyi'* 易理内篇 and the 'Outer numbers of *Zhouyi'* 易数外篇. Interestingly, the former contains the full list, while the latter has only the title without any content: obviously, it is an unfinished directory as seen here below.

易理内篇 (Page 1-4)	易理之奥；2.道久失傳而有復明之日；3.大秦有真傳可資以復明道；4.中國與大秦建都立國之始；5.古學失傳之由；6.堯典之洪水即大秦經典之洪水；7.古之先師中國與大秦同；8.經典文字之根原；9.書契之原旨；10.聖人制器尚象莫大乎書契；11.經典古籍原閔係萬世萬方；12.大秦國先慶後殃見於魯國之景象；13.古史之根本；14.古史之大旨；15.史有先世後世之二元而合為一统；16.百世所望之大聖惟一無二；17.認佛為孔子所望之聖者大非；18.經以寓言闡道徒作世事観則失其本旨；19.究左道之原而明所以異於正道之故；20.先天初造不測之本；21.後天再造不測之本；22.初造與再造本同義異不測之奥；23.先天後天三義總說： 先天未變實義：1.神人萬物出於自有無始之主；2.初生神人萬物之序；3.初造天地之時；4.神人品物初生皆善而吉；5.上主親陶人祖賦以元良美善之性；6.神人初稟自專善惡祸福任其抉擇；7.人祖始居福地萬世之吉凶係焉；8.神人若恒順命則先天元吉永保無失。 先天已變實義：1.道晦德昏之始；2.倡亂之首既出随之者同隕其命；3.叛神既亂天常應命明德之神驅而逐之；4.人世始终之凶悪由元婦之不貞；5.原祖從婦方命而圯萬世萬方之族；6.初人純善無慝既變之後無人不染其污；7.上下神人已變天地萬物因之皆變；8.先天既變則羣魔王世而天國缺矣。 後天不變實義：1.上主救世之旨下降同人為後天之幹；2.後天新民之主兼配上主下人尊卑之二性；3.大聖降救之旨萬世萬民之望屬焉；4.救世大聖應期降誕非由人道；5.救世大聖之誕驗於異星之祥兆；6.大聖親立隐顯諸德之表永垂聖教；7.大聖躬負普世之罪祈禱於林囿；8.救世主甘心致命感通上下成上主下人復和之功；9.大聖守難時日月失常顯大異薄之象；10.救世主被無知者初笑虐而後敬畏；11.大聖自為祭品享大父而養人灵；12.大聖既崩臨灵地中携先聖出獄後復活升天；13.救世主命宗徒付以神化之權敷教萬方；14.救世主降祥降殃非至於無窮不足以勸善懲悪；15.普世萬民咸婦聖化成天國之一统；16.天地窮盡之期大聖再降公審善悪永叛生死吉凶；17.天堂地獄上昇下黜善悪永報之景象。
易数外篇	空

As seen in the above table, the *Inner meanings* 易理内篇 are also divided into two sections. Section one has 22 items regarding the cause of the loss of the Way and of the ancient learning, suggesting that China and the West share the

same roots and that the latter – the West - can rediscover the great Way and the accomplishments of the Sages of old. Section two is about the general instructions of the three meanings of *Xiantian* and *Houtian* 先天後天三義. It discusses *Xiantian*-unchanged 先天未變實義 in 8 items, *Xiantian*-changed 先天已變實義 also in 8 items and *Houtian*-unchanging 後天不變實義 in 17 items. The contents of these tables have been discussed in detail in other manuscripts of Bouvet's *Zhouyi* study.

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27-3. *Ze ji jing shu tian xue zhi gang* 擇集經書天學之綱

28-4. *Zong lun bu lie lei luo shu deng fang tu fa* 摠论布列类類洛書等方圖法

29-5. *Tian xiang bu jun qi kao gu jing ji jie (Ju gu jing zhuan kao tian xiang bu jun qi)* 天象不均齊攷古經籍解（據古經傳攷天象不均齊）

30-6. *Tai ji lue shuo* 太極略说

31-7. *Shi xian tian wei bian shi zhong zhi shu you tian zun di bei tu er sheng* 釋先天未變始终之數由天尊地卑圖而生

32-8. *Yi xue wai pian yuan gao* 易學外篇原稿（十三節）

33-9. *Yi xue wai pian* 易学外篇八節

34-10. *Yi xue zong shuo* 易学總说

35-11. *Yi jing zong shuo hui* 易经總说彙

36-12. *Yi gao* 易稿

37-13. *Yi yao* 易鑰

38-14. *Yi yao zi xu* 易鑰自序

39-15. *Zhou yi yuan yi nei pian* 周易原義内篇

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40-16. *Zhou yi yuan zhi tan mu lu* 周易原旨探目録 理數内外二篇

41-17. *[Shang yu]* [上谕，七月初五日上問白晉所釋易經如何了…]

42-18. *[Zou gao]* [奏稿. 初六日奉旨問白晉，爾所學易經如何了...臣係外國愚儒不通中國文義...容臣白晉同傅聖澤细加考究...]

43-19. *[Zou gao]* [奏稿.有旨問白晉，你的易經如何，臣叩首謹奏，臣先所備易稿粗疏淺陋，冒瀆皇上御覽…]

44-20. *[Zou gao]* [奏稿.臣白晉前進呈御覽易學總旨即易經之内意與天教大有相同…]

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