國立政治大學英國語文學系博士班博士論文

指導教授：陳超明 教授

Advisor: Dr. Chao-ming Chen

科學的卡萊爾：《衣服哲學》中的科學、物質、與科學家

The Scientific Carlyle: Science, Matter, and Scientists in *Sartor Resartus*

研究生：張惠慈 撰

Name: Heui-tsz Chang

中華民國 **99** 年 **1** 月

January 2010

The Scientific Carlyle:

Science, Matter, and Scientists in *Sartor Resartus*

A Dissertation
Presented to

Department of English,

National Chengchi University

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

by
Heui-tsz Chang
January 2010

To Orlando, Yuni, and Hilda

Acknowledgements

To write a dissertation is a lonely and isolating experience. It is impossible to accomplish this dissertation personally without the support of numerous people. My sincere gratitude thus goes to my advisor, my committee members, my parents, my friends, and my family.

In the first place, I would like to express the deepest appreciation to my advisor, Dr. Chao-ming Chen, who has the attitude and substance of genius in both research and teaching. His truly literary intuition has always made him an oasis of ideas to inspire me and to enrich my study whenever I was lost in thoughts. Without his encouragement, supervision, and support from the preliminary to the concluding levels, this dissertation would not have been possible.

I gratefully acknowledge my committee members, Dr. Han-ping Chiu, Dr. Ying-huei Chen, Dr. Chien-chi Liu, and Dr. Eva Y.I. Chen, for their reading of my manuscript and for their insightful guidance and helpful advice. They are always the model of literary scholars. My gratitude is also extended to the teachers who taught me at National Chengchi University, including Dr. Yuan-wen Chi of Academia Sinica. Their insightful instructions were the soil to nurture the growth of this dissertation.

I would also like to thank my parents, my sister and my brother. They were always supportive, encouraging me with their best wishes. I am indebted to my friends too, without whose encouragement and support this dissertation would never be finished.

Last but not least, I would like to extend my heartfelt thanks to my husband, Orlando. His support, encouragement, and unwavering love were the foundation on which our family has been built in the past eight years. To him, our son, Yuni, and our daughter, Hilda, I dedicate this dissertation.

The Scientific Carlyle:

Science, Matter, and Scientists in *Sartor Resartus*

The Table of Contents:

Abbreviations:

Sartor Resartus	*SR*
"Signs of the Times"	ST
"Characteristics"	CH

The Scientific Carlyle:
Science, Matter, and Scientists in *Sartor Resartus*

English Abstract

There are two purposes of this study. First, to dispel the myth that regards Thomas Carlyle as a sage or prophet and *Sartor* as an aesthetic unity, and, second, to debunk the myth that assumes a conflict between science and religion, matter and spirit, as well as between philosophers and scientists in Thomas Carlyle's *Sartor Resartus*.

Carlyle was traditionally supposed to be a "sage-prophet" who rejects science and matter, and *Sartor* was regarded as an aesthetic unity to transmit the Carlylean philosophy of religion and spirit. The two myths have been consolidated in many social, cultural, and literary studies and need reexamination.

This dissertation comprises four chapters. The first chapter deals with the demystification of Carlyle as an "Author-God" to generate new meanings and create a new genre. It also questions *Sartor* as an "aesthetic unity" to reflect the author's sagacity and to stand for a modern bible. To be interpreted through Michael Foucault's archaeological study, *Sartor* will be demonstrated as a discursive museum to exhibit the transitions and vicissitudes of thoughts in reference to science, matter, and scientists.

Chapter Two treats the religious significance of Carlyle's "Torch of Science." Through the theory of a mutually productive relationship between science and religion, this chapter will reveal the sacredness in the "Torch of Science." Not a destroyer of faith, the "Torch of Science" serves as a religious vehicle to explore the exterior/material world and the interior/spiritual universe. Instead of criticizing the "Torch," Carlyle encourages the proper use of science and expects spiritual reform

from the “Torch.” The main target of Carlyle’s prod thus is not the “Torch of Science” *per se* but its *status quo*, i.e., the abuse of science dominated by utilitarianism and mechanism.

In Chapter Three, based on his contemporary natural theology, the philosophy of “Natural Supernaturalism” will be analyzed as Carlyle’s belief in the mutually productive interrelations between spirit and matter as well as the visible and invisible. Never thinking matter as “litter,” Carlyle deems the spiritual and the material as two sides of wholeness, corresponding to and supporting each other. Never questioning man’s use of matter, Carlyle advises his reader to open their inner eye with faith, to penetrate the material form with fantasy, and to see God’s truth in the “whole.”

In Chapter Four, with the references to Carlyle’s personal experiences, “science” as a vocation in the 1820s and 1830s, and the philosophy of science and the scientist advocated by William Whewell, “Diogenes Teufelsdrockh” will be reanalyzed and reinterpreted as an ideal proto-scientist wandering and pondering solitarily in the dark. Moral, spiritual, religious, and philosophical, the scientific thinker purports to defeat the furtive invasions of mechanism and utilitarianism. Not simply “God-born Devil’s dung,” “Diogenes Teufelsdrockh” encapsulates the gist of Carlyle’s clothes philosophy: a wise speculative scientist searching for the truth of God hidden in every corner of the natural world.

Instead of criticizing science and matter, Carlyle in fact laments that man no longer trusts the invisible and the interior but has all his head, heart, and hand contaminated by mechanism and utilitarianism. For spiritual and moral reform, Carlyle places his hope on the scientist holding a Torch. Through the intertextual reading of *Sartor*, this study shows the interplay, conflict, conciliation, and evolution of the thoughts in reference to Carlyle’s contemporary concepts of science and religion, matter and spirit, as well as scientists and philosophers.

科學的卡萊爾：《衣服哲學》中的科學、物質、與科學家

中文摘要

本研究有兩目的：第一，打破卡萊爾為智者預言家，與《衣服哲學》為美學整體之迷思；第二，重探卡萊爾在《衣服哲學》中呈現科學／宗教與物質／精神二元對立之迷思。

在傳統的研究中，卡萊爾一向代表智者預言家，反對科學與物質；而《衣服哲學》則代表美學整體，忠實地傳達卡萊爾的宗教與精神哲學。然而在過去的研究中，有兩個迷思逐漸固化，而需再次檢驗。首先，卡萊爾為預言哲學家之說誤將卡萊爾視為超越主義之起源，而美學整體之說則誤認《衣服哲學》為一完整美學領域，內涵特定中心與主旨。其次，過去學者一致認同的科學／宗教與物質／精神二元敵對之說，也令人質疑，因為根據在二十一世紀初之科學宗教歷史的新研究，直至十九世紀末，包括卡萊爾在創作其《衣服哲學》期間（1830-31），科學與宗教之間並非互有惡意的敵對關係，而是複雜而互惠的交互關係。

本論文包括四個章節，第一章旨在重探卡萊爾具有「作者神格」及《衣服哲學》內含美學整體之說，試圖破除卡萊爾為意義與文類創造者之迷思，以及質疑《衣服哲學》能忠實呈現其「作者父親」之智慧賢能，並代表現代聖經之假說。以傅科之考古的歷史學研究為基礎，本研究將呈現《衣服哲學》為一論述博物館，陳列英國於 1820 與 1830 年間，關於科學物質方面的思想，並探討交錯於此觀念下各類論述的演變、交錯、與興衰。

第二章則探討卡萊爾在「科學火炬」中所內涵的宗教意義。透過二十一世紀科學宗教歷史的新研究，以科學宗教的互為生產關係為基礎，本研究發現科學之於卡萊爾並非宗教信仰之破壞者，反而是服務宗教的神聖工具，其「火炬」功能，不僅能挖掘外在的物質世界，也能深掘內在的精神宇宙。《衣服哲學》於是並非旨於批判「科學火炬」，而在宣揚其教化功能，宣導科學的善用，並期以科學之

火達到復興心靈及內在改革之目的。卡萊爾的真正批判標的，於是並非「科學火炬」本身，而是「科學火炬」的所處之境，也就是，世人的心靈因受實用主義與機械主義的支配，而造成對科學火炬之誤用。

根據卡萊爾同時期的自然神學，以精神／物質及可見／不可見之間互為生產的相互關係為基礎，第三章旨於重新檢驗卡萊爾的「自然超自然主義」。物質之於卡萊爾，實非無用而該摒棄之物，而是開啟精神之門的必要之鑰，因為精神與物質實為神的一體兩面，互惠與相互對應。實體之物，與無形之精神則同等重要。卡萊爾於是從未呼籲停用物質，拋棄衣物，他實則建議讀者應當張開其內心之眼，穿越物質之限制，真實看達上帝之真理。由外至裡，由實體至無形，此認知，才是真正對於神的「一體兩面」的完整認識。

第四章，根據卡萊爾的個人經驗、1820 與 1830 年間科學家一職的發展、以及威維爾的科學與科學家哲學，本研究將重新定義戴歐吉尼斯‧托服思卓空為一早期理想科學家的原型，也就是孤獨地在黑暗中流浪與沈思的智者。此科學之智者一方面道德與精神崇高，一方面又篤信哲學與宗教；他對於科學的致力研究，旨在對抗機械主義與實用主義對當代文化精神的鯨吞蠶食。「戴歐吉尼斯‧托服思卓空」之名，於是不應簡單地只代表著「生於上帝之魔鬼污糞」。透過對於當代的理想科學家形象之探討，此名所深含之隱喻於是展現：上帝之真理，深藏於自然物質世界之所有情境，甚至是任何不起眼之角落；只有透過沈思的智者科學家，深悟其宗教的使命，才有辦法開啟上帝之真理。

卡萊爾於《衣服哲學》中以嘲諷口吻所批評之對象，並非科學與物質，而是卡萊爾對世人的失望，因為世人不再相信看不見的內在精神事物，反而任由其腦、心、與手受控於機械主義與實用主義。卡萊爾於是期待改革，期許沈思的科學哲人手持神聖的科學火炬，引領世人進行改革，復興傳統的信仰、道德、與精神。透過文本與社會文化的互文閱讀，本論文於是呈現，收藏在《衣服哲學》論述博物館之內，關於宗教／科學、精神／物質、與哲學人／科學人等思想之交會、矛盾、相融、及衍生。

Introduction

Science *vs.* Religion

> "Never mind whether religion and science were really in conflict; they were increasingly *thought* to be in conflict." (Welch 34)

> "To change the image radically, what we have in the nineteenth century, from Schleiermarcher and Hegel on, is both a massive effort at mediation or synthesis, a uniting of theology and science." (Welch 37)

During the twentieth century, it was widely believed among the popular as well as the intellectual that there had been always warfare relationships between science and religion since the sixteenth century. The contentions triggered by the scientists such as Nicholas Copernicus (1473-1543), Johannes Kepler (1571-1630), Galieo Galilei (1564-1642), and Charles Darwin (1809-1882) were the typical examples to support the conflict theory. The Copernicus's astronomical revolution (1514), namely the heliocentric (sun-centered) theory, was extensively believed to be the initiation of the war between science and religion in history. After three-century struggles finally, for the warfare-theory believers, the scientific revolution at last reached its eventual victory and overcame religious authority in 1859, the year when Darwin published his *Origin of Species*.

Due to the ideology of the warfare relation between science and religion, some thoughts were believed always oppositional to each other. Deeply rooted in the twentieth-century minds, the concept of "science" implied the physical world, matter, reason, and truth, while that of "religion" referred to the invisible world, spirit, irrationality, and superstition. With these allusions, a scientist was supposedly a

rationalist and enlightened thinker, who embraced the faith of “to see is to believe.” To the contrary, a religious man was usually assumed intuitional and superstitious, not able to judge by reason but by instinct. To state more plainly, among the twentieth-century minds, concepts of science and the scientist signified cleverness and rationality while those of religion and the religionist denoted ignorance and muddlehead. The famous incident of the 1860 encounter between Bishop Samuel Wilberforce and Thomas Henry Huxley is one of the most persuasive examples to portray the idée fixes of a scientist and a religionist. This dramatic incident not only indicates the victories of science and reason over religion and superstition but also marks the ultimate break of science from religion and the scientist from the yoke of the Church.

I. The Huxley-Wilberforce Encounter in 1860

During the warring quarrels over Darwinism in the mid nineteenth century, a representative science-religion warfare opened fire between Wilberforce the Bishop and Huxley the scientist at a meeting of the British Association in Oxford on June 30, 1860. Soon after Darwin’s publication of *Origin of Species* (1859), Wilberforce and Huxley debated on the issue of evolutionism: Wilberforce poured scorn on Darwin’s evolution theory, while Huxley, the mouthpiece of the autonomy of science, bearded Wilberforce and defeated the “prelatical insolence and clerical obscurantism” (Lucas 1996). Since this dramatic event, Wilberforce then was illustrated as an emblem of the stubborn, banal, and irrational Church, and Huxley was as that of the clever, vital, and reasonable science. Not merely popular in the late nineteenth century, this historical event of the Wilberforce-Huxley encounter was prevalent during the early and mid

twentieth century as well.[1] William Irvine, for instance, once adopted this dramatic encounter to caricature the ignorant and muddleheaded bishop and to glorify the intelligent and rational scientist in his 1955 book, *Apes, Angels and Victorians: The Story of Darwin, Huxley, and Evolution*.

Even if popular, the 1860 Huxley-Wilberforce encounter however should not be considered a reality. In "Wilberforce and Huxley: A Legendary Encounter," J. R. Lucas states that even if "[t]he legend of the encounter between Wilberforce and Huxley is well established," the account yet "must be a largely legendary creation of a later date" (1996). In *Darwin's Forgotten Defenders: the Encounter between Evangelical Theology and Evolutionary Though*, D. N. Livingstone also argues that the 1860 encounter should be more fictional than actual (Livingstone 33-35) because there was never the first-hand reference recording the contents of the belligerent repartee between the two representative men.[2]

The two studies above share a common ground: the "history" of the 1860 religion-science encounter should be a legend, not a reality; it is more of a fiction fabricated by the later-day intellectuals. Lucas opines that this encounter is of significance because it denotes the divergence of disciplines. Before 1860, "a largely amateur and unprofessional public" could easily get on science (Lucas 1996). However, after 1860, science gradually became "more of a closed shop…from which amateurs [were] more and more excluded" (Lucas 1996). For Locus, the importance

[1] According to Colin Gauld's research, "References to the Wilberforce-Huxley encounter were found in 63 books. The earliest report was dated 1896 (republished in 1960) while the latest was 1991." In Gauld's research, it shows that among the 63 references about the meeting, the major emphasis of the encounter is not the substance of the speeches of the two significant men but the impressions of the two: the ignorant and conservative Wilberforce defeating the clever and rational Huxley. Cauld intends to prove from the references that, Wilberforce-Huxley encounter, whether a reality or not, is of powerful influence to strengthen the impression of a warfare relation between science and religion with the circulation of scientific knowledge (Gauld 2007).

[2] J. R. Lucas. "Wilberforce and Huxley: A Legendary Encounter" (http://users.ox.ac.uk/~jrlucas/legend.html) Originally published in *The Historical Journal*, 22, 2 (1979), pp. 313-330, This page was revised on May 31st, 1996, and most recently revised on August 17th, 2008. 2008 08 23. D. N. Livingstone. *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought.* Grand Rapids: Eerdmans, 1987.

of the encounter consists not in proving the conflict between two systems of thoughts but in signifying a cultural phenomenon; that is, during the end of the nineteenth century, science was no longer a study tolerating the participation of any unprofessional man, such as Wilberforce the Bishop. Around the 1860s, science should have already turned to be a "specialty in which non-professionals [were] disfranchised from the right to express an opinion" (Lucas 1996).

Livingstone brings up a similar opinion in his study as well, pointing out that the 1860 encounter might be an imagined legend popularly existing among the intellectuals of the 1890s. Similar to Lucas, Livingstone considers that, at the end of the nineteenth century, there was a rise of new scientists who intended to distinguish themselves from the influence of the Church and to strike out a new field of their own. Livingstone analyzes further that, inasmuch as scientists' consciousness of a necessary separation from the influence of the Church appeared in the 1890s, there would not have been vehement hostility between the bishop and the scientist during the 1860s, the age of Darwin's *Origin* being published. If the concept of warfare between science and religion was not yet concretized during the 1860s, among the amateurs or laymen in the years while Thomas Carlyle composed *Sartor Resartus* (1830-31), there should not have been thoughts of religious and scientific animosities against each other. Carlyle's criticism thus should not be targeted at science per se. Supposedly there might have been a more precise object that Carlyle intended to attack.

Though seeming not a reality, the imagination of a combative relation between science and religion in the past centuries was popularly circulated in every field of the studies in the twentieth century. Many disciplines in the academic studies had the concept of a warfare theory rooted. In the literary field, too, the ideology of a science-religion war, whether in an implicit or explicit way, dominated scholars'

analyses in the twentieth century. In the analyses of the early nineteenth-century writer like Carlyle, hostilities between science and religion as well as matter and spirit were usually supposed truths and hardly questioned.

II. Emery Neff's Study of Thomas Carlyle and John Mill

In the last chapter of *Carlyle and Mill* (1926), "Old Foes with New Faces," Neff concludes the three-hundred-page study with a deep regret: "Who knows how much more the cooperation of Carlyle and Mill, the intellectual leaders of the mid-century, might have accomplished?" (393) Once friends and admirers of each other, Carlyle and John Stuart Mill broke their friendship and became foes possessing opposite ambitions and styles. Neff considers that, due to "the incompatibility of their temperaments," the "design of cooperation" between the two representatives of the Victorian society became "fatal" (393). "Carlyle" and "Mill," in Neff's study, hence stand for two models of the recurrent battles between duel intellectuals: "the contrasting types like Mill and Carlyle, scientists and artists, positivists and transcendentalists, individualists and authoritarians, constantly recur in the world" (393-94). Their ideas, beliefs, values, thoughts, and methodologies to knowledge are so diverse that "[i]t is probable that their division will be eternal, or at least until the success of Carlyle's jestingly imagined 'Heaven and Hell Amalgamation Society'" (396). According to his own words, Neff determines that there is no possibility of any mutual interrelation between not only Carlyle and Mill but also the values they represent—science and art, positivism and transcendentalism, as well as reason and religion.

Titling his book *Carlyle and Mill: an Introduction to Victorian Thought*, Neff apparently indicates that Carlyle and Mill are two symbolic figures to represent two streams of ideas in the Victorian society. In the Neffian analysis, Carlyle is influenced

by German idealists while Mill by French Positivists; Carlyle is religious as well as spiritual while Mill scientific as well as materialistic. Within the two streams of thoughts, suggested by the metaphor of "Heaven and Hell," dwells bare interrelation but an unbridgeable gulf. Metaphorically, then, Neff asserts an ever confronting force of science in contrast to religion, matter to spirit, as well as a scientist to a religious philosopher. This assumption obviously takes for granted the binaries of science/religion, matter/spirit, and scientist/philosopher in Carlyle's age.

Though first printed in 1926, Neff's *Carlyle and Mill* was still influential in the mid-twentieth century and had its reprints in 1952, 1964, and 1974. The success of the Neffian study indicated that the assumptions of the breaks between science-religion, matter-spirit, and scientists-philosophers in the early nineteenth century were undoubtedly realities and generally agreed among scholars. In the twentieth-century researches, Carlyle unquestionably stood for the "philosopher" of "religion" and "spirit"—the keywords that could be synthesized by the term, transcendentalism—in contrast with the "scientist" of "science" and "matter."

III. Carlyle in M.A. Abrams's *Natural Supernaturalism*

Not merely belonging to the camp of religion in Neffian dualism, Carlyle also represents an artist to inherit the theological tradition of Christianity in M.A. Abrams's *Natural Supernaturalism* (1971). By applying Carlyle's term in *Sartor Resartus*, Abrams titles his remarkable study on Romanticism as *Natural Supernaturalism: Tradition and Revolution in Romantic Literature*. With Carlyle's paradoxical phrase, Abrams analyzes the common significance among Romantic poets and philosophers in both England and Germany. "Natural Supernaturalism" henceforth signifies a specific terminology to demonstrate the Romantic spirit—"to naturalize the supernatural and to humanize the divine" (68)—and to link the

revolutionary spirit of Romanticism with the Christian tradition in literature.

To categorize Carlyle's *Sartor Resartus* in the trend of Romanticism, Abrams supposes that Carlyle's protagonist, as other Romanticists do, undergoes a similar "self-formative educational journey" (Abrams 309). Like the Romantic poets, Teufelsdrockh wanders in the wild nature, "the solitude of the North Cape" (*SR* 135), to seek spiritual healings. Troubled by the spiritual crisis in a sense of insecurity between the outward chaos and the inner desire, the Romantic pilgrim journeys to quest possible reconciliations between the exterior disorder and interior harmony. In such interpretation, Teufelsdrockh's biography culminates at the moment of "The Everlasting Yea," in which, religiously, he perceives an ultimate omnipotent power that governs the order and harmony of the entire universe.

Purposefully, Abrams aims to apply Carlyle's "natural supernaturalism" to interpreting Romantic poets' secularized theology—Romantics unconsciously inherit the theological tradition of Christianity and transfer the religious concepts, images, and patterns to the secularized form in nature. Interpreted in this way, Carlyle's "The Everlasting Yea" is conceived as "a secularized form of devotional experience" (Abrams 65). To align religion with Romanticism, Abrams is contributive to revealing the "assimilation of Biblical and theological elements to secular or pagan frames of reference" (66) in Romantic poets. He argues that though considered hostile to Christian religion, the Romanticists could never escape the "religious formulas" that had been "woven into the fabric of our language" (66). In his analysis, "natural supernaturalism" hence represents a cardinal term to manifest the unbreakable Christian tie woven in the works of Romanticists as well as of Carlyle.

IV. Some Inquiries about the Studies of Carlyle and *Sartor Resartus*

Due to the science-religion conflict assumption (in Neff's study for instance) as

well as the unbreakable Christian tie woven in Carlyle's work (such as in Abrams'), the twentieth-century studies about *Sartor Resartus* usually explicitly or implicitly related the issue of transcendentalism to the work's unbreakable bond to Christianity.[3] Due to the work's umbilical cord linking religion and religion's hostile relation to science, the famous "Torch of Science" (*SR* 1) in the opening of *Sartor* thence turned to be a target of Carlyle's criticism. For instance, the "'Torch of Science' expels Mystery and reduces Creation to a material process," comments Tess Cosslett in *The 'Scientific Movement' and Victorian Literature* (1982: 1). In her analysis, Cosslett assumes that "science" is synonymous with rationalism and materialism. The mechanistic powers of reason and matter efface the intrinsic force originating from intuition and soul. The "Torch of Science" hence murders the Mystery of the Creation Myth in Christianity. Tantamount to a religious declaration, *Sartor Resartus* in Cosslett's analysis therefore aims to go for science, reason, matter, and mechanism. Instead of an exception, Cosslett's assumption was generally the agreement hinted or declared in the twentieth-century studies—Carlyle the transcendental philosopher should be of a Christian origin, devoting himself to criticizing science, matter, as well as the scientist.

However, as investigated by Lucas and Livingstone, if in reality there was neither apparent break nor vehement hostility but merely a fabrication of conflicts

[3] The issues of transcendentalism or religion can be discovered in the studies as follows: "*Transcendence through Incongruity*: the Background of Humor in Carlyle's *Sartor Resartus*." (Abigail Burnham Bloom. *The Victorian Comic Spirit: New Perspectives.* Ed. Jennifer Wagner-Lawlor. Aldershot, England: Ashgate: 2000. PP153-72.) Bloom's article is about Carlyle's usage of irony to reveal his idea of transcendentalism. "Coleridge in *Sartor Resartus*." (James Treadwell. *Wordsworth Circle.* 1998 Winter; 29(1): 68-71). This essay is about Carlyle's transcendentalism in relation to Coleridge's Romantic thought. "*Sartor Resartus*: A Philosophy of a Mystic." (Yukihito Hijiya. *The Carlyle Society Papers-Session* 1991-92. Edinburgh: Carlyle Soc..; 1992. PP41-50). Hijiya's article is on Carlyle's Romantic spirit, about the pilgrim's self consciousness and inner life. "'Shadow-Hunting': Romantic Irony, *Sartor Resartus*, and Romanticism." (Janice L. Haney. *Studies in Romanticism*. 1978; 17:307-33). "Adam-Kadmon, Nifl, Muspel, and the Biblical Symbolism of *Sartor Resartus*. (Joseph Sigman. *ELH* 1974Summer; 41 (2): 233-56). "The Pattern of Conversion in *Sartor Resartus*." (Walter L. Reed. *ELH*1971 Sept; 38(3): 411-31.) And "*Sartor Resartus* and the Problem of Carlyle's 'Conversion.'" (Carlisle Moore. *PMLA: Publications of the Modern Language Association of America* 1955 Sept; 70(4): 662-81.

between science and religion in the early nineteenth century, did Carlyle assuredly intend to design a story that simply targets science? If Carlyle indeed aimed to criticize science per se, why did he state definitely that he could not find any solution in either English or French philosophies but have to turn to the "scientific watch-tower" (*SR* 2) of the German to look for the key to straighten out his contemporary spiritual crisis? Or, if Carlyle indeed deemed that the modern science in his age was guilty of spoiling his contemporaries' spiritual progress, why did he declare his belief of an integration of man and nature as well as being and nothingness by stating, "This [the integration] is no metaphor, it is a simple scientific *fact*" (199)? Furthermore, if science was unquestionably in opposition to spirit and religion during his age, entirely synonymous to mechanism and materialism, why did Carlyle praise Teufelsdrockh's philosophy in one of the concluding chapters of *Sartor* with the phrase, "this [*Science of Clothes*] is a high one, and may with infinitely deeper study of thy part yield richer fruit" (203).

According to the evident passages found in Carlyle's own work, I opine that what Carlyle intended to criticize should not be the "Torch of Science" itself. Provided that Carlyle took his philosophy of clothes as a "science" and considered the philosophy to integrate the microcosm with macrocosm as a "scientific *fact*," the conception of "science" in *Sartor* should stand for a more positive and prominent meaning. The tendencies to take the "Torch of Science" as a negative term and as Carlyle's object of ridicule might probably be correspondent to the twentieth-century assumption of the science-religion struggle in the past centuries. The binary opposition of science and religion thus severed Carlyle the Christian philosopher from the "Torch of Science," simultaneously tagging religion with spirit and science with matter. The past analogy of religion with spirit and science with matter, gradually, caused the word "science" in *Sartor* an ambiguous term and made the reading of

Sartor a torturous journey. The warfare assumption in fact hardly helped understand the difficult work but incidentally created more obstacles to entangle the reader in the whirlpool of Carlyle's thoughts.

Therefore, what if there was not warfare relation between science and religion, matter and spirit, as well as scientists and philosophers/religionists during Carlyle's early age? What if in reality Carlyle did not directly aim at attacking "science" in *Sartor* but others? And what if during Carlyle's age there was positive correspondence than hostile belligerence between science and religion? To get rid of the haunting assumption of the warfare theory, I then intend to examine Carlyle's *Sartor* from a more positive viewpoint to treat the science-religion interrelation. With this new aspect, the Neffian binaries represented by Carlyle and Mill supposedly may be shattered, and Carlyle's imagination of an "Amalgamation" of "Heaven and Hell" may turn to be possible.

During the late twentieth and the early twenty-first centuries, doubting the conflict thesis, some scholars have started to reexamine the warfare assumption and expanded new discourses concerning the science and religion interrelationships.[4] Recent significant publications about interactions between science and religion include: "Dispelling Some Myths about the Split between Theology and Science in the Nineteenth Century" (1996) by Claude Welch, *Victorian Science in Context* (1997)

[4] Nowadays, there are many academic institutes working on the subject of "science and religion interrelation." For instance, Metanexus Institute in the United States is a global institute assembling scholars from departments of theology, history and philosophy of science, medical ethics, chemistry, and so on to deal with the subject of science-religion relationship. The website is http://www.metanexus.net/. In Cambridge University in England as well, there is The Faraday Institute for Science and Religion (http://www.st-edmunds.cam.ac.uk/faraday/). Other scholarly searches for the issue of "Science and Religion" can be found on the following websites: "Counterbalance: Science and Religion Project" (http://www.counterbalance.org/), "The Center for Theology and Science" (http://www.ctns.org/), "Science and Religion: Scholarly Organization and Resources" (http://www.religiousworlds.com/science.html), "Integral Science Organization: Individuals and their Works Relating to Integral Science" (http://www.integralscience.org/), "Science and Religion Forum: Seeking both Intelligibility and Meaning" (http://www.srforum.org/), "Institute of Religion, Science, and Social Studies" (http://www.religion.sdu.edu.cn/), "Global Perspectives: on Science and Spirituality" (http://www.uip.edu/gpss_major/), and "The Boston Theological Institute: Science and Religion" (http://www.bostontheological.org/programs/science_and_religion.htm).

edited by Bernard Lightman, *Science and Theology* (1998) by John Polkinghorne, *Consilience: The Unity of Knowledge* (1998) by E. O. Wilson, both *The Foundations of Dialogue between Science and Religion* (1998) and *Science and Religion: An Introduction* (1999) by Alister McGrath, *Rocks of Ages: Science and Religion in the Fullness of Life* (1999) by Stephen Jay Gould, *Science & Religion: A Historical Introduction* (2002) edited by Gary Ferngren, *Science and Religion 1450-1900: From Copernicus to Darwin* (2004) by Richard G. Olson, etc.

Generally, among these studies, there are general similarities. Firstly, they expect to discover new discourses within the supposed unbridgeable gulf between science and religion. Rather than oversimplifying the science-religion relation as severe hostility as the previous studies have done, the new studies intend to disclose possibilities and complexities between the two disciplines. Secondly, the new science-religion scholars unanimously believe that before the end of the nineteenth century, science and religion shared a mutual relation, supporting and corresponding to each other. In other words, between the two disciplines, there were harmony and interaction rather than malice and belligerence. Thirdly, these studies all agree that, instead of a reality, the conflict theory is more of a socially constructed discourse during the late nineteenth and the twentieth centuries. About a hundred years, the misconception of science-religion struggles has occupied our conception of the science-religion relation and misled our understanding of the past history. The new studies hence propose to expel the myth of the conflict assumption for the purpose of collapsing the disciplinary boundaries, looking for mutual interrelations among different fields of studies, and reexamining the past studies misled by the warfare thesis.

In this dissertation, the new study about the mutual interrelation between science and religion thus will be introduced to reexamine “the Torch of Science” in Carlyle’s

Sartor. Rather than getting bogged into the conflict discourse and simply criticizing science and matter based on the Neffian binary opposition, this study will have *Sartor* been analyzed by demolishing the borderlines between science/religion, matter/spirit, and scientist/philosopher in order to represent more faithfully Carlyle's concepts of "science," "matter," and "scientist." I will argue that, more than criticizing science, matter, and the man of science, Carlyle in truth perceives and foresees the danger of the possible breaks of the harmonious relations between science/religion, matter/spirit, and the literary man/the scientific man. By fabricating a Clothes Philosophy, in a ridicule tone, he then proposes to remind his contemporaries of the intrusion of materialism, mechanism, and utilitarianism that will bring about gaps and ruptures to break the integrated unity into two poles. Carlyle never aims at strengthening the break between science and religion or matter and spirit. Instead, anticipating and worrying the probable breaks of science from religion, matter from spirit, and the man of science from that of classics/religion, Carlyle in fact, on one hand, purports to criticize the utilitarian use of science as well as the materialization of religion among his contemporaries and, on the other, prospects to inform his readers of the true meanings, values, and uses of "science" and "religion."

There will be four chapters in this dissertation. The first chapter includes a literature review and an introduction of theoretical bases. From the review, this study will reveal the problems of the past analyses in reference to Carlyle and *Sartor*, that is, the beliefs in the sage theory and in the unity myth. From the theoretical discourses of Roland Barthes and Michael Foucault, the myth of Carlyle as a transcendentalist sage will be questioned and *Sartor* as an aesthetic unity to center the themes of spirit and religion will be dispelled. Freed from the sage and unity myths, both Carlyle and *Sartor* then will become texts and discursive sites to transmit the confrontations, transitions, as well as vicissitudes of diverse thoughts.

The second chapter will aim at justifying Carlyle's "Torch of Science" and revealing the "Torch's" religious significances. Via the reexamination of the new studies to assert the mutually productive relation between science and religion in the nineteenth-century England, the main target that Carlyle intends to criticize in *Sartor* will appear: it is not the "Torch of Science" *per se* but its *status quo*. In other words, instead of intrinsically problematic, science is criticized by Carlyle because his contemporaries use science improperly with their intentions dominated by utilitarianism and mechanism. For Carlyle, the "Torch of Science" is of religious powers. Rather than destroying religious faith, the Torch of Science" serves as a sacred vehicle to explore not only the exterior/material world but also the interior/spiritual universe. Accordingly, Carlyle never intends to avoid and criticize the "Torch;" instead, he encourages the proper use of science and even takes the "Torch" as a potent vehicle to restore and reform the spiritual world.

In the third chapter, the inseparable interrelation between spirit and matter as well as the indivisible mutuality between the visible and the invisible in *Sartor* will be explored. To analyze from the concept of natural theology that was once popular during Carlyle's early age, I will argue that Carlyle deems the spiritual and the material as the two sides of a unity—"a whole," or God—that always correspond to and support each other. Through his theory of "natural supernaturalism," Carlyle thus proclaims his faith in a mutually productive relation between the matter in the physical world and the spirit in the metaphorical world. Instead of a break between matter and spirit, from the matter in "nature" and the spirit in the "supernatural" Carlyle perceives the philosophy of a "whole." Matter should not be jettisoned; yet, the seer has to open his inner eye to penetrate the true philosophy clothed in matter. Since matter is significant to be the "purse" to cloak the spirit, Carlyle never advises to take off the Clothes or to break off from matter; rather, he instructs his reader to

open the inner eye and to be wise for seeing into the truth of the "whole."

In the fourth chapter, I intend to examine Teufelsdrockh the protagonist in relation to "science" by references of Carlyle's personal experiences, "science" as a vocation in the 1820s and 1830s, and the philosophy of science and the scientist advocated by William Whewell (1794-1866). As long as Carlyle opens *Sartor* with the "Torch of Science," the protagonist named Teufelsdrockh supposedly represents the holder of the Torch to propagate Science. If Teufelsdrockh is highly related to science, then, who is he? More than a literary man or a philosopher, Teufelsdrockh should be a proto-scientist, an ideal scientist to be moral, spiritual, religious, and philosophic simultaneously. As the mutual relation between science and religion, the relation between the literary/religious man and the scientific man is harmonious and correspondent as well. For the ideal man of science, the purpose of the scientific study, hence, is not for utilitarian application but religious exploration and spiritual improvement. In such circumstances, as a religious scientist, Teufelsdrockh reveals that, on one hand, science is moral and religious during Carlyle's early age, and on the other, a scientist's task is to discover the principle of God's law in nature and to practice His love and wisdom hinted in the principles.

In Coda, there will be concluding remarks about struggles and negotiations of the thoughts in "Carlyle" and "*Sartor*." First, not simply a Victorian sage to seek religious solace and spiritual progress by creating Teufelsdrockh, "Carlyle" as a proper name indicates the confrontations, conflicts, and compromises of the ideas of science/religion, spirit/matter, as well as the literary/religious man/the scientific man in the 1820s and 1830s. Secondly, more than an aesthetic unity to illuminate transcendentalism, *Sartor* as a discursive museum exhibits the quarrels and alterations of the conflicting ideas in reference to science/religion and matter/spirit. As indicated by G. B. Tennyson that "Carlyle's scientific inclinations have never been very

thoroughly explored" (21 note), hopefully, this study will provide new insights into "Carlyle's scientific inclinations" and new thoughts on science and religion around 1820s and 1830s in England through the perspective on the nineteenth-century science-relation relations.

Chapter One

Carlyle, a Victorian Sage?

> In English departments in particular…it has been unthinkable entirely to ignore the prose writings of figures such as Carlyle, Arnold, Ruskin, and company. But at the same time, it has been hard to know quite what to do with them. (Collini 14)

> [It is] language which speaks, not the author. (Barthes 168)

> [A] text is made of multiple writings, drawn from many cultures and entering into mutual relations of dialogue, parody, contestation. (Barthes 171)

I. Introduction

Walter Whitman highly praised Thomas Carlyle as "a representative author, a literary figure" (par. 2) of the nineteenth century in an elegiac prose. For Whitman, it was not merely Carlyle's "literary merit" but his "touch of the old Hebraic anger and prophecy" (par. 5) that made him a great poet of his age. Whitman then added further that it was not appropriate to use the term, "prophecy," to describe Carlyle's value; rather, "prophet" would be proper since "it mean[t] one whose mind bubble[d] up and pour[d] forth as a fountain, from inner, divine spontaneities revealing God" (par. 5). Three decades later, in Robert Huntington Fletcher's *A History of English Literature* (1918), Carlyle again was praised as "a social and religious prophet, lay-preacher, and prose-poet, one of the most eccentric but one of the most stimulating of all English writers" (Par. 1). Since then "prophet-poet" was almost synonymous with Carlyle from the late nineteenth century to the early twentieth.

Due to Whitman's appreciation and the early twentieth-century scholarly appraisal, "Thomas Carlyle" the name almost equates the term, sage-prophet, during

the years from 1860s to 1980s.[5] *Sartor Resartus*, reflecting its author's sagacity, hence stood for a modern spiritual-bible to moral- and life-philosophy. To ally Carlyle to a sage and *Sartor Resartus* to the Bible, generally, the traditional twentieth-century scholars all agreed that, firstly, Carlyle was a conscious "Author-God" purposefully creating a unique philosophy, elevating Carlyle as the founder of nineteenth-century transcendentalism. Secondly, *Sartor Resartus* was an aesthetic unity structurally organized and rhetorically coherent to center Carlyle's theme of moral philosophy of man and man's life.

The "sage-prophet" discourse was problematic because, to take the author as an ultimate creator and the text as a complete unity, scholars mistook the author as the origin to produce meanings, and the work as an artistically-arranged structure of an aesthetic unity. They opined that, first, the author was able to create a never-said discourse, able to dominate the meaning, to work for the author's own intent, and able to combine all contested meanings congenially to each other. Second, they supposed that there was necessarily an aesthetic unity to the work to combine the rhetoric, imagery, structure, and theme in the work via the author's intention, forming compatible interrelations between author and work. A critic, consequently, was responsible for revealing the center of the work and to discover the aesthetic interrelations hidden within the labyrinthine meanings. Based on these assumptions, the twentieth-century traditional studies of Carlyle and *Sartor* thus mainly focused on the aesthetic unity of the work and the moral purposes of the author.

To regard Carlyle as a prophet-sage and *Sartor* as a moral-philosophical instruction, the traditional scholars in fact sanctified both the author and the book. To be hallowed, the author was supposed to precede the book to "*nourish* the book"

[5] Around 1930s and 1940s, however, due to the rise of Nazism and the eruption of the Second World War, Carlyle lost his reputation of a prophet-poet for his early affiliation with Goethe and Schiller as well as his enthusiasms about German Romanticism and transcendentalism (Tennyson 1984: xiv).

(Barthes 170). The author and the book hence "[stood] automatically on a single line divided into a *before* and an *after*" (170). For instance, the author, Carlyle, stood for the father of the book, *Sartor*, which represented the child to deliver faithfully the father's idea and for posterity. Carlyle, the transcendentalist, then spontaneously left his noble spirit to his child, *Sartor*. "Carlyle," as the name of the father, thus typified the center of thoughts, and *Sartor*, as a pious child, signified an aesthetic unity to convey the central idea of the author-father, Carlyle. The author-father was sacred and noble, since he was the fountainhead originating thoughts and wisdom, and the book-child was stable and dependable, because the lessons pouring from the book were true to the author's intention. There seemed to be clear boundaries between the author-father and the book-child. The father-author stationed himself high in heaven to leave his message in his book-child in the mundane world. The responsible and trustworthy book-child never betrayed the father's command and never diverged from its duty of advice, instruction, and moralization. According to such an interpretation, there were necessarily the stable and reliable interrelations between Carlyle the author-father and *Sartor* the book-child.

The hallowed author-child assumption of modern studies, however, overvalues the author. Due to the characteristics of the meanings—neither transparent nor steadfast—the author is by no means the ultimate origin and the sole creator of the work and the work itself is on no account an aesthetic unity able to combine the conflicting opinions and to work for morality only. The position of Carlyle, instead, should not be as high aloft as heaven but an indexical node to point a convergence of multiple discursive practices among the complex web of meanings. More than a transcendental figure to "create" meanings, the author should be regarded as an agent to transmit "already-said" meanings.

Furthermore, the hallowed author-child assumption also misinterprets the

book-child as a closed territory. Meanings, however, due to their characteristic referring and deferring, are never stable within an assumed intact-border of the work. Meanings thus exceed the supposed boundaries of the book form, flowing across the imaginary boundaries of the work. Without any limits, the completion of the work and its aesthetic unity hence never exists but turns out to be merely the New Critic's romantic imagination. Instead of taking the work as an accomplished art, late twentieth-century scholars then replace "work" by "text," to highlight the attributes of borderlessness and intertextuality. Since they are borderless, meanings of a text can no longer be self sufficient but will be interrelated to the contexts of the text itself. The text is never independent but always relying on other texts.

To regard a work as a text, then, neither the author is the origin of meanings nor is the text the end of meanings. The "author can only imitate a gesture that is always anterior, never original" and the "the book itself is only a tissue of signs, an imitation that is lost, infinitely deferred" (Barthes 170). Namely, neither is the author a sanctified "Author-God" nor is the work an artistic unity and of biblical-like guidance. Meanings, whether the "already-said" or the "never-said" (Foucault *Knowledge* 25) stream through the book, flowing over the bound of the book itself, even, over the author's intentional control.

Provided that "a text is not a line of words releasing a single 'theological' meaning (the message of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash" (Barthes 170), then, does "Carlyle" still represent, as in George P. Landow's *Elegant Jeremiahs*, one of the "far-off Hebraic utterers, a new Micah or Habbukak" to "bubble forth [his words] with abysmic inspiration" (21)? On condition that the "*oeuvre* can be regarded neither as an immediate unity, nor as a certain unity, nor as a homogeneous unity" (Foucault *Knowledge* 24), then, does *Sartor* still represent, in John Holloway's prominent *The*

Victorian Sage, an aesthetic unity "to express notions about the world, man's situation in it, and how he should live" (1)?

Simply put, what is Carlyle? Is Carlyle indeed a sagacious Author-God, not only generating new meanings of Victorian prophecy but also creating a new form of the sage-prose writing? And what is *Sartor Resartus*? Is *Sartor* indeed an aesthetic unity, not only faithfully conveying the Author-God's meanings and independently standing for other meanings?

The purpose of this chapter hence is to reexamine "Carlyle" the author and to review "*Sartor Resartus*" the text from the concepts of the author and the text. Instead of honoring Carlyle the sage-philosopher and lauding the aesthetics and the morals in *Sartor* in the manner of the New Critics of traditional studies, I shall, first, reconsider Carlyle the author from the concepts based on Barthes's death of the author and Foucault's author function, and second, to review *Sartor* the text from Foucault's archaeological viewpoint. With the interrogation of the author's status and the work's unity, I will argue that, first, more than a stereotype of a Victorian prophetic sage, "Carlyle" functions as a proper name to indicate the adaptation, transformation, and modification of certain ideas such as science, religion, matter, spirit, nature, the supernatural, scientists, and philosophers. Second, more than an aesthetic unity about the spiritual elevation of a lost philosopher, *Sartor* the text stands for a discursive site of the confrontation, conflict, and contradiction of multiple voices, resembling a museum that exhibits the ideas such as the visible, the invisible, the wise, the foolish, the Baconian scientist, and the Newtonian scientist of early nineteenth century Britain.

Before freeing the author and the work from the traditional myths of an all-powerful "Author-Father" and an obedient "book-child," this study will start with a review of the past studies in reference to Carlyle and *Sartor*. This review is of two

purposes: on one hand to discover the confinements of previous studies and on the other to delve into the blind points for further breakthrough. After an epistemological review of the Carlyle studies in the past centuries, then, there will be the interrogations of the author and the work to succeed.

II. The Modern Interpretations of Carlyle and *Sartor Resartus* and Their Problems

(1) The New Criticism

With regard to the studies concerning Carlyle and *Sartor*, Emery Neff, who published *Carlyle and Mill* in 1926 and *Carlyle* in 1932, can be said to be the pioneer of Carlylean studies. The earliest scholar of the New Critic trend, Neff focused his studies on the historical events during the nineteenth century, Carlyle's biography, Carlyle's literary purposes and Carlyle's moral lessons. In Neff's analysis, "Carlyle and Mill," the two representative figures of the nineteenth century stand for the models of intellectual opposites in the recurrent philosophical battles: "the contrasting types like Mill and Carlyle, scientists, and artists, positivists and transcendentalists, individualists and authoritarians, constantly recur in the world" (1974: 393-94). Neff's analysis is typically the dualism to divide good from the evil, religion from science, transcendentalism from positivism, as well as spirit from matter. For instance, Carlyle is regarded as a stereotypical spiritualist, moralist, and transcendentalist, while John S. Mill (1806-73) is the stereotypical figure symbolizing a utilitarian, mechanical, and scientist. Even if not openly declaring it, Neff in fact praised Carlyle greatly and took sides with him because, during the early twentieth century, the demand for moral lessons and spiritual sublimation in literature still prevailed. Neff's dualism in analyzing Carlyle and Mill also indicates the significance of literature to conduct social responsibility.

After Neff, however, the studies concerning Carlyle and his "non-fiction prose" were slumberous because during several decades from 1930s to 1970s, the dominant Anglo-American studies fell into the myth that, as Stefan Collini comments, "the almost religious significance attached to the concept of 'literature' was coming to be focused on the Holy Trinity of poetry, drama and the novel" (16).[6] "[N]on-fiction prose," neither poetry, nor drama, nor the novel, was ignored because its form, "nearly limitless" (17), resisted any categorization. Hardly defined and classified, the study of non-fiction prose then undergone a spell of neglect. Not until the heyday of New Criticism during the 1950s and 1960s was there increased debate of the legitimacy in research of "non-fiction prose writing," including those of Carlyle's, in orthodox Anglo-American literary studies. A group of scholars, kindled enthusiasm for legitimating the studies concerning not only the works of Carlyle, but also those of John Newman (1801-90), John Ruskin (1819-1900), and Matthew Arnold (1822-88). These scholars discovered the similarities in rhetoric techniques, aesthetics and morals among non-fiction prose writers and started to categorize these writers and their works. The studies of the "non-fiction prose" henceforth increased from the 1950s and peaked during the 1960s.

In order to legitimate non-fiction prose writings, John Holloway published *The Victorian Sage: Studies in Argument* in 1953, intending to define a new category for the non-fiction prose writers in the literary field. In his study, Holloway on one hand redefined writers, titling Carlyle, Newman, Ruskin and the others as "Victorian Sages," and on the other, generalized the aesthetics, literariness, and purposes (morals) in the "sagistic writings." Holloway assumed that during the Victorian age, a new mode of literary genre, "sagistic writing," had sprung up—in the form of the

[6] The other reason for the stillness of the Carlyle study is the taboo of Nazism and Germanism during and after the Second World War.

"non-fiction prose" and for the purpose of moralizing. He further induced that among these sagistic writings, there were several attributes in common. First, "[t]heir work reflect[ed] an outlook on life, an outlook which for most or perhaps all of them was partly philosophical and partly moral" (1). Namely, the sagistic writings were of enlightening purposes, aiming to lead the reader to a philosophical and moral life. Second, in order to "[quicken] the reader to a new capacity for experience," the sages "work[ed] in the mode of the artist in words…, by virtue of an appeal to imagination as well as intelligence, and by virtue of a wide and subtle control over the reader's whole experience" (10). That is to say, the sages were conscious of the difficulty to conduct the reader to "the good" and hence skillfully applied literary techniques of imagination and narrative to tempt the reader's interest.

Holloway justified the studies of non-fiction prose in *The Victorian Sage* through categorizing the common ground of their purposes and deducing the universality of the literary techniques among the non-fiction prose writers. He reasoned that on the surface the sages argued differently in theories, but in a deeper sense, they were characteristically the same in adopting "illustrative incidents" (12) and their use of "figurative language" (13) to turn their difficult arguments into simple stories for their reader's to grasp their meaning. Different in opinions, all of the Victorian sages were keen to "[quicken] the reader" (13) with their new philosophies by similar techniques. The sages hence on the one hand were conscious of their contemporary socio-cultural problems and on the other aware of their duties to rectify the people. In Holloway's criticism, for instance, the Victorian sages acknowledged their outstanding intelligence and reckoned themselves to be above the common people and piercing into the future and managing the hereafter. Holloway's sages hence were saints, standing aloft beyond the masses by their sensitive perceptions and special mission.

Among all of the prose writers in Holloway's *The Victorian Sage*, Carlyle was the most typical model of the traditional sage, one who adopted illustrative incidents and figurative language to create easily the understood knowledge for the "Life-Philosophy" (Holloway 21). In purpose, Carlyle "want[ed] to state, and to clinch, the basic tenets of a 'Life-Philosophy'" (21), and he believed that "Knowledge of God comes from confident belief in Him" (22). In literary method, Carlyle was gifted in using "Biblical language" and "wildest rhetoric" (24) to create persuasive effect and to succeed in his moralizing purpose. Holloway considered that *Sartor*, "In a word…[was] *anti-mechanism*" (23). To convey this central tenet, in Holloway's view, Carlyle adopted three techniques to achieve the purpose of "*anti-mechanism*" in his philosophy. First, he used "a wild, passionate energy run[ning] through [his work], disorderly and even chaotic, but leaving an indelible impression of life, force, vitality" (26). Second, Carlyle was gifted in using "the dramatization of discussion" (27) to give impression to his readers. The third feature of Carlyle's work was his prosperous usage of figurative language in rhetoric devices that not only helped his readers easily become involved in the mythic character but also, most importantly, create the literariness of his work, pushing his work into the legitimate category of English literature.

Holloway's study, principally, aimed to recognize the legitimate status of the non-fiction prose writings in literary studies, to compete the non-fiction prose with the Holy Trinity of poetry, drama, and the novel. Even if declaring that his study was "not evidence for one theory" (290), in fact, Holloway achieved redrawing the boundaries of "non-fiction prose" writing and to redefine the limitless genre through the purpose and technique. His definition of "sage literature," though, was not theoretically successful, and stirred up a wave of "drawing the boundaries" for non-fiction prose later. During the 1960s, there was proliferation of the studies concerning the "sagistic

writing." For instance, G. B. Tennyson's subtle investigation of *Sartor Resartus* in *Sartor Called Resartus: The Genesis, Structure, and Style of Thomas Carlyle's First Major Work*, published in 1965. Edited by George Levine and Lionel Madden, *The Art of Victorian Prose* appeared in 1968. Albert J. LaValley published *Carlyle and the Idea of Modern: Studies in Carlyle's Prophetic Literature and its Relation to Blake, Nietzsche, Marx, and Others*, and George Levine issued *The Boundaries of Fiction: Carlyle, Macaulay, Newman* in 1968 as well. The interest in drawing boundaries for non-fiction prose multiplied further during the 1970s and the 1980s. The latest study to emphasize the "style" and "technique" of the "sage writing" was George Landow's *Elegant Jeremiahs: the Sage from Carlyle to Mailer*, published in 1986.

Landow, similar to but more confident than Holloway, endeavored to redefine the "genre of the Victorian sage" and elucidated the literariness and aesthetics of non-fiction prose writings. He assumed that the sagistic writing was unique because it was neither simply fiction due to its specific moral purpose, nor sermons, due to its trait of imaginative narrative. In a revised and condensed article, "Elegant Jeremiahs: The Genre of the Victorian Sage," published in 1989, Landow redrew the boundaries of the non-fiction prose by comparing the sagistic writings with the sermon and the novel. "[B]y clarifying some of this genre's basic themes and techniques," Landow "suggest[ed] how to relate sagistic prose to other genres, such as the novel and sermon" (38), and illustrated the differences and similarities among the three genres. After the comparison, Landow then concluded that, though formally similar to the novel and rhetorically akin to the sermon, the Victorian sages' non-fiction prose had its singularity obviously distinct from the novel and the sermon. That is to say, there should be clear-cut boundaries differentiating non-fiction prose from the other two genres.

In order to delineate the borders of the genre, Landow firstly defined the writers

of the non-fiction prose as prophetic sages, employing Whitman's praise of Carlyle: "Walt Whitman, we remember, commented that 'Carlyle was indeed, as Froude terms him, one of those far-off Hebraic utterers, a new Micah or Habbukak. His words bubble forth with abysmic inspiration,' and he approvingly quotes Froude's description of him as 'a prophet, in the Jewish sense of the word'" (21). With Whitman's account, Landow demarcated a specific group of writers resembling the Hebraic prophets who spoke "abysmic inspiration" to alter the common people's will and behavior in an age of turmoil.

Secondly, Landow outlined the features of the sagistic writings. To compare the Victorian sage with the interpreter or the exegete of the Old Testament, Landow argued that "the [Victorian] sage … read the signs of the times" (22) as the sages did in the Old Testament, and thus, in content, both the ancient and the Victorian sages expressed their concern for contemporary unrest and future happiness. That is to say, both sagistic writing and sermon shared similar purport and profundity. Technically, however, the sagistic writing was more complicated than that of the sermon. Landow argued that the "Victorian sage…adopt[ed] not only the general message of the Old Testament prophet but also the quadripartite pattern"[7] (23) to create an "*ethos*" (25) of implicit persuasion.[8] Different from the sermon that instructs and admonishes with a threatening tone, the sagistic writing was more acceptable with its imaginative narrative and placid tone. More refined in rhetoric and more philosophical in content,

[7] According to Landow's definition of the quadripartite pattern of the Old Testament prophet writing is:

> first…called attention to their audience's present grievous condition and often listed individual instances of suffering; second, they pointed out that such suffering resulted directly from their listener's neglecting—falling away from—God's law; third, they promised further, indeed deepened, miseries if their listeners failed to return to the old, and forth, they completed the prophetic pattern by offering visions of bliss that would be realized if their listeners returned to the ways of God. (1989: 23-24)

[8] Landow believed that the Victorian sage writers generally operated this implicit persuasion while preaching. Within implicit persuasion, the sage seemed to state to his audience that "'I deserve your attention and credence, for I can be trusted, and no matter how bizarre my ideas or my interpretations may at first seem, they deserve your respect, your attention and ultimately your allegiance because they are correct and they are necessary to your well-being'" (1989: 25).

non-fiction prose hence was deserving of scholarly attention. Due to these three specific features—prophetic sage, moral purpose, aesthetic rhetoric, and amicable tone—Landow then justified the study of non-fiction prose and simultaneously made "the discursive prose of the Victorian sage a valuable literary exercise" (Clubbe x).

From the 1950s to the 1980s, from Holloway's suggestion of a probable genre to Landow's confident clarification of a distinct genre, and though there were differences in argument, studies concerning Victorian non-fiction prose shares two common traits. First, these studies basically belonged to traditional New Criticism, for they especially emphasized the aesthetics, literariness, and unity of the sagistic writing. Second, their efforts to legitimate non-fiction prose writings not only boosted the status of "non-fiction prose" to the level of imaginative writing but also disengaged the spell of "background" and "context" haunting "the non-fiction prose" (Collini 4). In other words, with the wave of the study of the sagistic writing, these scholars purposefully promoted non-fiction prose study to weigh equally with the "Holy Trinity" of literature in orthodox Anglo-American literary studies.

Among these enthusiastic studies of the Victorian sage, however, there were in general two problems. First, the definition of "the conscious prophetic sage" composing didactic non-fiction prose is problematic, for traditional scholars seemed to mistake the author to be God-like. The non-fiction prose writers were generally considered to be wise philosophers who knew well the past, saw through the present, and previewed the future. Not only did their contemporaries take the prophetic philosophers as wise sages, but also the philosophers themselves were conscious of their specific position to shoulder the duty of conducting the people. Hence, in their writings, the sagistic prophets consciously warned the reader to be good and pure for the ultimate salvation. Their dictating tones to warn and to persuade implicitly suggested that the sages took themselves to be wiser than and superior to the common

people. They were not only “authors” to write and to warn but also “God’s messengers” to guide and to protect the people. Besides the author himself and his contemporaries, modern critics also elevated the sage’s status to that of the ancient saints: “Readers of Carlyle and Ruskin similarly perceived their obvious indebtedness to Jeremiah, Isaiah, Daniel and other Old Testament prophets” (Landow 21). The sainted position lifted the author to a quasi-divine status like God; the sage hence turned to be a “God-Author” of the people and a “father-author” of the work. That is to say, the sage-author was endowed with omnipotent powers in the New Critical studies.

The second problem of the traditional study was the modern critics’ expectation of a harmonious aesthetic unity to the work. Due to the modern critics’ emphases on literariness and rhetoric, the sage’s works were considered to possess a unified cosmos in which dwelled an inner balance and an aesthetic harmony. Every image and symbol hence should be well-interrelated with each other, and the similes and metaphors were doubtless well-designed. The work itself was an impenetrable and confined unit, without any conflict or contradiction, and without any relation or kinship linking the external world. In a word, in the New Criticism, both the Victorian prose writers and their works were contained within the generic border of the sagistic writing. The author, termed as a “sage,” was a wise philosopher who spoke God’s language to command the people, and the work, the non-fiction prose, was a well-arranged art due to its definite rhetorical devices and distinct thematic concerns.

However, is the author indeed the ultimate origin of meanings or a God-like designer that speaks first? According to Barthes’s “The Death of the Author,” if meanings are never stable but always referring to other meanings anterior to themselves, what the author says is never the initial meaning. The author, in Barthes’ view, is more of an imitator of mixed meanings than an originator of all-powerful

meanings (170). Further, is the work itself really a unified and stable completeness without any break, but concentrating entirely on a noble theme? As long as meanings are never neutral but always referring to other meanings, textually and contextually, meanings hence ought to overflow the boundary of the work and connect other meanings. A work, hence, is by no means the end of all meanings but one node among meanings. Through trying to legitimate the study of non-fiction prose by canonizing the author and the work and sealing them in sainted positions, the New Critical scholars have overvalued the author's originality and overlooked the meaning's textual and contextual reference and deference. The plan of legitimating non-fiction prose in the literary study, hence, met its bottleneck at the end of the twentieth century. Luckily however, cultural criticism during the 1990s opened-up new perspectives for the Victorian prose research.

(2) Cultural Criticism

After the studies on "sagistic writing," the New Critical studies concerning Carlyle and the other Victorian prose writers decreased. The wave of the "cultural criticism," greatly influenced by Raymond William's *Culture and Society* published in 1958, might be the main reason. The term, culture, smashed the boundaries of the book and created new subjects. Rather than focusing on artistic style, aesthetic form, and literary technique, the cultural-critical scholars at the end of the twentieth century turned to take intertextual relations into consideration.

One of the prominent studies to examine Carlyle and *Sartor* from the aspect of cultural studies and intertextual relations was Ralph Jessop's *Carlyle and Scottish Thought*, published in 1997. One of the most successful cultural studies of Carlyle by far, Jessop's study can be divided into three parts. In the first, Jessop reconsiders Carlyle's status in the academic field of philosophy, not literature. Rather than taking

Carlyle as a literary figure in nineteenth-century literature, Jessop relocates Carlyle among his contemporary Scottish philosophers and reexamines Carlyle as a philosopher in the school of "Reidian Common Sense" (15-26). In the second part, Jessop illustrates Carlyle's relations with his contemporary Common Sense philosophy and details Carlyle's theories. Further, Jessop also expounds the common agreement between the philosophies of Hume, Reid, Hamilton, and Carlyle philosophies.

The general argument of the Common Sense Philosophy, in short, is the belief of a harmonious relation between the dualistic oppositions. For the Common Sense philosopher, there should not be any distinct break between the two extremes of "the heaven and earth, light and darkness, the mind and the body" (107). The Reidian philosophers prefer to "propose a philosophical position" by choosing the "middle way between the extremes of alternative monistic systems" (106), that is, between idealism and materialism. Rather than relinquishing the mind in materialism or the body in idealism, the Common Sense philosophers "perceive mind as analogous to matter" (107) and intend to harmonize the two extremes. One of the Reidian philosophers in the Common Sense Philosophy, Carlyle believes in an amicable relation between mind and body, heaven and hell. In the third part, Jessop thus discusses Carlyle's short essays and *Sartor* in regard to the Reidian philosophy. Jessop argues that Carlyle's text "strives to unify mind and body, faith and skepticism, it ultimately accepts that any humanly achieved harmonization of the polarities dividing human existence is achieved only through struggle and is flawed by the very ceaselessness of the quarrel between the two" (14). In Jessop's interpretation, Carlyle's mind-body philosophy is similar to Hegel's dialectic.

Besides Jessop's literary-philosophical study on Carlyle, from the end of the twentieth century to the present, there were few scholars interested in Carlyle and his

Sartor. Even if the New Critics once intended to elevate the literary position of non-fiction prose, the study of "non-fiction prose" in fact is still unpopular at the end of the twentieth and into the early twenty-first centuries. It is probably because, as Collini frankly points out, "In English departments in particular…it has been unthinkable entirely to ignore the prose writings of figures such as Carlyle, Arnold, Ruskin, and company. But at the same time, it has been hard to know quite what to do with them" (14). The limitlessness of non-fiction prose unfortunately does not enlarge the scope of study but seem to restrict it instead. Hoping to open up more territories for more fruitful discussions, Collini then suggests a new method that blends the advantages of New Criticism and William's *Culture and Society* may probably assist to unfold new visions.

In "From 'Non-Fiction Prose' to 'Cultural Criticism,'" Collini then tries to find a middle way between New Critics' sage writing theory and Williams's cultural criticism in order to break new ground for further discussion of non-fiction prose writings. In both New Criticism and Williams's cultural criticism, Collini finds their flaws. He argues that the New Critics' sage writing theory mainly focuses on "the tensions and limitations in the category of 'literature'" (21). That means that the critics are ambitious to equal non-fiction prose writings with the "'fictional' status of discursive and novelistic prose" (21). Hence, literary techniques in the work's unifying cosmos become the gist in the New Critical studies. The emphases on the "imagination" and "literariness" however fall into a bias against the cultural and ideological significances in the work itself, since New Criticism makes the writers "an annexe to a narrowly formalist conception of 'literature,' which, among other things, led to a neglect of *what* they were saying as a result of an excessive emphasis on *how* they were saying it" (26). That is to say, the new critics assess too much the form than the content of the prose writer, overemphasizing the significances of the literariness in

non-fiction prose. In order to modify this flaw of the sage writing theory, Collini then recommends Williams' *Culture and Society* with regard to socio-cultural significance as a valuable means to balance the formal inclination and to produce new possibilities.

For Collini, like the sage writing theory, Williams' cultural criticism, however, has its own weakness too: it creates "a sharp binary division in English intellectual history of the period." A Marxist, Williams overvalues the opposing camps between the dominant liberal culture represented by utilitarians and traditional ethics represented by moralistic elites. This binary division tends to create a good versus evil contradiction: the one who clings to the trend of the moral tradition is good while the other who obeys the hegemonic liberal culture is evil. Neff's binary opposition that compares Carlyle the moralist and Mill the scientist is one of the examples resembling Williams's "tradition and culture" criticism. Collini criticizes Williams' division as too oversimplified and distorting, because Victorian society is thus split into two sharp groups:

> on the one hand, a hegemonic position made up of laissez-faire liberalism in politics, rational economic man in political economy, and the priority of individual liberty in social ethics; and, on the other hand, a tradition of protest or critique embodying a more holist, more spiritual, more 'romantic', and ultimately more generous notion of human life and social relations. (24)

Within William's binarism, traditional writers such as Carlyle, Ruskin, and Arnold represent contributors promoting the key ideas of morals and the moral instructors to guide the development of the people and the society. These moral sages stand up for the good tradition, that is, "the ideas of the moral health of the nation, of human wholeness, or of the distinctiveness of human spiritual or imaginative activities"

(Collini 23). They are great defenders who consolidate ethical values and guard against the utilitarian invasion according, to Williams' argument.

Collini, however, argues that there is fallacy in Williams' research of the Victorian moralists' moral defense against bourgeois culture: "'This is Victorian society against something that is also Victorian society', or in other words that the moral values, social ideas and persuasive resources they draw upon are not 'set over against social actuality', but are among the parts of that actuality'" (24). That is to say, Williams's attempt to unveil the actuality of society by the division between the tradition and the culture in reality opposes the actuality itself, since the dominance of utilitarian culture in the Victorian society is in reality the actuality of the society.

Collini hence claims a more balanced study to open-up a middle way between the New Critics' sage writing theory and Williams's cultural criticism. From the New Critics' limitedness, Collini claims to study the "what" of non-fiction prose from a socio-cultural perspective rather than to study the "how" of the author to achieve literariness through specific aesthetic techniques. From Williams' weakness, Collini suggests to have "a flexible and eclectic kind of intellectual history… to remedy some of the distortions [William] ha[s] been discussing" (26). Collini's claim for a "flexible and eclectic kind of intellectual history" seems to be probable because it may possibly bring about "the fullest and most illuminating characterization of figures and episodes," in which there is "no monopoly to one explanatory idiom and according no automatic priority to social circumstance, individual intention, intellectual tradition or any other single analytical dimension" (26).

Simply put, Collini's suggestion of a "flexible and eclectic" study of non-fiction prose should be a search that emphasizes both the text itself and the text's intertextual relations with its socio-historical references. To apply this new study to Carlyle's *Sartor*, there are two aspects. On one hand, rather than persisting in the discourses of

the “how,” as in previous studies, the new study should endeavor to discover the “what” in Carlyle’s text, *Sartor*, focusing not simply on the literariness but, more importantly, on the textual significances with regard to *Sartor*’s textual and contextual meanings. On the other, rather than emphasizing any specific intellectual history, the new study should try to be more objective and eclectic to exhibit the confrontations and interrelations of diverse ideological systems, implicitly or explicitly, mingled together within the *Sartor* the text. In other words, instead of falling into the fallacy of underlining aesthetic techniques in New Criticism and intellectual struggles in Williams’ interpretation, the goal of a new study of *Sartor* should try to disclose “what” is “said,” “unsaid,” and “yet-to say” in *Sartor* by centering on the intertextual significances of the text itself within the socio-cultural context of early nineteenth century English intellectual history.

In order to open up a new perspective in Carlylean study, this study follows Collini’s suggestion to concentrate on the study of the textual and intertextual significances of *Sartor*. The textual considerations of Carlyle and *Sartor* then will release Carlyle from the godlike author and sage position and the *Sartor* as a spiritual bible and from an aesthetic unity. To free Carlyle the author, I argue, the notion of Barthes’s “death of the author” and Foucault’s “author function” will be beneficial, and to free *Sartor* from the aesthetic yoke, Foucault’s concept of “archaeological study” will be profitable

III. Problems of Carlyle the Author-God And Theories about the Author

To begin with, what does the word, “author,” mean? What is the purpose of the author’s name? What are the relationships between the author and the society he dwells in? And what is the relationship between the author and his work? In “The

Death of the Author"(1968), Roland Barthes declares a new age to review the subject of the author; on one hand, he downgrades the author from the transcendental Author-God position, and on the other, he elevates the text's position from merely a passive carrier of the Author to an active participator in meaning production.

To analyze this from the linguistic perspective, Barthes revolts against the traditional assumption that the author is the ultimate origin of meanings in traditional literary studies. He argues, "Linguistically, the author is never more than the instance writing, just as *I* is nothing other than the instance saying *I*" (Barthes 169). Resembling all of the *I*s whose sayings are never beyond the linguistic system, all the writings of the author are by no means above the complex network of the language, but are within it. As long as what the author says is never beyond the linguistic system, the author's meanings in the work are in no way original. The meanings that the reader receives from a work are the meanings read and chewed by the author, who in fact is a meaning borrower of the linguistic network who hands over already existing meanings to his reader. It is hence "language which speaks, not the author; to write is, through a prerequisite impersonality …, to reach that point where only language acts, 'performs,' and not 'me'" (168). In Barthes' analysis, the author never represents a theological simile, but a transfer, or an agent, whose "hand, cut off from any voice, borne by a pure gesture of inscription (and of no expression)" (170). Simply put, what the author performs in a work is not originality but the repetition of already-said meanings. It is thus language in the author that speaks, not the author who personally speaks.

Since the author is not an "Author-God," the ultimate creator of meanings, the spoken words in the work are freed from the author as well, becoming "a tissue of quotations drawn from the innumerable centers of culture" (Barthes 170). Instead of representing an aesthetic unity, the work is an open text, interwoven amid the

complex web of socio-cultural meanings. According to the attributes of language, always referring to other meanings and always deferring its own meaning, not only is the author by no means the origin of meanings, but also the meanings of the text are never finished. The text is a site "to mix writings, to counter the ones with the others" (170). The text never presents a monologue from a theological Author; rather, it explicitly or implicitly contains the interwoven socio-cultural complexities of various subjects and meanings. The cost of an absent author then brings forth the significance the intertextual relationship between the text itself and the context. Since meanings are always beyond the author's control, exceeding and flowing with other (implicit) meanings in the language system, one key to literary research then would be the intertextual exploration of textual meanings.

In 1969, Foucault published "What is an Author?" to modify Barthes's "The Death of the Author." Opposing Barthes's idea to take the author as merely an absent site in which to convey already-existing meanings, Foucault argues that "the author" functions as well to impart specific meanings. More than simply a physical individual, "the author" symbolizes the "characteristic of the mode of existence, circulation, and functioning of certain discourses within a society" (Foucault, 1991: 202). To put it simply, rather than eradicating the author as Barthes does, Foucault revives the author to take it as a site of plural selves and a node of multiple meanings.

Resembling Barthes, Foucault rejects the traditional assumption regarding the author as a transcendental figure, that is, the center as well as the origin of discourse. However, different from Barthes who radically uproots the existence of the author in "The Death of the Author," Foucault argues that the empty space left by the eradicated author should be replaced with new interpretations. Rather than taking the author as a real physical individual, Foucault assumes the author to be a "proper name" with which convey the socio-cultural meanings at the node that the author is situated. In

other words, the proper name of the author does not "refer purely and simply to a real individual," but "gives rise to several selves, to several subjects" (Foucault 1991: 205). To study the author hence means to study the context of the author; the proper name of the author indicates more than the physical individual but the socio-cultural meanings of the author's location.[9]

Foucault retraces the rise of sanctifying the author in the modern age. From the eighteenth century onward, the fashion of "author-construction" (Foucault 1991: 203) started to rise. Inheriting the Christian tradition to take the author directly signify the work, modern literary criticism "uses methods similar to those of Christian exegesis employed when trying to prove the value of a text by its author's saintliness" (204). The author precedes the meaning and stands aloft beyond the text, representing a genius creator of transcendental spirit. The author is sainted to indicate "the principle of thrift in the proliferation of meanings" (209).Consequently, the author is defined as "a constant level of value," "a field of conceptual or theoretical coherence," "a stylistic unity," and "historical figure at the crossroads of a certain number of events" (204). In short, the author is constructed to become a transcendental figure—a prototype of a certain discursive style, a model of specific value and moral, and a founder of particular theory.

The problem of the twentieth-century "sage theory" in the Carlyle study arises from what Foucault indicates the modern custom of "author-construction." The New

[9] In fact, Foucault concludes four functions of the author in "What is an Author?" Though in the age that "what difference does it make who is speaking?" (Foucault "Author" 210), Foucault analyzes the status of "the author" and concludes that "the author" is functional in four ways. First, the author functions to indicate the "juridical and institutional system that encompasses, determines, and articulates the universe of discourse" (205). To put it simply, the proper name of the author marks the boundaries of the profane and the sacred, beyond both, either punished or sainted. Second, the criteria to judge how the author differs socially and culturally. Once sacred in an age, the author may become illicit in discourse in another. Third, our concept of the author is not generated from the discourse of the producer spontaneously but "the result of the complex operations which constructs a certain rational being we call 'author'" (203). Namely, how the author is interpreted is related to how the discourse is operated. Forth, the proper name of the author does not "refer purely and simply to a real individual," rather, it "gives rise to several selves, to several subjects" (205). Namely, the author in reality is different from the author as the proper name to indicate a series of works.

Critics hence have mistakenly assumed that the author is a transcendental figure to guide a literary fashion and to usher in a new morality. During the 1960s-1980s wave of "sage theory," Carlyle is identical with a wise philosopher inheriting the Jeremiah of the Christian tradition. The keyword "sage" sublimes the author and elevates the author to the position similar to "God." The author, resembling God the Creator, becomes an intelligent genius that creates ideas, originates principles, and generates meanings. For modern critics such as Neff, Holloway, and Landow, Carlyle is an original writer for he invents the transcendental "Life-Philosophy" that shows the people how to be immune from the early nineteenth-century materialism, mechanization, and utilitarianism. Except creating the transcendental life philosophy, Carlyle the Author-God represents the synonym of a new literary genre—non-fiction prose writing—as well. Of its own principles, rhetoric, and aesthetics, Carlyle's "non-fiction prose" form is very different from the traditional literary forms of poetry, drama, and fiction prose. Carlyle the Author-God hence turns out to be not only the originator of "Life-Philosophy," a moralist in an industrial world, but also a founder of a new literary form, "non-fiction prose," in the modern critics' interpretations.[10]

[10] The modern interpretation of Carlyle as an Author God, I suuggest, excludes the modern anxiety of study in the field of literary criticism. According to one of Foucault's "author functions," how an author is interpreted is related to how the discourse operates at a certain age. The "sage theory" in the modern age to transcend the author and the genre suggests the "characteristic of the mode of existence, circulation, and functioning" of the discourses in the mid-twentieth century. That is to say, the wave of the "sage theory" concerning Carlyle and other non-fiction prose writers indicates an anxiety of study in the field of literary criticism.

Hidden under the enthusiasm of modern critics like Holloway and Landow who intend to revive the study of non-fiction prose, there dwells the modern anxiety to explore the purpose and the value of the non-fiction prose writings. In order to legitimate the "sage theory," some critics take Carlyle as the main subject to elaborate the sage theory in monographs and others connect the non-fiction prose writers with the already legitimated fiction prose writers to prove the equivalent values of the two. Not only does the sage theory indicate the modern anxiety in studying non-fiction prose writings, but also the results of the "sage theory"—moralism and aesthetics—demonstrate the modern anxiety about literary principle and effect. In principle, any literary work should be of aesthetic values; in effect, any literary work should be moralistic. The discourse of "sage theory" concerning Carlyle the Author-God, in other words, indicates a mode of existence, purpose, and functioning of modern criticism. As a discourse, the "sage theory" implicitly shows the modern anxiety for discovering the ultimate "center" and the absolute "truth" in literature. Rather than interpreting the historical reality of Carlyle the real individual in the early nineteenth century, modern criticism in fact reflects the reality of its own philosophy and values.

To avoid the fallacious assumption of regarding Carlyle as an Author-God—as a pure originator of meanings, a genuine educator of morals, and a sacred prophet to speak merely God's word, truth—this study intends to take Carlyle as a discursive site of multiple voices converging, conflicting, and compromising. "Carlyle," the proper name attached to *Sartor* the text, will represent a discursive node of "several selves" and "several subjects," revealing not merely his personal experiences and ideas but also collective ideologies and circumstances while Carlyle the individual was writing. This study then will not praise Carlyle as a genius and the originator of transcendentalism, the founder of Clothes Philosophy, and the pioneer of the genre of non-fiction prose. Instead, this study will take what Carlyle said as the "already existing or yet-to-appear" discourses—the discourses neither independent nor distinguished but inter-relational to other discourses and texts—to characterize *Sartor* the text as a certain mode of discourse.

Even if there are discourses confronting and conflicting, this study does not mean to prove that Carlyle is of a split character and *Sartor* is segmented. Foucault elaborates that even if there is never general congeniality among all discourses, the proper name of the author "serves to neutralize the contradictions that may emerge in a series of texts: there must be—at a certain level of his thought or desire, of his consciousness or unconscious—a point where contradictions are resolved, where incompatible elements are last toed together or organized around a fundamental or originating contradiction" (Foucault 1991: 204). The author, as the "point where contradictions are resolved" does not signify a center to organize all the inconsistencies technically. Rather, the author, amid various discourses, consciously or unconsciously, perceives the contradictions, feels anxious about the discord, and then looks to discover possible concurrences among the incompatibilities.

So to be interpreted, "Carlyle" the author thus indicates a site of an utterance.

The speaker of this utterance, *Sartor*, consciously or unconsciously perceives the crises caused by the incongruities of his age and expects to seek the possibility of reconciling the disharmony, such as the impending breaks of science form religion, of matter from spirit, or of the scientist from the philosopher. In other words, explicitly or implicitly, *Sartor* the text exudes the convergences, confronts, as well as compromises the conflicting discourses, such as those surrounding science and religion in Carlyle's age. Different from the previous studies that consider Carlyle as an intelligent transcendentalist who advocates simply the significances of religion, spirit, as well as the transcendentalist, this study will demonstrate that "Carlyle," the author's proper name, signifies multiple voices and various contradictions, and *Sartor* the text is Carlyle's discursive museum to exhibit the diverse thoughts conflicting and compromising during the early nineteenth century. In other words, instead of stressing simply one pole of the conflicts—science vs. *religion*, matter vs. *spirit*, and scientist vs. *transcendentalist*—this study suggests that "Carlyle" represents a discursive site to show the possibility of harmonizing and integrating the two aspects of ideas, that is, the amalgamation of science and religion, matter and spirit, as well as the scientist and the transcendental philosopher.

Obviously, Carlyle's intention to reconcile the two poles is distinctive in *Sartor* because a true philosopher, for him, is the "Philosopher" who "station[s] himself in the middle…. The Philosopher is he to whom the Highest has descended, and the Lowest has mounted up" (*Sartor* 50). Simply put, the "in-between" is the goal of Carlyle's Clothes Philosophy.

IV. Problems of the Aesthetic Unity

And Foucault's Archaeological Study

Similar to the "Author-God" assumption, to suppose a godlike author as the

origin of meanings, and to regard a work as a complete unity, is problematic as well. The assumption of a work as an integral aesthetic structure tends to take contradictory discourses and incongruous voices as "the other" and tries to have them eliminated and silenced. As Foucault declares in the *Archaeology of Knowledge*, the past studies aspired to discover the unity of a text, intentionally ignoring, reducing, and dispelling the inconsistent, the discordant, and the contradictory for the purpose of retaining the unity of a work. Similarly, the past researches of *Sartor* were generally dominated by the "aesthetic unity" assumption and thus tended to emphasize merely the work's artistically well-arranged structure. The stress on the unity of a work, however, is problematic since the unity assumption inclines to neglect the discourses of the opposite and exclude thoughts inconsistent with the center. For instance, the thoughts of matter and science are usually excluded for they are obviously incongruent with the theme of transcendentalism in the past studies.

Due to the unity assumption, "the Torch of Science" is usually the specific target culled to be criticized because it is an "other", not belonging to the categories of religion, spirit, and transcendentalism. This exclusion of the Torch of Science in the past studies needs reexamination because Carlyle seems never directly to refuse "science" in *Sartor*; instead, he takes the "Science of Clothes" as "a high one" (*SR* 203). That is to say, the unity assumption to categorize "the Torch" as a heterogeneous voice to tarnish the unity of *Sartor* seems to overlook Carlyle's initial purpose of the composition of *Sartor*. Instead of regarding "the Torch of Science" as an "other" to spoil the unity of transcendentalism in the past studies, I will argue that "science" in *Sartor* should be a valuable account to examine the confrontations of thoughts, the departure of ideas, and the interrelations of concepts. "The Torch" thus should not represent an object to tarnish the unity of a transcendental theme but a "torch" to light up the as-yet-unexcavated relics buried in *Sartor* the text, that is, the confrontations of

the traditional concept of science versus the emerging concept of scientism during the early nineteenth century (interpreted in Chapter Two), the departure of the concept of religion (spirit) from the concept of science (matter) (Chapter Three), and the interrelations of the concepts of science and religion (Chapter Two), spirit and matter (Chapter Three), as well as a scientist and a spiritual philosopher (Chapter Four).

In order to discover the buried relics, to dispose of the unity myth, and to unchain the sainted work, I propose Foucault's interrogation of a total history in *Archaeology* will be of assistance. In traditional studies, historians believe that history is of a spirit, of a specific purpose, and of logical consequences. Foucault terms this traditional concept of history as a total history, that is, a concept founded on the assumption of an orderly, purposeful, and teleological history. To presume an orderly and logical history, traditional historians intentionally ignore the interferences, ruptures, contradictions, and discontinuities in history. This ignorance results from the presumption of a law of a necessary causality in history. Due to the belief of the necessary causality, historians tend to play the role of reasonable judges to sort the material, to reorganize sequences of events, and to rearrange their relative significances while facing disorderly and disarranged material and literatures of history. There are hence orders and general principles intentionally discovered or created to adapt to the casual law of history. Therefore, even if the literatures are chaotic, there are always positive and reasonable relations among events and statements.

Further, so the argument runs, from the generalized principles among the events or statements, traditionally, historians infer the spirit of a specific age, illustrate the progressive trajectory of the age, and endow the age with moral purpose. History, thus, is of conscious, spirit, meanings, and intentions. Similar to human life, history has its birth and death, moving from a beginning and toward an end; resembling to life that

grows, history develops, evolves, and then progresses toward the heavenly realm, that is, the perfect status of human civilization in millennium. History, then, resembles life.

Foucault however opposes the teleological assumption he sees in the traditional studies of history; he considers that the concept of the total history defies history itself, through bestowing symbolic meanings on history. He argues that the subjectivity of history—consisting of consciousness, symbols, meanings, and spirit—is no more than an illusion produced by the historians' neglect of the discontinuity, reduction of the causality, and over-interpretation of the events. Foucault, rather than taking history as an organic life, regards history as a material object that contains neither meaning, nor purpose, neither conscious, nor spirit. In history, there are ruptures, breaks, discontinuities, and contradictions, instead of logical causal relations. As a neutral object, history then becomes an open space, containing disparate events, among which there is neither exact connection nor causality, let alone any transcendental unity, truth, or center.

As long as history is without any subjectivity, Foucault then claims that the new study of history "would deploy the space of a dispersion" in stead of "draw[ing] all phenomena around a single center—a principle, a spirit, a world-view, an overall shape" (1991: 10). A historian, hence, should not interfere in producing meanings and creating a spirit of history, but should objectively expose the appearance of history without any attempt of allegorical interpretations.

Further, Foucault criticizes the concept of totality, arguing that all epistemological fields share a similar assumption at center. Because of the unity thesis, scholars tend to ignore heterogeneity, search for subjectivity, and conclude a totality for any knowledge, book, or author. Any forms of knowledge are endowed with specific spirit, principle, and purpose. That is to say, the belief a "totality" prevails in

all the discursive arenas.

In the traditional study of Carlyle, too, the totality analysis dominated the academic field, generally assuming Carlyle as a sage philosopher and *Sartor* of a specific aesthetic unity. Of a particular totality, *Sartor* the text was granted as having a transcendental spirit purposefully conducting people towards a better morality through Carlyle's theme of spiritual elevation. This is revealed in his distinguished literary manner of "Bildungsroman". Centering the transcendental spirit, the heterogeneous voices, such as the discourses concerning science, matter, and the scientist, were unintentionally neglected or intentionally silenced in the past studies. However, instead of being muted, these discourses still maintain their significance and always allow *Sartor* to connect with the text's socio-cultural denotations.

In order to reveal the muted discourses buried in the assumption of unity, Foucault suggests an archaeological study of history, that is, a new perspective to avoid the researchers' intentional interruption in creating meanings based on a myth of unity. In the traditional humanistic studies, to achieve the "totality" assumption, researchers unconsciously interfered in textual analysis to produce meanings and create the totality. In the new historical study however, Foucault advocates that researchers should not subjectively partake in producing meanings but should impersonally expose the text's interrelations with its context. The meanings thus revealed from the text may probably be contradictory, irregular, and inconsistent, not able to be unified by any reduction. The incoherent phenomena for Foucault, however, are more valuable because they are able to demonstrate the disparate discourses and exhibit the true face of a text or a discourse.

In the archaeological study, contradiction and inconsistency will therefore no longer impede scholars' research but are treasures for scholars to extract further meanings. To face ruptures and breaks, the archaeological researcher therefore will be

always excited, because, for Foucault, “contradictions are neither appearances to be overcome, nor secret principles to be uncovered. They are objects to be described for themselves, without any attempt being made to discover from what point of view they can be dissipated, or at what level that can be radicalized and effects become causes” (1991: 151). That is to say, rather than an “other” that should be suppressed, the contradiction serves as a threshold to disclose the confrontation, the entanglement, and the interrelation of different systems of thoughts. Contradiction, hence, are not knots, but “the different *spaces of dissension*” (152), that is, the “*spaces*” representing “two ways of forming statements, both characterized by certain objects, certain positions of subjectivity, certain concepts, and strategic choices” (153). The inconsistency in a text hence is by no means “a terminal one” to show “two contradictory propositions about the same object” or “two incompatible uses of the same concept” (153). Contradictions, to the contrary, stand for a discovery of the crossover point of “two ways of forming statements” (153)—the point of two systems of thoughts striking each other, for instance, the traditional concept of science confronting the rising concept of scientism as well as the traditional concept of a spiritual philosopher encountering the rising concept of a scientist during Carlyle age.

To deal with this crossover point of two the systems of thoughts, the archaeological researcher will not give undue emphasis to the significance of any particular system. The archaeological researcher, however, prefers to reveal the point of confrontation, to expose all the voices of different systems of statements, and to juxtapose these systems of thoughts without any interference or value judgment. The archaeological study, hence, is similar to a discursive museum in which there are displays of different systems of ideas. Every statement, every discourse, and every idea are excavations of history. Among the excavations, none is superior to the other or preferable to the scholar; they are equally exhibited in the museum of ideas. In this

study of *Sartor*, then, I will not emphasize solely transcendentalism or spiritualism in the interpretation of *Sartor*. Instead, *Sartor* will be interpreted as a contextual knot to reveal the confrontations of diverse ideas and voices in regard to science, religion, matter, spirit, as well as what it is to be a philosopher and a scientist. *Sartor* hence represents a discursive museum to display vicissitudes of these ideas during the early nineteenth century.

Due to its unbiased evaluation, the archaeological study will potentially help pierce the illusions of a transcendental center and an aesthetic unity in the previous *Sartor* analyses of the past century. Different from the traditional studies in regard to science, matter, or the scientist as "the other," contrary to the themes of religion, spirit, and the transcendental philosopher, this study assumes that *Sartor* contains more than one system of thoughts. Based on Foucault's archaeological analysis, and different from Christianity or German Romanticism, the supposed "other" voices associated with science and matter will no longer be contradictions but a crossover point to reveal thoughts like religious science, spiritual matter, and the philosophical and spiritual scientist. In short, rather than centering on a transcendental theme, *Sartor* will appear to be a text-museum exhibiting the heterogeneity of thoughts and statements during the early nineteenth century.

Not only will the *Sartor* text be free from the myth of aesthetic unity, Carlyle as well will no longer be fixed under the label of a transcendental sage prophet. Carlyle of course still represents one of the most significant philosophers of early nineteenth century England. However, the proper name of Carlyle suggests more than transcendentalism but a space where diverse thoughts assembled. So to be interpreted, greater than a mere moralist who promoted religion and spirit and repressed other voices, Carlyle should be regarded as a large-hearted philosopher who senses a problem, records the phenomena, and then demonstrates his expectation to reconcile

the (ongoing and oncoming) breaks between the unity of religion and science, spirit and matter, as well as the philosopher and the scientist. Instead of inclining to either side, Carlyle in reality stations himself at the middle way between the two poles of each pair of thoughts; on the one hand, to warn the probable breaks between the pairs, and on the other to anticipate compromises in between, since “The Philosopher,” says the wisest of this age, “must station himself in the middle” (*SR* 50).

Chapter Two

The "Torch of Science"

> In a world existing by Industry, we grudge to employ fire as a destroying element, and not as a creating one. However, Heaven is omnipotent, and will find us an outlet. (*SR* 32)

> In which case, must it not also be admitted that this *Science of Clothes* is a high one, and may with infinitely deeper study on thy part yield richer fruit: that it takes *scientific rank* beside Codification, and Political Economy, and the Theory of the British Constitution. (*SR* 203, italics mine)

I. Introduction

Carlyle's "Torch of Science" in the New Critical studies usually represents a target of criticism. For instance, the "'Torch of Science' expels Mystery and reduces Creation to a material process," comments Cosslett in *The 'Scientific Movement' and Victorian Literature* (1984: 1). To analyze the "Torch of Science" as the object of Carlyle's abhorrence, traditional scholars like Cosslett generally regard Carlyle as a sage-prophet who founds transcendentalism and *Sartor Resartus* as a modern spiritual-bible that reflects the sage's philosophy with which to instruct and guide the reader in an age governed by machines and science. In the typical traditional "sage-prophet" discourse, "Carlyle" stands for the synonymies of religion, spirit, as well as transcendentalism, and *Sartor* for those of the Bible and morality. Due to the general agreement on the twentieth-century conflict theory of science and religion, "Carlyle" and "Sartor Resartus," the synonymies of spirit and religion, are granted the status of keywords against the notions of science, matter and machine. Carlyle's

"Torch of Science" in the opening paragraph of *Sartor* hence reasonably represents Carlyle's mark of criticism because the machine, "Torch," for the use of "science," is doubtlessly the obstruction to hinder the progress of spirit, soul, morality, and humanism.

However, if Carlyle was indeed rejecting science and regarding it as a mechanical device to destroy spiritual and moral progresses of his contemporaries, why did Carlyle term his philosophy the "Science of Clothes" and honor his Science of Clothes with "a scientific rank" besides sciences of Codification, Political Economy, and the British Constitution (*SR* 203)? If indeed disdaining science and regarding science as a destroyer of spirit, why does Carlyle's mouthpiece, Teufelsdrockh, turn to the German "scientific watch-tower" (2) for theoretical and philosophical inspiration? These evidences suggest that the term, "Science," in Carlyle's diction does not seem to possess a negative meaning but rather probably signifies a positive one. In other words, what if there are no distinct breaks between the notions of science and religion in *Sartor* as twentieth-century scholars had assumed.

"To change the image radically," states Claude Welch in "Dispelling Some Myths about the Split between Theology and Science in the Nineteenth Century" (1996), "what we have in the nineteenth century, from Schleiermarcher and Hegel on, is both a massive effort at mediation or synthesis, a uniting of theology and science" (37). Welch's study shows that, rather than conflicting with each other, science and religion seem to be in amicable agreement with each other in the nineteenth century. If there is indeed no conflict between science and religion during Carlyle's age, then, what is the true meaning of Carlyle's "Torch of Science?" If the Torch is no longer Carlyle's target of criticism, then, what is Carlyle's main subject of ridicule?

With Welch's inspiring statement and the complex thesis in regard to science

and religion, this chapter then proposes to reexamine the notion of "science" in Carlyle's age and in *Sartor.* Supposedly, if there is no science-religion break during Carlyle's age, the "Torch of Science" should not be viewed as a destructive machine to impede the spiritual and moral growth in *Sartor*. Moreover, serving as a vehicle to light and guide, what if the "Torch" metaphor to modify "Science" signifies the meaning of sacredness and religion? Then, if the "Torch" is religious, how is it also science? Is it as sacred as the lighting attribute of the torch? Furthermore, if the Torch of Science is sacred and no longer stands for the target of Carlyle's criticism, what does Carlyle really worry about? What is the true crisis that Carlyle perceives, warning his readers to avoid when it comes?

Methodologically then, this study will juxtapose *Sartor* with its textual and the contextual references: Carlyle's "Signs of the Times" (1829), "Characteristics" (1831) and his contemporary views of "science", to look for a more precise significance of Carlyle's "Torch of Science" and to discover the principal target of his criticism. To begin with, an adumbration of the complex theory of science-religion relation brought up by many twenty-first century historians of science and religion will be introduced in the first part of this chapter. Contrary to the traditional conflict theory assuming distinct breaks between science and religion in previous centuries, the complex thesis argues that there were, in reality, mutually productive interrelations between science and religion in the past centuries. Since there never was a hostile relation between science and religion in the past centuries, in the second part this study will first regard science as an impediment to hinder the progress of the soul. Carlyle in reality aspired to harmonize the traditional ethics of religion with the new value of the mechanical uses of science. Second, rather than merely serving as a mechanical tool, Carlyle's "Torch of Science," intrinsically functions as a religious means to illuminate the interior and the exterior worlds. And third, instead of taking science as a destructive

force to prevent spiritual reform, Carlyle in fact fosters a hope to apply the "Torch of Science" to shoulder the mission of spiritual and moral reforms via the Torch's sacredness and potency.

II. The Twenty-first Century Complex Thesis of Science-Religion Relation

During the twentieth century, according to popular belief, people believed that there had been conflicts between science and religion in the past centuries. Events involving Copernicus, Kepler, Galilei, and Darwin were the persuasive examples to substantiate the historical conflicts. Among these events, the publication of Darwin's *Origin of Species* (1859) was usually assumed the fatal incident to bring about the ultimate break between science and religion in the modern age.

For twentieth-century scholars, *Origin of Species* was an enemy to religion because Darwin's evolution apparently defied traditional Christianity by the adaptation theory and by the mutability of species. "The *Origin of Species* became the foundation of a new history of the world," Noel Annan discovered in his 1967 study, because "The issue was not simply whether scholars might re-interpret the Bible but whether the beloved story of man's Creation and the Flood was rubbish" (100). Darwin's *Origin* hence was critical because it seemed to initiate a new age of science departing from religious dogma.

To examine the science-religion relation in the past century, John Hedley Brooke observes that "[t]he assertion of incompatibility between a Christian and a Darwinian world-view often hinged on the antithesis between chance and design" (1991: 304). The story about God's creation of the world and all living beings in "Genesis" suggests that God's divine power intervenes in the affairs of man and that He manages all the ranks of beings and all the laws of the heavenly body. Every being and all

matter are placed at fixed positions under God's divine principle and, being endowed with most abilities and duties, man is God's favorite being to carry out His mission on earth.

Darwin's adaptation theory however negates the myths of Creation and Flood because it is not God but blind chance responsible for the "order in the world" (Annan 101). Rather than being divinely fixed in form and position, all living beings are mutable, to adjust themselves to environments. Thus, it is "chance" which decides the existence of all beings instead of God's will in the creation and selection of all lives. God's preference and special care for the human race then turns to be man's arbitrary imagination. God is not the designer and chance becomes the key factor of evolution.

Darwin's theories of "natural selection" and "blind chance," after 1859, gradually displaced the Biblical accounts, because "selection" and "chance" superseded God's authoritative power. Cruel or random natural powers take the place of the benevolent God. In the views of the twentieth-century historians, Darwin was reasonably a revolutionary scientist to overturn the Christian authority. For them, "Darwin" signified a pivot marking the end of the mutual interaction between science (represented by Darwin's *Origin*) and religion (Judeo-Christian tradition). The interrelation between the two intellectual systems soon petered out and finally reached their fatal break in the Huxley-Wilberforce Encounter in 1860.

In the past few decades, however, historians of science and religion have started to reassess Darwin's relation to religion and his attitude toward God by references to different estimates and discoveries. In the earlier interpretations of *Origin*, it appeared that Darwin's defiance of Christianity was generated by his revolutionary spirit. Darwin hence was necessarily deemed an atheist. Some scholarly researches on the newly discovered but once unnoticed documents, however, have recently revealed a rather different history. For instance, while frankly stating his fluctuation between

belief and disbelief in his diary and letters, Darwin still never purposefully denied the existence of God. In a letter writing to John Fordyce on the 7th of May 1879, Darwin confessed:

> But as you ask, I may state that my judgment often fluctuates. Moreover whether a man deserves to be called a theist depends on the definition of the term: which is much too large a subject for a note. In my most extreme fluctuations I have never been an atheist in the sense of denying the existence of a God.— I think that generally (& more and more so as I grow older) but not always, that an agnostic would be the most correct description of my state of mind. (Quoted, *Darwin Correspondence Project*)

Not only did Darwin declare his "state of mind" but also his work oozed with his faith. According to Brooke's investigation in *Science and Religion: A Historical Introduction* (1991), "origin," the metaphor Darwin adopted from the Old Testament, is a term "possible to read into his [Darwin's] conclusion a set of meanings and values associated with a biblical religion" (275). Exploring Darwin's correspondence, Brooke observes that Darwin in reality intended to affiliate his theory with the Old Testament by the metaphor, "origin," instead of aiming to challenge the Creation myth by his evolution theory. According to Brooke, Darwin was never an atheist; he "often presumed to know that a rational Creator would not have distributed His creatures around the globe in the patterns that [Darwin] himself had discovered" (276). In other words, though theoretically constituting an intrinsic paradox in his *Origin*, Darwin personally still assumed that there was a rational Creator to distribute His creatures, which indeed evolved according to the changes of environments. In Brooke's interpretation, the ultimate Creator hence never vanishes from Darwin's mind

(275-277).[11] What Darwin did in *Origin* was but to modify the Creation Myth in the Bible.

The conceptual and rhetorical interrelations between science and religion occur not only in Darwin's correspondence but also in documents of other nineteenth-century scientists. An advocate of Darwinism, T. H. Huxley (1825-95) was not able to sever all ties with religion either. For instance, in order to advocate the significance of scientific education for the populace, Huxley adopted a religious metaphor, "lay sermons" (Brooke 1991: 31), as an analogy to encourage people to attend schools. Lyon Playfair (1819-98), "one of the most energetic spokesmen for applied science in nineteenth-century Britain," Brooke notices, also "declared that 'science is a religion and its philosophers are the priests of nature'" (31). From Darwin's confessions, Huxley's analogy, and Playfair's rhetoric, the new evidences plainly indicate that even if there were doubts concerning Christianity and the Bible, the Darwinian evolutionism in the nineteenth-century did not abruptly split science from religion. In other words, conceptually, Christianity de facto did not die out but retained its power among the scientists and laymen during Darwin's age. If Darwin and other scientists in the 1850s and 1860s still possessed faith, in the 1830s Carlyle supposedly would not have relinquished religion either.

Many new documentary findings in the past decades have gradually altered the traditional arguments and subjects in regard to the study of the Victorian science-religion relations. In subjects, scholars no longer concentrated on studying the scientific influence upon intellectual dimensions like zoology, psychology or anthropology.[12] In the traditional studies, scholars tended to discover how the

[11] According to Brooke, even if Darwin intended to emphasize his respect for and belief in Christian by using the term, origin, controversially, Darwin's evolutionism was revolutionary per se. "Two quite different meanings could therefore be attached to Darwin's *Origin*—that it was consistent with a biblical religion…and, conversely, that it undermined it" (1991: 276).

[12] For example, J. A. V Chapple's *Science and Literature in the Nineteenth Century* published in 1986

nineteenth-century scientific accomplishments affected contemporary cultural and literary texts. Cosslett's *The 'Scientific Movement' and Victorian Literature* (1984) is one of the examples in which she states that her study proposes "to trace some of those 'great ideas' as they appear both in the scientific writings of the time, and in its other literature" (3). The new historians of Victorian science-religion relation however veer their research aspect towards the contextualization of science. What matters in the new study, declares Bernard Lightman, should be the "subtle interplay of Victorian science with its social and cultural context" (4). The traditional studies minded the scientific effect on other works, while the new studies weighed the interrelation of science and its context.

In arguments, as well, scholars of the new studies changed their research topic in regard to the nineteenth-century science-religion relation by abandoning the conflict assumption and veering towards the possibility of a theory based on harmony. They deemed that to assume an abrupt break between science and religion arbitrarily overlooked the documents recording the accommodations between the two intellectual practices and passed over the complex contextual relations of the two. Gary Ferngren, a historian of the history of science, then states in *Science and Religion: Some Historical Perspectives* (2002):

> While some historians had always regarded the Draper-White [conflict] thesis as oversimplifying and distorting a complex relationship, in the late twentieth century it underwent a more systematic reevaluation. The result is the growing recognition among historians of science that the relationship of religion and

---

focuses mainly on the intellectual significances of science in every field—such as astronomy, chemistry, paleontology, geology, zoology, psychology, anthropology, etc, and the relations of these studies manifested in the Victorian literature. Tess Cosslett's *The 'Scientific Movement' and Victorian Literature*" published in 1982 is another example, in which Cosslett first expounds "the values of science" and then illuminates the symptoms of the values exemplified in the works by Tennyson, G. Eliot, Meredith, and Hardy.

> science has been much more positive than is sometimes thought. Although popular images of controversy continue to exemplify the supposed hostility of Christianity to new scientific theories, studies have shown that Christianity has often nurtured and encouraged scientific endeavour, while at other times the two have co-existed without either tension or attempts at harmonization. If Galileo and the Scopes trial come to mind as examples of conflict, they were the exceptions rather than the rule. (ix)

For the new scholars of the history of science, the conflict thesis, also termed the Draper-White thesis,[13] the warfare thesis, or the military model, distorts the history of science and religion in the past through an oversimplification of an either hostile or amiable relation of science and religion. For the new scholars, there were probably some doubts about the biblical myths and discontent with Christianity in the nineteenth century and the belligerent warfare, yet this was not the only form of the science-religion interaction.

The twenty-first century scholars unanimously agree that, rather than constituting reality per se, the warfare theory is more of a discursive production once popular during the late nineteenth and twentieth centuries. To trace the possible beginning of the "warfare" imagination, scholars of science regard John William Draper (1811-82) and Andrew Dickson White (1832-1918) of the late nineteenth century as the probable founders conceptualizing the terms of "warfare" and "conflict." Draper published *History of the Conflict between Science and Religion* in 1874, and White released *History of the Warfare of Science with Theology in Christendom* in 1896. The two pioneering volumes with reference to the history of science soon concretized the imagination of "warfare" and "conflict" by the titles,

[13] The origin of "Draper-White thesis" will be explained later.

instantly causing fermentation and pervasion of their hostile impression. The metaphor, warfare, gradually turned from a descriptive phrase to a prescriptive one.

However, Welch asserts that "the 'warfare' has almost nothing to do with the actual history of theology or of science in the nineteenth century" (31) in "Dispelling Some Myths about the Split between Theology and Science in the Nineteenth Century" (1996). He continues, "[n]ever mind whether religion and science were really in conflict; they were increasingly *thought* to be in conflict" (34). For instance, in the Preface to *History of the Warfare* (1896), instead of challenging religion, White in fact declared his confidence in religion: "My conviction is that Science, though it has evidently conquered Dogmatic Theology based on biblical texts and ancient modes of thought, will go hand in hand with Religion; and that, although theological control will continue to diminish, Religion … will steadily grow stronger and stronger" (vol.1. xii). In Welch's study, White also appears to be "a friend to religion" (30), because the Bible for White is not "an oracle or a fetish, but a revelation of the ascent of man and of the 'eternal law of righteousness—the one upward path for individuals and nations'" (31).[14] In recent studies, "White" thus no longer represents a doubter to relinquish religion but a believer to seek the possible accommodation between science and religion. Though titling his book *Warfare*, White does not mean to assail religion but aims to criticize the dogmatism of the Catholic Church. God remains sacred for White, who in reality requests the reform of the Church instead of the reform of Christianity itself.

If White, one of the radical scholars to criticize religion in the late nineteenth century, still possessed faith in God and looked for the possibility of a congenial

[14] Furthermore, in his *Science and Religion*, Brooke, too, argues that there are flaws in Draper's and White's supposition of the "conflict" and "warfare" argument. Brooke considers that "They share a defect in common with all historical reconstruction that is only concerned with extreme positions. They neglect the efforts of those who have regarded scientific and religious discourse as complementary rather than mutually exclusive" (1991: 35).

relation between science and religion, then in the mind of Carlyle, the philosopher of the 1830s, there might not have been a combative relation but a sympathetic relation between science and religion.

Alister E. McGrath argues in *The Foundations of Dialogue in Science & Religion* (1998) that the warfare discourses, like many other discourses, are productions of economic, cultural, social, and political constructions. He traces one of the possible sources of the conflict theory, finding that the emerging liberation intent since the Enlightenment might be one of the motives to agitate the break of science from religion and to reinforce the twentieth-century myth of a "perennial conflict" (1998: 25). In McGrath's analysis, the heart of the Enlightenment movement centered "the quest for liberation from the political, religious, social and intellectual *ancien régime*" (1998: 22). Embedded in the concept of liberation, there was a dual relation: the old and authoritative organization versus a new and free energy. The new forces of the liberating party meant to overthrow the old authoritative power of the past in order to reestablish freer systems to serve the people. Between the tradition in the past and the innovation in the modern, conflicts and struggles arose. Though there were various representatives of the authoritative institution, religion that had lasted for centuries was always considered the principal target of the libertine's defiance (McGrath 1998: 23).

For the Enlightenment libertines, Christianity represented a symbol of the *ancien régime* in the dualistic warfare structure. Contrasted to the conservative Christianity, natural sciences that had reformed people's knowledge of the universe soon turned into "a potential weapon of assault in this task" (McGrath 1998: 23). McGrath reasons that the recurrent mythological metaphor of "Prometheus" in the early modern art and literature, exuded the intellectual's anticipation of the new science to serve as a weapon subverting the oppressions of the traditional institution (23-25). Percy Bysshe

Shelley's *Prometheus Unbound*, portraying Prometheus stealing fire for the people was usually adopted as the example to praise the new science as a means to break the fetters of the past in order to attain freedom. With Prometheus's stolen fire, man's life undergoes many changes, from handiwork to mechanization, from superstition to reason, and from theocracy to democracy. Prometheus the Romantic hero hence represents an emblem of freedom, and the stolen fire as transforming human life and mind symbolizes science. Thereupon, Prometheus becomes the symbol of the science used to release man from superstitions and irrationalities, which however are the emblems of dogmatic Christianity. Science then is affiliated with the modern and freedom, and religion is attached to the past and tradition. In McGrath's interpretation, the warfare relation between science and religion therefore is more of a concept gradually concretized by the libertine's desire for freedom since the Enlightenment and finally arriving at its apex in the late nineteen century.

According to the new studies in the late twentieth century, since the warfare theory is more of an ideological construction than a reality, there should be other forms of relation between science and religion. According to Brooks' study in *Science and Religion*, the nineteenth century science-religion relations in fact are complicated and diversified. Generally, there are principally three forms. First, "religious beliefs have served as a *presupposition* of the scientific enterprise insofar as they have underwritten that uniformity" (19). The Bible provides a presupposition of an orderly universe created by an intelligent Creator who has concealed His laws in nature. Scientific studies hence propose to discover the latent regularities in nature, thereby revealing the intelligent Deity's omnipotence and wisdom. In the primary stage, therefore, science never means to resist religious doctrine but to serve Christianity to observe God's principles evidenced in nature (19-22).

In Brooke's analysis, the second mutual relation between science and religion is

that “religious doctrines have also offered *sanction* or justification” (1991: 22) for scientific research. To unfold God’s principles of creation, nature is primarily God’s sanctuary book. Since God has revealed himself in the two books: the Book of his words (the Bible) and the book of his works (nature), studying nature should be perceived as constituting just as religious an activity as reading the Bible. Deep within a scientist’s soul, hence, there are faith and piety instead of scorn and defiance toward Christianity. Scientific study, too, is religious because it purports to glorify the greatness of God. In such interpretation, “of all pursuit, the study of experimental philosophy [is] most likely to engender a spirit of piety, perseverance, and humility—the hallmark of Christian virtue” (22) because the Creator in the Bible can enhance the researcher’s fear and esteem to contemplate His works in nature (22-23).

Thirdly, “religious beliefs …have also supplied *motives*” (Brooke 1991: 23); the aims of these are to better the world and create an earthly utopia. Scientific scholars believe that scientific research can glorify God and also relieve man from suffering. They presuppose an unending improvement of the world and infer the probability of arriving at the millennium in the Bible through potent scientific achievements. In other words, there is always “religious motivation behind scientific inquiry” (24). Studying science thus is a religious mission: to discover God’s laws, to arouse man’s reverence for God, and to improve the status quo for advancing to the promised land (23-24).

In the late twentieth-century new studies, historians of science and religion observed that there are mutual and complicated interrelations, instead of a distinctive rupture, between science and religion in the past centuries. The warfare imagination popular during the early and mid twentieth centuries thus is but the misprision, as McGrath argues, “marred through the dominant use of militaristic and imperialist metaphors (most notably that of ‘warfare’) in its description” (1998: 3). Never in the

states of “warfare” and “conflict” as White’s and Draper’s titles suggest, the science-religion relation was in fact amicably correlated during the nineteenth century, since, states Brooks, “statements about God and statements about nature are closely interrelated. They are designed to show how theological and scientific concerns have been mutually relevant in the past” (1991: 11).

II. The “Torch of Science” in *Sartor Resartus*

(1) Carlyle’s “Torch of Science”

The “Torch of Science” was once regarded as the main target of Carlyle’s criticism in the past studies. Based on the new science-religion discourses, the significance of the “Torch of Science” is reversed from a utilitarian conspiracy to a religious vehicle to reveal not only the material and exterior world but also the spiritual and interior universe. Rather than a target of Carlyle’s satire, the “Torch of Science” stands for the metaphor of a powerful engine to light up the natural as well as the spiritual worlds.

In the past studies, due to the “unity” assumption centering upon the theme of transcendentalism, the notion of science in *Sartor* was either ignored or criticized. Prejudiced by the conflict theory of the science-religion relation, the twentieth-century critics were easily led by a science-religion dualism to exalt religion and spirit and denounce science and matter. The key word, “science,” in *Sartor* hence usually appeared to be a discursive victim misrecognized by the warfare-theoretical interpretation.

Instead of simply denouncing “science” itself, through the “torch” metaphor, Carlyle in reality exposes a further complicated socio-cultural denotation of the concept of science in his age. The word “science” possesses more than one meaning;

it is relative to diverse socio-cultural significances in the arenas of science, religion, philosophy, and history. In other words, "science" in *Sartor* serves as a discursive node to exhibit diverse thoughts and ideas crisscrossing at the nexus of the key word. In order to discuss the tangling thoughts and ideas connecting "science," this study will start with the analysis of the "Torch of Science" in the opening of *Sartor*.

Resembling the key signature on the musical notation of composition, the opening chapter, "Preliminary" of *Sartor*, signifies the work's pitch, setting the work's theme at the wise use of science, to apply science as a means to investigate the physical as well as the metaphysical worlds. The opening sentence, an a-paragraph long sentence, has already demonstrated, perhaps indistinctively, Carlyle's attempt to adopt science as a vehicle to accomplish the religious and moral reform of his age:

> Considering our present advanced state of culture and how the Torch of Science has now been brandished and borne about, with more or less effect, for five-thousand years and upwards; how, in these times especially, not only the Torch still burns, and perhaps more fiercely than ever, but innumerable Rush-lights, and Sulphur-matches, kindled thereat, are not also glancing in every direction, so that not the smallest cranny or doghole in Nature or Art can remain unilluminated,—it might strike the reflective mind with some surprise that hitherto little or nothing of a fundamental character, whether in the way of Philosophy or History, has been written on the subject of Clothes. (*SR* 1)

Rhetorically, Carlyle devises a comparison between areas of the illuminated by the "Torch of Science" with the "unilluminated" to create tensions for his thrusts in the opening sentence. This long sentence consists of two parts, the present participle in the front followed by a main clause after a dash. The present participle, too,

consists of two parts divided by a semicolon. In the previous part of the present participle, joining “our present advanced state of culture” with man’s use of “the Torch of Science” for “five-thousand years and upwards,” Carlyle states his cognition of a causal relation between culture and science; due to the “Torch of Science”, man is civilized and society is progressing. In this opening phrase, Carlyle apparently demonstrates his confidence in the power of “science” to better human society. The confidence that Carlyle asserts here demonstrates a general agreement among the Victorian contemporaries: human civilization evolves with man’s use of science.

In the second part of the present participle after the semicolon, Carlyle further illustrates the present condition of the “Torch of Science” in his time. To be fiercer than ever, the Torch, whether as big as “Rush-lights” or as small as “Sulphur-matches,” blazes every corner of human world, leaving no “smallest cranny or doghole in Nature or Art … unilluminated.” With similes, Carlyle affirms that the Torch is a constructive tool to explore the human world thoroughly, whether the grand area or the tiny nook as small as a cranny, whether the science of the physical (nature) or that of the human (art). The present participle, therefore, exhibits Carlyle’s belief and confidence in the power of the “Torch of Science” to brighten the human world and guide human progress. To sum up, the first part of the long sentence creates an optimistic tone to celebrate the Torch with which to “illuminate” the world.

However, Carlyle’s tone shifts suddenly after the dash in the main clause, not only posing his interrogation of the Torch’s efficacy but also pointing right away the weakness of the Torch to be unilluminated in “the subject of Clothes.” Carlyle intensifies his mocking tone soon after the dash by the phrase, “it might *strike* the *reflective* mind with some *surprise*” (italics mine), to remind his “reflective” readers to ponder why they are so careless in neglecting the subject of Clothes, an area closest to the human body, most common in daily life, and most apparent in sight. This

neglect is “surprising” for Carlyle since, as mentioned in the present participle, the Torch is so powerful that “not the smallest cranny or doghole in Nature or Art can remain unilluminated.” It is so surprising for Carlyle that the subject of Clothes, so basic in life and so obvious in sight, interests neither a philosopher nor a historian. More forcefully, Carlyle’s mocking tone is reinforced by the use of the word, “strike,” which functions as a pun.

On the surface, to “*strike* the reflective mind” means to “impress on the reflective mind to have more contemplations of the subject of Clothes.” That means, apparently, that Carlyle seems to encourage the reflective mind to pay attention to the overlooked subject. In a deeper sense, however, to “strike” also suggests to rub a match head to ignite, to produce fire and light. To “strike” the reflective mind, hence, means more than impressing on the mind the significance of the ignored subject. Moreover, to “strike” the “reflective mind” indistinctively signifies that the mind is in fact not “reflective” but dim and blunt, needing more friction and percussion in order to be “struck” to become more contemplative and insightful for lighting up the subject of Clothes. Rather than praising the reader for their “reflective” minds, in the subtle tone, Carlyle cunningly criticizes the reader for being too thoughtless to leave the Clothes a barren subject and simultaneously intends to strike his reader to kindle interests in this subject by his ironic compliment.

Within this long sentence, which is also the opening paragraph of *Sartor*, Carlyle technically creates tensions and ironies. By the technique of comparison, Carlyle delineates tensions between the impression of a powerful science and the fact of ineffective science as well as between the already illuminated area and the not-yet illuminated area. The tone is ironic because, seemingly powerful, the “Torch of Science” in fact fails to shine on the most basic and obvious area of human life, Clothes. In the present participle, the Torch is powerful to flame thoroughly so that

not even the smallest cranny escapes its light, yet it becomes impotent in leaving the subject of Clothes vacant in the main clause. The comparison between the powerful Torch and the impotent Torch then produces irony which highlights Carlyle's question: why the Torch is unable to illuminate the subject of Clothes. In this interpretation, the target of Carlyle's criticism, therefore, is not the "Torch of Science" per se but its status quo: *it is not the problem of the Torch itself but the problem of the user of the Torch; it is not the fault of the Torch itself but the fault of how the Torch is adopted to light up the world.*

In other words, Carlyle in reality is confident regarding the power of the "Torch of Science," thinking it a powerful vehicle with which to observe the world and guide the advance of humans; yet, he is discontented with the present situation of the Torch, which is too myopic to neglect the field of the Clothes. To deem the "Torch of Science" as a powerful, valid, and indispensible tool to explore the world on one hand, and to consider the user as the main problem to weaken the Torch on the other, Carlyle then enthusiastically expects to redefine the true attitude and usage of the powerful Torch, in order to help the vehicle to fully elaborate its capacity for accomplishing its task of enlightenment. Though merely consisting of only one sentence, the first paragraph of *Sartor* explicitly exhibits Carlyle's main theme: to have a good use of science in order to enlighten humans and better the world.

After affirming the power of the "Torch of Science" and pointing out its present myopia in the first paragraph, Carlyle further illustrates his anticipation of the Torch's domain by the symbolic metaphor, "Clothes," in the following paragraphs. Carlyle insists that, more than calculatingly noticing the great subjects, Science should also heed the trivial matters; more than practically observing the visible objects, Science should also respect the invisible region. Carlyle on one hand criticizes his contemporaries for being too calculative to care merely for the practical and visible

subjects and on the other hand, expects to adjust his contemporaries' attitude in applying the Torch. For Carlyle, man's proper attitude in using science should not be motivated "by expediency, by Rewards and Punishments," but should be aroused by the inner goodness originating from "the mysterious Self-impulse of Whole man, heaven inspired, and in all senses partaking of the Infinite" (CH 74).[15]

To apply the same technique in the first paragraph, Carlyle adopts a comparison between what Science has explored and what Science has not yet discovered to reveal his contemporaries' present myopia in using the Torch, in the second and third paragraphs in the first chapter, "Preliminary." In the second paragraph, Carlyle praises the accomplishments of Science by listing numbers of great achievements in the fields of physics, astronomy, navigation, geology, geognosy, in the areas of "Social Contract," "the Standard of Taste," "the Migrations of the Herring" (*SR* 1-2), and even in biology and psychology that concern man's physical and psychological faculties:

> Man's whole life and environment have been laid open and elucidated; Scarcely a fragment or fibre of his Soul, Body, and Possessions, but has been probed, dissected, distilled, desiccated, and scientifically decomposed: our spiritual Faculties, of which it appears there are not a few, have their Stewarts, Cousings, Royer Collards: every cellular, vascular, muscular Tissue glories in its Lawrences, Majendies, Bichâts. (*SR* 2)

In the long list of the scientific achievements, the "Torch of Science" appears to be capable of probing not only every corner of the visible world (either above the head or beneath the feet), every subject of human life (either the great issue of Social Contract

[15] The notions of the attitudes of "expediency, rewards and punishment" will be discussed later in the section on "The General Contamination of the Mechanical in the Use of Science and Carlyle's Urge to Reform."

or the small subject of “Intoxicating Liquors” [*SR* 2]), but also every segment of man himself (either the visible cell or the invisible psyche). With the long list of the glorification, it seems that no event, matter or subject on the earth can escape from the powerful light of the Torch. However, just after the compliment, Carlyle suddenly reverses his tone from confidence and conceit to doubt and distrust. He soon turns his respect for the Torch’s achievement to the subject in the third paragraph.

Carlyle questions why, though so potent to sparkle in every corner of human life and environment, the “Torch of Science” however does not extend its energy to the subject of Clothes:

> How, then, comes it, may the reflective mind repeat, that the grand Tissue of all Tissues, the only real Tissue, should have been quite overlooked by Science, —the vestural Tissue, namely, of woolen or other cloth, which man’s Soul wears as its outmost wrappage and overall; wherein his whole other Tissues are included and screened, his whole Faculties work, his whole Self lives, moves, and has its being? (*SR* 2)

In order to strengthen the significance of the subject of Clothes, Carlyle compares “the only real Tissue” that “man’s Soul wears” with man’s “whole other Tissues,” i.e., man’s physical tissues. The “vestural Tissue” is the “outmost wrappage and overall,” not only to “include” man’s physical tissues and “whole faculties,” but also to “screen” man’s “whole Selves” and “being.” To regard to Carlyle’s theory of the “tissue” through taxonomy, one of the most popular subjects in Victorian learning, one can easily understand Carlyle’s principle of classification: the physical tissue is merely one of the divisions, parallel to the divisions of “faculties,” “Selves,” and “being”, under the subject of Clothes.

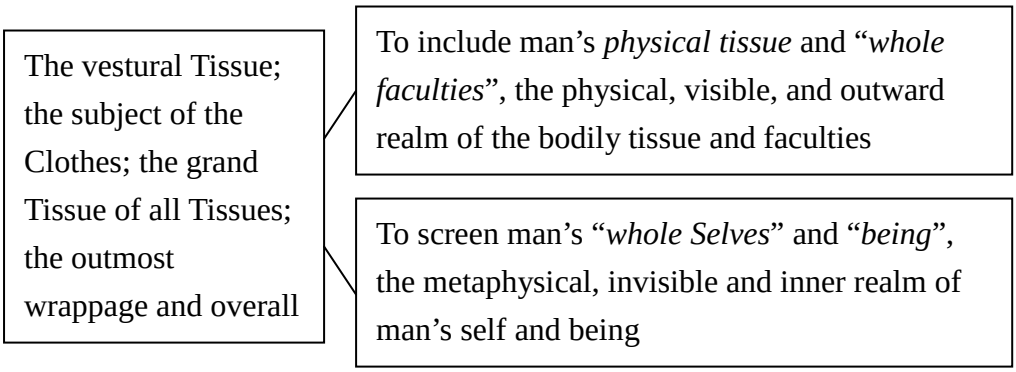

Fig. 1: Carlyle's Theory of "Tissue"

To contain not only the physical, visible and outward realm of the bodily tissues and faculties but also the metaphysical, invisible and inner realm of man's self and being, the Clothes then unquestionably appear to be "the grand Tissue of all Tissues," and the subject of Clothes turns to be a significant issue needing contemplation of the "reflective mind." That is to say, if "every cellular, vescular, muscular Tissue glories in its Lawrences, Majendies, and Bichâts," it is unreasonable to have the more important subject of Clothes belonging to a larger class "quite overlooked by Science."

About this neglect, rather than criticizing the Torch to be impotent to light up "the grand Tissue of all tissues," Carlyle indicates that it is "some straggling, broken-winged thinker[16]…soar[ing] over it [the subject] altogether heedless" (*SR* 2). Thus, instead of questioning the Torch per se, Carlyle points out that it is the thinker who is too shortsighted to apply the Torch, mistakenly leaving the subject of Clothes in an "obscure region" (2). The thinker wrongly "figure[s] man as a *Clothed Animal*" without discovering that man in fact "is by nature a *Naked Animal*; and only in certain circumstances, by purpose and device, masks himself in Clothes" (2). Between the "Clothed" and the "Naked," a "philosophic thinker…of boldness, lynx-eyed

[16] The subject of the "broken-winged" thinkers will be discussed in Chapter Three, "Natural Supernaturalism Redefined."

acuteness" (5), like Carlyle, can perceive a space valuable for researchers to delve into knowledge, a space yet still vacant and barren. His contemporary "broken-winged" thinker, however, only "cast[ing] an owl's glance," myopically regards "Clothes as a property…as quite natural and spontaneous" (2) to be justly ignored, without noticing the difference between the "Clothed" and the "Naked." To adopt Shakespeare's saying, Carlyle explains, "we are creatures that look before and after: …we do not look round a little, and see what is passing under very eyes" (2). Due to the limitedness of the blear-eyed thinker's horizon, the powerful tool of the Torch thus is utilized to mostly explore the big and visible subjects but barely the small, trivial and even invisible subjects.

Carlyle believes that knowledge is everywhere. Any slight and negligible area contains invaluable knowledge as long as the thinker does not fear the "unprofitable diligence" and "devious courses" (*SR* 3) and does not calculatingly choose subject "[by] geometric scale" (3). Carlyle then takes practical examples from natural realities to illustrate the significance of the seemingly slight and trivial objects similar to the Clothes: "be it remarked, that even a Russian steppe has tumuli and gold ornaments; also many a scene that looks desert and rock-bound from the distance, will unfold itself, when visited, into rare valleys" (3). Though seemingly vacant and infertile, the pettiness unexpectedly comprehends the treasure of philosophy and wisdom: "[d]espise not the rag from which man makes Paper, or the litter from which the earth makes Corn" (53). Carlyle then argues that "[r]ightly viewed no meanest object is insignificant; all objects are as windows, through which the philosophic eye looks into Infinitude itself" (53). Therefore, there is no difference between great objects and petty matter, between visible subject and invisible issue; it is, however, the difference between how a calculative mind and a philosophic thinker view the world and to apply the "Torch of Science".

Thinking that knowledge should be everywhere, Carlyle then looks for Germany, the "learned, indefatigable, deep-thinking Germany" (*SR* 2), to come to his aid. In Carlyle's age, while English and French are still mired by the influences of the French Revolution and Napoleonic invasions, "the German can stand peaceful on his *scientific watch-tower*… to tell the Universe …what o'clock it really is" (2-3 italics mine). He veers toward the German philosophy because, according to David Knight's research on the science in 1830 Germany, "one could find both speculative insights and also highly empirical research and teaching" (61). The "scientific watch-tower," a high platform not only for looking far and broad but also for approaching God and heaven, symbolizes a combination of the "speculative insights" and the "empirical research and teaching." Rather than denouncing science, Carlyle hence discovers in Germany the philosophy "to bring a dynamical spirit into science" (Knight 63). With the spiritual permeation in science, though there are "raging, struggling multitude here and elsewhere" (*SR* 2) in the contemporary English and French, the German are still spiritually "peaceful" to immerse themselves "solemnly, from hour to hour" in the "preparatory blast of cowhorn" (2-3) for telling the world the truth of the time ("tell the Universe…what o'clock it really is"). Symbolically, the "solemn German" able to see the truth becomes the ideal philosopher in Carlyle's imagination. Similarly, the "scientific watch-tower," to comprehend both of the significances science and spirit, emblematically illustrates Carlyle's ideal manner of study, that is, empirical research with speculative insights.

The "Torch of Science" in *Sartor*, in such interpretation, thus does not signify mechanism or utilitarianism to destroy the elevation of spirit; instead, it is a powerful investigating vehicle for Carlyle, to reinforce the advance of the human spirit as long as the philosopher stations himself right in the scientific watch-tower and equips himself just with the tool of the Torch. With the Torch, a philosophic thinker is

without any fear of "an unprofitable diligence" (*SR* 3) but solemnly "has his way" (3) to discover "some *out-lying, neglected, yet vitally momentous province*" (3 italics mine). Once a subject "overlooked by science," Clothes, the "grand Tissue of all Tissues," thus will be excavated since it is a "yet vitally momentous [province]" to bury "the hidden treasures' (3). In the opening of *Sartor*, bringing up the problem of the common neglect of his contemporary "broken-winged thinker," Carlyle then poses his purpose in "Chapter I Preliminary" clearly, that is, to introduce a German philosopher and his philosophic book on the subject of Clothes to English intellects who, unfortunately, have had their "free flight of Thought" cramped by the "immediately practical tendency on all English culture and endeavour" (4). Compared with the German philosopher, the English intellect lacks "the free flight of Thought," and compared with the German philosophy, the English culture is too practical to neglect "abstract Thought" (2).

To be analyzed from his ideal philosophy and philosopher from Germany, Carlyle's position on and anticipation of the "Torch of Science" becomes apparent. First, Carlyle takes the "Torch of Science" as a promising vehicle that can illuminate not only the grand, the physical and the visible, but also the trivial, the metaphysical and the invisible. To link the visible to the invisible, the physical to the metaphorical, Carlyle tactfully uses the metaphor of "tissue," to thread the outmost layer, Clothes, through the middle, the bodily tissue, with the innermost, the Soul and the being. The principal plan of *Sartor* thus is exposed: to hold the "Torch of Science" to investigate from the outmost vestural Tissue to Man's inner Soul. Second, to be discontented with his contemporary common neglect of the spiritual and general tendency toward the practical, Carlyle expects to introduce the German philosophy, combining science and spirit, to reform his contemporary English science, a science in which "pure Science, especially pure moral Science, languishes among us English" (4). Third, due to the

expectation to reform, implicitly, Carlyle points out his contemporary conundrums in the use of science, to fear "an unprofitable diligence," to rely on practical purpose, and to lack spiritual and moral tendencies. In other words, what Carlyle in reality criticizes in *Sartor* should be the utilitarianism, pragmatism and mechanism popular among his contemporary English intellectuals.

(2) Carlyle's "Torch of Science" and Religion

To take the Torch of Science as a powerful vehicle to illuminate the exterior and the interior worlds, Carlyle, however, is not the pioneer. The "torch" treated as a metaphor to signify scientific endeavor to exalt God's magic sign can be traced back to the seventeenth century when the rational science of nature came to the fore. The XLII emblem and epigraph in Michael Maier's alchemical book[17] *Atalanta fugiens* (1617) can be taken as one of the evident examples to illustrate the "torch" as a vital tool to assist a chemist in exploring the nature where God has left his divine signature.

[17] Alchemy is a kind of study to combine the study of the physical and the spirital.

Fig. 2 The 42nd Epigraph of *Atalanta fugiens*: Nature, Reason, Experience and Reading must be the Guide, Staff, Spectacles and Lamp to him that is employed in Chemical Affairs. *The Alchemy Web Site*. Levity.com. 1996. March 18, 2009. <http://www.levity.com/alchemy/atl41-45.html>

Published in Latin, Maier's *Atalanta fugiens* is an interesting book incorporating fifty emblems with an epigram and a discourse for each emblem. The torch metaphor appears in Emblema XLII, in which a chemist carries a lamp to follow the footsteps of the Goddess Nature in the wild at night. Epigramma XLII says: "Nature, Reason, Experience and Reading must be the Guide, Staff, Spectacles, and Lamp to him that is employed in Chemical Affairs."[18] The main theme of Discourse XLII rephrases what the Epigramma says, that is, the required qualities with which a successful chemist should be equipped.

Though merely portraying the mundane world, Maier's Emblema XLII exudes religious themes: the chemist's task is to observe the intelligent Creator's principle of Creation concealed in the orderly-designed nature. As argued by Brooke in *Science*

[18] The translation is adopted from the website, <http://levity.com/alchemy/at41-45.html>.

and Religion, "religious beliefs have served as a *presupposition* of the scientific enterprise" (19); the purpose of the scientific study hence means to serve Christianity to prove the omnipresence of God who leaves his magic signs in nature. To study nature then means to perceive God, because studying the Book of God's work (nature) is as religious as reading the Book of God's words (the Bible). The chemist, wearing spectacles, with a lamp walking in the dark in Maier's Emblema XLII similarly illustrates the religious theme: it represents how a scientist is able to discover the divine signature through empiricism by reading nature in the mundane world. The required equipment for a faithful scientist should be the Goddess nature as a guide, reason as a staff, experience as spectacles, and reading as a lamp. Simply put, to exercise reason, to follow experiences, and to read good authors, allows the scientist to unfold divine secrets hidden in nature.

The lamp, the lighted torch among the requirements for scientific research, is of significance because without the torch, the scientist will be blind, seeing nothing in the dark, and going astray. A torch is a lighting machine, helping the scientist in "seeing the light" outwardly and inwardly. The scientist hence is able to see the light in the exterior dark and to "see the light (understand)" in the inner murk. In other words, the lamp not only kindles exterior nature, leading the scientist to stagger in the dark wild, but also enlightens the interior, insight, guiding a scientist to "understand" nature and to perceive God's designing principles. The scientist needs to have a lighted torch to reveal God's sacred Book in Nature; then, he can not only accomplish his scientific enterprise but also devote his achievements to Christianity religiously.

With the "Torch of Science," Carlyle's philosophic thinker in *Sartor* is as religious as Maier's alchemist endeavoring to discover "the hidden treasures" "in the immeasurable circumambient realm of Nothingness and Night" (*SR* 3). Carlyle's lynx-eyed thinker, never renouncing the Torch, equips himself with the Torch of

Science while wandering in “Nothingness and Night,” because the Torch will guide him with its light to traverse the wild in the dark to reveal the unknown in the soul, and to resolve the secrets of the Divine.

As a metaphor, Carlyle’s Torch not only follows the traditional concept of a scientist’s lamp but also alludes to God’s light in Creation too. In *Genesis,* “God said, ‘Let there be light,’ and there was light” (*Gen* 1: 3-4). In the Bible, light is a sacred gift from God to bring order, wisdom, improvement, and spiritual elevation. God’s light to illuminate the world and to enlighten man generates the awe and esteem in man, who then imitates God in creating an artificial light, the “Torch of Science,” for lighting up and improving the world. As argued by Brooke, “religious doctrines have also offered *sanction* or justification” (1991:22) for scientific research, the religious man thus creates the “Torch of Science” by imitating God’s light and applies this Torch to discover God’s secrets of creation. As God’s light governs both the physical and the metaphysical worlds, giving universal and moral order, so man’s light, too, illuminates both of the visible and invisible worlds, leading man’s material and spiritual progresses. The man-made light, the Torch, resembling God’s light, directs man to the same goal: to help man become enlightened, civilized and progressive for approaching the state of millennium. The man-made light therefore should be religious rather than offensive.

Carlyle trusts light and believes that light is associated with God. “Light has come into the world; to such as love Light, so as Light must be loved, with a boundless all-doing, all-enduring love. …Do we not already know that the name of the Infinite is Good, is God? ” (CH 103) As Maier’s alchemist, Carlyle’s wise philosopher is an empiricist as well, wandering in the dark to observe “the mystery of the Infinite” in nature, which is “a mystery…through all ages, we shall only read here a line of, there another line of” (103). For Carlyle, God’s words (the Bible) are hidden

in God's work (nature) too. God's secrets are inscribed in the "System of Nature! ... [that] remains of quite *infinite* depth, of quite infinite expansion" (*SR* 193). And the laws of nature are God's words: "We speak of the Volume of Nature: and truly a Volume it is,—whose Author and Writer is God" (193-94).

In order to reveal God's words in nature, Carlyle's wise philosopher should prepare for himself the "Torch of Light." Teufelsdrockh describes the highest man that he honors: "his *outward* and his *inward* endeavour are one: … [the] inspired Thinker, who with heaven-made Implement conquers Heaven for us! … [with] *Light.*… Guidance, Freedom, Immortality" (*SR* 171-72, italics mine). With "Light," the inspired Thinker can discover the outward world and also "see the light" of the inner, i.e. to "understand" inwardly. Since "Understanding is indeed thy window" (167), seeing through the window with a Torch of light, the inspired Thinker thus will understand the divine signature inscribed in nature and also perceive with his inner eyes God's wisdom hidden in the inward "wild-weltering Chaos" (148). Carlyle believes that the inspired Thinker has "vision" (148) within his Soul. As the inner vision is lighted up through the "window," the inward "dark wasteful Chaos" will soon turn into a "blooming, fertile, heaven-encompassed World" (148). The Torch hence functions materially and technically as well as spiritually and religiously. It lights up nature and God's work outwardly and kindles the inner vision too, for helping the philosopher to conquer the inner chaos for seeing God's light inwardly: "Let the inward and the outward be Light!"

As Brook argues, "of all pursuit, the study of experimental philosophy was most likely to engender a spirit of piety, perseverance, and humility—the hallmark of Christian virtue" (*SR* 22). Carlyle's "Torch of Science," as well, engenders his protagonist's spirit of piety, perseverance and humility. Wandering in the natural wild to seek the truth, Teufelsdrockh finally achieves the state of the "Everlasting YEA" by

realizing that “One BIBLE I know, of whose Plenary Inspiration doubt is not so much as possible; nay with my own eyes I saw the God’s-Hand writing it” (146-47). In wild nature, Teufelsdrockh no longer sees “chaos” but the “BIBLE”. Both the “BIBLE” in nature and the Bible in words originated from “God’s-Hand.” The two Bibles are in fact “One.” In the state of the “Everlasting YEA,” Teufelsdrockh hence no longer doubts but humbly and faithfully believes in the Divine and His writings. Like Maier’s alchemist who discovers God by following nature humbly with a Torch in hand, Teufelsdrockh too travels alone to the North Pole to face his inward predicament through pursuing God’s truth. After this journey, Teufelsdrockh therefore conquers his inner disbelief and doubt, witnesses God’s signature, perceives God’s wisdom, and finally achieves a state of inner harmony. Teufelsdrockh’s long wandering in the “Nothingness and Night” hence is a journey into God’s light.

In nature, Teufelsdrockh sees God’s light and also perceives God Himself: “Or what is Nature? Ha! Why do I not name thee God?” (*SR* 142) Holding the Torch of Science to wander in the dark does not cause Teufelsdrockh to deny God; instead, to wander with the Torch, he has piety and esteem generated and has his belief and confidence in God increased: “Like soft streamings of celestial music to my too-exasperated heart, came that Evangel. The Universe is not dead and demoniacal … but godlike, and my Father’s!” (142). Facing the Infinity represented by nature, Teufelsdrockh soon feels that “the self in thee needed to be annihilated” (145). Before nature and before God, man should be humble. Even if man is proud of his great advancement, any human invention, the “Torch of Science” for instance, is but an imitation of God’s Creation, Which is far more enormous than any of man’s trivial inventions. Teufelsdrockh then advises his reader to be pious and humble because “Thought without Reverence is barren, perhaps poisonous” (51). He reminds his reader that “Man’s Unhappiness … comes of his Greatness” (143) because human

achievement in every field causes man to be too self-conceited and arrogant to forget the origin of his greatness, that is, God. It is through (imitating) God, instead of depending on man's self, that man is able to reach "Greatness." Humble, pious and perseverant, Teufelsdrockh the empiricist wanderer in the wild is a sincere believer obedient to Christian virtue, since he believes: "Love God. This is the Everlasting YEA" (145).

Religion not only serves as a "presupposition" of scientific enterprise," offers "*sanction*" for scientific research and engenders "Christian virtue," but also supplies "*motives*" (Brooke 191:23) for empirical studies. The motives for depending on science derive from the desire for increase, growth and development. Though bringing advances, for some traditional nineteenth-century people, science is monstrous because it causes great changes. However, Carlyle is fascinated with "change," because "Change, indeed, is painful; yet ever needful; … [it is] necessity of great Change… [it is] the product simply of *increased resources* … the old *methods* can no longer administer" (CH 100). Probably bringing pains, change is necessary since after the temporary throes, there will be "*increased resources*" that the "old *method*" cannot produce. By no means doubting the new method, science, Carlyle in reality defends it, looking forward to the use of science:

> What is it… that in our own day bursts asunder the bonds of ancient Political Systems, and perplexes all Europe with the fear of Change, but even this: the increase of social resources, which the old social methods will no longer sufficiently administer? *The new omnipotence of the Steam-engine* is hewing asunder quite other mountains than the physical. Have not our economical distresses, those barnyard Conflagrations themselves, the frightfulest madness of our mad epoch, *their rise also in what is a real increase: increase of Men; of*

> *human Force; properly, in such a Planet as ours, the most precious of all increases*? (CH 100, italics mine).

Science brings increase; increase suggests development. In an age of change, an age looking for advancement, science then represents a promising vehicle to better the world and to construct an earthly utopia for approaching the biblical millennium.

Never assuming that the advancement of science hinders the developments of spirit and religion, Carlyle, to the contrary, is certain that "the bodeful Night" (CH 98) will end, because the "progress of man towards higher and nobler developments of whatever is highest and noblest in him, *lies not only prophesied to Faith, but now written to the eyes of Observation*" (98, italics mine). Human development is twofold, outwardly, the scientific, the social, and the industrial, and inwardly, the spiritual, the moral and the religious. To hold the "Torch of Science" with sincere Christian faith, Carlyle believes, the observing lynx-eyed philosopher will be able to see and to increase both the inward and outward. In other words, Carlyle's wise philosopher never tends to deny but always to have both Faith and Light, the Faith to believe that "from the bosom of Eternity there shine for us celestial guiding stars" (CH 103) and the Light to assure that "we are in progress" (98).

Rather than simply signifying science, Carlyle's "Torch of Science" in the opening paragraph of *Sartor* is full of abundant meanings. As suggested by Foucault, the "unity" assumption is problematic because it intrinsically supposes an "other" and intentionally excludes the other. The traditional "transcendental" assumption in dealing with *Sartor*, too, presupposes "spirit and religion" as the center and "science" as the other. Under the "unity" assumption, reasonably, the themes of spirit and religion should be elevated, while the themes of science and matter should be rejected. This assumption then causes breaks, contradictions, and discontinuities between

science and religion in the interpretation of *Sartor*.

However, to have a more meticulous look of Carlyle's Torch inter-textually with references to his contemporary science-religion relations, Maier's alchemical book, and Carlyle's "Characteristics," the "Torch" shines differently. It is a medium congenially bridging science and religion. On one hand, the Torch is scientific: it is a man-made Light to function as a powerful vehicle to help the scientist to light up nature (God's work). On the other, the Torch is religious, an imitation of God's Light, implying God's omnipotence. Made purposefully to serve Christianity, the Torch investigates the nature where God leaves His signature outwardly and reminds man of "Let there be Light!" inwardly, to arouse man's piety and esteem for God.

Furthermore, the Torch metaphor also reveals Carlyle's world view, that is, between the interior and the exterior worlds, there are mutually related interrelations rather than breaks or divisions. Ideally, Carlyle believes that the Torch shines simultaneously inwardly and outwardly, and thus the light of Torch should be able to reach both the visible and the invisible, the physical and the metaphysical, and the material and the spiritual. This assumption, too, derives from the belief of "God's omnipotent Light." As God's Light guides man outwardly and inwardly, so man-made light, to imitate God's, should lead man to search exteriorly and interiorly. The "Torch of Science" hence helps man see the light in nature and see the light (understand) in soul; it opens man's eyes and insight.

However, intriguingly, why does Carlyle argue in favor of the "Torch of Science" at this crucial moment? Why does Carlyle have to emphasize the mutual relation between science and religion as well as between the inward and the outward? What kind of crisis is Carlyle worried about? As suggested by Foucault, the rise of a statement indicates an incident that brings confrontations and contradictions. The contradictions are not knots or ends, but the "*spaces*" to represent "two ways of

forming statements, both characterized by certain objects, certain positions of subjectivity, certain concepts, and strategic choices" (Foucault *Archaeology* 151). Carlyle's argument about the "Torch of Science," as well, implies "two ways of forming statements," reflecting the confrontation of two ideas, that is, the value of the religious and the spiritual in tradition in conflicting with the rising attention to the material and the utilitarian in his age.

Due to the rapid progress in economies and industries, Carlyle's contemporaries indulge themselves with lavishness, concentrating merely on "the clay-given mandate, *Eat thou and be filled*" (*SR* 138-39). Regretting that his contemporaries are too utilitarian, material and mechanistic to ignore the spiritual, moral and religious, Carlyle then avows the significance of "the God-given mandate" (138). In *Sartor*, criticizing the Torch ironically to focus merely on the great, the physical and the visible but overlooking the trivial, the metaphysical and the invisible, Carlyle then brings up his main thesis: the necessarily mutual relation between the scientific and religious, the physical and metaphysical, the mundane and the divine, as well as the interior and the exterior. "The Torch of Science," able to light and to reform, is therefore a sacred vehicle to unite man and God, matter and spirit, and science and religion.

Carlyle's criticism of the Torch reflects his worry and his hope: the worry about the break of science from religion, sprit from matter, and man from God, as well as the hope to pass the crisis and rejoin the two poles. Carlyle's "Torch" metaphor then not only indicates his contemporary crisis but also demonstrates his reform imagination. More than renouncing science by criticizing the Torch, Carlyle in fact intentionally adopts science as the foundation upon which to rebuild the fortress of the spirit.

(3) The General Contamination of the Mechanical in the Use of Science And Carlyle's Urge to Reform

Carlyle's "Torch of Science" interpreted by Foucauldian analysis appears to be a discursive space in which to denote confrontations of two streams of thought, the decline of the traditional ethical vs. the rise of a new value related to the use of science. Then, what are the differences between traditional ethics and the new value in holding the "Torch of Science" to investigate the exterior nature and the interior universe? What are the intrinsic principles of the traditional ethic and the new value? And why is there the new value rising to offend the traditional ethic of science?

For Carlyle, the traditional value in regard to the concept of science should domain "the two great departments of knowledge—the outward … [and] the inward" (ST 105). However, during his age, there was a general interest in the mechanical to deal with all aspects of human life, including the use of science. He declares that there is "a *mighty change* in our whole manner of existence" (103 italics mine). And this "change" is a stealthy tendency of the mechanical to contaminate "not only our modes of action alone, but our modes of thought and feeling" (103). Due to the "mighty change," gradually, "[men] are grown *mechanical* in *head* and in *heart*, as well as in *hand*. They have lost *faith* in individual endeavour and in *natural force*, of any kind" (103 italics mine). From the hand to act, to the head to think and the heart to feel, men's "whole manner of existence" (103) undergoes the great influence of the "mighty change." Step by step, men lose their belief in the invisible, the inner, the metaphysical, and the divine since only the visible and the tangible are trustworthy. Without faith, men neither look for the "internal perfection" (103) through discovering the "natural force" with their "individual endeavour[s]," nor follow the traditional intellectuals like the wandering alchemist in Maier's Emblem. The men of the new value, instead, solely depend on "external combinations and arrangements,

for institutions, constitutions, for Mechanism of one sort or other…. Their whole efforts, attachments, opinions, turn on mechanism, and are of a mechanical character" (103). The new men of the mechanical character, therefore, look merely toward the external and exert their efforts simply to the visible, disregarding the inner and the invisible. The rising new value, in Carlyle's phrase, thus refers to the "mighty change," that is, the mechanization of men's "whole manner of existence."

Disappointed and dissatisfied, Carlyle criticizes that this "mighty change" "sufficiently indicates the intellectual bias of [his] time" (ST 105). The intellectuals have lost their inner eyes and the perception of "seeing the light;" they see solely the external:

> That, except the external, there are no true sciences; that to the inward world (if there be any) our only conceivable road is through the Outward; that, in short, what cannot be investigated and understood mechanically, cannot be investigated and understood at all. (105)

Carlyle's contemporary intellectuals misinterpret the "Torch of Science" as simply a tool to investigate the "Outward" and to overlook "the inward world." To deem the inner as "no true sciences," the intellectuals cause the "state of Science" (103) to go astray. Consequently, "the Metaphysical and Moral Sciences are falling into decay, while the Physical are engrossing, every day, more respect and attention" (103). Not merely the physical and the visible worlds are gradually dominated by the mechanic calculation, the metaphysical and the invisible worlds can not escape from the yoke of mechanism, either: "*Philosophy,* Science, *Art, Literature*, all depend on machinery" (102 italics mine). This complaint is similarly stated in *Sartor* as well: "pure Science, especially pure moral Science, languishes among us English" (*SR* 4). No longer

trusting the "pure moral Science" that refers to the Science able to light up the world and enlighten people in the traditional concept, Carlyle's contemporary intellectuals incline themselves toward the new value of science in the mechanical trend.

To be mechanical, the intellectuals are calculative and blind to see through the appearance. Each calculatingly "teaches and practices the great art of adapting means to ends" (ST 100), attaching themselves to "counting-up and estimating men's motives…, [to] curious checking and balancing, and [to] adjustments of Profit and Loss" for the purposes of "guid[ing] them to their true advantages" (108). In other words, the intellectuals no longer mind the "whole inward Sea of Light and Love" (*SR* 49); they become the "man who cannot wonder, who does not habitually wonder (and worship)" (51). Spirit, moral, and religion are vacant in their hearts and minds; what they do care about are technical "Mensuration and Numeration" (50) in "all Laboratories and Observatories" (51). The intellectuals, hence, tangle themselves in the "Logic mills, to grind out the true causes and effects of all that is done and created" (ST 112). They do nothing and they do not create; they are far from the ideal intellectuals represented by Maier's chemist—taking a Torch, wearing spectacles, wandering in dark wild, and investigating the divine truth manifested in the mundane matter. Looking for merely "Profit and Loss" and estimating only the "true advantages," the intellectuals become empty heads with "a Pair of Spectacles behind which there is *no Eye*" (*SR* 51 italics mine). Carlyle here ridicules his contemporary intellectuals of the new values, who seem to equip themselves with the tool of science apparently but are in reality without an "Eye," that is, the physical Eye to probe the appearance (clothes) for seeing into the truth as well as the insightful Eye to observe the truth in perceiving the divine.

Carlyle, then, traces the possible origin of the mighty change mechanism, and indicates that the "last class of our Scotch Metaphysicians had a dim notion that much

of this was wrong" (ST 104). Among the last classes of the Scotch Metaphysicians, according to Carlyle, it is John Locke who splits the "philosophy of the mind" (104) from the study of all sciences. Locke's

> whole doctrine is mechanical, in its aim and origin, in its method and its results…: it is a mere discussion concerning the origin of our consciousness, or ideas, or whatever else they are called; a genetic history of what we see in mind. The grand secrets of Necessity and Freewill, of the Mind's vital or non-vital dependence on Matter, of *our mysterious relations to Time and Space, to God, to the Universe,* are not, in the faintest degree touched on in these inquiries; and seem not to have the smallest connexion with them. (104 italics mine)

Apparently, for Carlyle, Locke's philosophy disregards the mysterious and thus causes the regression of philosophy and the predicament of science in the present. Though discussing "the origin of our consciousness, or ideas," Locke overlooks the "grand secrets of Necessity and Freewill," the first causes of the universe, and the mysterious relations between mind and matter, between man and God. Without concern for the issues of the mysterious, Locke's philosophy hence results in the present overlooking of "the moral, religious, spiritual condition of the people" (106) and in the contemporary keen pursuit in "their physical, practical, economical condition" (106). Tragically, this society inclines to worship the "Body-politic" and slight the "Soul-politic" (106).

The man of the "Soul-politic," according to Carlyle, refers to the man who "deals much in the feeling of Wonder, insists on the necessity and high worth of the universal Wonder" (*SR* 50). For the man of the "Soul-politic," "Wonder … is the basis of Worship: the reign of wonder is perennial, indestructible in Man" (50). Simply put,

Carlyle's Wonder is the invisible, the spiritual, the metaphysical, and the religious, which cannot be investigated purely by the physical eyes or the mechanical tools but have to be dug out by the deep thinker who faithfully carries a lamp walking in the dark nature. The men of the "Body-politic" are "Logic-choppers, and treble-pipe Scoffers, and professed Enemies to Wonder" (51) "who cannot wonder" but "walk through [their] world by the *sunshine* of what [they] called *Truth,* or even by the hand-lamp of what [Teufelsdrockh] call[s] *Attorney-Logic*; and '*explain*' all, '*account*' for all, or *believe nothing of it*" (51 italics mine).

Instead of walking in the dark wild of the mysterious Nature and holding the Torch to light the outside and the inside like the traditional "true intellectual" (CH 74), the men of the new value in the "Body politic," without any belief and faith, walk under the sunshine and have "the hand-lamp" to "explain" and "account" for the mysteries in nature falsely. They are "illuminated Sceptics, *walk…in full day-light, with rattle and lantern*" (*SR* 51 italics mine) to investigate the world "with his dissecting-knives and real metal probes" or by "Leuwenhoek microscopes… and anatomical blowpipe" (ST 105). Seemingly able to see, the man of the new value in reality sees no truth but blindly believes in the mechanical tools that solely examine the exterior. "[T]hough *the Sun is shining*" (*SR* 51 italics mine), the man of the "Body-politics" is the fool without insight. Ridiculing the man of the new value as "Dilettant[i] and *sandblind* Pedant[s]" (52 italic mine), Carlyle is confident that it is not that "the reign of wonder is done, and God's world all disembellished and prosaic" (52), but a tragic regression of science to become "the mechanical and menial handicrafts" (51).

Carlyle takes Dr. Cabanis's statements concerning "thought" in *Rapports du Physique et du Morale de l'Homme* as an example to explain the privation of the spiritual and the invisible among his contemporary studies in "Signs of the Times."

For Dr. Cabanis, thought is a sort of matter "secreted by the brain;" it is "a product of the smaller intestines" (ST 105) [shit] instead of anything related to the spiritual or the metaphysical. Carlyle regrets that Dr. Cabanis, one of the representatives of the new thinkers, is so blind to "[walk] through the land of *wonders, unwondering*" (105 italics mine). The man of the new value has neither faith nor belief, seeing by no means "Poetry and Religion" (105), because he mechanically dissects wonder and analyzes mystery. Science, therefore, in Carlyle's assumption, gradually loses its traditional ethics, that is, the reverence for both the exterior and the interior worlds, but attaches itself to the mechanical, to trace merely the seeable in the exterior world.

In "Carlyle's Denial of Axiological Content in Science" (1988), Charles W. Schaefer, similarly, argues that Carlyle "assists the reverential-poetic perspective by boldly impugning science for the manner in which it entangles itself in the 'clothes' which cover the most urgent questions; by reminding his age that just our being here at all is the chief wonder; [and] by exposing the tendency of science to lapse into scientism" (16). Though not boldly declaring that Carlyle does not deny but favor science, Schaefer points out that Carlyle intends to "[call] attention to the furtive tendency of science to lapse into scientism" (12). Implicitly, there is a discursive space for defending an ideal type of science in Carlyle's imagination between Schaefer's lines. From the "science" to "scientism," there is a distance. Schaefer argues that Carlyle impugns his contemporary science because it "entangles itself" in merely the exterior (clothes) without noticing the interior (the reverential-poetic perspective). In other words, the present science (to focus on the exterior) differs from the past science (to concern both the interior and exterior). What Carlyle impugns, suggestively, is the present science, i.e., scientism, instead of the past science, i.e., the pure science of the inner and the outer. In Schaefer's own term, what Carlyle denies is the "axiological content in science" (10), that is, the science to be imbued with the

calculative estimation of “Profit and Loss” (ST 108) and to “replace wonder with explanation in the name of science” (Schaefer 12).

More than a denier of his present science, Carlyle is in reality an early nineteenth-century leader of an ethical reform of science. Different from his contemporary social and political reformers who fanatically demand structural and formal rearrangement, Carlyle deems that an inner revolution is far more fundamental and essential. Similar to the political reformers, Carlyle is enthusiastic about pursuing the great happiness of the people. Yet different from the political reformers who interest themselves in the exterior circumstances, which is “itself the sign of a mechanical age” (ST 106), Carlyle insists that man’s great happiness “depends on the mind which is within us, not on the circumstances which are without us” (106). For Carlyle, “Give us a reform of Government!” (106) is by no means the solution; to the contrary, “the necessity and infinite worth of moral goodness” (106), that is, the “divine spirit” rising from “the mystic deeps of man’s soul” (108), serves as the ultimate principle of man’s great happiness. In other words, man’s happiness starts with the inner liberation of the soul rather than the outward emancipation of the form. Carlyle, hence, is a reformer of spirit and morals. And to embark on the reform, science is the opener.

To reform science from the within, Carlyle then analyzes the attributes of science. According to his own definition, science comprises two aspects, the dynamic and the mechanic:

> To speak a little pedantically, there is a science of **Dynamics** in man’s fortunes and nature, as well as of **Mechanics.** There is a science which treats of, and practically addresses, the primary, unmodified forces and energies of man, the mysterious springs of Love, and Fear, and Wonder, of Enthusiasm, Poetry,

> religion, all which have a truly vital and **infinite** character; as well as a science which practically addresses the finite, modified developments of these, when they take the shape of immediate "motives," as hope of reward, or as fear of punishment. (ST 107)

The science of dynamics, about "forces and energies" and "the mysterious springs of Love…and Wonder," implicitly, refers to the "Soul-politic." It is a system dominating the invisible, the spiritual, the metaphysical, and the religious. Carlyle worships the science that "deal[s] chiefly with the Dynamical" (107) by the "wise men" "in former times" (107). The past philosophers of the dynamical science are "*enlightened* lovers" (107 italic mine) such as "Moralists, Poets or Priest," who, "without neglecting the Mechanical province…, [apply] themselves chiefly to regulate, increase and purify the inward primary powers of man" (107). In other words, Carlyle deems that the possible reform should depend on the "enlightened lovers" to deal with "the Dynamic."

Yet, the science of mechanics, the "finite" caused by "immediate 'motives'" for "practical" reasons, suggestively refers to the "Body-politic." It is a system reining in the visible, the material, the physical, and the earthly. Ideally, it is only with the Torch of Science that a philosopher is able to see the light in the dark. Carlyle grieves for the mechanical science in his age, because the philosopher no longer holds the Torch to walk in the dark but *under the sunshine in the day time*: "The **Euphuist** of our day differs much from his pleasant predecessors. An intellectual dapperling of these times boasts chiefly of his irresistible perspicacity, his '*dwelling in the daylight of truth,*'… [and] *dwelling in the rush-light of 'closet logic'"* (ST 112 italics mine). The thinkers of the new values, in Carlyle's viewpoint, are not sincere philosophers of "the free flight of Thought" (*SR* 4), but the "broken-winged thinkers" (2) self-

conceitedly boasting their haste and unprofitable studies. The new thinkers, shortsightedly “look before and after” (2) in their small “closet” and vainly hope to discover “truth” in the daytime. They are no longer the traditional philosophers, like Maier’s chemist, following the footprints of nature, with a lamp, to discover the divine signature during the night time, but mechanic calculators who “deal exclusively with the Mechanical province; and occupying themselves in counting-up and estimating men’s motives, strive by curious checking and balancing” (ST 107). They are so sly and cunning that they “wisely [contrive]” (107) stories and excuses to cover up “those same ‘motives” (107) for gaining their “Profit and Loss” and “their true advantage” (107). Tragically, these cunning new thinkers exist not solely in the field of science; in the fields of art, literature, religion, politics, etc., are men of the “strong Mechanical character” (111), too. That is to say, not only the exterior world but also the interior are contaminated by the mechanical. For Carlyle, therefore, his contemporary predicament does not reside in the pervasion of science and industry; to the contrary, *it is the infiltration of mechanism into every field of human life and soul causing the present crisis.*

To trace the possible derivation, Carlyle regards the doubt of the invisible and the loss of belief as bringing about this infiltration of mechanism.

> The truth is, men have lost their belief in the Invisible, and believe, and hope, and work only in the Visible…. This is not a Religious age. Only the material, the immediately practical, not the divine and spiritual, is important to us. The infinite, absolute character of Virtue has passed into a finite, conditional one; it is no longer a worship of the Beautiful and Good; but the calculation of the Profitable. … Our true Deity is Mechanism” (ST 111).

Due to this crisis of the mechanism, Carlyle "call[s] for change (ST 117), looking forward to the progress of man's soul to a "higher, heavenly freedom" (117) in "Signs of the Times" (1829). His reform intention, the demand for change and progress, is so urgent that he claims again the seriousness of the revival of "the eye of Observation" to lead men "towards higher and nobler developments of whatever is highest and noblest" in "Characteristics" (1831). In *Sartor* (1833-34), then, Teufelsdrockh, the lynx-eyed wise philosopher from Germany, is Carlyle's incarnated ideal philosopher of the traditional ethics of the past to propagate the indispensable reform of spirit, morals, and religion in men's "whole manner of existence" (ST 103).

To shoulder Carlyle's reform task, Teufelsdrockh does not give up the "Torch of Science," but takes it as his lamp in the long night of the North Cape to discover the truth. Undergoing physical and spiritual torments in wild nature, Teufelsdrockh finally *sees the "Light"* that "is with man's Soul as it was with Nature" (*SR* 148). The world of the interior, the spiritual and the religious hence harmoniously integrates the exterior, material and physical in Teufelsdrockh's new experiences. Consequently, nature is neither "the wild-weltering Chaos" nor "a dark wasteful Chaos" but "a blooming, fertile, heaven-encompassed World" of Light (148). From the trivial and "obscure region" (2) that the calculative owl-eyed thinker overlooks (2), Teufelsdrockh successfully discovers truth from "the vestural Tissue…which Man's Soul wears" (2). The Clothes Philosophy then is produced, the philosophy about the interior and exterior, the visible and invisible, and the physical and the metaphysical worlds. Empirically investigated by the "Torch of Science" to light the inner and the outer, Teufelsdrockh's "*Science of Clothes*" turns to be "a high one" that "may with infinitely deeper study on thy part yield richer fruit" (203 italics mine).

Science, an investigating vehicle to illuminate the interior and exterior,

therefore, appears to be a powerful and sacred tool; when handled by the owl-eyed thinker of the new values, the Torch loses its power in the daytime, unable to illuminate either the inner or the outer.

To conclude, it is the user's attitude and manner causing science to be mechanical, not the "mechanical attribute" of science itself that brings about the calculative scientism and contaminates man's use of science, making it mechanical and material. It is man's loss of the dynamic in regard to science that results in the mechanization of science, not that science itself lacks dynamics. Simply put, it is science's status quo, instead of science per se, that causes the prevalent mechanical condition of science during Carlyle's age. Science therefore is by no means the main target of Carlyle's censure; rather, it is the furtive tendency of mechanism encompassing men's "whole manner of existence" that engenders Carlyle's sense of crisis and anticipation of reform.

Table 1: The Conflicts Reflected by the Torch of Science

Concepts about science	Traditional concept of science (to domain the inward and the outward)	The contemporary crisis of science (the inward department falling into decay)
Also termed by Carlyle	The metaphysical science, moral science, pure science	Scientism, the mechanical science, the utilitarian science, the calculative science
The attributes of science	the science of dynamic: treating the primary forces and energies of man, the mysterious springs of	the science of mechanics: about the finite, modified and immediate motives—profit and loss

	wonder; the infinite character	
The philosopher of science	The lynx-eyed philosopher from Germany	The owl-eyed calculator in England
The philosopher belong to	The "Soul-politic" to believe wonder, worship, and the invisible	The "Body-politic," without any belief and faith, to trust merely the superficial and visible

IV. The "Torch of Science"

Instead of renouncing science as Cosslett comments in *The 'Scientific Movement'*, Carlyle in reality is a defender of the "Torch of Science," imbuing science with religious meanings and a sacred mission. With the Torch metaphor, Carlyle's science is inevitably symbiotic with Maier's religious scientist and God's Light. Science and religion, in Carlyle's viewpoint, therefore, are by no means hostile to each other but mutually productive.

Regarding the "Torch of Science" as a sacred tool to carry out the reform mission, Carlyle assumes that, first, science should functionally investigate the interior and the exterior, the invisible and visible, and the metaphysical and the metaphysical and, second, it should also indiscriminately observe not only the grand issues of gravitation or the planetary system but also the trivial objects in the "obscure region" such as "the vestural Tissue." Carlyle believes that God leaves his divine signature in every corner of the world, even in the slightest and the most negligible area. As long as the thinker sincerely believes and wanders, the divine truth will be

revealed.

Since the Torch of Science carries religious meanings, investigating powers, and a sacred mission to reform, Carlyle in reality does not intend to ridicule science in the opening of *Sartor*. To the contrary, the critical and mocking tone in Chapter I of Book First implicitly reveals the impending crisis of his age, a general myopia affected by mechanism among Carlyle's contemporaries. *Sartor* hence illustrates a transition of ideas, the ideas of philosophy, science, religion, mechanism, reform, and the ideas of the status and vista of a philosopher.

A Foucauldian analysis reveals that *Sartor Resartus* as a discursive horizon, exhibits the confrontation of thoughts and departure of ideas: the decline of traditional ethics vs. the rise of the new values in the whole manner of human existence, the gradual loss of the wise philosophical thinker vs. the increase in the calculative pragmatist, and the languishment of pure science vs. the prevalence of mechanical thought. The Torch metaphor exposes the stealthy rupture of the term, science, from religion in the history of Carlyle's age. Even if Carlyle intends to denote "science" as a term containing reference to both the interior and the exterior worlds, the widespread usage of the term to signify the aspect of the mechanical has gradually altered the meaning of "science." *Sartor* hence marks the transformation of "science" from its broader sense in the early and middle nineteenth century to a stricter sense in later decades; that is, from the significance of the "state or fact of knowing" (*OED*) to the synonymy of "Natural and Physical Science," "restricted to those branches of study that relate to the phenomena of the material universe and their laws" (*OED*). The contradictions revealed in *Sartor*, hence, are not the warfare relations between science and religion, but the confrontations of, and debates over, the issues of philosophy, science, religion, and the nature of the philosopher.

To juxtapose contextual references to the science-religion relations during

Carlyle's age and textual references in "Signs of the Times" and "Characteristics" with *Sartor Resartus*, this study discovers that the true conundrum of science in Carlyle's age derives not from the science-religion break, but from the indifferent trampling of the mechanic over the dynamic in all aspects of human existence. Furthermore, for Carlyle, it is the contemporary obsession with the mechanic, the exterior and the visible that turn science into a blind machine seeing nothing in the daylight. Carlyle, therefore, does not aim to demand the relinquishing of science in *Sartor Resartus*, but rather, he proposes to propagate the indispensability of spiritual, moral, and religious reforms in all manners of human existence, including in science, in order to push the social progression and the advancement of human civilization. Carlyle clearly reveals in the opening of *Sartor* that the "Torch of Science" is the key to realizing the required reforms.

Chapter Three

"Natural Supernaturalism" Redefined

> For Matter, were it never so despicable, is Spirit, the manifestation of Spirit…. The thing Visible, nay the thing Imagined, the thing in any way conceived as Visible, what is it but a Garment, a Clothing of the higher, celestial Invisible, 'unimaginable, formless, dark with excess of bright'? (*SR* 49)

> "The Philosopher," says the wisest of this age, "must station himself in the middle": how true! (*SR* 50)

I. Introduction

Though calling for a spiritual reform in an age dominated by mechanism and utilitarianism, Carlyle never proposes denying the necessity of matter in the secular world. In *Sartor*, spirit and matter do not stand as opposites, conflicting with each other. On the contrary, spirit and matter are in a mutually productive relationship: matter symbolizes the spirit, and the spirit supports matter. Spirit and matter are not two ends of a binary opposition but two sides of the same coin, reciprocally allied. Visible matter—imaginable and tangible—is by no means "despicable" in Carlyle's thought, but represents "a Clothing of the higher, celestial Invisible" to symbolize the spiritual and the supernatural, namely, God. Instead of contradicting each other, visible matter in the natural world and the invisible spirit in the supernatural correspond with each other in *Sartor Resartus*. "Natural supernaturalism" hence should be defined as the material nature symbolizing the invisible supernatural and the spiritual supernatural nurturing visible nature.

In regard to Carlyle's natural supernaturalism, M. H. Abrams's "to naturalize

the supernatural and to humanize the divine" (68) stands as the most prevalent and persuasive explanation. Borrowing from Carlyle's paradoxical term, "natural supernaturalism," Abrams identifies in *Natural Supernaturalism: Tradition and Revolution in Romantic Literature* the irreducible religious heredity buried in the themes of individualism and secularization in the revolutionary Romantic writings. He argues that "the writings of Wordsworth and his English contemporaries reflect[ed] not only the language and rhythms but also the design, the imagery, and many of the central moral values of the Bible, as well as of Milton, the great poet of Biblical history and prophecy" (32). Hence, even if Wordsworth intended to claim his own "great Argument" (28) to distinguish his writings from his ancestor's, namely, Milton's, in reality "[b]ehind Wordsworth's program for poetry was *Paradise Lost*, and behind *Paradise Lost* were the Holy Scriptures" (32).

Taking Ludwig Wittgenstein's statement that "We are not contributing curiosities, but observations" (Abrams 15) as his analytical base, Abrams believes that no one is able to escape from one's culture and language and hence no one is able to contribute novelty. What one can do is merely to observe and repeat the ancient. He then argues "the fact is that many of the most distinctive and recurrent elements in both the thought and literature of the age had their origin in theological concepts, images, and plot patterns" (65). With such an interpretation, Wordsworth's revolutionary "high argument" is but the "assimilation of Biblical and theological elements to secular or pagan frames of reference" (66). The *revolutionary* spirit of Wordsworth and his contemporaries, in both Germany and England, thus had its root in Christian *tradition*, because Christianity had been "woven into the fabric of our language, control the articulation of our thinking" (66). "Natural supernaturalism," in Abrams's interpretation, therefore stands for "to naturalize the supernatural and to humanize the divine." His argument is instructive for he reminds radicals that

Romantic writings are perhaps revolutionary in their form but traditional in their content.

In order to prove the significance of the indispensible religious tie in Romantic writings, Abrams utilizes the metaphor of a "culminating and procreative marriage between mind and nature" as a secularized form of the marriage of God and his redeemed bride on earth in order to stress the theological as well as teleological themes in Romantic writings. He deems that, for instance, Teufelsdrockh's spiritual renovation in wild nature represents the repeated formula of the Romantic marriage of "mind and nature." Abrams's pattern of analogy is apparent: a: b:: c: d, that is,

God: the redeemed bride on the earth::

mind: nature::

the supernatural: nature

This analogy also implies:

the invisible: the visible::

the religious: the secular::

the spiritual: the material

Under this dualistic analogy, Abrams' proposition turns out to be obvious: to bring up the significance of the unbreakable "divine" tradition to bind the Romantic revolution.

Though taking the spousal of mind and nature to elaborate his keynote of "natural supernaturalism," Abrams's emphasis however mainly falls on the "mind" as the "supernatural" ends. He shows how the prophet-poet grows spiritually to cross his inward crisis through diverse "circuitous journeys" (Abrams chp3, chp4, chp5). The

alienated poet at first feels lost in the mundane world and finally regains faith and an integrated self in the paradise on earth. In Abrams's structure of analysis, the "mind" as well as "the supernatural" seems to be the protagonist, while the "nature" appears as a backdrop. What is significant resides in the inner world, and the external world is a mere setting that reflects what is working in the prophet-poet's interior universe. With such emphasis in his analysis, Abrams thus has a bias in treating the spousal metaphor of mind and nature. He has his eye on mind more than on matter, and simultaneously, he inclines to interpret "the supernatural" more than to elaborate "nature."

Hence this study intends to modify Abrams's by emphasizing the other side, the material, the secular, and the visible, in his dualistic structure of analysis, that is, the "nature" side in Carlyle's philosophy of "natural supernaturalism." If Abrams's study aims to claim the significance of the theological tradition in Romantic writings, including in Carlyle's, this study proposes to highlight the significance of the physical world in Carlyle's writing. To adopt the same idea from Wittgenstein as Abrams does, this study has its analysis founded on the statement that: "We are not contributing curiosities, but observations" as well. Since no one is able to escape from the language and culture in which one dwells, the early nineteenth-century natural theology that valued the Book of Nature highly might have been woven into Carlyle's thoughts too. The subject of "nature" under this analytical scheme, then, will no longer play as a foil to the mind but have its own characteristics and attributes in relation to the other subject, "the supernatural." The visible and the material therefore will no longer function as the specific "form" of the "secularization" in a revolutionary age but one of the keynotes in Carlyle's philosophical dialectic.

This chapter hence has two aims. The first aim is to analyze the attribute and function of "matter" in Carlyle's "Clothes Philosophy." I opine that Carlyle never

intended to relinquish “matter” on account of transcendentalism. Rather, matter as well as its mechanic order in the mundane world in *Sartor* has its own divine significance and spiritual function: matter in *Sartor* serves as a visible medium to perceive God and a tangible vehicle to accomplish spiritual reform. Similar to Abrams’s, this study also assumes that the text never speaks the novel but repeats what is whispering in the context, and thus Carlyle’s respect for “matter” is not simply his own idiosyncrasy but a reflection of the contemporary ideology of natural theology. Carlyle’s “natural supernaturalism” therefore can be treated as an aesthetic revision of natural theology, similar to William Paley’s in *Natural Theology* (1802), and his Clothes Philosophy can be viewed as a metaphorical adaptation of Paley’s “watch analogy.”

The second aim of this chapter will be the elaboration of Carlyle’s concept of the universe, the “whole.” I assume that Carlyle never perceives a separation between the natural and the spiritual, or the material from the divine; instead, what he perceives is the rupture between the “subjective” world from the “objective” world in the minds of his contemporary intellectuals. That is to say, without thinking of the use of “matter” as a hindrance to spirit and God, Carlyle in reality deplores the “subjective” bias of his contemporaries in ignoring the “objective” universe, that is, the “whole” harmoniously integrated matter and spirit, the visible and the invisible, as well as the natural and the supernatural. What Carlyle is criticizing, in *Sartor*, thus, is not “matter” but his contemporaries, who are blinded to the objective universe (the whole), ignoring the supernatural half, but seeing merely the mechanic half of the whole. He imputes the spiritual crisis in an unhealthy society to the foolish, not to the use of “matter.” Matter, due to its function symbolizing God, should be weighed equally with “spirit.” Matter and spirit correspond to each other; they stand for two poles of “the whole” in Carlyle’s “Clothes Philosophy.”

To begin with the argument that Carlyle is an aggressive reformer to strengthen the faith in an invisible God based on visible matter in "nature," this study will firstly start with an adumbration of Carlyle's early studies, his intimacy with natural theology, and the importance of "matter" in natural philosophy.

II. Carlyle's Early Studies and Matter

(1) Carlyle's Early Studies

Before becoming a professional writer, Carlyle was once a student of natural philosophy. Around 1814 and 1815, when entering the University of Edinburgh, Carlyle had taken the required courses for ministerial students. However, just after one year, he abandoned his ministerial studies and turned to the studies of mathematics, mineralogy, and geology. G. B. Tennyson observes it to be "[l]ess a cause than a consequence of his loss of faith was his preoccupation with natural philosophy" (19). Carlyle's rejection of ministry, paradoxically, aimed to grasp the truth of God that he found unable to be apprehended from the ministerial studies. Since Christianity could not solve the perplexed mind of the young Carlyle, science stood as a probable means to offer answers. For the twenty-first-century reader, Carlyle's transfer from religion to science seems to be an odd gesture; for the nineteenth-century people, however, his change was but a reasonable choice because natural philosophy, termed as science in the twenty-first century, was "conceived of as the handmaid of religion" (19).

For Carlyle the young scholar, natural philosophy was never a weapon to attack his loyalty to religion but one part of "a synthesis" (Tennyson 20) that hopefully could "unite in meaningful harmony in the multiplicities of modern life" (20). Natural philosophy in the young Carlyle's mind, hence, "appeared as a way to bridge the gap [of science and religion], not as a cause of it" (20). Between natural philosophy and

theology there was not a break: the study of the material world did not mean to deny the research in the spiritual, and the study of the spiritual world did not mean to abandon the recognition of the material world. The young Carlyle in reality held that the material world comprehended the spiritual wisdom and the supernatural world left its symbol in the natural world.

In order to deepen his faith in God, Carlyle chose the knowledge of geology as a channel to explore the divine secret. "Geology was the keystone science of the first half of the nineteenth century" (Tennyson 21), and the Germans were masters in this field. Carlyle thus was not simply interested in German literature but also fascinated with German science, especially with the study of geology. Like his model, Johnna Wofgang von Goethe (1749-1832), who was expert in poetry, theology, as well as optics, the young Carlyle also broadly read writings of religion, literature, and natural philosophy—the sciences such as "Busching's *Geography*" (Carlyle *SR* 62), Saussure's chemistry, Cuvier's zoology, and Playfair's mathematics.[19] Besides his contemporary scientist, "he knew Newton" (Tennyson 21) too. For this voracious young reader, the knowledge in the fields of science, literature, and religion never contradicted to but correlated with one another.

During the years to compose *Sartor* (1830-31), Carlyle's relation to natural philosophy was never less than that to literature, religion, and history. In the early nineteenth century, natural philosophy was one of the standard disciplines among English intellectuals, and Carlyle personally attended to this study. In 1834, his profession in natural science even promoted him to "the Chair of Astronomy at Edinburgh" (Tennyson 23), a position Carlyle considered seriously but finally rejected.

[19] According to Tennyson's research, Carlyle read "Saussure, Cuvier, and Playfair, and he knew Newton" (21). Nicolas-Théodore de Saussure was a Swiss chemist; Baron Georges Léopold Chrétien Frédéric Dagobert Cuvier a French naturalist and zoologist; and and John Playfaire a Scottish scientist. Playfair was professor of mathematics and professor of natural philosophy at the University of Edinburgh. *Illustrations of the Huttonian Theory of the Earth* published in 1802 was one of his best known books.

Carlyle's endeavor in the physical world, hence, never confused his interest in the metaphysical, and his curiosity to nature never hindered his affection of the supernatural. He never considered the incompatibility between science and religion, matter and mind, as well as nature and the supernatural, since for "the great majority of British intellectuals, science and theology were mutually informing means of investigating God's world… [and] its practitioners did not in general recognize that gap [between science and theology] to begin with" states Colin Jager in *The Book of God* (4). In other words, matter in nature never stood at opposite poles to spirit in the supernatural, and any scientific investigations into the physical substance never aimed to prod Christianity and irritate God. Since there was never a gap between matter and mind, Carlyle was quick to "[make] free use of analogies drawn from natural science like geology to advance arguments" (Tennyson 22). It is thus reasonable that matter corresponded to spirit, and science to religion in the Carlylean universe. "The Torch of Science" in the opening of *Sartor*, for instance, is one of the typical metaphors to demonstrate Carlyle's free use of the consonance between matter and spirit as well as science and religion.

For the early nineteenth century, Carlyle was unexceptional in embracing the concept of a harmonious relation between matter and spirit, as well as science and religion. To the contrary, due to the ideology of the design argument rooted in natural philosophy, every educated mind believed in "a felt convergence of religious belief and scientific investigations" (Jager 4). During Carlyle's age, one of the most influential and widely read books to theorize natural philosophy was William Paley's *Natural Theology; or, Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature* (1802). Though Paley (1743-1805) was not "the most original or inspiring thinker," Jager states, "[e]very university-educated

man would have encountered Paley's works at least once during his career" (103).[20] Not odd, Carlyle read Paley's *Natural Theology*. Darwin even praised Paley's "watch analogy" in one of his 1859 letters: "I don't think I hardly even admired a book more than Paley's 'Natural Theology.' I could almost formerly have said it by heart" (qtd. Cosslett 25).[21] Natural theology was a concept not only wide-spread during the eighteenth century but also generally believed in the nineteenth. During the prevalence of Darwin's Origin of Species, Paley's "watch analogy," yet, was still the most compelling theory for discursive expositions in many of the scientific writings, such as Hugh Miller's *The Testimony of the Rocks* (1856), *or Geology in its bearing on the Two Theologies, Natural & Revealed* (1857) and Frederick Temple's *The Relations between Religion and Science* (1887).

(2) Matter in Natural Theology

There are principally three beliefs in the philosophy of natural theology. First, within the physicality of matter, there is spirit. Second, behind the mechanistic system of matter, God is the master who operates the motions of all pieces of matter. In other words, the laws and principles of matter derive from a universal omnipotent, God. Third, between matter and spirit, there is a mutual relationship, reciprocally responding to each other. The true meaning of matter consists of two parts, the exterior form and the interior significance of matter. A natural philosopher, hence, does not see merely the matter's appearance but also perceives its spirit. To study the

[20] In his study of Paley in *The Book of God: Secularization and Design in the Romantic Era*, Jager indicates that directly or indirectly, every university-educated man and orthodox clergyman was influenced by Paley's design argument. Though it was hard to estimate Paley's influence on moral and religious thoughts in the early nineteenth-century England, Jager however demonstrates the popularity of Paley's books among intellectuals. For example, Paley's *Principles of Moral and Political Philosophy* "became a required text at Cambridge by 1786, within two years of its publication, and retained this status well into the nineteenth century.… As for *Natural Theology*, it had gone through twenty editions by 1820—more than one per year" (105).

[21] Darwin's statement here is quoted from Cosslett's *Science and Religion*. The original source, according to Cosslett, is from Darwin's *Life and Letters* (1887) vol. 2, p219.

exterior form of matter in nature, therefore, is a convenient way to God because He has already hidden His wisdom in every piece of matter in the natural world.

The concept of spirit within matter in fact was neither a new nor a revolutionary idea in the nineteenth century, because natural philosophy had already had its tradition rooted in "*mechanistic* physics" (Brooke 1991: 117) of late seventeenth-century science. Different from the ancient sciences, a new conception concerning "particles of matter" (118) had emerged in the seventeenth-century, and henceforth the natural world became an apparatus able to be analyzed by mathematical formulae. "The basic postulate of the mechanical philosophies was that nature operates according to mechanical principles, the regularity of which can be expressed in the form of natural laws, ideally formulated in mathematical terms" (Brooke 1991: 119). For the seventeen-century scientists, such as Robert Boyle (1627-91) and Issac Newton (1642-1727), to adopt a mechanistic metaphor to explain the physical world, hence, did not mean to expel God and the myths of Creation and Flood in Genesis; instead, for scientists like Boyle and Newton, the formulae of the mechanical world were not the proofs of the absence of God but the direct evidences of God's omnipresence in every piece of matter.

For Boyle, Nature was "not a separate agent" (Brooke 1991:132) but "a system of rules, according to which those agents, and the bodies they work on, are by the great Author of things, determined to act and suffer" (qtd. Brooke 1991:132). Boyle believed that the laws of Nature were inherently "of God's devising" (132) because his understanding of mechanical physics relied on "the fact that matter exhibited certain properties" and "the choice of which properties to bestow on matter had been God's" (132). To compare man who had spirit within his corporeal body and who was able to have his spirit work upon matter, Boyle insisted that the Spirit of God, as well, voluntarily worked upon matter and installed in it a "'very agile and invisible' sort of

fluid, for which the term *spirit* commonly used" (Brooke 1991: 135). Though mechanical and physical, matter was inherently of spirit in Boyle's thought, and God, of course, was the origin of the spirit.

Newton,[22] as well, was one of the mechanistic philosophers. In his famous essay, *De gravitatione* (1687), "he argued that space is eternal in duration and immutable in nature precisely because it is 'an emanative effect of eternal and immutable being" (Brooke 1991:139). The physical form of space, for Newton, was by no means momentary and fickle but of the essence to endure eternally and to be changed by none. The physicality of space could traverse the limitation of time and the ruination of natural power because, Newton believed, "in Him are all things contained and moved" (qtd. Brooke 1991:139). It was also this belief of an omnipresent God within every physical body that prompted Newton's law of motion—"because God is present in all places, He is *more* able by His will to move bodies (and thereby to form and reform parts of the universe)" (139). In Newton's mind, the story of an omnipotent and omnipresent God in the Bible was not a superstition or myth; rather, God was indeed so real that every matter of the physical space in the Book of Nature responded to every word of God's will in the Book of Scripture.

Matter in the physical nature to contain God's spirit and power in reality was not a pagan idea but had been revealed in the Bible. In Psalm 19, for instance:

> [1] The heavens declare the glory of God;
> the skies proclaim the work of his hands.
> [2] Day after day they pour forth speech;
> night after night they display knowledge.
> [3] There is no speech or language
> where their voice is not heard.

[22] In Brooke's study, Newton is not an atheist as he is sometimes assumed to be in previous studies. Brooke argues that to take Newton as a scientist to be against religion is "a superficial view, for Newton was deeply concerned with the action of God in human history" (1991:137).

[4] Their voice goes out into all the earth,
their words to the ends of the world.
In the heavens he has pitched a tent for the sun,
[5] which is like a bridegroom coming forth from his pavilion,
like a champion rejoicing to run his course.
[6] It rises at one end of the heavens
and makes its circuit to the other;
nothing is hidden from its heat. (19: 1-6)

God's glory, speech, and knowledge are poured from the heaven onto every corner of the earth. Everyman of the world, even if using a different language, is able to acknowledge God's words written on nature. The "heat" of the sun is one of God's universal languages to display His glory. Gravitation and motion, as well, are the universal laws governed by God. Newton's devotion to science thus was not rebellious but religious since he helped expose God's omnipotence and omnipresence. Similarly, the material worlds in the Bible as well as in Newton's universe were spiritual. As it was said in the Bible, that the heaven's "voice goes out into all the earth," so Newton claimed "He necessarily exists everywhere" (Brooke 1991:139).

Besides Boyle and Newton, the seventeenth-century medical scientist, J.B. Van Helmont (1579-1644) also declared his belief that "the natural world [was] a system of seedlike entities," in which there were "seminal spirits that penetrated matter giving it specific properties" (Brooke 1991:72). Descartes (1596-1650) expressed his belief in an omnipotent being reigning over the motion of matter and stated: "From the mere fact that God gave pieces of matter various movements at their first creation, and that He now preserves all this matter in being in the same way as He first created it, He must likewise always preserve in it the same quantity of motion" (qtd. Brooke 1991: 74).[23] Accordingly, God left his Spirit in His creation. For the

[23] Descartes states this argument in *Principles of philosophy* (1644).

seventeenth-century and many of the eighteenth-century philosophers, it was generally believed that the universe was a mechanistic system and the operator of this well-designed machine was God. To state it differently, natural philosophers believed God not only created every piece of matter and being in nature but also implanted in all His Creations spirits. To discover the law in nature therefore was as religious as to read the Bible. Even if "mechanistic," matter in reality was of spirit internally.

During the nineteenth century, Paley's "watch analogy" in *Natural Theology* was one of the most compelling explications to account for the correspondence between design and God, matter and spirit, as well as science and religion. Deeply impressed by Newton's "celestial mechanism" (McGrath 1999 99), Paley also concerned the visible-physical world as a complex and purposeful machine able to be apprehended by understandable principles and regularities. As suggested by his subtitle, "*Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature*," Paley's *Natural Theology* proposed to expound "the existence and attributes of Deity" through the physical appearance of nature analogized by a simple law.

In order to make the theory of natural theology an intelligible one, Paley opened his *Natural Theology* by the analogy of a stone as a creation of God parallel a watch as a creation of man:

> In crossing a heath, suppose I pitched my foot against a *stone*, and were asked how the stone came to be there: I might possibly answer, that, for any thing I knew to the contrary, it had lain there for ever; nor would it perhaps be very easy to show the absurdity of this answer. But suppose I had found a *watch* upon the ground…when we come to inspect the watch, we perceive…that its several parts are framed and put together for a purpose, e.g. that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the

> hour of the day…. [T]he watch must have had a maker: that there must have existed, at some time, and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer: who comprehended its construction, and designed its use. (28)

One perhaps could not answer the question where a stone, a substance, came from; Paley however suggested that, to compare man's ingenious design, a watch, with the stone in nature, one hence could easily grasp that the stone might have its designer as a watch might. Paley believed that everything in the world was by no means futility but a manifestation of wonder produced by God. In other words, as a watch was contrived by a meticulous watch designer for reckoning time, so matter in the visible nature was designed by a deity for specific purposes. Paley's analogy thus appeared apparent:

watch: the watch designer:: stone: the nature designer (God)

Like a material watch containing a creator's invisible intention, in the stone, the physical substance in nature, there was God's intangible motive and consideration. Due to the matter/spirit correspondence, to observe the physical world, consequently, was the most direct method to discern God. For the nineteenth-century intellectuals, to read the book of nature hence was as religious as to read the book of Scriptures.

Meanwhile, between 1794 and 1807 in America, Tomas Paine (1737-1809) published a book—*The Age of Reason*, also popular in England—that principally treated natural theology as well. Like Paley, Paine advocated that God's benevolence and wisdom able to be discerned in nature:

> Whereas the Bible had been written by men, nature was the handiwork of God. Whereas the Bible had suffered corruption through copying and translation, nature had an indestructible perfection. Whereas the Bible portrays a passionate God, changeable and vindictive, nature shows Him to be immutable and benevolent. (qtd. Brooke 1991: 193)

More radical than Paley however, Paine argued further that "theology was merely the study of human opinions concerning God, whereas science was the study of the divine laws governing nature" (193). The powers of the Book of Scriptures in Paine's argument were of less significance compared with those of the Book of Nature. The words in the Scriptures may probably be distorted and misunderstood by human capacity, while the evidences in the nature were God's direct creations. To explore divine purposes and universal laws in nature was a more effective and persuasive method to reveal the universal wisdom buried in the material form; to study the Bible translated by man's thoughts however was circuitous and unfaithful. More reliable than the Bible, scientific research stood for Christian religion, in Paine's analysis, because scientific values were the "defense[s] of Christian theology" (194).

In sum, founded on the design argument, both Paley's and Paine's natural philosophies based their arguments on the deduction of "*from* design *to* God" (Jager 2). To observe the natural world, natural philosophers discovered that every substance in the visible world was by no means bootless but of specific purpose and function. To infer the general regularities and principles among matter in nature, they believed that the system and order in the visible world was not an accident but a meticulous and subtle design produced by a certain omnipotent power. From the "design" visible in nature, natural philosophers deduced an encompassing might to govern the entire visible world, namely, God. The visible and physical world consequently turned out to

be a perceptible medium for people to discern the invisible and spiritual world. The substance therefore suggested God, and matter implied spirit. To observe the physical matter on earth, for the early- and mid- nineteenth intellectuals, was to perceive the spirit of the invisible God.

Paley's and Paine's theories about the orderly mechanism as God's purposeful contrivance in fact sounded reasonable and convincing to early nineteenth-century minds. The new technological inventions, such as telescopes, watches, steam engines, steam locomotives, etc., were so complicated and practical that, besides altering man's life, it obviously suggested the rationality, complexity, and intelligence of man's ability to contrive machines. As the complex inventions came out of man's purposes to improve the present life, so God's designs in nature were created intelligently, rationally, and purposefully for the progress of the universe. In Paley's scheme of natural theology, there is a harmony between God, machine, and nature. God, the Creator of the universal machine, demonstrated Himself in the appearance of nature. To perceive God meant to investigate and examine the regular principles of the nature. Therefore, the philosopher who loved science and nature devoted himself in Christian religion simultaneously. And the young Carlyle was one of the natural philosophers to dedicate himself to both the studies of God and nature.

Comprehended within his contemporary natural-theological ideology, the young Carlyle, a natural philosopher as well as a religious devotee, should not be simply defined as an artist rejecting science or a theologian ignoring matter in the mechanical world. Like many other contemporary natural theologians, Carlyle also believed that the mechanical structure of the universe was of transcendental connotations, and that to read both the Book of Scriptures and the Book of Nature will lead toward the same end, the truth and wisdom of God.

III. Matter in *Sartor Resartus*

(1) Natural Theology and Matter

> We speak of the Volume of Nature: and truly a Volume it is,—whose Author and Writer is God. To read it! Dost thou, does man, so much as well know the Alphabet thereof? With its Words, Sentences, and grand descriptive pages, poetical and philosophical, spread out through Solar Systems, and Thousands of Years.... It is a Volume written in celestial hieroglyphs, in the true Sacred-writing; of which even Prophets are happy that they can read here a line and there a line. (*SR* 193-94)

In a representative chapter of *Sartor Resartus*, "Natural Supernaturalism," the concept of natural theology, akin to Paley's watch analogy, seems to loom. Between nature and the supernatural, there is neither conflict nor incongruity but congenial harmony and mutual relations. Under the temporal ("Thousands of Years") and spatial ("Solar Systems") structures, every being and object in the universe imply God's wisdoms and words. Any observation of the visible nature, where God leaves his "hieroglyphs," leads towards the invisible God. The Book of Nature weighs as significantly as the Book of Scripture because both books are the media of man to God. Realizing the symbolic worth of the Book of Nature, wise prophets such as Teufelsdrockh and Carlyle feel joyous to read God's words and wisdom hidden in "the Volume of Nature," that is, the "true Sacred-writing." Namely, in the material form of the world, "the Volume of Nature," the Carlylean prophets never nose out shadows to hide God's light but feel enlightened by God's physical evidence. Material nature coexists harmoniously with the spiritual supernatural in the eyes of the wise prophets. The spiritual does not supersede the material, and neither the supernatural exceeds the natural. Instead, nature is the key of man to God, and matter is the

medium of mind to spirit.

Since the spiritual and the material interrelate with each other, as does the supernatural and the natural, “every star,” “every grass-blade” and “every Living soul” (*SR* 198) are the proofs of God’s existence. The Book of Nature corresponds to the Book of Scriptures for the young Carlyle: “Then sawest thou that this fair Universe, were it in the meanest province thereof, is in very deed the star-domed City of God” (198). Similar to Paley who uses the watch analogy to explain the nature-God relation, Carlyle takes the natural world as God’s “celestial hieroglyphs” to imply God’s profound wisdom hid in nature. In this regard, apart from reading the Bible, reading nature can also help to grasp God’s light and virtue, according to Carlyle’s “hieroglyph” analogy. Matter in the physical world in Carlyle’s “natural supernatural” theory, like that in Paley’s and Paine’s natural philosophies, shows the sagacity of God in the spiritual and the supernatural.

In the Carlylean cosmos, there are two layers of the universe. One is the visible and material world, i.e. nature, where living beings and inanimate objects dwell in. More correctly, the concept of nature here, different from the wild nature of bushes and animals, is the nature of every behavior, construction, and institution of all beings and objects. This nature thus includes the social lives of human beings because all that can be perceived by the “body’s eye” (*SR* 199) belong to the category of nature. Nature in the Carlylean cosmos contains matter of both the organic and the mechanic, of both beings and objects. The other layer of the Calylean universe is the invisible and spiritual world, i.e. God’s supernatural world, which contains everything about the spirit, soul, virtue, and morals. Things cannot be perceived by the “body’s eye” belong to the category of the supernatural.

Based on the natural-theological concept between the Carlylean nature and supernatural, visible and invisible, there is never hostility or incompatibility, but

mutually productive interrelations. The invisible and supernatural God presents His wisdom in material nature, and man's reading of the visible and material nature can help apprehend the truth of the invisible God. Teufelsdrockh's "properly the higher and new Philosophy of Clothes" (38) suggests this natural-theological theme because of the link between "clothes" with "philosophy" hints at the intimate combination of the physical with the metaphysical. Clothes are of philosophy, and God's vesture, namely, nature, contains God's soul, the supernatural.

Because God's clothes, nature, are of connotative significances within, matter weighs heavily in the Carlylean natural supernaturalism. Matter is the "Symbol" (*SR* 163) of God. Too ungraspable and too unrealizable, the mysterious God needs to cast His wisdom, morality, and principles into physical substances, from which man can discover God's token. Nature, or matter, hence does not mean pettiness, humbleness, or worthlessness, but the vesture of God, functioning as the vehicle for man to reach God. With the symbolic vestures, man is able to "see" God and to comprehend His lessons, because "the Infinite is made to blend itself with the Finite, to stand visible, and as it were, attainable there" (165). The infinite merges with the finite, and the invisible hides in the visible. The material vesture of God exhibited in nature, hence, becomes so indispensable because every matter is "the visible embodiment of a Thought," to "[bear] visible record of invisible things…in the transcendental sense, symbolical as well as real" (165-66). In other words, the visible and material universe "is but one vast Symbol of God" and "what man himself is but a Symbol of God" as well (165). Physical matter, in the Carlylean cosmos, weighs importantly to signify God and to make concrete the invisible.

Worrying that his readers may be misguided by the subjects of transcendentalism and supernaturalism to scorn and overlook the significances of the visible and the material, Carlyle advocates, from Teufelsdrockh's voice, the value of matter in the

physical world in the “Adamitism” of Book First. In this chapter, Teufelsdrockh declares that he is neither an “Adamite” (*SR* 44) nor given to “Sansculottism” (48). For the radical Adamites, the possibility to return to Adam’s innocent age means to pass through the ceremony of taking off all the material forms of the clothes. Doffing matter, symbolically, indicates taking off secular burdens and transcending the mundane world simultaneously. With this nostalgic gesture, the Adamites expect to recall the truth and virtue in the remote ancient times. Like Adamites, Teufelsdrockh realizes that the soul is concealed in matter. However, by contrast, he does not agree that the gesture of disposing of all the material symbols can summon up past virtues.

Teufelsdrockh, in fact, is positive toward the function of the clothes in the secular world. Clothes are signs to stabilize and to maintain social orders. Conservative in the concept of social structure, Teufelsdrockh believes that social orders are the precious fruits of historical evolution and are always promoting the improvement of human culture and society. Therefore, order cannot be destroyed simply in the name of Adamite nostalgia, which may probably lead backward to barbarism. Denying the gesture of taking off all the clothes as the only means to recall past values, Teufelsdrockh argues that the active abandonment of matter in fact cannot bring back heavenly innocence and spiritual freedom. To the contrary, instead of discarding the established order, man should revive his inherent capacity of “the mystic faculty” (*SR* 196) that can pierce the material form of the clothes, open the inner eye, and reveal the invisible spirit already hidden inside. In other words, different from his contemporary “Sansculottist” who demand a social revolution, Teufelsdrockh advocates an inward revolution. To witness the bloody French Revolution, Carlyle does not consent to the radical manner to destroy the present system to gain equality. Compared with destruction, Carlyle prefers to reform inwardly from the heart by awakening man’s intuition than to tear off the symbolic

clothes and to demolish the already-existing order outwardly.

The visible matter never spoils Teufelsdrockh's plan of spiritual reform but backs man's improvements in varied aspects and achieves man's superiority among all beings. Matter is man's tool to alter life, and "Clothes are but one example" (*SR* 31) among all of the man-created tools. Moreover, man's body is a form of the material tool to carry spirit, too: "without Clothes, could we possess the master-organ, soul's seat, and true pineal gland of the Body Social" (48). Matter for spirit or body for soul is not an obstacle but a carrier. The human body carries the soul and matter sustains the social. As clothes are the matter to bracket spirit, so are bodies the "PURSE[s]" (48) to contain soul. Furthermore, to avoid the reader misconceiving matter as litter, Teufelsdrockh argues that man's gift to use matter can promote man aloft over his physical limits:

> Weak in himself, and of small stature, he [man] stands on a basis…insecurely enough.... Three quintals are a crushing load for him; the steer of the meadow tosses him aloft, like a waste rag. Nevertheless he can use Tools, can devise Tools: with these the granite mountain melts into light dust before him; he kneads glowing iron, as if it were soft paste; seas are in his smooth highway, winds and fire his unwearying steeds. *Nowhere do you find him without Tools; without Tools he is nothing, with Tools he is all.* (30 italics mine)

"Man is a tool-using Animal" (30), the most influential and powerful animal among all beings. Man's ability to manipulate tools helps him to create all kinds of possibilities and conquer all difficulties. With tools, hence, "progress he has made" (31). Matter—such as "the first wooden Dibble …those Liverpool Steam-carriages, or the British House of Commons" (31)—are signs of man's intellect and progress, and

then, should not be abandoned.

Clothes, one of the widespread man-created tools, function technically and socially. On one hand, clothes are "for defence" (43). In clothes, man is "as in a warm movable House …wherein that strange THEE of thine sat sung, defying all variations of Climate" (43). On the other, "Clothes gave us individuality, distinctions, social polity; Clothes have made Men of us" (30). The concept of class distinction in Carlyle's philosophy stands not for opposition like that in French Revolution or Marxism, but represents order, regularity, and "individuality." Clothes are symbols of social position to signify each person's responsibility in a cooperative society. Social order distinguishes duties and creates stability; hence, Teufelsdrockh exclaims: "Society, which the more I think of it astonishes me the more, is founded upon Cloth" (45).

(2) Matter and Spirit, Nature and the Supernatural, as well as Visible and the Invisible

The most obvious example to depict Carlyle's positive attitude towards the concept of tool—matter—appears, surprisingly, in the "Center of Indifference" of Part II, that is, in the turning point of *Sartor Resartus*. While wandering "in the solitude of the North Cape" (*SR* 135), Teufelsdrockh confronts "a man, or monster… [who is] shaggy, huge as the Hyperborean Bear" (136). At this critical moment, this monstrous and barbarous stranger,

> counting doubtless on his superior statue, and minded to make sport for himself, or perhaps profit, were it with murder, continues to advance; ever assailing me with his importunate train-oil breath; and now has advanced, till we stand both on the verge of the rock, the deep Sea rippling greedily down below. What

> argument will avail? On the thick Hyperborean, cherubic reasoning, seraphic eloquence were lost. *Prepared for such extremity, I, deftly enough, whisk aside one step; draw out, from my interior reservoirs, a sufficient Birmingham Horse-pistol*, and say, "Be so obliging as retire, Friend… and with promptitude!" this logic even the Hyperborean understands; fast enough, with apologetic, petitionary growl, he sidles off; and expect for suicidal as well as homicidal purposes, need not return. (136 italics mine)

Right at the moment being face to face with the "thick Hyperborean," any sweet or threatening reasoning takes no effect. Only by "deftly" taking out the "sufficient…pistol" from his "interior reservoirs" does Teufelsdrockh save himself from the peril of nature—the Hyperborean Bear as well as the deep Sea.

His successful escape from the danger of nature, Teufelsdrockh explains, should be attributed to his deft use of a tool—the pistol. "Such I hold to be the genuine use of Gunpowder: that it makes all men alike tall" (*SR* 136). With the help of the matter, pistol, Teufelsdrockh overcomes his physical weakness, symbolically taller than the Hyperborean Bear. Teufelsdrockh hence concludes that, "savage Animalism is nothing, inventive Spiritualism is all" (136). This deduction expresses two significances of Teufelsdrockh's Clothes Philosophy. First, as discussed earlier, Teufelsdrockh claims that he is by no means an Adamite who advocates the return to the age of the fig leaf, as emblemized by the Hyperborean Bear image. Though as huge as a bear, without any tools, the Hyperborean's bully merely gives himself airs. The most threatening weapon, for Teufelsdrockh, lies not in the superficial figure, but dwells inside the "interior reservoir." Man's dexterous use of tools helps him leave Adamite nudity, barbarous ignorance, and dull irrationality. To hand the pistol rationally, men are of more power to conquer exterior difficulties and to rescue his life. The Hyperborean

metaphor hence implies Teufelsdrockh's doubt of the return to the Adamite society, which in fact not necessarily enhances man's spiritual improvement but probably causes man's socio-cultural recession.

Secondly, and more importantly, Teufelsdrockh's ingenious combination of the pistol with the "interior reservoir" successfully insinuates his theme of spiritual progress founded on the deft use of a material tool. The pistol is more than a simple material tool; its location, the "interior reservoir" suggests its spiritual significance. Teufelsdrockh's pistol from the interior reservoir is so powerful to intimidate the Hyperborean Bear because his pistol contains inner powers. *The material pistol is of enclosed spiritual forces, and this spirit appears to be visible as long as its power is displayed in the material form of the pistol.* The matter is of a soul within, and the soul manifests through the appearance of matter.

The inner power wrapped in the material pistol implies Teufelsdrockh's attitude toward using the tool-using principle. Instead of manipulating tools arbitrarily, technically, and intentionally, one should use the tool—matter—piously, spiritually, and morally. To ally the pistol with the inner reservoir, Teufelsdrockh justifies "the cunningest mechanism" (*SR* 137) with the "inner" image. The matter can be spiritual as long as the manipulator uses it with a spiritual and moral aim. *In other words, matter is by no means guilty; it is problematic only when the user neglects the "interior reservoir."* Without a soul within, any man-created matter can produce negative consequences, but with noble spirit, matter may bring out positive meanings. In Teufelsdrockh's term, "inventive Spiritualism is all." The "inventive Spiritualism" implies Teufelsdrockh's main thesis of his Clothes Philosophy—any manipulation of man-made matter should depend on transcendental spiritualism. Man-created matter, like God's Creation of the physical universe, should rely on the use of the spirit. Between spirit and matter, there are therefore mutually productive interrelations: the

spirit supports matter and the matter demonstrates the spirit. This argument echoes Paley's "watch analogy," aesthetically delineating the productive relationship between matter and spirit in the scheme of natural philosophy.

In *Sartor*, another vital aesthetic metaphor that implies the harmony of matter and spirit, nature and the supernatural, as well as the visible and the invisible appears in Chapter One and Two, "Genesis" and "Idyllic" of Book Second. A semi-autobiography of Carlyle, Book Second records the growth of Teufelsdrockh from infancy to youth, from childhood innocence, adolescent agonies, to his young spiritual loss caused by unsuccessful job-hunting and romance. Finally, spiritually wandering through the inner hell of "The Everlasting No," Teufelsdrockh overcomes his mind's devil in "The Center of Indifference." Suddenly to have an epiphany in "The Everlasting Yea," he transcends the inner darkness to come across God's light and to gain a spiritual rebirth.

Entitled "Genesis" and "Idyllic," the two chapters are emblems of Teufelsdrockh's happy boyhood in "Celestial Nepenthe" (*SR* 68) where he feels no sorrow, no pain, no worry, no pressure, but harmony. To organize Teufelsdrockh's disorderly material, the English Editor discovers that all of the materials concerning this Eden-like period are enveloped in a bag with a tag, "the *Libra* Bag" (*SR* 61). Libra, a symbol of harmony, to note the beginning of a prophet's birth, parallels "Genesis" in the Bible that records the beginning of the universe. Symbolically, the Libra metaphor signifies Carlyle's cosmic view of the beginning of the universe, that is, to begin with harmonies between spirit and matter, man and God, nature and the supernatural.

The harmony between nature and the supernatural is apparent in Carlyle's "Genesis," which details Teufelsdrockh's mysterious birth. By no means an ordinary person born from mortal parents, Teufelsdrockh was brought by "a Stranger" (*SR* 62)

to a childless couple. The baptized “red-coloured Infant” in a “green-silk Basket” appeared to be “an invaluable Loan” (63) to fulfill the expectant parents. Similar to the miracle of the Virgin Mary’s birth, the childless parents mysteriously had a baby, whose real father was God. Teufelsdrockh’s “true Beginning and Father is in Heaven, whom with the bodily eye [he] shalt never behold, but only with the spiritual” (65). This statement on one hand informs the origin of the prophet and on the other hints his mundane duties to propagate the way of man to God by “the mind’s eye” (199).

Even if born from God the Father, in fact, Teufelsdrockh is nurtured by the Mother Earth. “Kind Nature, that art to all a bountiful mother; that visitest the poor man’s jut with auroral radiance; and for thy Nurseling hast provided a soft swathing of Love and infinite Hope, wherein [Teufelsdrockh] waxes, and slumbers, danced-round…by sweetest Dreams!” (*SR* 68) The symbolic mother of Teufelsdrockh, then, is the physical nature that gives warm embraces and enriches the youth’s soul. The young Teufelsdrockh’s early happiness hence derives from not merely the inherent innocence descending from God the Father but also the material plentitude nursed by the Mother Earth. In other words, right at the beginning of the universe, there is libration between heaven and earth, Father and Mother, Soul and Body, as well as Nature and the Supernatural. The “Genesis” of *Sartor* therefore represents a realistic picture of Paley’s natural theology in portraying the integration of celestial spirit and terrestrial nature. Heaven and Earth, both cradling life, collaborate to “breed a fresh Soul” and to [breed] a fresh (celestial) Egg” (66). The “fresh Soul” has settled in the physical “Egg,” the heavenly spirit is wrapped up in hospitable nature, and supernatural vigor dwells in the corporal body. In Teufelsdrockh’s “*Libra*” bag hides the secrets of the beginning of universe and life: the mutually productive collaboration of heaven and earth, Mother and Father, body and soul, matter and spirit, as well as the physical and the metaphysical.

Carlyle's natural supernatural integration symbolized in "Genesis" resembles the natural-theological concept in Paley's *Natural Theology*. Like Paley, Carlyle does not intend to take natural theology to replace the revealed religion in the Bible. On the contrary, regretting the decline of the Christian religion, Carlyle reinterprets Christian mythology from a modern manner and roots the mysteries of the Bible in a modern character of the industrial age. The intertextuality of Jesus Christ and Teufelsdrockh hence combines the ages of mythology and industry, the worlds of miracles and mechanism, and the religions of the revealed and the natural. Instead of denying the Creation and the invisible world of God in the Bible, Carlyle successfully joins the Christian myth aesthetically with a modern tale, fortifying the revealed theology that is gradually losing its credibility in an age full of new sciences.

Between the two poles of Libra dwells the invisible world of God, spirit, myth, the supernatural, and the visible world of Earth, matter, reality, and nature. In the Carlylean cosmos, the two poles of Libra correspond with each other, without any incompatibility or break. Symbolically, Teufelsdrockh's happiness and delight collected in the Libra bag suggests Carlyle's ideal objective universe in which Teufelsdrockh is completely free of subjective bias. In this Carlylean ideal objective universe, between the visible and the invisible, the celestial and the terrestrial, and the natural and the supernatural, none is better; one depends on the other. Teufelsdrockh hence quotes Saint Chrysostom and exclaims: "the true SHEKINAH is Man" (*SR* 49), because in the ideal objective universe, one perceives God while seeing man. Between God and man, the visible and the invisible, there is no boundary, but mutual reliance.

(3) The Separation of the Subjective Universe from the Objective

Even if the objective universe consists of two realms, the visible and the invisible, Carlyle laments in "Signs of the Times," however, that "men have lost their belief in

the Invisible, and believe, and hope, and work only in the Visible" (Carlyle ST 111). Carlyle's contemporaries have bias against things invisible and against religious faith. His age is no longer "a Religious age" (ST 111), but a subjective universe in which

> Only the material, the immediately practical, not the divine and spiritual, is important to us. The Infinite, absolute character of Virtue has passed into a finite, conditional one; it is no longer a worship of the Beautiful and Good; but a calculation of the Profitable. (111)

The invisible realm that Carlyle longs for seems to be nonexistent for modern people, who merely see and trust the visible and the material. Carlyle regrets the separation of the mutual reliance between the visible and the invisible in the modern world, and advises that "Not the invisible world is wanting, for it dwells in man's soul, and this last is still here" (ST 117). Apparently, Carlyle discerns well that the problem of the visible-invisible break does not happen in the objective relationship between the two, but comes about from the subjective attitude of the seer. In other words, it is subjective ignorance of the invisible that leads the modern unable to perceive the harmonious wholeness in the objective universe endowed with both the visible and the invisible.

From Teufelsdrockh's observation, there are two layers of man's knowledge about the universe. One is the objective universe perceived by "the wise" (*SR* 198), and the other is the subjective universe sensed by "the foolish" (198). The universe in the eyes of the wise is the natural supernatural integration, the visible and invisible collaboration, and the material and spiritual interrelation. The universe in the eyes of the foolish, however, is a half universe dominated merely by the material, the visible, the mechanical, and the physical. The wise sees the invisible through the visible; the

foolish, however, sees solely the visible, unable to penetrate the material to meet the invisible. Hence, “Nature, which is the Time-vesture of God, and reveals Him to the wise, hides Him from the foolish” (198).

For Teufelsdrockh, the wise is distinct from the foolish because both perceive the universe by different organs. The wise sees the universe with his inner eye—“the mind’s eye” (*SR* 199)—that penetrates matter, turning the subjective world transparent and lifting the wise toward the supernatural. With the sharp inner eye, the wise transcends the time-space hindrances of man’s subjective universe and, then, straightforwardly enters the realm of the infinite and the eternal, that is, the objective reality of the universe (199). The foolish, however, operates merely his physical eye—“the body’s” (199). The physical eye binds the foolish to the subjective universe, yoking him with the want of matter and profit. Confined to the subjective world, the foolish hardly penetrates God’s time- and space- vestures, unable to transcend the boundaries of the physical world. He merely perceives the subjective universe of matter, never knows the reality of an objective universe, and on no account spies the wisdom of the supernatural.

Further, Carlyle argues that “the mind’s eye” of the wise is different from “the body’s” of the foolish because the two “eyes” are operated by different “reasons.” The wise uses “Pure Reason” (48) to control his “mind’s eye,” while the foolish uses “vulgar Logic” (48) to command his “body’s eye.” The “Pure Reason” is a form of “healthy Understanding,” which is “not the Logical, argumentative, but the Intuitive, for the end of Understanding is not to prove and find reasons, but to know and believe” (CH 71). With the “Pure Reason” to “Understand” healthily, the wise intuitively discovers the world beyond the realm of bodily eye’s, acknowledges objective reality, and believes in the supernatural. The wise, hence, is also termed “the man of insight,” “the Discoverer, or even Knower” (71).

Also termed “the man of logic,” “the Reasoner” (CH 71), the foolish however is mechanical and intentional due to his dependence on the “vulgar Logic.” “Logic is good, but it is not the best” (71-72). Logic confines and materializes the foolish, who then “cannot prosper” but becomes a “Systematic and Theoriser and Word-monger” (71). His “*vital* intellectual force lies dormant or extinct, his whole force is mechanical, conscious; … it is foreseen that, when once confronted with the infinite complexities of the real world, his little compact theorem of the world will be found wanting (71). In other words, the foolish is not able to realize “the infinite complexities of the real world,” namely, the objective universe, for his sole dependence on the little vulgar Logic aborts his unconscious intuition and healthy understanding.

The foolish, the Systematic, looks orderly and regular is in an inferior circumstance. Yet, the wise, with his inner eye wide open, stays in a higher one. The wise seems to “‘[have] no system’” but in reality “is in a state of healthy unconsciousness” and “his system is in high order” (CH 67). For instance, Teufelsdrockh’s chaotic studio shows emblematically his “state of healthy unconsciousness” working in an “unsystematic higher-order.” To the wise such as Teufelsdrockh, he does not care for logical argument but intuitive truth; he does not juggle with terms but reigns some “winged word” (72). The thoughts of the wise soar and their words fly. “Only by some winged word, winged as the thunderbolt is, of a Luther, a Napoleon, a Goethe, shall we see the difficulty split asunder, and its secret laid bare” (72). Beyond the orderly system of the subjective world, the wise witnesses the “secret” of the objective universe “laid bare.”

In regard to the vitality of the reasoning faculties, the “Pure Reason” of the wise is dynamic, while the “vulgar Logic” of the foolish is mechanical. The dynamic Pure Reason flies across the confinement of the subjective boundaries, piercing the

superficiality of words. Spontaneously and unconsciously, the dynamic Pure Reason generates infinite vigor and the rhetoric of the wise prospers (CH 71-73). His words, full of imaginative and fantastic power, fly over the restrictions of the body's eye. He is a man of insight, operating the dynamic Pure Reason to discover truth and create poetry. The mechanism of vulgar Logic, however, always stays on the surface of the word, even if oratorical, and is in fact artificial. Showy and pretended, the orators of mechanical vulgar Logic are "system-makers and builders of logical card-castles" (71). "[W]ith all his logical tools," the system-maker is able to juggle with languages and to flourish his depth, but if "you wanted him to find you [answers], [it] is not forthcoming" (72). Carlyle believes that the Oratory is Artificial and the Rhetoric is Natural because "The Orator persuades and carries all with him, he knows not how; the Rhetorician can prove that he ought to have persuaded and carried all with him" (72). Consciously reigning visible knowledge, the Orator in fact knows mechanically and perceives nothing. However, unconsciously initiated by the invisible power within, seemingly confused, the Rhetoric is the true philosopher of profound wisdom.

Table 2: The Differences between the Wise and the Foolish:

	The wise	**The foolish**
Also termed	A man of insight, the Discoverer, or a Knower	A man of Logic, the Reasoner, a system-maker, or a Word-monger
The universe they perceive	The objective universe; the whole	The subjective bias
The eyesight	Both the visible and the invisible worlds; both nature	Merely the visible world; nature; and matter

	and the supernatural; both matter and spirit	
The organ to see	The mind's eye; the inner eye	The physical eye; the body's eye
The reason	The dynamic Pure Reason	The mechanic vulgar Logic
Their relation to words and the use of language	A Rhetoric, naturally and intuitively prospering winged words	An Orator, consciously and pretentiously juggling with words
Purpose of knowledge	To know and to believe; an healthy understanding	To prove and to find reason; an argumentative persuasion

(4) Carlyle's Contemporary Social Disease in All Fields

For Carlyle, his contemporary social disease in "the Mechanical Age, the Age of Machinery" (ST 100) derives from the spread and pervasion of the mechanical vulgar Logic to every layer, arena, and rank of the society. Not only in the areas of industry and science, but also in the fields of philosophy, art, religion, and morality, there is no longer the philosopher of the dynamic Pure Reason: "Not the external and physical alone is now managed by machinery, but the internal and spiritual also." (101). For Carlyle, the problem of his contemporaries resides not in the break of matter from spirit, of man from God, and of science from religion. On the contrary, society has become mechanical because the modern forgets his internal vitality, his intuitive inner eye, and the objective universe, but gives way to the mechanic vulgar Logic.

Taking the sciences in France and Britain as examples, Carlyle laments that his contemporary natural philosophers no longer mind the spiritual and moral but

succumb to the physical and mechanical:

> the Metaphysical and Moral Sciences are falling decay, while the Physical are engrossing, every day, more respect and attention. In most of the European nations there is now no such thing as a Science of Mind; only more or less advancement in the general science, or the special sciences, of matter. (Carlyle ST 103)

For Carlyle, science is an encompassing knowledge "to fish in all manner of waters, with all manner of nets" (*SR* 4). More than studying merely the physical and material world, science should probe the metaphysical and the spiritual as well. Different from the twentieth-first century science, Carlyle's science ends not in practical purposes, but moral and spiritual ones. Since the purpose to study the natural world aims to "body forth the Finite from the Infinite" ("Characteristics"), the natural philosophers hence should rely on the mind's eye and master their dynamic Pure Reason.

Even if, ideally, studying nature targets the wisdom of the infinite, Carlyle however argues that, among his contemporaries, sciences diverge from an encompassing knowledge to become a one-dimensional knowledge merely interested in the visible. About the invisible, Carlyle's intellectuals are disinterested: "The science of the age, in short, is physical, chemical, physiological, in all shapes mechanical" (ST 103). To take Mathematics for example, once "the highly prized exponent of all these other sciences, has also become more and more mechanical" (103). Mathematical philosophers are concerned more with operational analysis than theoretical organization; hence there is "more Mathematics than ever; but less Mathesis" (104). Carlyle regrets, then,

> No Newton, by silent meditation, now discovers the system of the world from the falling of an apple; but some quite other than Newton stands in his Museum, his Scientific Institution, and behind whole batteries of retorts, digesters, and galvanic piles imperatively 'interrogates Nature,' who however, shows no haste to answer" (102).

The scientists lose their conviction and faith; they do not pursue "internal perfection, but … external combinations and arrangements" (103) because, for scientists of Carlyle's age, "except the external, there are no true sciences" (105). There are breaks between Carlyle's concept of science and his contemporaries': Carlyle's contains both the visible, physical, and invisible, metaphysical worlds, while his contemporaries narrow their scientific scopes to the practical and purposeful in the material world. In science, Carlyle cares for the spiritual and moral ends, while his contemporaries distrust the invisible but dedicate their lives to the profitable ends.

Not only are the intellectuals in scientific fields mastered by the physical and visible world, but also the religious scholars are taken in by the material and mundane world. The religious heroes in history fought for Christian religion were in Carlyle's view the wise with inner eyes, for whom "their visible object was … worth nothing. It was boundless Invisible world that was laid bare in the imaginations of those men; and in its burning light, the visible shrunk as a scroll. Not mechanical, nor produced by mechanical means, was this vast movement" (ST 109). The past religious martyrs lived for faith and conviction, ignoring the mundane profit and loss but minding solely the spiritual and moral fulfillment because "Men did battle, in those old days, not for Purse-sake, but for Conscience-sake" (109).

In contrast, the present religious intellectuals attend to merely calls of the mechanical and profitable. The "mystic deeps of man's soul" (108) no longer dwells

in the man of religion. Without the inner eye and the dynamic Pure Reason, men are "blinded in their minds, have grown to 'live without God in the world'" ("Characteristics"). The "Christian Religion of late ages has been continually dissipating itself into Metaphysics; and threatens now to disappear, as some rivers do, in deserts of barren sand" because "Religion, like all else, is conscious of itself, listens to itself; it becomes less and less creative, vital; more and more mechanical" ("Characteristics"). Oratory overcomes Rhetoric, and Artificial overturns Natural. In religion, the mechanical dominates the spiritual, because, grieves Carlyle, "Our true Deity is Mechanism" (ST 111). In an age mastered by mechanism, religion is never

> a thousand-voiced psalm from the heart of Man to his invisible Father, the fountain of all Goodness, Beauty, Truth, and revealed in revelation of these; but for the most part, a wise prudential feeling grounded on mere calculation; a matter, as all others now are, of Expediency and Utility; whereby some smaller quantum of earthly enjoyment may be exchanged for a far larger quantum of celestial enjoyment. Thus, Religion too is Profit, a working for wages; not Reverence, but vulgar Hope or Fear. (113)

Except scientific and religious intellectuals zealously long for terrestrial profits, artists and writers, too, disregard the "infinite harmonies of Nature and man's soul" (ST 114). "We praise a work, not as 'true,' but as 'strong'; our highest praise is that it has 'affected' us, has 'terrified' us" because "Beauty is no longer the god [an artist] worships" (114) and sales volume is the sole concern. Likewise, "Virtue is Pleasure, is Profit; no celestial, but an earthly thing. Virtuous men, Philanthropists, Martyrs are happy accidents; their 'taste' lies the right way!" (115). Moral deeds are material and superficial labels made public to earn reputation. The root of virtue is on no account

"hidden, buried form the eye of the sun" (*SR* 165). Anything concerning the metaphysical—the spiritual, the moral, the religious, and the poetic—are possessed by the mechanic; because "we worship and follow after Power; which may be called a physical pursuit" (ST 115).

For Carlyle, an unprecedented crisis of the spiritual decay bursts in his age: the spiritual breaks from the material, and the mechanical manages the dynamic. The crisis of this break is not a reality of the objective universe, but the modern people's subjective misconception, because "Men are grown mechanical in head and in heart, as well as in hand" (ST 103). Man's mechanization of head, heart, and hand derives from man's loss of faith in the invisible and his fear of opening the inner eye. Man's dynamic Pure Reason is blind and inert and his unconscious winged-words are dormant. Man is confined to his subjective bias and, consequently, unable to discover the objective universe that contains simultaneously the material, the natural the spiritual, and the supernatural.

Different from the man who rests in the "glass ball" (ST 117) of mechanism, Carlyle believes in the internal harmonies between man and God, matter and spirit, as well as nature and the supernatural. He then urges the people to open the inner eye and be aware of the dynamic Pure Reason—the key remedies to cure the foolish in the mechanical age. He reminds his people: "man is not the creature and product of Mechanism; but, in a far truer sense, its creator and producer" (110). Owing to inheriting God's noble spirit and dynamic creation, man is able to create minute and delicate machines. God creates man and man creates machines; man symbolizes God's wisdom and machines symbolize man's intellect. The machine created by man, therefore, should serve man, who, yet, should not submit himself to the man-made machine and be arbitrarily manipulated by the mechanic principles of profit and pleasure.

The break of mind and matter in reality causes the young Carlyle to be regretful and sarcastic. Not merely politically shown in “Signs of the Times” and “Characteristics,” his melancholy appears aesthetically in the quasi-biography, *Sartor Resartus*, as well. Though cynical in tone, Teufelsdrockh however is sincere, serious, and faithful. Like Carlyle’s *Sartor*, Teufelsdrockh’s *Clothes, their Origin and Influence*, too, aims at awakening the inner eye, enlivening the intuitive unconsciousness, and activating the dynamic Pure Reason. By elevating the spiritual faculty of the man, Carlyle, as well as Teufelsdrockh, expects to link the modern’s bias in the subjective universe with their lost faith in the objective.

(5) Fantasy

Though advocating a necessary link between the subjective and the objective universes, Teufelsdrockh in reality realizes the difficulty to pass through the gap from the visible to the invisible, from matter to spirit, from man to God, and from nature to the supernatural. According to Carlyle’s theory, the natural world is the medium to send messages in “celestial hieroglyphs” and “the Universe is but one vast Symbol of God” (*SR* 165). Peering at nature seems to mean seeing through it. However, the fact is that the natural world is not transparent and God’s light is by no means easy to be grasped by the body’s eye. There is clothing to hide the true wisdom of the supernatural.

Teufelsdrockh explains that the universe is impenetrable because “deepest of all illusory Appearances, for hiding wonder…are your two grand fundamental world-enveloping Appearances, SPACE and TIME” (*SR* 195). Time and space, like cocoons, wrap all of God’s creatures as well as man since his birth. To cover up His creation by time- and space- vestures, God makes concrete his divinity and makes seen His spirit. The time- and space- vestures are purposeful to represent His wisdom,

intellect, and morality. Among all creatures, man, for instance, is one of the physical bodies wrapped in the time-space vesture. Even if material in the outward form, a "celestial Me" (195) hides. Namely, within every physical creature, God's spirit is enveloped. Conscious of God's intention to create matter and to cover His spirit within, the wise apprehends well "that Time and Space are not God, but creations of God" (196). Hence, the vehicle to reach God should not be the body's eye fixed on the physical faculty. According to Teufelsdrockh analysis, the key to God's spirit, to the supernatural wisdom, lies in man's inner "mystic faculties" (196).

Hidden in the "inner reservoir"—mentioned in Teufelsdrockh's Hyperborean encounter—the "mystic faculties" in fact is *fantasy*, that is, an "organ of the God-like" (*SR* 164). It is "not our Logical, Mensurative faculty, but our Imaginative one," (166) with which "[man] there by, though based, to all seeming, on the small visible, does nevertheless extend down into the infinite deeps of the Invisible" (164). In Teufelsdrockh's philosophy, fantasy functions as a tool to penetrate the substance of the material and to transcend the opacity of the invisible. Fantasy helps take off God's time- and space- vestures to bare His wisdom and infinity. As long as one possesses the faculty of fantasy, one is able to surmount the obstacles of time and space, because "wouldst thou *plant for Eternity*, then plant into *the deep infinite faculties* of man, his *Fantasy and Heart*; wouldst thou plant *for Year and Day*, then plant into *his shallow superficial faculties*, *his Self-love and Arithmetical Understanding*, what will grow there" (169 italics mine). Fantasy opens the inner eye and enlivens the dynamic Pure Reason; by the intuitive vigor of the two, the wise is able to reach the supernatural.

Teufelsdrockh, further, adopts mythological metaphors to portray the mystic faculty—fantasy—that can transcend the time- and space- vestures and rises above the visible to meet the invisible. First, "Fortunatus had a wishing Hat, which when he put on, and wished himself Anywhere, behold he was There" (*SR* 195). The wishing

Hat is a metaphor of fantasy, with which, "Fortunatus triumphed over Space ... [and] annihilated Space; for him there was no Where, but all was Here" (196). Resembling Fortunatus, the wise with the hat of fantasy can triumph over space, annihilating boundaries and soaring toward the infinity, i.e. the nowhere but here. Moreover, Teufelsdrockh adds, if fortunate enough to equip a "Time-annihilating Hat," the wise will be more powerful to wish himself "Any*where*, straightway to be *There*…shooting at will from the Fire-Creation of the world to its Fire-Consummation" (196). No time confines the wise, who is able to fly through infinity. Eternity, hence, becomes seizable; nowhere ("Weissnichtwo") and no time are by no means remote and inaccessible. Nowhere becomes now-here and no time becomes on time.

Teufelsdrockh then adopts Orpheus and his Lyre as the second example to explain the imaginative power of art. The art of fantasy can generate imaginable power to topple the wall, pierce time and space, and transcend the restriction of matter. With fantasy, one resembles Fortunatus to wear the magic Hat or Orpheus to play the magic Lyre, freely cutting across time and space. The visible and finite world, hence, turns out to be transparent; the invisible and infinite universe is everywhere, anytime, and simultaneously nowhere, no time. Meanwhile, man merges in God, and matter melts into spirit, because the "I" is "a Ghost, as actual and authentic as heart could wish; well-nigh a million of Ghosts were traveling the streets by his side" (*SR* 199). With fantasy, the wise becomes weightless and enters the objective universe.

Fantasy is the intuition of a philosopher and an artist. It is a dynamic power of the inner eye as well as a power similar to madness: "In every the wisest Soul lies a whole world of internal Madness, an authentic Demon Empire; out of which, indeed, his world of Wisdom has been creatively built together, and now rests there, as on its dark foundations does a habitable flowery Earth-rind" (*SR* 195). The power of madness, seems to "'[have] no system,'" symbolized by the disorderly structure of

Sartor, because “his system is in a higher order” (CH 67, 72). The philosopher of fantasy is prosperous in rhetoric, winged in words, flourishing in metaphors, and flying away from the mechanism of oratory. Teufelsdrockh explains further that, not only philosophers and artists, but also intellectuals in science and religion, should bear the “characteristic” of “spontaneity” and “unconsciousness” (CH 72) to free his fantasy from the yoke of the mechanism.

(6) Whole

With the intuitive operation of spontaneity and unconsciousness, the wise with fantasy never senses the break between matter and spirit, man and God, as well as nature and the supernatural. The wise is never confused with the fissures in the objective universe and by no means doubts its wholeness. The foolish, however, operating merely his conscious faculties, is limited by his bias and confined to the mechanical world. He depends excessively on order and system, blinds his spontaneity, ignores his dynamic powers of unconscious, and closes simultaneously his inner eye. Therefore, the foolish never senses the invisible world around him, let alone perceives it, understands it, and even believes in it. He has no fantasy but oratory. His vulgar Logic and oratory generate more of his doubt and disbelief, and his syllogistic wordplay distances him from God and spirit. Instinctively, he feels a break within himself and considers society to be sick and in need of incessant reformation. Carlyle then adopts “the Physician’s Aphorism” (CH 67) to indicate the critical problems of the foolish at the very beginning of “Characteristics”: “The healthy know not of their health, but only sick.” The sick are conscious of their malady because they ignore the “*whole*” already within him but seek outward remedy to fulfill the inner lack. Carlyle suggests that “when we feel ourselves as we wish to be, we say that we are *whole*” (CH 68). In other words, the inward search of the

already existing spirit to fulfill one's wholeness—the objective universe—is far more healthy and significant than outward reform or revolution.

Teufelsdrockh realizes that "the Divine Essence is to be revealed in the Flesh," (*SR* 199) and that matter and spirit should be a "whole" in harmony. Between matter and mind, nature and spirit, none is superior to the other but one responds the other: "Or what is Nature? Ha! Why do I not name thee GOD? Art not thou the 'Living Garment of God'? Oh Heavens, is it, in every deed, HE, then, that ever speaks through thee; that lives and loves in thee, that lives and loves in me?" (142). Not only are matter and mind, nature and spirit, man and God "wholes" but also "origin of Evil…arises in every soul, since the beginning of the world" (143). The Evil in the soul does not mean to hinder the progress of the spirit but functions as a propellant to drive the soul towards perfection. Teufelsdrockh expects his readers to realize thoroughly that every substance, like every spirit, is part of the whole and none should be disposed of, since "*The whole is greater than the part*: how exceedingly true!" (40). The full name of the fictional professor, Diogenes Teufelsdrockh, "the God-born devil's dung," hence, becomes a rhetorical metaphor of the "whole" to combine good and evil, matter and spirit, heaven and hell, and God and Devil.

The "whole" is the true wisdom of Carlyle's philosophy. In the "whole," the wise philosopher transcends the matter/spirit and man/God distinctions, entering the objective universe already within his "inner reservoir." The openness of his inner eye helps him to enliven fantasy and the dynamic Pure Reason. In such circumstances, the wise sees beyond the visible marks of social ranks. The king is by no means nobler than a carman in his eyes, since "To the eye of Pure Reason what is he? A Soul, a Spirit, and divine Apparition" (*SR* 48). The flesh of the soul integrate with each other, and in between there is no difference. Seeing the flesh, the wise simultaneously senses the soul. Through the carman's "wool-rags" (48), he then sees "a Universe, with azure

Starry Spaces, and long Thousands of Years" (49) because the material clothes of the carman "is sky-woven, and worthy of a God" (49). The foolish, who cannot tell the Spirit under the "wool-rags," mechanically notices the tatters and judges of the carman and cannot tell his beautiful soul.

For the wise, the physical and the metaphysical are integrated: mind clothed in the body, spirit wrapped in the matter, the invisible symbolized by the visible. Teufelsdrockh therefore concludes:

> The beginning of all Wisdom is to look fixedly on Clothes, or even with armed eyesight, till they become *transparent*. **"The Philosopher," says the wisest of this age, "must station himself in the middle": how true!** The Philosopher is he to whom the Highest has descended, and the Lowest has mounted up; who is the equal and kindly brother of all. (*SR* 50 bolds mine)

Between the spirit, the "Highest," and the matter, "the Lowest," is no gap but a harmonious joint. The mind integrates matter and matter represents the mind. Teufelsdrockh's full name, Diogenes Teufelsdrockh, hence symbolizes the sum of "the Highest" and "the Lowest," the wholeness of the physical and the metaphysical, and of the visible and the invisible. Between "the Highest" and "the Lowest," Teufelsdrockh, right at the "middle station," signifies Carlyle's wise philosopher. The English Editor, hence, exclaims that "The grand unparalleled peculiarity of Teufelsdrockh is, that with all this Descendentalism, he combines a Transcendentalism" (48). The man with a gorgeous gown in the mysterious eye of Teufelsdrockh may become degraded "below most animals" while the man with tatters may become exalted "beyond the visible Heavens, almost to an equality with the Gods" (48). The visible matter, under the mysterious inner eye of Teufelsdrockh,

does not mean humbleness, equal to dung and death. On the contrary, the material and the spiritual are two sides of a coin, complementary to each other. Hence, “For Matter, were it never so despicable, is Spirit, the manifestation of Spirit” (49).

Resembling Paley’s natural theology, Carlyle’s natural supernaturalism involves the complementary relationship between nature and God as well as matter and spirit. The whole of Carlyle’s natural supernaturalism, like Paley’s natural theology, is teleological, looking forward to the progress of human spirit and society. Optimistic in the harmonious relationship between matter and spirit, Carlyle’s natural supernaturalism advocates the belief that the machine will not eat out spirit, matter will not swallow up mind, and science will not gnaw at God, because

> On the whole, as this wondrous planet, Earth, is journeying with its fellows through infinite Space, so are the wondrous destinies embarked on it journeying through infinite Time, under a higher guidance than ours…. Go where it will, the deep HEAVEN will be around it. Therein let us have hope and sure faith. (ST 117-18)

The progress of astronomical science, hence, does not destroy Carlyle’s dependence on God; on the contrary, the mechanical laws and mathematical rules of nature expose God’s wisdom further. The mechanical progress of the material world exemplifies the inner progress of the spiritual universe. Everything, not merely the orbit of heavenly body but also the progress of human soul, is under “the higher guidance then ours.” And only depending on “hope and sure faith” is one able to grasp the wisdom of the whole in Carlyle’s natural supernaturalism.

(7) Teufelsdrockh, the Emblem of the Whole

Sartor Resartus, believed to be a biography of Carlyle (Peterson 31-59), is chaotic in structure but in fact has its philosophy hidden in a higher system. To adopt a formless structure, Carlyle merges wild winged thoughts in the structure of spontaneity and unconsciousness. Teufelsdrockh's spiritual journey hence symbolizes Carlyle's early inward progress: from a suspicious doubter to a hopeful believer, from his misconception of a separation, to his belief of a whole, from his foolish bias relying on mechanical matter, to a wise man seeing with an inner eye. *Sartor*, a biography recording Carlyle's personal spiritual progress, thus describes his experiences, from physical blindness to spiritual discernment. His physical journey in nature and spiritual journey in the supernatural finally accomplish his wisdom and forges his inner eye.

To describe the characteristics of Teufelsdrockh, the English Editor once exclaims that, in Teufelsdrockh,

> we find consummate vigour, a true inspiration; his burning thoughts step forth in fit burning words, like so many full-formed Minervas, issuing amid flame and splendour from Jove's head; … all the graces and terrors of a wild Imagination, wedded to the clearest Intellect, alternate in beautiful vicissitude. (*SR* 22)

To combine the opposite forms of energies, Teufelsdrockh is the emblem of Carlyle's "whole"—the "wild Imagination" of Minerva (Diana) plus the "clearest Intellect" of "Jove" (Zeus); the reason symbolized by Jove's head plus the "consummate vigour, a true inspiration" suggested by the burning flame of Minerva. Neither wild and chaotic, nor rational and orderly, Teufelsdrockh blends the two characteristics, stationing himself between the two extremities. Implanted in Teufelsdrockh the character then, is Carlyle's ideal image of a true philosopher to "station himself in the

middle”—between “imagination” and “Intellect,” between consciousness and unconsciousness, between oratory and rhetoric, between dynamic and mechanic, between nature and the supernatural.

Like a prophet’s book, Carlyle’s biography, as well as Teufelsdrockh’s, reveals a Jesus-like wise man, who once suffered disbelief and regains his conviction finally. From disbelief to conviction, the prophet philosopher represents a savior sent by God from the Heaven who not only propagates the significance of belief in God, but also prophesies salvation by God’s supernatural powers. According to this prophetic theory, as long as they open their inner eye, trust the internal harmonies between nature and the supernatural, God and man, as well as matter and spirit, men will be able to perceive the objective whole of the universe, the natural-supernatural integration of God. In other words, to see God, one should start with being in the middle and believing in the whole.

Through the magic birth of Teufelsdrockh myth, Carlyle creates a modern Apocalypse to declare the new heaven and new earth: “Mechanism is not always to be our hard taskmaster, but one day to be our pliant, all-ministering servant; that a new and brighter spiritual era is slowly evolving itself for all man” (ST 117). The Carlylean Apocalypse, supplementary to the Bible, advocates millennialism.

IV. “Natural Supernaturalism”

Doubtless, Carlyle is a religious prophet, a spiritualist, and a transcendentalist. However, while propagating his spiritualism and transcendentalism, Carlyle does not simultaneously declare to relinquish matter for religious purpose. On the contrary, Carlyle adopts a mutually productive relationship between matter and spirit to create a new philosophy and to lead the people lost in the mechanical age towards a religious and spiritual end. In the clothes philosophy of Carlyle’s, the “clothes” denotes the

outward material world, and the “philosophy” signifies the inner spirit. The “clothes philosophy” hence signifies “Natural Supernaturalism”—a philosophy echoing the nineteenth-century natural philosophy. Though similar to Paley’s watch analogy, Carlyle’s natural supernaturalism is not duplication, however; it just unconsciously whispers the voices of its age. Unintentionally, Carlyle’s text is interwoven with the context of his age; his natural supernaturalism intertextualizes his contemporary natural philosophy.

To parallel the then natural philosophy and Carlyle’s Natural Supernaturalism in reading *Sartor*, the conventional conception of matter/spirit, science/religion, and nature/supernatural splits fade out, and new binary structures are exposed:

the wise vs. the foolish

the inner eye vs. the bodily eye

the invisible vs. the visible

the Pure Reason vs. the vulgar Logic

the objective universe vs. the subjective world

the dynamic fantasy (imagination) vs. the mechanic thinking

the supernatural vs. nature

Carlyle does not detest matter; what he intends to blame instead are the foolish who see with the bodily eye and think with vulgar Logic. Carlyle’s purpose of natural supernaturalism is clear—*to advocate fostering one’s inner eye and Pure Reason in order to transgress the limitations of the subjective world and mechanical thinking in order to approach God’s supernatural divinity*. Based on Carlyle’s contemporary natural philosophy to mingle the two ends of nature and the supernatural than to sever them, the complexity of *Sartor Resartus* is both lucid and understandable. In short,

Carlyle never rejects science or matter but advocates the wise use of science, matter, and the machine with one's dynamic inner eye and Pure Reason. Matter, science, and nature are not the origins of mechanism, utilitarianism, and evil, since "This deep, paralysed subjection to physical objects comes not from Nature, but from our own unwise mode of viewing Nature" (ST 116). Simply put, Carlyle has faith in matter, since it is not litter, but the container of the spirit.

Chapter Four

Teufelsdrockh, More Than a Literary Man…

> …the Tailor is not only a Man, but something of a Creator or Divinity. Of Franklin it was said, that "he snatched the Thunder from Heaven and the Sceptre from Kings": but which is greater …. [It is] how a man is by the Tailor new-created into a Nobleman, and clothed not only with Wool but with Divinity and a Mystic Dominion. (*SR* 217-18)

> What were the implications of romantic notions of genius for the image of the scientist? … First, the Romantics promoted a concept of creative genius as transcending rules and conventions in poetry, art, and science. Second, they encouraged the idea that such genius was intimately bound up with an extraordinary personality—one capable of breaking with conventional methods to achieve great discoveries, but also likely to transgress traditional norms of behaviour …. It is here…that the question of Newton's character appeared…, put by Wordsworth and Carlyle…. (Yeo 1993:139-40)

I. What is Carlyle's "Tailor"?

In one of the concluding chapters of *Sartor Resartus*, "Chapter XI Tailors," Carlyle exclaims that "What too are *all Poets and moral Teachers*, but a species of Metaphorical Tailors" (*SR* 218, italics mine). For Carlyle, Poets are of a significant role because ideally it is "who but the Poet first made Gods for men" (218). Due to the two statements, generally, there is always the equation of Carlyle's Metaphorical Tailor with the Poet. The Carlylean transcendentalist hence seems to straightforwardly direct the Poet. If not the Poet, there is usually the assumption that the Carlylean transcendentalist must be a literary man.

However, does Carlyle indeed suppose a transcendentalist should be a poet or a literary man? If indeed a transcendental Tailor is a literary man or a poet, why does

Carlyle claim "Close thy *Byron*; open thy *Goethe*" (*SR* 145)? And why does Carlyle take Benjamin Franklin (1706-1790), the man to "[snatch] the Thunder from Heaven and the Sceptre from Kings" (217), as one of the emblematic ideals of the Tailor? Johann Wolfgang von Goethe (1749-1832) is generally assumed to be a literary man owing to his literary successes in *Sorrows of Young Werter* (1774), *Wilhelm Meister's Apprenticeship* (1795-96), and *Faust* (1808).[24] However, Goethe dedicates himself to the study of optics more than to literature and believes himself to be the only person greater than Newton to know the truth in the science of colors (Eckermann "Dec. 30, 1823" par. 8; Uberoi 17). With regard to Franklin, though he composed "The Way to Wealth," he has never been lauded for his literariness but his political and scientific achievements. According to Carlyle's description of Franklin, the one to "snatch Thunder from Heaven and the Sceptre from Kings," Franklin obviously appears to be a professional of the laws of nature and politics instead of literature. If Franklin is a scientist and a politician in Carlyle's mind, and if Goethe is more than a literary man but a scientist, does Carlyle indeed suppose his philosophical thinker should be a Poet?

Otherwise, if Carlyle claims to "close thy *Byron*," whether to be "a Poet" or not should not be the only estimation of a Carlylean philosopher. During Carlyle's composition of *Sartor* (1830-31), Lord Byron (1788-1824) was already a prominent poet in Europe and a trendsetter in the Dandiacal Style. This international poet however does not win Carlyle's admiration. If it is not Byron the poet, Carlyle's contemporary prominent man of letters to represent the great prophet of the age, what kind of person of what kind of characteristics, can stand for the Carlylean great mind? To take the "Tailor" chapter as the clue to help trace the possibility, Franklin and

[24] Carlyle's *Sartor Resartus* was primarily influenced by Goethe's *Sorrows of Young Werter* and *Wilhelm Meister's Apprenticeship*, not by *Faustus*. In *Sartor*, Carlyle mentions both *Sorrows* and *Wilhelm* twice.

Goethe may be two of the representatives to symbolize "[the world's] Hierophant and Hierarch, or even its God" (218). To compare Goethe and Franklin, a common ground is science: both are familiar with science and are themselves scientists.[25] Presumably, there seems to be some attributes related to "science" in Carlyle's imaginations of his ideal philosopher.

With regard to Carlyle's ideal philosopher, Teufelsdrockh is the incarnation. The investigation of Carlyle's Metaphorical Tailor hence should be focused on Teufelsdrockh, the character. Thus, what is Teufelsdrockh, if the Carlylean philosopher is not necessarily a poet? What if Teufelsdrockh is more than a literary man? If not merely a literary man, what possibly is Teufelsdrockh? If Carlyle claims the significance of the "Torch of Science" in the opening of *Sartor*, what is Teufelsdrockh the protagonist in relation to the Torch and Science since he supposedly is the holder of the Torch to reveal the truth? Furthermore, if Carlyle sympathizes with the use of matter by declaring "natural supernaturalism," what is the significance of matter for Teufelsdrockh? Or, more specifically, what is the significance of matter in Teufelsdrockh's Clothes Philosophy? Moreover, if there seems to be the attribute of "science" in Carlyle's imagination of his ideal philosopher, what is the attribute of science presented in Teufelsdrockh the philosopher?

This chapter thus proposes to examine Teufelsdrockh the protagonist as the incarnation of Carlyle's ideal philosopher in *Sartor*. I suppose that, in Carlyle's mind, the Metaphorical Tailor is not necessarily a poet or a literary man. Instead, there should be a more significant attribute when it comes to deciding whether a man is a transcendental philosopher or not. This means that to be a poet is good but not sufficient; the obligatory attribute of a true Carlylean philosopher resides in other

[25] Goethe was a specialist in optics, plant morphology, and homology, and Franklin was a prodigious inventor who created the lightening rod, bifocal glasses, the refrigerator, etc.

requirements. Besides, in terms of the importance of the Torch and the theory of "Natural Supernaturalism," I assume that "science" implicitly plays a pivotal role in Carlyle's composition of the character of Teufelsdrockh. As long as Carlyle never disdains science and matter and personally gets involved in scientific studies at an early age, the significances of science may probably be merged into Teufelsdrockh the character, making the Carlylean ideal philosopher to be more than just a literary man.

In order to grasp a more explicit image of Teufelsdrockh, the exploration of Teufelsdrockh's relation to science and matter would become necessary, because *Sartor* starts with the Torch of Science to claim "Natural Supernaturalism" and ends with Franklin the scientist as the typical Metaphorical Tailor. In the following research, then, there will be two parts. The first is a survey of Carlyle's interrelation with science and the men of science at an early age (1820-30).[26] In this section, there will be sketches of Carlyle's contemporary socio-cultural circumstances in reference to the development of science as a legitimate discipline and the emergence of the scientist as a respectable profession. The second part consists of two sections. In the first section there are theories concerning the philosophy of science and of the scientist proposed by Carlyle's just contemporary philosopher of science, William Whewell (1794-1866).[27] A few discussions of Carlyle's ideal science and scientists will also be analyzed by the comparisons of the Whewellian and the Carlylean thinking minds. After having grasped Carlyle's relations with his contemporary science and the man of science, the second section will undertake the analyses of 1) Teufelsdrockh the character—his study, his profession, his struggles, his awareness, and his theory, 2) the solution of the riddle hidden in the bizarre name, "Diogenes Teufelsdrockh," and 3) the true meaning of Carlyle's Tailor in Clothes Philosophy.

---

[26] *Sartor* is composed in 1830-31.
[27] Carlyle was born in 1795, one year after Whewell's birth.

II. Carlyle and Science:

Science and the Man of Science in the Early Nineteenth Century

More than being just a literary man, Goethe—Carlyle's model—was also a scientist. Though renowned for his *Werter* and *Faust*, Goethe wrote also *Metamorphosis of Plants* (1790) and *Theory of Colours* (1810). To break the common impression, J. P. S. Ubeori's study shows that Goethe "had probably devoted more time to his scientific studies than to all his prose and poetry" (17). Confident of his study of natural philosophy and his achievement in writing *Theory of Colours* (1810),[28] Goethe proudly stated, "I, amongst millions, am the only one who knows the truth on this important subject [of light]" (Eckermann "Dec. 30, 1823" par. 8). He believed his theory of colour to be more successful than Newton's and greatly resented being judged as a failure in science. Different from the modern concept of a scientific treatise of light, Goethe's *Theory of Colours* was filled with philosophical contemplation of the art of science and the theory of light and dark. More than a scientific thesis, Goethe's theory of light was, at the same time, a religious, philosophical, and literary meditation.

Similar to his model, Goethe, Carlyle was not only a literary man but also a scientific scholar. More than just a literary man, Carlyle was once a devotee of science—in mathematics, geology, geometry, magnetism, etc. Besides absorbing himself in German philosophy and literature during the 1820s and '30s, Carlyle was simultaneously engrossed in German science. During these decades, Carlyle largely involved himself in the profession of science, as a young mathematics scholar and

[28] Goethe's *Theory of Colours* is a philosophical-scientific treatise to analyze light and darkness. Goethe's theory of light is fundamentally different from that of Newton's *Optics* (1704). Goethe's quality of light is homogenous, but Newton's is heterogeneous.

tutor,[29] a critic and reviewer of science, and an applicant for Chairs at universities.[30] He tutored in mathematics, wrote scientific treatises, and translated scientific theses to earn his living during the 1820s.[31] He was proud of his mathematical abilities during 1834, the period after finishing *Sartor,* and applied for the chair of astronomy at Edinburgh University (Meadows 133; Tennyson 23).[32] Accordingly, neither was science seen as being a despicable field, nor was being scientific considered to be immoral or irreligious from Carlyle's point of view. Teaching science, studying science, working for science, and even being scientific were ordinary habits and customary manners in Carlyle's life. Composed in such a milieu, *Sartor* supposedly should similarly have exuded a positive and prospective attitude to the treatment of science, of the man of science, and of being scientific.

In the early nineteenth century, in reality, there was no distinct division between writers and scientists. Some writers were themselves scientist as well, but felt no contradiction in possessing dual status and felt no split between the two vocations. Many contemporary intellectuals were gifted in the fields of both letters and science, and hence were themselves comfortable at being experts in both areas. Since there

[29] In 1817, Carlyle's name firstly appeared in print as an "ingenious young mathematician," because he provided Professor John Leslie (the author of *Elements of Geometry, and the Plane Trigonometry* [1817]) with the solution to the problem of how "to divide a straight line, whether internally or externally, so that the rectangle under its segment shall be equivalent to a given rectangle" (Tennyson 19). In 1819, Carlyle first gained an income from science, by undertaking a translation of an article on mineralogy (19). Carlyle tutored the Buller brothers in 1822. Between 1820 and 1823, Carlyle contributed articles to the *Edinburgh Encyclopedia*.

[30] In 1827, Carlyle applied for the Chair of Moral Philosophy at the new London University. Even if considered, Carlyle did not win the position. In 1828, similarly, he applied for the Chair of Moral Philosophy at St. Andrews. This time, even although he obtained a testimonial from Goethe, he failed again. The position went to a safer person, Rev. Dr. Cook. In 1834, Carlyle applied for the Chair of Astronomy at Edinburgh University (Tennyson 23-24; Meadows 133). Failing again, Carlyle did not manage to find employment in any official institution of science, even if he strongly expected to.

[31] Carlyle's theses and reviews of science include: *Problem in Leslie's* Elements of Geometry (1817), *Review of Pictet's* Gravitation (1819-20), "Remarks on Prof. Hansteen's 'Inquiries Concerning the Magnetism of the Earth'" (1820-21), "Outline of Prof. Mohs's New System of Crystallography and Mineralogy" (1820-21), and "Baillie's *Metrical Legends*" (1821). Carlyle's translation of scientific treatises includes: *Portion of Malte Brun's* Geography (1821) and *Legendre's* Geometry (1824). References about Carlyle's scientific writings are cited from G. B. Tennyson's Appendix in *Sartor Called Resartus.*

[32] Finally, this position went to Thomas Henderson (Tennyson 19).

were no contradictions between science and letters, to be a man of science thus was never inconsistent with being a man of letters. In his study of the scientist as a profession in the nineteenth century in *The Victorian Scientist: The Growth of a Profession* (2004), Meadows observes that "[w]riters frequently mentioned scientific ideas, and even sometimes the scientists themselves" (Meadows 133). Between scientists and writers, there was never hostility; instead they frequently "*overlapped* in their views" (133, italic mine). Writers were themselves not only sometimes scientists, but were usually also on friendly terms with scientists.

For instance, more than being a philosophical and literary man, Carlyle was an expert in geology and was acquainted with Charles Babbage (1792-1871) and Charles Lyell (1797-1875). Carlyle's best friend was "…rather surprisingly, the highly materialistic Tyndall. The two became so close that, when Carlyle's wife died, Tyndall took him for a holiday in the South of France to help him get over it" (133-34).[33] According to Meadows's study, the scientific communication turned out to be steady organizations from the 1850s to the late 1870s (1). Before the 1850s or, more correctly, before Darwin's publication of *Origin of Species*, scientific concepts still maintained an amicable relationship with the thoughts of the humanities, and the men working in science were still on good terms with the men engaged in philosophy, theology, and the classics. In both vocation and conception, men of letters and of science overlapped. They shared a *both-and relationship*, instead of an either-or division, in Carlyle's youth. More precisely, the early nineteenth century literary man was simultaneously a scientific man sometimes. There might be simply the literary man or the scientific

[33] Charles Babbage studied mathematics at Cambridge University and became a professor at Cambridge. Charles Lyell was educated at Oxford University. He was an expert in geology, supporting the gradual theory — that the earth changed gradually rather than catastrophically. His *Principles of Geology* was once the most influential book in the nineteenth century and was important for helping Darwin to develop the idea of evolution. John Tyndall (1820-93) studied physics in Germany and was a professor of Natural Philosophy at the Royal Institution. He was well-known for his study of heat radiation and as a popularizer of science (Meadows 4-7).

man, but there were also those men who were professionals in both fields. Carlyle was one of these examples, *not only a literary man but also a scientific expert.*

In the first half of the nineteenth century, the situation of intellectuals being expert in both science and the humanities was very common because the concept of "science" involved a wider scope than is the case now. "Science" indicated not only the empirical research of the natural world, but also the inner perception of the philosophical, idealistic, and religious meanings of the universe. During this period, science was not yet an independent discipline, but was appended to those of philosophy and religion. In the early nineteenth century, classics and religion were popular studies in universities, while "science" was more of a hobby for the ambitious amateur who majored in classical, philosophical, as well as religious learning. Not yet a legitimated discipline, "science" was therefore of multiple significances but denoted simply the empirical study of the natural world.

More clearly, "natural philosophy" was a more prevalent term to our modern concept of "science," that is, the study of natural matter and phenomena. However, different from modern science in the twentieth century, natural philosophy in the early nineteenth century contained religious significances as well. To investigate "nature" meant to study divine creation. Within "divine creation," there was not merely the laws of nature, but also the "philosophy" of God. The early scientific study of nature accordingly involved not only the subject of the visible world but also that of the invisible, namely, the spiritual, the philosophical, the religious, and the moral. The twentieth century notion of science—indicating the specific study of visible substances and excluding any idealistic considerations—in reality had not yet been conceptualized during Carlyle's composition of *Sartor* because the "divorce between science and consideration of values" started "since the late nineteenth century" (Yeo

1993:4).[34] Before this conceptual divorce, science dealt with moral duty and philosophical purposes, and a man of science was, at the same time, spiritual and religious. Due to this ideological circumstance, the notion of "science" in Carlyle's recognition was far different from ours at the present time, but with a wider scope. His intimation with scientific study, also, was by no means exceptional and accidental. Moreover, Carlyle might even be a representative figure of a religious and literary man of science.

Carlyle's composition of *Sartor* (1830-31) was published in the early span of the transition from natural philosophy to modern science, in the period which still treated science from an idealistic perspective. During this period, there was a "close integration of science within a Christian culture," and the men of science were in reality "clerical scientists" (Yeo 1993: 30-31).[35] For the clerical scientists during this period, investigating nature did not simply mean studying the superficial phenomena of the visible world. On the contrary, to study the appearance of nature was a preparatory stage for a more significant purpose of the inner truth, that is, to perceive truth by discovering the laws that God left in the universe. "Nature" as a study was empirical and material as well as religious and philosophical. In *Sartor*, too, nature

[34] It was in the 1930s that Edmund Husserl commented on the development of his present science and indicated that modern science was falling into a crisis. For him, European science on certain levels was successful, but in reality had nothing "to say about human ideals and aspirations" (Yeo 1993: 4). In other words, it was not until the early twentieth century that science gradually became independent of philosophical and religious thoughts.

[35] In the early nineteenth century there was generally a belief in *a unity of truth* to combine every field of learning—science, religion and the arts. This was the assumption that "all truths — theological, poetic, and scientific — were in harmony" (Yeo 1993: 30). That is to say, it was generally believed that there was only one truth in the universe. During the 1850s, this assumption however was smashed by Darwin's publication of *Origin of Species* (1859) because "scientific criticism of the theory of evolution by natural selection released a number of conflicts within science itself" (30). Darwin's *Origin* thus brought "truth complex,"[35] making the unity assumption controversial. Gradually, with the pivotal appearance of Darwin's *Origin*, the material and the visible world started to be separated from the spiritual and the invisible. Consequently, Victorian man's belief in natural theology also began to shatter (Yeo 1993:31). Composed around the period when the unity of truth started to shatter, *Sartor* showed, on one hand, the contemporary belief in the spirit-science, moral-science, and religion-science unities and, on the other, Carlyle's anxiety with regard to the breaking of spirit from science and his urgency with regard to the reform of science by spirit and moral means.

indicated not merely the “external Nature” (*SR* 117) of the wilds but also the “Living Garment of God” (142). From Carlyle’s observation of the “Mountains” and “rocks” (142) came his “natural philosophy” of nature-as-God’s-garment and God’s-spirit-hidden-in-nature.

Though probably familiar with science, during the first half of the nineteenth century, for any young man to make science his career was difficult and risky before the appearance of *Origin*. Being a man of science required special ardour and great financial support, since “science” was more of an amusement than a certain career. During this period, most undergraduates entered higher education to look for opportunities for working in the Church or being the Fellow of a university college. To take Cambridge and Oxford for example, the aim of the education was to train people for traditional professions such as medicine, the law, and the Church (Meadows 35), since these vocations guaranteed a stable income and social status. As for the men who took science seriously, they were mostly amateurs who were not only rich, but also ambitious to research the natural world. They were mostly clerics or professors curious about investigating nature as a pastime, or responsible for specific scientific business associated with a certain stable position. Without any institutional, familial, or even marital support, it was almost impossible to achieve one’s aspiration for being a man of science by depending merely on one’s own enthusiasm. In 1830, Babbage once made the well-known cry by complaining “that there was no such career in science” (Yeo 1993: 34) since to get fully involved in the study of science required wealth and time, unlikely except for men like Darwin who inherited money from his family. As long as science was not yet a broad avenue to success in the early nineteenth century, the literary and philosophical Carlyle, who showed his zeal for reforming science in terms of spirituality and morality by the Torch in *Sartor,* might be greatly interested in science.

Though unpopular and difficult in terms of making a living, a few scientific jobs were available in the early nineteenth century; these jobs, however, attracted only very low salaries. The men who were interested in scientific study thus needed to look for other means of support, officially or privately (Meadows 117). Mostly, the academic world was the first choice for its stability of position and comparatively generous salaries.[36] Carlyle, too, once expected to obtain a stable position in a university (1827, 1828, and 1834)[37] but all attempts failed. If unable to find a secure position at any university, the man of science then looked for other sources of money: publication, editing, marrying a wealthy wife, or inheriting a large sum of money (Meadows 121-22).[38] Without any familial backing, financial problems were serious for zealous scientists. Fortunately, to marry a wealthy wife (as Carlyle did), or to inherit property (as Darwin did) could help the scientist break free from worry and poverty (121). If not fortunate enough to have the chance of marrying into wealth or inheriting riches, the man of science had to depend on himself by publication and by editing popular journals in order to earn extra money (121). In general, during the first half of the nineteenth century, the study of science was a luxury that demanded money and time, and thus only wealthy and well-educated men, and certainly not lower-class men or women, were allowed to amuse themselves with scientific research (Yeo 1993:

[36] To give a general idea about the value of the pound in the Victorian age, the present-day £100 is equivalent to about £5,400 pounds in the 1830s (Meadows 2-3). For instance, Edward Frankland (1825-1899), an expert on sanitation problems, was once a professor at Owens College in Manchester in the second half of the Nineteenth Century. His annual salary was £300 pounds in total, a middle-class salary as a college professor (Meadows 117-18).

[37] Carlyle's experiences of pursuing a position in the academic world are illustrated in note 30 of this chapter.

[38] In order to fulfil his passion for the study of geometry, Carlyle indeed sacrificed his study for the ministry at Edinburgh University and turned to undertaking scientific translation, publication, and editing. Eventually, Carlyle married Jane Baillie Welsh, an only child of Dr. John Welsh and Grace Baillie Welsh. John Welsh was a wealthy businessman who ran a medical practice at a staging post and personally owned a station in the local community. At the age of eighteen, Mr. Welsh died of typhus and Jane inherited a large fortune. Due to her intellectual horizons, Jane surpassed and looked down on most of her suitors. After rejecting several advantageous marriages, Jane then met Carlyle and was fascinated with his dream of being a writer. Finally, at the age of 25, the wealthy girl married Carlyle for his genius. Carlyle, thus, was fortunate enough to marry a woman with both innate and familial dowries (Uglow "Jane Welsh Carlyle").

35).

Besides, among many intellectual activities in universities, scientific research was never a favorite subject, and did not possess a secure position because, compared with other disciplines such as classics and theology, science had a much lower status, and was not even a rival (Yeo 1993: 32-33). In such a situation, only for those who possessed considerable wealth and extreme interest, was science a possible profession. That is to say, "scientific activities" in the early nineteenth century were, in fact, both marginal and laborious. With few participants and few supporters, science as a career was neither favorable nor valuable. Though inaccessible to most people, science however was not strange to the educated, since both classics and mathematics were emphasized equally in any field of higher education. As a result, intellectuals were trained both literarily and scientifically to be able to handle the humanities and science simultaneously.

Due to the overlap of humanistic and scientific studies, and due to the difficulty of survival for a scientific man in the early nineteenth century, Carlyle supposedly should have had a great interest in science and ample connections with science. As discovered by Tennyson, "Carlyle's studies in natural philosophy co-exist with his studies in literature and history" (Tennyson 22). In his youth, "[r]eligion, natural philosophy, history, literature—these were Carlyle's early interests; and he held them with no concern that they were necessarily incompatible" (22). After giving up his studies for the ministry at Edinburgh University for reasons of religious conviction around 1814 and 1815, he then turned to the study of geology. The rise of interest in German literature, intriguingly, derived from his early devotion "to uncover the secrets of geology (or geognosy) and mineralogy" (21), which he believed hid the true knowledge of God. Due to his belief in God, Carlyle turned to geology; due to his interest in geology, he read the abundant publications in German. Then, intriguingly, it

was Carlyle's devotion to German geology that led to his in-depth study of German literature and the birth of *Sartor*.

Not merely interested in science, Carlyle even sacrificed his stable career for the risk of working for science.[39] Due to his disappointment with his contemporary education, Carlyle quit his studies for the ministry at Edinburgh University. After leaving university, in order to earn his own living, Carlyle tutored the Buller brothers in mathematics, Carlyle's specialty. Later, he started to write scientific reviews, scientific treatises, did translations and edited scientific essays.[40] For Carlyle, to leave the study for the ministry in reality was an incredibly risky decision because this rejection meant him having to renounce his vocation to the Church, a job guaranteeing a stable income and social status. Carlyle had to be greatly ambitious with regard to science. How else could he be willing to surrender himself humbly to the uncertain low salary associated with being a part-time tutor, translator, and science editor, since choosing science as a career required considerable time and money? In *Sartor*, more than depicting his failure in romance, chapters entitled "Getting Under Way" and "Sorrows of Teufelsdrockh" explicitly reflect Carlyle's predicament associated with "quitting College" (*SR* 90) "[t]o find by study of [him]self, and of the ground [he] stand[s] on" (91). Instead of following the easy path by depending on the institutional safeguards, Teufelsdrockh turned to "Self-help" (87), that is, the road not taken. To have such faith and courage, Carlyle should have taken the study of science as being a sacred deed and the man of science as being a noble man. I am of the opinion that the Torch of Science represents the sacred science and that Teufelsdrockh is the noble scientist in Carlyle's imagination. The sacred science lights the world and enlightens

[39] According to Tennyson's meticulous research in *Sartor Resartus*, "Carlyle's scientific inclinations have never been very thoroughly explored" (21 note), most studies merely pay attention to Carlyle's literary and philosophical contributions due to the science-religion complex assumption.

[40] His first money from doing translation came in 1819, "a translation of an article on mineralogy" (Tennyson 19). To translate mineralogy, Carlyle is supposed to have an elementary knowledge of mineralogy.

the people, while the noble scientist searches the world, meditates upon the theory of the universe, and instructs the people in God's true knowledge.

III. More than a Literary Man…: Teufelsdrockh and Science

A. The Whewellian Scientist and the Carlylean Scientist

During Carlyle's composition of *Sartor*, the term "scientist" in reality did not then exist. The term, "scientist," usually adopted to denote a certain group of professionals who specialize in investigating natural matter, had not yet been created until Whewell's coinage in the *Quarterly Review* for March 1834 (Ross 9).[41] On its appearance, the term was not generally accepted but instead was seriously criticized by most learned scholars, including Michael Faraday (1791-1867) and Thomas Huxley (1825-95). It was not until the end of the nineteenth century and the early twentieth century that the term, scientist, was gradually recognized and considered to be a standard term to indicate the man of science (Ross 10-32). Before the popularization of "scientist," most of the "scientists" preferred to be called "the men of science" or identified as a specialist such as "geologist," "chemist," "mathematician," or "botanist" (Meadows 2; Ross 2-12). "The man of science" thus was more commonly used and was a general term to cover both specialists and amateurs interested in or expert at any field of natural philosophy during the nineteenth century.

Not yet a legitimated term in common usage, but in its formative stage, "scientist" was muddled with diversified controversies over the characteristics of the

[41] The term, scientist, first appeared in Whewell's review of Mrs. Somerville's book *On the Connexion of the Physical Sciences* in the *Quarterly Review* for March 1834 Vol. 51, pp. 58-61 (Ross 9). In 1840, Whewell again suggested the usage of the term, scientist, in his *Philosophy of the Inductive Sciences*: "We need very much a name to describe a cultivator of science in general. I should incline to call him a *Scientist*. Thus we might say, that as an Artist is a Musician, Painter, or Poet, a Scientist is a Mathematician, Physicist, or Naturalist" (qtd. Ross 10). Both Carlyle and Whewell were in the period in which there was an increasing consciousness of the necessary division of professions and disciplines.

man working for an indefinite scope of "science" during Carlyle's composition of *Sartor*. In regard to the discourses concerning the shaping of a scientist and the scope of science, generally there were two schools, empiricism and idealism. The empiricist school, also termed Baconianism, valued the utility and application of science and thus expected scientists to be good at observation and collection. The idealist school, termed as Newtonism, however, valued more the morals and ethos of science and thus assumed scientists to be not only intellectually gifted, but also morally good.[42] As stated by Foucault, the proper name of an author "…serves to neutralize the contradictions that may emerge in a series of texts" (1991: 204). I assume that Carlyle, as the proper name of *Sartor*, implies his contemporary "contradictions" of the conflict between the Baconian and the Newtonian modes of thought. That is to say, if every text is an exhibition of the multiple voices confronting, conflicting, and compromising, 1) *Sartor* the text should be a textual museum to display the 1820s and 1830s arguments over the discipline of the scientist and the methodology of scientific study between the two schools, and 2) Teufelsdrockh the character should be the discursive site to reflect Carlyle's philosophic pondering over what an ideal scientist should be.

During the 1820s and the 1830s, Carlyle was not the only person to worry about the discipline of a man of science and the epistemology of a scientific study. In reality, Whewell was the most significant figure as a philosopher of science during Carlyle's early years, advocating the proper discipline of the man of science and the moral necessity of the philosophy of science. Though we are taught that modern science originated from the seventeenth century, it was during the Nineteenth Century that,

[42] In the early nineteenth century, from the end of the eighteenth century to the 1830s, the main stream concerning science and the scientist inclined to the idealist school. During the 1830s and the 1840s, the debates between the two schools became apparent and turned vehement. It was after J.S. Mill's revision of "Benthem" in 1859, also the year of Darwin's publication of *Origin*, that the scientists of the empiricist school gradually became the majority (Yeo 1993: 180-85, 188-89). In Carlyle's composition of *Sartor*, it was obviously based on the dominance of the idealist school.

first, “scientists became professionals with a significant role in society” (Meadows 1) and, second, science was seen to be important in education, in industry, as well as in government policy (Meadows 1; Yeo 2001: 65-88). Before the mid nineteenth century, the scope, methodology, discipline, publication, popularization, and education concerning science were still uncertain, but was controversial and disputable. The uncertainty of science made the delimitation of science as a new discipline philosophical and debatable, because it was related to the method of training, the endowed duty, and the social responsibility of a scientific man. Foreseeing a new profession to come, Whewell was the philosopher who was most enthusiastic over upgrading the instruction of science at university in the early nineteenth century.

Gifted in mathematics and astronomy, and an expert in the theory of tides, Whewell however was “concerned in defining and elaborating the bounds of science… and to articulate the norms and practices of good science” (Ruse 8-9). A professor of moral philosophy at Trinity College, Cambridge, Whewell gave a great deal of thought as to how to formulate science as an independent study and how to train a man of science as a moral specialist. He spent much of his research considering the philosophy of science and the scientist, attempting to define the borderlines of the new field of science and the new vocation of the scientist in their early stages of formation. *History of the Inductive Sciences* (1837) and *Philosophy of the Inductive Sciences* (1840)[43] were major achievements with regard to his philosophy of good science and the good scientist in higher education. Simply put, Whewell’s ideal science is “a combination of *a priori* concepts or ideas applied to empirical discoveries and generalizations” (9), and his ideal scientist is a “*whole man*” (Yeo 1993: 129) of “the union of intellectual and moral excellence” (132).

[43] Though publishing his *History of the Inductive Science* and *Philosophy of the Inductive Sciences* in 1837 and 1840, Whewell in reality had already expressed most of his philosophy of science in his early writings in the *Bridgewater Treatises* during the 1820s.

In order to realize Whewell's concepts concerning science and the scientist, it is necessary to have a glimpse of the early nineteenth century debates on the sphere and the methodology of science, as well as the discipline and the character of the man of science. In the early decades of the nineteenth century, Baconianism and Newtonianism were the two main discourses in reference to the issues of science and the man of science. In terms of the debates with regard to the concepts associated with the two issues during the 1820s and the 1830s, the subjects principally focused on six interrelated aspects: the position of the scientific community, the methodology of scientific research, the ethics of science, the discipline of the scientist, the morals of the scientist, and the image of the scientist.

Before 1831, the Royal Society[44] was the most significant scientific community associated with the important men of science. Due to its severe elective system based on elitism, it allowed only a few Fellows to join the Society each year, the Fellows of the Royal Society were normally masters or great minds such as Newton. As for the amateurs interested in science or some medium level working in science, there was no possibility of becoming a member. With the prevalence of science and the increase in the number of scientific researchers in the early nineteenth century however, science gradually became a profession and the number of professional scientists multiplied. Many intellectuals therefore urged the need for greater access to the Royal Society, but they received a cold shoulder and a refusal. In 1831, due to his disillusionment with the elitism and a dissatisfaction with the conservatism in the Royal Society, William Vernon Harcourt (1789-1871) then founded the British Association of the Advancement of Science (the BA), to welcome any amateur practitioners of science and to contribute to their research, efforts donates

[44] The full name of Royal Society is Royal Society of London for the Improvement of Natural Knowledge. It is a learned society, founded in 1660 and still exists in the present day.

(Russell 168-92). Different from the Royal Society, which gave weight to the gentleman intellectual and highly respected the talented genius, the BA welcomed all kinds of enthusiastic amateurs interested in science. The membership was not strict, but egalitarian and democratic.

If the attitude towards the role of scientists in the BA was amateurism or institutionalism, it was, by contrast, professionalism, elitistism and individualistism in regard of the role of scientists in the Royal Society (Yeo 1993: 129). For the leaders of amateurism such as Harcourt, the "institutional mode of producing knowledge" by "many smaller minds" (126) might be able to promote more of the advancement of science, while for the supporters of professionalism as seen in the Royal Society, such as Whewell and John Herschel (1792-1871),[45] the spontaneous freedom of the thought of the great individual was the major force behind scientific advancement and social progress (129).

Though never directly mentioning the two conflicting discourses, Carlyle however hinted at his preference for the professional Newtonianism compared with the institutional Baconianism. The abandonment of his study for the ministry within the institution of the university suggested his conservative inclination towards the Newtonian great mind of the Royal Society. His admiration for Newton also showed his preference for the elitism. In *Sartor*, Carlyle ridiculed the institutional mode of learning in the college represented as a large "mechanical structure" full of "*Statistics of Imposture*" (*SR* 84). Under the institutional system, the professors and students of

[45] John Herschel, trained in mathematics at Cambridge, was an astronomical observer in the Southern hemisphere and also a pioneer contributor to the science of photography (Meadows 5). With regard to the issues of the scope of science, John Herschel published *Preliminary Discourse on the Study of Natural Philosophy* in 1831, which was the first book aimed at taking scientific method into consideration, to explain the role of science to the public, and to advance the role of science in education (Yeo 2001: 65). Coincidently, Herschel's publication of *Preliminary* was in the same year as the formation of British Association (the BA). Since around 1831 that has been a scientific revolution in the study of the history and philosophy of science (Yeo 2001: 66; Fisch and Schaffer 1988: vi) with more and more personal publications and public organizations related to the methodology, epistemology, and the pedagogy of science.

the institution were not the respectable speculators of philosophy, but “Musical and Literary Dilettanti” (96).

Due to the different attitudes with regard to the treatment of scientists, the cultivation of a professional scientist in the institutionalism varied from that in the intellectualism. For the empiricist of institutionalism such as Harcourt of the BA, “the gradual accumulation of empirical observation was presented as the guarantee of sound progress in the science; theory and hypothesis… were said to be dangerous” (Yeo 2001: 265). To cultivate a scientist, the empiricist school thus emphasized “…the need for massive collections of data” (265). Whether a man gifted in theoretical contemplation or not was never the consideration in the institutional system, since the lack of any previous scientific training was never a disadvantage and would not be biased either (265). In the institutional system, the scientific progress therefore depended more “upon collective effort, rather than upon the achievements of gifted individuals” (265). Since the empiricist scientists generally presumed “a cooperative pursuit embracing all classes and talents” (264), they were proud of their democracy that embraced all participants.

Emphasizing collection and observation, the empirical scientists were trained to mind merely the visible world and to slight the invisible. They were always a well-disciplined group of observers who operated mechanically in order to discover and collect evidences in the physical world (e.g. in the studies of geology, botany, zoology, astronomy, etc.). From the discovered facts, the empiricist then inferred a common rule among the first-hand proofs and developed a scientific principle. Due to this methodology, the institutional empiricist preferred fact to theory epistemologically: they believed that only the visible and the provable facts were the truth and were true knowledge. As for the invisible, the inexperienced, as well as the unproved in the physical world, these were not the subject of scientific inquiry (Yeo

1993: 176-85).

In *Sartor*, it was not "science" itself but this empiricist school of science that Carlyle in reality abhorred, since this school trusted only the visible and believed merely "the Outward; …what cannot be investigated and understood mechanically, cannot be investigated and understood at all" (ST 105). The dependence on the visible physical world in the empiricist school caused the man of science to neglect his intrinsic intuition and imagination, simultaneously blocking his religious faith and morality. Instead of rejecting science per se, Carlyle in fact advocated the need for the ideal science, that is, the true science primarily concerning the invisible and the spiritual as found in the Newtonian intellectualism.

For the scientist of the intellectualism, it was the invisible world, instead of the visible, that was the aim of science; it was the theory, instead of fact, that was the object of natural philosophy; and it was speculation, instead of collection or observation, that was the methodology of scientific inquiry. In the cultivation of a philosophical scientist, the training in how to collect facts was, of course, necessary; the investigation of the visible world however was not the most important aspect. The key to the true science still lay in the scientist's belief in an a priori axiom in any mode of scientific research. The discipline of a Newtonian scientist hence gave weight to generating the highest principle of the universe by cultivating a faith in God. Based on this religious faith, the scientist of the intellectualism generally believed that all the evidence of design and order in the material world, was originally generated by the Author of the universe (Yeo 1993: 120) and, thus, the purpose of science should aim to describe the laws inscribed in the Creation of the intelligent Mind. Due to the belief in an a priori Intelligent Mind, and a conscious Deity, the Newtonian scientist thus was always the most faithful and moral researcher.

As well as Whewell, Carlyle believed that the great man of science should be

the most faithful and moral intellectual. In “Characteristic,” Carlyle showed his admiration for the ideal intellectual who always kept God in mind via a “healthy understanding” (CH 71). For Carlyle, differing from the institutional way of thinking that disdained the invisible world by physical observations, “the end of [the healthy] Understanding is not to prove and find reasons, but to know and believe” (Ch 71), that is, to know the invisible and to believe in God. In both the Whewellian and the Carlylean perceptions of an ideal scientist, not only was intellect the necessary quality, but also morality and faith were the guaranteed requirements.

In the early nineteenth century, it was generally believed that “human moral and intellectual capacities were closely related” (Yeo 1993: 187) since both capacities were endowed by Divinity. It was hence generally agreed that the scientist talented enough to exercise his intellectual capacity was the specific chosen person to possess divinely-given endowments for carrying greater responsibilities for revealing God’s demonstration in the physical world. The scientific inquiries hence were not only an intellectual practice but also a moral duty, because the practice of science was likewise a “proper use of Divinely given intellectual capacities” (187).

In Whewell’s terms, the great scientific mind to exercise its imagination and intuition to perceive the invisible and intangible “theory” of the universe, was the inductive thinker, a faithful interpreter of nature (Yeo 1993: 116-44, 176-205). For the Whewellian inductive scientist, the most significant process in scientific research was *speculation*. Through a long course of pondering, a big theory was supposedly produced to expound the divine principle and purpose of Creation. Rather than looking for petty evidence or collecting materials as the empiricist did in the Baconian school, methodologically, the inductive scientist, usually an erudite and philosophical man, wandered and pondered, speculating on an a priori axiom of God’s universal law. The purpose of science for the inductive mind was the intellectualism aimed at

revealing God and proving His doctrines.

However, the empirical scientist, the deductive reasoning mind in Whewell's terms, undertook scientific research by discovering evidence, explaining the superficial laws, and proposing the possible applications. Deductive reasoning diverged from inductive thinking, primarily in terms of their beliefs and their habit of mind. There were ruptures between religion and science in the deductive mind. Whewell commented that the scientist of the empirical school generally "displayed a lack of religious conviction" and thus "none of these was a great discoverer" (Yeo 1993: 121). Not holding a faith in God, and noticing the intrinsic value of knowledge while researching, the amateur scientist of the institutionalism school of thought merely took the power and utility of the products of science to heart instead. Practical and utilitarian, they looked for the instant result and the immediate application. The purpose of science, for the deductive mind, hence was not looking for the internal worth of the visible substance and for revealing the true knowledge left in the physical world. Rather, the deductive empiricists were calculative and indifferent practitioners, seeking merely superficial interest and tangible benefits.

The ideal inductive thinker and the empiricist deductive thinker explored different types of scientific inquiry for different purposes. Carlyle's ideal scientist or Whewell's inductive thinking mind speculated on the concealed truth that already existed here and now in God's Creation; the empirical scientist or the deductive reasoning mind however tended to "[generate] new truth" (Yeo 1993:122) or to multiply new inferences for utilitarian operations. The inductive thinker meditated philosophically on the petty subjects which seemed to be "self-evident and certain *a priori*" such as "the laws of motion and gravitation" (122) and pondered spiritually the theology and teleology of the discovered evidence. Yet the deductive mind enthusiastically looked for new discoveries, painstakingly generalized the

experiments, superficially explained the law, and acquisitively expected practical utilization. For the inductive mind, it was speculation, instead of collection that was the method of science, and it was religion, instead of utility, that was the purpose of science.

Teufelsdrockh, in Carlyle's portrait, is typically a Whewellian inductive thinker. Rather than heedlessly "[soaring] over" (*SR* 2) and overlooking the "quite natural and spontaneous" (2) objects in the physical world, Teufelsdrockh "[looks] around a little" and "[sees] what is passing under our very eyes" (2). Instead of lightly taking for granted the already-existent, Teufelsdrockh regards the most ordinary matter, Clothes, as "an accident" for scientific study, for it contains not only the facts, history, and utility of clothes, but also the philosophy of man, of life, and of the true knowledge of God. Clothes, for Teufelsdrockh, do not stand for a commercial product, but a fountain of philosophical contemplation. What Teufelsdrockh the "speculative Radical" (47) intends to discover from the petty matter, clothes, is therefore the universal axiom. His aim in studying clothes is for religion but for benefit.

Having the deity in mind, the inductive thinker thus was a moral and transcendental theorist. The disconnected observations were never troublesome, because his faith could help him transcend the visible evidence to realize the fundamental laws and to perceive true knowledge. Due to the distinguished ability to perceive God's law, the inductive thinker was always the greatest mind compared with the normal amateur; he was part of the elite of "the union of intellectual and moral excellence" (Yeo 1993: 132). Different from the amateur's humble understanding, the intellectual elite exercised the mind twofold: to reveal the concealed truth in Divine Creation on the one hand, and to perceive "moral evidence and poetic beauty" (123) of the Divine on the other.

The deductive mind, however, was the collector of facts who was confined to

the visible world. Representing the "comparatively humble office" (Yeo 1993: 121), the deductive mind of the institutionalism was a mechanical observer working for physical substances and using utilitarian calculations. Without faith and morality, the empiricist tended to be bothered by the disorderly consequences of their evidence. Carlyle criticized the deductive mind as "the man of logic" (CH 71) whose only "whole force [was] mechanical, conscious" and thus was not able to "prosper" (71) but to be *tangled* "*in syllogistic mail of proof*" (71 italics mine). Without the "winged word," the deductive thinker could never see through the physical substance with "the free flight of Thought" (*SR* 4) but had to be locked into the system of logic, confined within the visible and tangible, and losing any "spontaneity [and] unconsciousness" (CH 72). With all his head, heart, and hand (ST 103) imprisoned in the visible and physical system, the amateur empiricist was therefore superficial and mechanical.

Due to the different habits of mind and methodologies of research, the images of the scientists of the different schools were also diverse. The deductive mind of the institutional amateurism had no individual identity, while the inductive mind of the idealistic intellectualism was always the heroic genius prominent due to his personal endeavours and his outstanding successes. With regard to the institutional amateurism, scientific attainment should occur due to the cooperation of many minor scientists, who thus possessed no individual identity but represented a collective authority under the name of the institution. All scientists represented a public body, rather than a distinguishable individual (Yeo: 1993:120-29). In terms of conservative intellectualism, however, the scientific individual was a great mind who worked alone for years in order to produce a big scientific achievement. For the individualistic professional, Newton as an example, the role of the institution was obscure, yet the individual talent was the seed to accomplish scientific research.

From Whewell's point of view, as well as in the opinion of many

intellectual's,[46] Newton[47] was the archetype of an ideal inductive thinker. More than an observer of "*what* occurred," Newton discovered "*why* it occurred" (Yeo 1993: 130). More than generalizing the discoveries superficially, Newton thought at the highest level, transcendently looking for the ultimate law of the physical cause with faith and moral integrity (132). More than depending on institutional support, Newton was a solitary genius speculating alone upon abstraction.

Different from the amateurs of the "relatively humble office," the scientific great minds such as Newton were always "an extraordinary personality" apt to "breaking with conventional method to achieve great discoveries" and "likely to transgress traditional norms of behaviour" (Yeo 1993: 139). The ideal scientist was always a recluse, retreating from the society, from any "distractions of social and political life" (135). In solitude and, sometimes, darkness (141), the creative genius immersed himself in meditation, to experience the mythical possession through losing his physical connection with the mundane world (143). Only in solitude and retreat could the creative scientist meet the transcendent power, perceive the divine, and then reveal the truth, because exile was "the means of insight into the natural world" (137-38). Carlyle also regarded Newton as the typical solitary genius in retreat and commented: "by silent meditation," he discovered the "system of the world from the falling of an apple" (ST 102). Instead of "*unit[ing] with a party*" or hiding himself "in his *Museum*, his *Scientific Institution*" (102, italics mine), Newton was the scientific

[46] Not only for Whewell and Carlyle, but also for contemporary intellectuals such as Herschel, Hamilton, and Forbes, Newton represented the archetype of an ideal scientist due his great discoveries and moral integrity (Yeo 1993: 132).

[47] See P129-131 of Yeo 1993. In his *Newton and Flamsteed* (1835), Whewell illustrated why Newton was a supreme theorist and Flamsteed merely a humble astronomical observer. For Whewell, Newton was an ideal scientist because he was a "whole man" possessing both intellect and morals, while Flamsteed was merely an observer "not meet[ing] the intellectual and moral standards of the philosopher" (Yeo 1993: 133). Not only intelligent but also moral, Newton was a philosophical savant of virtue and faith. Whewell presented Newton not just as "a superlative practitioner of [the inductive] method but as the embodiment of the virtues" (Yeo 1993: 143). In contrast to common amateurs, Newton often got lost in meditation and knew not what he did.

genius *quietly* working for science in the *pastoral.*

Never directly mentioning the contemporary debates over the differences between a utilitarian humble man in the Baconianism, and an intellectual great mind in the Newtonianism, Carlyle however implicitly indicates this contention by his preference for the Newtonian school with his creation of Teufelsdrockh and his detestation of the Baconian school with Teufelsdrockh's complaints about his learning, professors, and friends in school. In the educational institution, Teufelsdrockh is unsatisfied with the lack of theoretical training, and disappointed with the poverty of spiritual fulfillment. In despair, the Carlylean intellectual then resolves to start a solitary journey in the pastoral domain, determining to ponder personally over the "why" that God has already left in nature.

Table 3: The Conflicts Reflected by the Whewellian Concepts of Science and the Scientist

	The Newtonianism; the Newtonian School; the Royal Society	The Baconianism; the Baconian School; the BA
Also termed	Professionalism; elitism; the idealistic scientist; the moral and transcendental theorist	Institutionalism; individualism; amateurism; the empirical scientist; the collector of facts
Methodology	Observation and collection, most importantly, speculation on an a priori axiom; **theory**	Merely observation and collection; **fact**
The faculty in	Intuition and imagination;	Reasoning and

scientific research	speculation—to explore the "why"	explanation—to explain the "what"
In Whewell's term	The inductive thinking mind	The deductive reasoning mind
Purpose of science	Religion	Utility
Image of the scientist	A heroic genius to ponder and wander solitarily in the pastoral	The "relatively humble office"

B: Teufelsdrockh as a Scientific Great Mind of the Newtonian School

(1) "When the blind lead the blind, both shall fall into the ditch."

Although never remarked in *Sartor*, Carlyle worried a lot about his contemporary education being dominated by the mechanical institutionalism just as Whewell did. Carlyle's anxiety about the "all-overtopping Hypocrisy Branch" (*SR* 84) invading all aspects of human life was vividly portrayed in Teufelsdrockh's disdain of the institutional education within Teufelsdrockh's "Gymnasic and Academic years" (78). During his pedagogy documented in the Bag *Scorpio*, Teufelsdrockh "show[ed] himself unusually animated on the matter of Education" (80), about which what he respond[ed] [was] but "anger" (80). With his first view of the "the Hinterschlag Gymnasium" around the age of thirteen, his "evil days began" (78), for his teachers "were hide-bound Pedants, without knowledge of man's nature" (80) and thus "his Greek and Latin were 'mechanically' taught; Hebrew scarce even mechanically; much else which they called History, Cosmography, Philosophy, and so forth, no better than not at all" (79). What the young Teufelsdrockh received in his early pedagogy was a mechanical cramming, from which he learned merely "[i]nnumerable dead Vocables"

(80) stuffed by the pedagogue "in whose own inward…there [was] no live coal, but all [was] burnt-out to a dead grammatical cinder" (80).

For Teufelsdrockh, the institutional education is inanimate because within the whole pedagogical system, there is no spirit. Mind, unlike vegetables, should grow not simply with "etymological compost" (*SR* 80). More importantly, it should be cultivated with "mysterious contact of Spirit" (80). Only through teachers' "fire of living Thought" (80) can the young "Thought" be kindled and animated. Modern education, in Carlyle's opinion, is unprofitable in terms of enlightenment, for during the schoolmen's "pilgrimage towards Truth" (CH 71), even if there are "the faithfulest endeavour, incessant unwearied motion, often great natural vigour," there is however "no progress" (CH 71). The reason for the futile effort, Carlyle suggests, derives from man's dependence on logic and ignorance of insight. The "man of logic cannot prosper" (71) for he is one of the "system-makers and builders of logical card-castles" (71). The logical card-castle perhaps looks good, but in reality is fragile and easy toppled, since within the building, the institution, the "whole force is mechanical, conscious… when once confront[s] with the infinite complexities of the real world, his little compact theorem of the world will be found wanting" (CH 71). Unfortunately, the mechanism in education does not end with Teufelsdrockh's completion of his "Gymnasic period" (*SR* 80). Instead, the university is a larger card-castle of logic full of, not only mechanism, but also deception.

During the years of "a University man" (*SR* 82) documented in the Bag *Sagittarius*, Teufelsdrockh's experience of higher education is no better than the early pedagogy but "in an atmosphere of Poverty and manifold Chagrin" (83). In the university, Teufelsdrockh does not see promise for "the coming golden ages" (85) but a "mechanical structure" full of "*Statistics of Imposture*" (84). Little is taught in the university, but much "fictitious-persuasive Proclamation" (84) has been made. Full of

"intellectual fabrication of every sort" (84), the highest educational institution for Teufelsdrockh is nothing but "a square enclosure, furnished it with a small, ill-chosen Library" (84). Within this card-castle enclosure, the Professors are not noble and moral intellectuals but "certain persons under the title of Professors, being stationed at the gates… and [paid] exact considerable admission-fees" (84). Rather than being the "spiritual Nurses" of the "hungry young" (86), the "Professors in the Nameless lived with ease, with safety, by a mere Reputation, constructed in past times…. They themselves needed not to work; their attempts at working, at what they called Educating, now when I look back on it, filled me with a certain mute admiration" (85-86).

Teufelsdrockh discovers that the disease of mechanism in the modern educational institution, such as in "Rational University" in *Sartor*, springs from the general symptom of disbelief. In an "Era of Unbelief" (*SR* 86), the "Rational University," "hostile to Mysticism" (86), no longer finds its nurture from spiritual things but demonstrates a "sick, impotent Scepticism" (86). Since "all spiritual intents become dead" (86), and man starts "not to question" (CH 87), "the end of man" turns to be "an Action, not a Thought" (CH 88). He laments having to live in "the period of Denial" (*SR* 86), that is, the winter of the dissolution of "all Opinions, Spiritual Representations and Creations" (86). In the spiritual winter season, man never asks himself the "unanswerable question: Who am *I*; the thing that can say 'I'" (39). Truth emerges only when one meditates one's "Existence" (39), because one is "alone with the Universe, and silently commune[s] with it" (39). In the word-castle of the modern educational institution however, the "dead Vocables" train men to be the "slave of Words" (40) and encourages intellectuals to be the "Dilettante and sandblind Pedant" (52). Scholars in the university are "logic-choppers, and treble-pipe Scoffers, and professed Enemies to Wonder" (51). "The man who cannot wonder, who does not

habitually wonder (and worship)," in reality has "no Eye" (51) and is blind even if he walks "through [his] world by the *sunshine*" to look for what he "callest Truth" (51, italic mine). The professors are blind and the disciples are aimless. Teufelsdrockh therefore feels sorrowful and sees no hope in institutional education, because "when the blind lead the blind, both shall fall into the ditch" (83).

With regard to the institutional blind, Herr Towgood is the typical emblem of the English ignoramus. Towgood, also "Toughgut" (*SR* 90), stands for the emblem of spiritless, the physical, and the mechanical in *Sartor*; in Whewell's terms, Towgood is the archetype of the "smaller mind" in "the comparatively humble office." In Teufelsdrockh's view, Towgood has "a fair talent, unspeakably ill-cultivated…and bating his total ignorance, for he knew nothing except Boxing and a little Grammar, showed less of that aristocratic impassivity, and silent fury" (88). Towgood, as indicated by his name and interest, "Toughgut" and "Boxing," looks to be tough in gut and fist, i.e., in his physical powers. Strong in flesh though, Towgood is by no means intellectually and spiritually special. Teufelsdrockh used to have some "genial hours" (89) with this man, because Teufelsdrockh was once under the condition of "foolish Heathen" (89) to believe neither spirit nor Divinity but to embrace this "obsolete sentiment of Friendship" (89). Though a friend at court, the high-born Towgood did not have a noble heart but merely "aristocratic impassivity" (90). Except "being that of Owning Land" (96), Towgood the aristocrat in reality was "little developed in him" (96). Though studying in "a University where so much as the notion of perfection" had been expected, Towgood's "studies had as yet been those of infancy" (89). For Towgood, one of the "Musical and Literary Dilettanti" (96), any thoughtful subjects functioned superficially, merely "to serve as the handsomest fringing" (96). Rich in aspects of the physical, economical, and familial, Towgood however is, in fact, *humble* in those aspects related to the spiritual, the speculative, and the moral.

(2) *"The whole is greater than the part."*

Realizing that "our Mis-education, make not bad worse; waste not the time yet ours, trampling on thistles because they have yielded us no figs" (*SR* 89), Teufelsdrockh finally turns to "Self-help" (87), by "quitting college" (90). Not able to guide the youth to solve the "mighty Sphinx-riddle" (97), the university cannot satisfy the hungry young man, but appears to be "a desert" of "savage monsters" (87). The young Teufelsdrockh then "[quits] the common Fleet of herring-buses" to become "a man without Profession" and to "sail in unknown seas" (101). Leaving the university, Teufelsdrockh soon discovers that "the Universe is majestically unveiling, and everywhere Heaven revealing itself on Earth" (101). In the whole Universe and Nature, the "solitary rover" (101) sees "[h]ere are Books... here is a whole Earth and a whole Heaven, and we have eyes to look on them" (89). Rather than depending on the "sandblind pedant" in the university, Teufelsdrockh turns to Nature and the Universe; rather than being a passive "*Auscultator*" (93) following the logic-chopping Professor, Teufelsdrockh relies on self-study. His "fellow Auscultators…were Auscultators" to dress, digest, and talk similarly (94). In their eyes "[s]mall speculation" has been found: "[s]ense neither for the high nor for the deep, nor for aught human or divine" (94). The passive Auscultator "sailing in prescribed track, for fixed objects" (101) and conforming to social expectations, represents but the product of the "mechanical structure…in a corrupt European city" (84).

Tired of being entangled with "the passive Auscultatorship" (*SR* 94), Teufelsdrockh decides to "[open] the career for a man of genius" (95) by aggressive "Assessorship" (95). No longer satisfied with being a passive follower in the "comparatively humble office," Teufelsdrockh determines to rely on himself. Through self learning and education, Teufelsdrockh stars "his mad Pilgrimings" (121), an

objectless voyage attempting to attain a higher realm. Similar to Whewell's inductive thinker in the Newtonian school, Teufelsdrockh abandons the institutional training and begins to trust himself. Unshackling himself from the yoke of the humble institution, Teufelsdrockh veers toward "groping about" (92) the universe, the truth, and the sphere where his "combined inward and outward Capability" (91) meet.

Unable to fulfil his greed for truth in the Nameless University of a nameless city, Teufelsdrockh then "quietly lifts his *Pilgerstab* (Pilgrim-staff)… and begins a perambulation and circumambulation of the terraqueous Globe" (*SR* 113). Retreating "into the wilds of Nature" (115) for "unlimited Wanderings" (114), this "solitary rover" has his "internal Unrest [to be] his sole guidance" (114). In solitude, Teufelsdrockh's "spiritual nature is nevertheless progressive, and growing" (121), even if he suffers from poverty and hunger. Similar to Carlyle's personal experience, of quitting the university and moving towards scientific training, Teufelsdrockh leaves the university in order to observe nature. The new profession of Teufelsdrockh is that of an observer of the physical world:

> The rocks … arrange themselves in masses of a rugged, gigantic character; which ruggedness, however, is here tempered by a singular airiness of form, and softness of environment: in a climate favorable to vegetation, the gray cliff, itself covered with lichens, shots-up through a garment of foliage or verdure; and white, bright cottages, tree-shaded cluster round the everlasting granite. (115)

In nature, more than discovering the "Beauty" (115) of the wild, Teufeslsdrockh perceives also its "Grandeur" (115). Not solely a trip of observation, discovery, and experience, this voyage is undertaken in order to pierce mystery and to found belief

through speculation. Due to his "genuine Love of Truth" (124), Teufelsdrockh determines to shoulder "the Infinite nature of Duty" (124) in order to unseal his own "sick ophthalmia and hallucination" (124). *Seeing* "God's light" and realizing "His heaven-written Law still [standing] legible and sacred there" (124) are the ultimate purposes of this physical journey.

Teufelsdrockh, the solitary wanderer pondering nature, in Whewell's terms is typical of an ideal scientist, an inductive thinker, and a genius philosopher of nature similar to Newton. Teufelsdrockh, the ideal scientist, minds not merely the superficial facts discovered in the physical world; more importantly, the internal Truth conforming to God's Law is his main aim. Teufelsdrockh's self-discipline through journeying in nature aims at revealing God's a priori axiom and unveiling His invisible Principle hidden in the visible, a much higher calling than collecting facts in a museum. Instead of attending to "*what* occurred," Teufelsdrockh probes into "*why* it occurred." Seeing more deeply, Teufelsdrockh then does not trust the "High Air-castles …cunningly built of Words …bedded …in Logic-mortar" (*SR* 40). Visible Words, for him, are but products of the conscious Logic, not generated from "the man of insight" or "the Discoverer," but manufactured by the mechanical "Orator" and the "Systematic and Theoriser and Word-monger" (CH 71). Superficially, seeing merely the "what," the Orator, or the collector of facts, knows only the partial, merely the segments and divisions of a higher whole. Speculating on the "*why*," however, "the Rhetorician" "in the state of healthy unconsciousness" (CH 72) can penetrate the visibility and can transcend the mechanical system to approach the sphere of the whole that seems to have "no system" but, in reality, lies "in higher order" (CH 67, 72).

As Whewell suggests that the theory of a philosopher's "*why*" is better than an observer's "what," so Carlyle ventriloquizes from Teufelsdrockh the theory of the

unconscious Rhetorician's "whole" to be better than the conscious Orator's "part": "*The whole is greater than the part*" (*SR* 40). In Whewell's view, Newton is great because he not only describes "what" occurred to the orbits of the lunar system, but also explains "*why*" there is this phenomenon of universal gravitation (Yeo 129-38). To expound the "*laws of phenomena*" (132) is indeed systematic, but mechanical; to perceive "a physical *cause*" (132) of those phenomena, however, is insightful and philosophical. In the factual "what," only part of the true knowledge of the Universe is discovered. In the imaginative "*why,*" however, the "whole" circumstances of "the *connexion* and *relation* of facts" is rendered.

Similar to Newton, the great solitary philosopher of nature, Teufelsdrockh attends to discovering the factual phenomena of clothes. Through a long course of solitary journey in the beautiful wild, Teufelserockh finally realizes the ultimate cause of the whole universe. In the physical "what," he sees "this so-solid seeming World" (*SR* 41) is but "an air-image…, *the living visible Garment of God*" (41). To see God's Garment is to know partial, that is, the external "what." Only by seeing through the Garment, to transcend the exterior substance, can the philosopher apprehend the "why" that causes the laws of the universe. Of course, "God" is the key to the "why."

As Newton's theory of gravitation explains the orbits of the lunar system, so Teufelsdrockh's theory of the clothes brings out the key to "the Sphinx's secret." To expound the "Cause-and Effect" (26) philosophy, "the secret of Man's Being" (40) appears to be the physical existence in the visible "WHERE" and "WHEN" (40). Man's being is but a mechanical factual "what." Through man's "large Intuition" (38), however, Teufelsdrockh penetrates the surface of all substances and pierces the invisible truth. The key to the "mighty Sphinx-riddle" (97) becomes accessible. As God is the operator of the lunar system in Newton's gravitation theory, so God, too, is the key to the Sphinx secret in Teufelsdrockh's Clothes Philosophy.

(3) "[T]he whole world of Speculation might henceforth dig to unknown depths."

Carlyle's concept of the "large Intuition," more precisely put, is "speculation." In Whewell's theory of a great scientist, the inductive scientist also exercises speculation with regard to perceiving Deity's "certain axioms and first principles" (Yeo 1993: 122). For Whewell, speculation is a penetrating faculty, allowing a thinking philosopher to transcend the visible collection to realize the ultimate laws of the universe and to grasp the philosophy of God. For Carlyle too, speculation plays the key to penetrating the clothes of visible facts, and to break the unknown mystery. Rather than being logical, systematic, and mechanical, "Speculation is by nature endless, formless, a vortex amid vortices" (147). It is a complicated form of thinking to combine both reason and imagination.

The most evident picture of Carlyle's ideal speculation can be discerned from Carlyle's portrait of Teufelsdrockh the philosopher and Teufelsdrockh's methodology to his *Clothes Philosophy*. Teufelsdrockh, a "speculative radical" (*SR* 47), personally plays the embodiment of speculation. In describing "the style [of] our Author," the Editor accounts that Teufelsdrockh is of "…a true inspiration… of a wild Imagination, wedded to the clearest Intellects, alternat[ing] in beautiful vicissitude" (22). As an embodiment of speculation, Teufelsdrockh exhibits the Carlylean two-stage exercise of thinking through two faculties, intellect and imagination. In the primary stage of thinking, there is the operation of reason, or intellect, in a conscious state. The first stage of thinking remains immature and unfinished, for it exists still at the superficial level. The "man of logic," "the Reasoner," and "the Discoverer, or even Knower" (CH 71) were the immature pedant accustom themselves to the first stage of thinking, that is, the mechanical mode of thought. In the second stage of thinking, it is the operation of imagination through intuition and instinct in a mystic unconscious state. Though

wild and chaotic, the second stage of thinking contains a vital force that can "dig to unknown depth" (*SR* 20) and dive into the "very sea of Thought" (5).

For Carlyle, the complete process of thinking consists of the two, intellect and imagination, and a mature thinker can alternate freely to and fro between the two faculties. Teufelsdrockh, the incarnation of mature thinking, namely speculation, thus looks extraordinary to bear two lights of thinking faculties:

> His look…is probably the gravest ever seen: yet it is … but rather the gravity as of some silent, high-encircled mountain-pool, perhaps the crater of an extinct volcano; into whose black deeps you fear to gaze: those eyes, those lights that sparkle in it, may indeed be reflexes of the heavenly Stars, but perhaps also glances from the region of Nether Fire! (*SR* 23-24).

The embodiment of speculation, Teufelsdrockh manifests a combination of contradictory forces—the heavenly light and the hellish fire as well as ordered reasoning and chaotic imagination—the two forces "alternat[ing] in beautiful vicissitude." As "a speculative Radical…of the very darkest tinge" (45), Teufelsdrockh sees farther and deeper than ordinary people with his "tendency to Mysticism" (49). Whatever he sees "has more than a common meaning, but has two meanings" (49): the superficial meaning in the visible state and the spiritual in the invisible. The two processes, belief and action, to practice "speculation" suggests that an inductive scientist like Teufelsdrockh is more than simply an idealist but a pragmatic practitioner as well. The Editor therefore identifies Teufelsdrockh as an "Ideologist," or "at least [Ideopraxist]: in the Idea … he lived, moved and fought" (135). In other words, with belief, Teufelsdrockh has his specific Idea of the world, and with this Idea, he has his confidence in every aspect of his conduct.

"Ideo-Praxis," speculation, therefore is ideal and practical.

For Carlyle, though seemingly chaotic, speculation however is not formless but has its own system "in high order" (CH 67,72). For grasping the law of speculation, the only key is *conviction* and *conduct*. Speculation "is by nature endless, formless, a vortex amid vortices: only by a felt indubitable certainty of Experience does it find any centre to revolve round, and so fashion itself into a system" (*SR* 147). Hardly perceived due to its unconscious state, speculation should be clutched with one's conviction in the invisible and conduct physically in order to practice his belief in God. With *belief* and *action* with regard to the belief, then the mystic experience of speculation from the "extinct volcano" could be realized.

For Carlyle, speculation is higher than "any Cause-and-Effect Philosophy" (*SR* 26) because the inspirational speculation answers "why" instead of "what." As the Whewellian inductive scientist attempts to answer "*why* it occurred" rather than "*what* occurred," Carlyle's speculative radical intends to treat the "*Spirit of Clothes*" (26) that is in "the boundaries too often lie quite beyond our horizon" (27). In other words, instead of explaining "why I wear such and such a Garment, obey such and such a Law" (26), Teufelsdrockh's "proper province" (26) ranges over the penetration of the material-practical utilities and socio-cultural meanings of the clothes, and the discovery of the "naked Facts, and Deductions" (26) of man's being in the universe. Instead of simply presenting the miscellaneous styles, histories, and significance of clothes, Teufelsdrockh's gist of the "new Philosophy of Clothes" (38) proposes to answer the "unanswerable questions: Who am *I*; the thing that can say 'I'" (39). Carlyle thus comments that the "Profitable Speculation" should answer the "painful, captious, hostile question towards everything in the Heaven above, and in the Earth beneath: Why art thou there?" (CH 90). The study of the physical substance of the clothes thus functions as a preparation for the further exposition of the "Ulterior or

transcendental portion of the Science" (*SR* 203).

Thus, "[o]ur Professor's method is not, … that of common school Logic" (*SR* 38). The Logic of the empiricist Baconian school only gives answers to the superficial appearance of what-questions, "where the truths all stand in a row, each holding by the skirts of the other" (38). Much more profitable than the empiricist Logic, Teufelsdrockh's "practical Reason" mingles with a "large Intuition" (38) to compose "a noble complexity, almost like that of nature reigns in his Philosophy, or spiritual Picture of Nature: a mighty maze, yet, as faith whispers, not without a plan" (38). Specifically, Teufelsdrockh's methodology is the two-stage thinking mechanism, i.e. speculation—an intellectual combination of radical extremes, the chaotic with the systematic, the rational with the imaginative, and the logical with the creative. For Carlyle, the two-part universe, the visible and the invisible, should be observed by different apparatuses of thought. The systematic-rational Logic is applied to treat the visible part of the universe with the attribute of man's visual observations. For the invisible part of the universe belonging to the religious and the spiritual, it is by man's chaotic-imaginative intuition that the highest principles and theories thus can be expounded.

In his "Science of Clothes" (203), Teufelsdrockh then separates his study into two parts: "the Descriptive-Historical portion" and "the Speculative-Philosophical portion" (*SR* 37). In the Descriptive-Historical portion, he discusses "merely the *Werden* (Origin and successive Improvement) of Clothes" (37), that is, to answer the visible and superficial questions with regard to the clothes. In this portion, Teufelsdrockh introduces his discussion of clothes beginning with the "Fig-leaves" in "Paradise" (27). From this "twilight region" (27), he then continues his study historically "from the Tower of Babel to follow the dispersion of Mankind over the whole habitable and habilable globe" and horizontally from "the light of Oriental,

Pelasgic, Scandinavian, Egyptian, Otaheitean, Ancient [to the] Modern researches of every conceivable kind" (27). As "an *Orbis Vestitus*," Teufelsdrockh gives his readers the "view of the costumes of all mankind, in all countries, in all times" (27). The "Speculative-Philosophical" portion of the Part Two however "treats of their *Wirken*, or Influences" (*SR* 37), that is, the exposition of "the moral, political, even religious Influences of Clothes" (38). Different from his contemporary science, Teufelsdrockh's study of clothes concentrates on philosophy by breaking through the "obscure region" (2) to answer the question of "Who am *I*" (39). With its emphasis on "abstract Thought" (2), Teufelsdrockh is confident that his science of clothes should be "a promise of new Fortunate Islands, perhaps whole undiscovered Americas" (39). Contributive to all mankind, Teufelsdrockh's Philosophy of Clothes therefore, as Carlyle wishes, functions as the Torch of Science to light the visible-physical world as well as to enlighten the invisible-spiritual universe.

To light up both the visible and the invisible worlds, Teufelsdrockh's *Die Kleider*, the Science of Clothes, thus represents Carlyle's ideal science, the science practiced by speculation. Consisting of two parts, *Die Kleider* signifies the two aspects of speculation. The first part is the Historical-Descriptive portion dealing with superficial and visible knowledge. The second part is the Speculative-Philosophical portion in regard to the theoretical and invisible truth associated with imaginative intuition. Like *Die Kleider*, Teufelsdrockh also stands for the incarnation of Carlyle's concept of speculation. Teufelsdrockh is, on one hand, of "consummate vigour, a true inspiration… of a wild Imagination" (*SR* 22) and, on the other, of "the clearest intellect" (22). Though chaotic in its form and content, Carlyle's *Sartor*, resembling *Die Kleider* and Teufelsdrockh, also has its own principles in a higher order. Skillfully, Carlyle's composition of *Sartor* is founded on the principle of speculation, that is, an amalgam of intellect and imagination as well as of practice and idea. Though

seemingly a disorderly riddle, *Sartor* de facto represents Carlyle's man-made hieroglyph, similar to God's "celestial hieroglyphs" (194), in which there is of an order belonging to the higher sphere that asks his reflective reader to decipher.

(4) *"Call one Diogenes Teufelsdrockh, and he will open the Philosophy of Clothes."*

Similar to Newton, the solitary scientist "breaking with conventional method to achieve great discoveries" and "likely to transgress traditional norms of behaviour" (Yeo 1993: 139), Teufelsdrockh is an extraordinary solitary "Anchorite" (*SR* 218) retreating to the wilds to speculate on the highest theory of clothes. After realizing his failure to depend on the empiricist institution for questing after truth, Teufelsdrockh abandons "the conventional method" of study in college and relies on "Self Help" (87) "in a new independent capacity" (101). "A solitary rover" (101), Teufelsdrockh then begins his unusual study by "sail[ing] in unknown seas" (101) to explore the "speculative Mystery of Life" (125). More than just being a territory to display evidence, "nature," for the Whewellian and the Carlylean scientists, represents a maternal womb for giving birth to inspiration and for generating abstraction. Desolately roaming in "nature," Teufelsdrockh experiences that "the Universe is majestically unveiling, and everywhere Heaven revealing itself on Earth" (101). Absorbed in the natural bosom alone, Teufelsdrockh then perceives "the universal Spiritual Electricity" (102) that guides him to wander and ponder.

Resembling the archetype of the early nineteenth century ideal man of science in the Newtonian school, Teufelsdrockh values philosophical theory above empirical observation. As indicated by Carlyle, the word form is but a garment of thought (*SR* 54). Teufelsdrockh also strengthens the weight of the inner significance in the "Thoughts" (54) of the Speculative-Philosophical portion, instead of the hallowed "Language" of the Historical-Descriptive one. The description of the collected

materials relating to the history and the employment of clothes in the first portion, thus, serves merely as the initial setting for the "Metaphysico-theological Disquisition" (58) of the science of clothes.

In order to reach the higher scientific and theoretical goals of the Philosophy of Clothes, Carlyle believes that Teufelsdrockh, the solitary thinker speculating in the wilds, should be the key, because "*Call one Diogenes Teufelsdrockh, and he will open the Philosophy of Clothes*" (*SR* 66). More than signifying "speculation" and "a radical thinking mind, "Diogenes Teufelsdrockh" as a name represents also the incarnation of "the Philosophy of Clothes." Simply put, Diogenes Teufelsdrockh is the embodiment of the Philosophy of Clothes in human form. Not only his thoughts and ideas, but also his behaviour and actions are the personified examples to express Carlyle's ideal of the essence of all Science.

In the traditional study, Diogenes Teufelsdrockh the name, "as has been long noted, signifies God-born Devil's dung, suggesting at once the opposites of God and the devil, heaven and hell" (Tennyson 200). To analyze him as a "child of both God and the devil" (222), Teufelsdrockh seems to be interpreted as a schizophrenic to represent simultaneously both good and evil, heaven and hell, as well as God and the devil. However, if he is the incarnation of Carlyle's ideal philosopher and offers the gist of the Clothes Philosophy, is Teufelsdrockh indeed a psychotic individual? What if Teufelsdrockh is more than a schizophrenic philosopher? What if the key words, "God-born Devil's dung," signify more than their literal meaning, but represent a specific metaphor for Carlyle's witty design? Based on the discourses concerning the early nineteenth century scientist, I assume that Teufelsdrockh represents the typically Whewellian scientist of the"[d]ivinely given intellectual capacities" (Yeo 1993: 187). As a specifically chosen great mind brought forth by the Father of God, Teufelsdrockh is endowed with the mission of grasping and propagandizing the true meaning of life

on earth. Both “Devil” and “dung” therefore should not be interpreted negatively to suggest the wicked side of Teufelsdrockh; instead, the words denote implicitly the purpose, method, and philosophy of Teufelsdrockh’s ordained mission in the mundane world.

What are the true meanings of Carlyle’s “dark,” “night,” and “evil”? To introduce the Professor, the Editor indicates that there seems to be an “incarnate Mephistopheles” (*SR* 23) cloaked in Teufelsdrockh’s grave look, making the mysterious writer a mixture of “great terrestrial and celestial Round” (23). The Editor explains that Teufelsdrockh looks to have the Mephistophelean gravity due to the “lights and sparkle” (24) burning in his eyes, the flashes that seem to shine “from the region of Nether Fire” (24). About Teufelsdrockh’s hellish lights burning in his eyes, Carlyle however does not endow it with any negative or pessimistic significance. Instead, in night and death, the seeming province of death, Carlyle sees the great truth. In “Characteristics,” Carlyle relates that the night seems to be nobler than the day, since the “Night” possesses “purely transparent eternal deeps” (CH 80). Similarly, though fearful, Death “express[es] a great Truth” since it is “properly the beginning of Life” (CH 80). Silent and invisible, night and death metaphorically denote the mysterious power of the unconscious, that is, the “Unconscious belong[ing] to pure unmixed life… and the sign of creation” (CH 80). Instead of being allied to wickedness and hopelessness, death and night for Carlyle denote the portal to light and heaven. Rather than being vicious and sinful, the evil and suffering that Teufelsdrockh confronts and represents are the “blessedness be[ing] imagined for us” (CH 91), “out of which man’s Freewill has to create an edifice of order and Good” (CH 90).

Since promising to help “create an edifice of order and Good”, Teufelsdrockh’s hellish fire burning under his glaring eyes is of a mysterious power able to assist the

lost philosopher in transcending the harsh reality of pain and doubt. In Carlyle's terms, this mystic power is Teufelsdrockh's "wild Imagination" (*SR* 22), or radical speculation. Carlyle assumes that from the visible realm to the invisible, from the lower sphere to the higher, from disorder to order, and from no to yes, there are the hindrances that can scarcely be destroyed except by exercising one's imagination and speculation. The two intellectual faculties are of violent and destructive powers, able to crush the blindness of the physical eye and help the seer to transcend the earthly substance. The "Imagination" hence is "wild," and the "speculation" is "radical." More explicitly, more than signifying vice and sin, the metaphor of the "Devil" in Teufelsdrockh's name signifies his enigmatic force of speculation, that is, the "Metaphysical Speculation … [to begin] in No or Nothingness" (CH 89). Teufelsdrockh's inherent devilish burning force is not a power defeating others; it is instead a force "in boundless chaos, self-devouring, engender[ing] monstrosities, phantasms, fire-breathing chimeras" (90). Teufelsdrockh's mystic force from the inferno does not indicate the evilness of his actions, behaviour, or deed. Instead, the energetic devilish force is thought to aid the seer how to break through the "common meaning" (*SR* 49) of the physical matter and how to grasp its hidden meanings, that is, the theoretical and spiritual meanings. More than a schizophrenic character to possess heavenly good and hellish evil simultaneously, Teufelsdrockh in reality should be an ideal "Thinker" of specific subversive force in his "Thought" (CH 90).

As the "Devil" signifies speculation, or wild imagination, the "dung" in Teufelsdrockh's name indicates the pettiness or nothingness of the matter in his study, that is, clothes. The significance of "the pettiness of the researched matter" echoes with Carlyle's ideal investigated area of the Torch. As it is brought out in Chapter One, Preliminary, the Editor intends to introduce a new philosophy that is discovered from the "the vestural Tissue" (*SR* 2), an "obscure region" (2) "outlying, [and] neglected"

(3). Yet, though seeming "desert and rock-bound" (3), this uninhabited area is, in reality, a "vitally-momentous province" (3) in which there are "hidden treasures" (3). Though base, petty, and trivial like dung, the clothes are seams of gold, being stored with the philosophies of man, the universe, and man's life on earth. Though petty and dungy, the most trivial and neglected nothingness contains the true philosophy of all science and human life. Since treasure buried in the dung is not likely to be discovered, the gold is only able to be mined by the "Wise man…who counsel[s] that Speculation should have free course" (3). With his specific devilish force from inferno helping to destroy the common meaning of matter, the speculative man is willing to dig dung. Thus, he is able to scoop out the true meaning of any most trivial matter in the universe, such as in the ignored clothes. Metaphorically then "Teufelsdrockh," the "Devil's dung," expresses Carlyle's anticipation for an ideal philosopher: to be energetic and subversive in thought and to be open-minded and unprejudiced in order to treat every subject in the natural world.

The significance of the name, Diogenes Teufelsdrockh—"God-born Devil's dung"—, therefore, in literal terms, should be *a wise speculative natural philosopher born to be assigned the mission of searching for God's signatures in nature, by digging out the most slighted region*. Hell and devil are not evil, and dung is never base. On the contrary, "in the immeasurable circumambient realm of Nothingness and Night" (3) there will be "new standards" and "new habitable colonies" (3). In this devilish dungy darkness Teufelsdrockh sees, not a pessimistic terminal, but a promising start, since "[t]his is no metaphor, it is a simple scientific *fact*: we start out of Nothingness" (199).

(5) "[T]he Tailor is not only a Man, but something of a Creator or Divinity."

Different from the modern concepts of "science" and "the scientist" in the

twentieth and the twenty-first centuries, those in the 1820s and 1830s were still broad and plastic in their views. As discovered by Meadows, writers and scientists often "overlapped in their views" and in their vocations (133). A poet was not necessarily a scientist, as Byron was, and a scientist was not necessarily a poet as Franklin was. However, a poet was possibly a scientist and a poet simultaneously, as Goethe was. Examined by the required attributes of a great mind of science in the early nineteenth century according to the Whewellian philosophy of science, I assume that Teufelsdrockh, similar to Goethe, represented a poetic-scientific man who crossed the two borders, "station[ing] himself in the middle" (*SR* 50). To be illustrated, Teufelsdrockh is placed in the intersection of the two vocations, that is, in the hatched common part of the two circles:

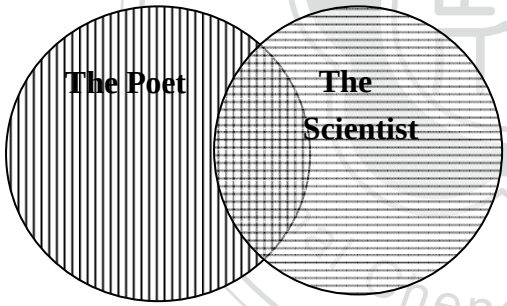

Fig. 3: the intersection of the two vocations, the poet and the scientist

In the Carlylean philosophy, the man of letters is not greater than the man of science, nor is poetry holier than science. Carlyle does not judge a person or a work from the perspective of being "poetic" or "scientific," and this is probably the reason why Carlyle excludes Lord Byron, the poet, but exalts Goethe and Franklin, both men of science, in *Sartor*. Thus, even though he was an eminent poet and a trendsetter during Carlyle's composition of *Sartor* (1830-31), Byron was never on his roll of the "species of Metaphorical Tailors" (*SR* 218). Instead of being a nobleman, Byron

stands merely for a superficial “Clothes-wearing Man” (204), whose inside is never his main concern, but “whose trade, office and existence” merely “consists in the wearing of Clothes” (204). Though termed a poet, Byron lacks spirit and faith from Carlyle’s point of view. On the contrary, it is Goethe, the German, who has “probably devoted more time to his scientific studies than to all his prose and poetry” (Uberoi 17) to win Carlyle’s admiration and reverence. And it is Franklin, the American, who spends most of his life in politics and science rather than in religion and poetry to be esteemed and honored.

In “Byron” the Dandy, Teufelsdrockh sees merely physical and superficial “Happiness;” in “Goethe” however, he perceives the philosopher to have spiritual and interior “Blessedness” (145). For the general public, to be a Byronic Dandy was trendy and happy; however, Carlyle reminds his readers that “there is in man a HIGHER than Love of Happiness: he can do without Happiness, and instead thereof find Blessedness!” (145). Happiness is instant and superficial; Blessedness probably involves suffering and painful, but it is religious, moral, spiritual, and permanent. To be a Byronic poet may be happy on the surface, but to be a Goethian scientist may be happier and blessed from within. Vocation therefore is not the estimation a Carlylean clothes philosopher; Carlyle’s criterion is spirituality.

Because the vocation is not the key, it turns out to be easy to understand why Teufelsdrockh cries out “Close thy *Byron*; open thy *Goethe*” (*SR* 145) after his spiritual undergoing and physical wandering in the “Everlasting Yea.” In this idiom, Carlyle demonstrates clearly his major concerns: they are spiritual awareness, moral integrity, and religious faith. That is to say, the “Tailor,” or the Carlylean “Creator or Divinity” (217) should be the one to possess the inner eye for penetrating the physical substance and to bear the speculation for discovering the “why” of God.

Obviously, instead of preferring the man of letters for art’s sake, Carlyle judges

a person from the inside: the “Man is the spirit he worked in; not what he did, but what he became” (*SR* 153). The criterion is one’s purpose, not one’s tool, and the end alternates along with one’s purpose, not with the method—poetry or science. As long as a man is working for a spiritual purpose, for the truth, his utilization of science as a tool can be both moral and noble, since his decent purpose will lead him towards being moral. When working for superficial purposes, however, “namely, the Money thereof” (215), a man composing poetry can be immoral and material, since his evil purposes will drag him towards being immoral. It is more of one’s motive than one’s vocation to decide on one’s position; it is more one’s purpose than one’s profession to determine one’s morality in the Carlylean philosophy. Therefore, a literary man like Byron is not necessarily more spiritual and religious than a scientific man such as Franklin. Instead, it is one’s morality that determines one’s inwardness and faithfulness.

Then, what is Teufelsdrockh if he is more than a literary man? As suggested by Carlyle’s personal experiences and Whewell’s theory of the early nineteenth century science and of the scientist, Teufelsdrockh is probably a scientific man and the object of his study is clothes. Or, as indicated in Meadows’ study that there was an overlap of the scientist and the artist in nineteenth century England, Teufelsdrockh can therefore be one of the examples to show the nineteenth century intellectual “overlap.” Further, while Carlyle was composing *Sartor*, there was not yet any specific term to indicate the Goethian poetic-scientist philosopher crossing the boundaries of science and poetry. Hence, the term “Tailor” is created. In the metaphor “Tailor,” Carlyle implants the attributes of his ideal philosopher—the “Ideopraxist” philosopher in the middle, practically handling the Torch to investigate the garment, the nature, and the spiritually exercising his radical speculation to meditate on the truth contained within.

Resembling the Whewellian scientists, the Carlylean Tailor is a religious and

spiritual man. Moreover, since vocation is not the essential requirement, spirit is. The Carlylean Tailor such as Teufelsdrockh should be required to have a more important attribute, the ability to speculate. Conservative in religion but subversive in thought, the Carlylean Tailor thus is a "speculative radical," aiming to dig the truth out of triviality. What is Teufelsdrockh? In short, *more than being just a literary-scientific man, Teufelsdrockh is a religious and subversive spiritual "speculative radical."* To illustrate this simply, Teufelsdrockh belongs to middle section of the intersection of the three circles:

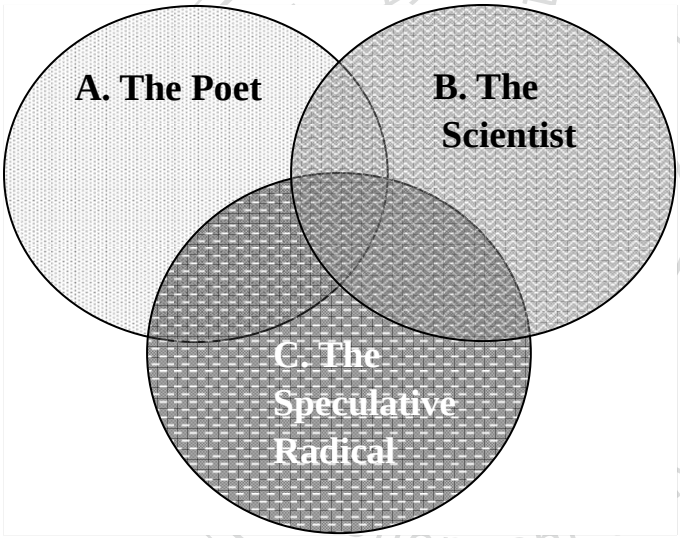

Fig. 4: Teufelsdrockh, a literary-scientific man as well as a speculative radical

Similar to the Whewellian inductive scientist, Teufelsdrockh also represents a Newtonian "whole man" of "the union of intellectual and moral excellence" (Yeo 1993: 132). For this ideal philosopher, the mechanical utility of any observation of the physical world is never the main concern; instead, the belief and truth of God should be the only destination of all research. More than a literary man, Teufelsdrockh thus is likely to be thought of as a philosophical proto-scientist of the 1820s and 1830s. The Torch is the vehicle for investigation held in his hand, and Science is the evidence of

faith in the heart. Using the Torch, Teufelsdrockh aims to enlighten the people, and in science, he expects to generate belief. With his "[d]ivinely given intellectual capacities" (Yeo 1993: 187), Diogenes Teufelsdrockh therefore is a *literary-scientific speculative radical* who unveils the secret of the Sphinx riddle and the philosophy of man's being in the universe, by his exploration of the dungy "obscure region" of the physical "vestural Tissues" (*SR* 2).

Coda:

From the Sagistic Carlyle to the Scientific Carlyle

> …it is too reductive to see the major Victorian moralists as chiefly concerned to articulate a critique of, and alternative to, industrialism; rather, their writings manifest, above all, an attempt to get beyond all partial, sectarian or merely specialized perspectives, to find somewhat to stand, intellectually speaking, from which the most 'general' assessments could be made. (Collini 25)

Due to the assumption of a conflict between science and religion, and the transcendental discourse of the past Carlylean studies, the "Torch of Science" and the material clothes in *Sartor* are usually the targets of criticism. Science is believed to be the destroyer of religion, and matter the obstacle to spirit. Since Carlyle is assumed to be a sage-prophet to guide his reader to transcend the physical bondage and to defeat the mechanical scientific view of the world, the protagonist, Teufelsdrockh, unquestionably is the incarnation of the author to transmit Carlyle's transcendental philosophy and his religious prophecy. Teufelsdrockh is therefore usually interpreted as a transcendentalist and a sage-prophet to practice Carlyle's aspiration for spiritual reform by abandoning superficial clothes and mechanical science in his imaginary world.

Yet, not only is the conflict theory a myth, but also Carlyle as an author-God and *Sartor* as an aesthetic-unity are myths. To free the author form God's position and to break down the boundaries of the work, *Sartor* becomes an open text, inter-related to other textual and contextual references. As a discursive museum, *Sartor* is rich in displaying the subtle nuances of the concepts of science, matter, and scientists in the

early nineteenth century England. Not entangled in the myth of conflict, science in *Sartor* does not attack religion; matter does not tie up the spirit; and scientists are not irreligious and utilitarian. For Carlyle, between the dualistic relations of science and religion, matter and spirit, and philosophers and scientists, there are mutual associations and reciprocal interactions, instead of belligerent conflicts.

With regard to the concept of science, Carlyle does not aim to criticize but to acclaim. Instead of having an antipathy toward science, Carlyle demonstrates his good intention for the use of the "Torch of Science" eagerly from the very opening of *Sartor*. Not a destroying machine to hinder man's spiritual and moral improvement, the Torch of Science functions as an illuminating vehicle, one lighting the visible, physical world, as well as for enlightening the invisible, intangible spiritual universe. With its illuminating capacity to reinforce the elevation of man's spirit and moral, Carlyle's "Torch of Science" does not stand for a simile of the mechanistic and of utilitarianism; rather, the "Torch," symbiotic with Maier's religious alchemist and with God's Light, carries a religious significance and a sacred mission to reform. Though critical, Carlyle's mocking tone in *Sartor* does not direct the "Torch of Science" but the general myopia affected by the mechanical views of his contemporaries. For Carlyle, the true conundrum of science does not derive from the science-religion break but from the indifferent trample of the mechanic over the dynamic in all manner of human activities. That is to say, what Carlyle is concerned with is not the "Torch of Science" per se but the status quo: *it is not the problem of the Torch itself but the problem of the user who adopts the Torch to light up merely the visible and superficial word.* Never claiming to relinquish science, Carlyle advocates the proper use of Science to approach the Truth of God.

Instead of within "science" itself, the true problem in reference to science resides in Carlyle's contemporary "purpose" and "method" in the use of science.

During Carlyle's age, there was a tendency for mechanical utilitarianism to encompass all aspects of Carlyle's contemporary socio-cultural practices. He discovers that pure science that once valued spirit highly is no longer popular but languishing. What rises and prevails to replace pure science is a calculative mechanical view that neglects the intangible world. To criticize his contemporaries' myopia in overlooking the invisible and the trivial, Carlyle then advocates a reform, the reform of man's attitude through the "Torch of Science." Able to "light" as God, the sacred "Torch" thus should be adopted by the philosophical wise with his inner eye open and should be utilized for the religious purpose aiming to uncover the truth of God.

Regarding the concept of matter, Carlyle neither takes it as litter that should be jettisoned, nor promotes "Adamitism" that demands to strip off all material clothes. Instead, the material forms of matter stands for the symbol of the inner spirit and the visible form of God. Not inferior to spirit as suggested in Abrams's study of "natural supernaturalism," tangible matter is weighted equally with the invisible soul. In Carlyle's phrase, "Natural Supernaturalism," the symmetrical relation of the two terms indicates two equal sides. Both natural and supernatural harmoniously complement each other, one functioning as visibility and the other as sagacity. As long as one is able to grasp simultaneously two aspects of the worlds, the physical and subjective as well as the spiritual and the objective, one is likely to acknowledge the "whole" of the truth. In order to adumbrate the philosophy of the "whole" lively, Carlyle then creates the idiosyncratic Teufelsdrockh, to practice his theory of "the whole" by "station[ing] himself in the middle": between the "Highest" and the "Lowest," between the imaginative and the intellectual, between the conscious and the unconscious, as well as between the natural and the supernatural. Through Teufelsdrockh, the embodiment of his philosophy of the whole, Carlyle then

demonstrates his obvious respect for the material substance of matter and his belief in matter as the “container” of spirit.

Carlyle indeed never worries over “matter” per se. The true problem for him resides in Carlyle’s contemporary disbelief in the spiritual world and the invisible universe clothed in matter. In his philosophy of “Natural Supernaturalism,” Carlyle shows his worry of the foolish who exercise merely reason not insight, who see with only their physical eyes not their inner eye, and who believe merely in the visible not the invisible. The overlooking of the inner eye and the interior world, for Carlyle, derives from the pervasive mechanical invasion in all manner of man’s existence, such as in science and politics, as well as in literature and religion. Implicitly, Carlyle demonstrates the impending decline of natural philosophy popular during his age. No longer believing that the natural world displays God’s signature and that the discovery of the physical substance signifies man’s religious belief, Carlyle’s contemporaries tend to admire the mechanistic scientism, in which only the mechanical aspect of nature and matter is valued. Through his philosophy, Natural Supernaturalism, therefore, Carlyle advocates a necessary renaissance of the traditional natural philosophy through reminding his readers to value the natural substance, which bears religious meanings, and the supernatural power, which imprints its mark on physical matter simultaneously. For Carlyle, then, *it is not the problem of man’s use of matter that causes his alienation from God; it is however man’s blindness of the inner eye and foolish reliance on the visible substance that hassled to the crisis of the mechanistic and utilitarian views contaminating every aspect of man’s world.*

Never rejecting science and matter, Carlyle does not regard scientists as irreligious, unspiritual, and immoral either. As a proto-scientist, Teufelsdrockh in Carlyle’s imagination represents a pious, philosophical, and radical, wise thinker to defeat the furtive invasion of mechanical and utilitarian thinking. More than

symbolizing Carlyle's philosophy of clothes, Teufelsdrockh the idiosyncratic character with a weird name, "Diogenes Teufelsdrockh (God-born Devil's dung)" suggestively indicates the 1830 debates over the epistemology of the scientific institution and the discipline of an ideal scientist between the idealistic Newtonianism and the experimental Baconianism. Belonging to the conservative Newtonian school like Whewell, Carlyle also believes that the use of science should aim at evidencing God and revealing God's philosophy on earth, and that the training of a scientist should center on his speculative insight and imaginative intuition. Teufelsdrockh, religious in aim and speculative in research, thus stands for the emblem of Carlyle's ideal scientific thinker. In Diogenes Teufelsdrockh the character, Carlyle has his natural supernaturalism capsulated. Rather than simply being interpreted as "God-born Devil's dung," Diogenes Teufelsdrockh is an incarnated form of Carlyle's central theme in *Sartor*: *the truth of God is hidden in every corner of the natural world, even the most slighted region, and it is able to be revealed only by a wise speculative natural philosopher aware of his religious mission*.

To claim his preference for an idealistic-philosophical natural investigator of the Newtonian school represented in Teufelsdrockh, Carlyle insinuates his detest of the practical-utilitarian natural collector of the Baconian school. The natural philosopher in the Newtonian school aspires to explain and theorize God's principles of Creation in the natural world, while the scientist in the Baconian school simply intends to observe and collect the superficial evidence scattered in nature. In observation, the Baconian scientist sees merely the exterior form, the clothes, of God's Creation. Through speculation, however, a philosophical scientist not only notices the exterior knowledge of matter but also perceives the interior wisdom of God. Carlyle believes that the growth of the Baconian school, the British Association as one of the examples, will bring about spiritual, philosophical, and moral declines,

because the criteria of easy training and quick learning in Baconian amateurism produces solely the superficial and mechanical humble craftsman, instead of the philosophically speculative and moral scientist. To create Teufelsdrockh as the ideal thinker to wander and ponder solitarily in the wilds, Carlyle then urges the reconsideration of his contemporary scientific education and physical study, strengthening the magnitude of humanistic values to cope with the utilitarianism and mechanism in scientific education. Optimistically, Carlyle believes that the ideal natural philosopher, or the speculative proto-scientist symbolized by Diogenes Teufelsdrockh, will take up the religious mission to unveil God's wisdom in nature and to reveal the universal secret in the Sphinx riddle.

Based upon the demystification of the theory of a conflict between science and religion, there are no longer hostile relations but reciprocal interactions between science and religion, matter and spirit, as well as scientists and philosophers. Instead of pessimism toward science and matter, Carlyle indeed treats the two positively and even defends the Torch of Science and the use of matter (tools), because the Torch is of sacred light and man is a tool-using animal. Never spurning man working for science either, Carlyle indeed is himself a religious man of science and characterizes his Teufelsdrockh in *Sartor* as an idealistic, philosophical, moral, and religious scientist, who investigates nature, the clothes of God, to reveal His truth cloaked in nature.

Behind his sarcastic tone and witty jest, Carlyle is critical of the mechanistic and utilitarian inclination of his contemporaries in every aspect of man's life, including in the church and literature. Carlyle laments that man no longer trusts in the visible and the interior but has all his head, heart, and hand contaminated by mechanism and utilitarianism. He then proposes reform, the reform of man's beliefs, morals, and spirit. To achieve the religious, spiritual, and moral reforms, Carlyle

recommends the science of the sacred light as the principal tool. To hold the Torch in hand, man will have his head and heart illuminated, able to see the physical evidence and to perceive the invisible wisdom. To take Teufelsdrockh the proto-scientist as an example, Carlyle distinctly instructs his reader that, to wander and ponder solitarily in the dark, man can live up to the dream of a spiritual renaissance and moral regeneration.

Carlyle is not an eccentric writer "to articulate a critique of, and alternative to, industrialism" (Collini 25). Never thinking industrialism as evil, Carlyle believes that any technology based on science is capable of bringing about progress and development. Instead, he looks forward to the material and spiritual progress by man's use of science. As indicated by Collini, similar to his contemporary prose writers, Carlyle composes *Sartor* to "find somewhere to stand … from which the most 'general' assessments could be made" (25). Witnessing the advancement of science to alter man's life in history, Carlyle senses the crisis in the corruption of man's soul and heart. He then preaches the reader to look inwardly and to appreciate the invisible. The "general" assessment that Carlyle and his contemporary reflective writers wish to make is a revival of traditional values. Yet, this revival wish is not contradictory to the progress of science. As long as science is able to assist in the advance of human society, it is capable of lifting the soul and fostering the mind too. Like his contemporaries, anxious about his social condition and concerned over the future, Carlyle writes to express his solicitude and to provide possible solutions.

Many critics, such as Michael Timko in *Carlyle and Tennyson* (1988), tended to compare the two Victorian writers and presume that Alfred Tennyson (1809-92) is greater than Carlyle because, "[u]nlike Carlyle, who ignored such issues as Darwinism, Tennyson was always aware of them, often brooded over them and attempted to discuss them fully in his poetry" (xii). Due to his "refus[al] to

acknowledge the idea that…humans could be related to 'species'" (xii), Carlyle, in Timko's discussion is a "failed prophet" (xii). Tennyson is greater because he is more aware of "the implications of science" (76). The fading of Carlyle's reputation thus is reasonable because he is of "arrogance, selfishness, and parochialism" (77) while facing the new sciences. Timko's evaluation of the two authors represents the traditional assumption in respect to Carlyle and Tennyson, arguing that Tennyson is the greater author who meditates philosophically on the issue of science coping with religion, and Carlyle a lesser thinker, contemplating merely on the issue of religion. Tennyson then becomes the representative spokesman of the Victorian science-religion discourse.

Yet, Tennyson in fact was not the first Victorian writer to meditate on the confrontation and reconciliation of science and religion. Carlyle inaugurates his discourse of the science-religion interrelation (1830) earlier than Tennyson (1833). Instead of refusing to acknowledge the idea of science, as indicated by Timko, Carlyle too was enthusiastic over the issue of an interrelation between science and religion, as Tennyson was. Different from Tennyson, who was pessimistic and hesitant, Carlyle is more confident in science and optimistic in the use of science. Different in tone, form, and attitude, both authors however illustrate the complex confrontations of the new study with the old tradition as well as the new belief with the old faith in regard to science and religion. Similarly, the two authors do not see direct hostility between science and religion; instead, both authors demonstrate complicated and nuanced interactions between the two discourses. Whether wavering or not, both Carlyle and Tennyson have science finally reside in their faith because "it [science] [gives] assurance of man's progress" (Timko 78). Due to the millennial imagination rooted in Christianity, a science that brings about progress rapidly should be indispensable. For both Carlyle and Tennyson, the progressive effect of science fits the spirit of

millenarianism in Christianity.

In reference to the science-religion confrontation of the 1830s, both the authors' names, Carlyle and Tennyson, simultaneously manifest the appearance of the science-religion discourse in the transition of traditional agricultural society to modern industrial-capitalist society. The two texts, *Sartor* and *In Memoriam* (1833-50), thus share an equal worth to exhibit the early Victorian discourse of the science-religion confrontation, to mark the interplay, entanglement, conflict, and reconciliation of the two systems of thoughts. Tennyson's *In Memoriam* is not the only text that indicates the mutual connection between science and religion. Obviously, according to Carlyle's characterization of Teufelsdrockh as an incarnation of the reciprocal relationship between science and religion, *Sartor* also represents the fact that science was religious and religion supported science during the 1830s. The general agreement on Carlyle's criticism of science in *Sartor* is thus a myth, a misconception based on the myth of twentieth-century conflict theory.

Works Cited:

Abrams, M. H. *Natural Supernaturalism: Tradition and Revolution in Romantic Literature.* New York: Norton, 1971.

Allen, Graham. *Intertextuality*. London: Routledge, 2000.

Almond, Gabriel A, et al. "Introduction." *Progress and Its Discontent*. Eds. Gabriel A. Almond et al. Berkeley: California UP, 1977. 1-15.

-----. *Progress and Its Discontent*. Eds. Gabriel A. Almond et al. Berkeley: California UP, 1977.

Altholz, Josef L. "Warfare of Conscience with Theology." *The Victorian Web: Literature, History, & Culture in the Age of Victoria*. 15 August 2001. 5 July 2007. <http://www.scholars.nus.edu.sg/landow/victorian/religion/altholz/a2.html>

Altick, Richard D. "Progress?" *Victorian People and Ideas: A Companion for the Modern Reader of Victorian Literature*. New York: Norton, 1973.

Annan, Noel. "Science, Religion, and the Critical Mind." *Backgrounds to Victorian Literature*. Ed. Richard A. Levine. San Francisco: Chandler Publishing, 1967. 95-119.

Barthes, Roland. "The Death of the Author." *Modern Criticism and Theory: A Reader*. Ed. David Lodge. London: Longman, 1991. 166-72.

Becher, Harvey W. "William Whewell's Odyssey: From Mathematics to Moral Philosophy." *William Whewell: A Composite Portrait*. Eds. Menachem Fisch and Simon Schaffer. Oxford: Clarendon, 1991. 1-29.

Bowler, P. J. *The Invention of Progress: The Victorians and the Past.* Oxford: Blackwell, 1989.

-----. *Evolution: The History of an Idea.* Berkeley: California UP, 2003.

Briggs, Asa. "Religion and Science." *Backgrounds to Victorian Literature*. Ed.

Richard A. Levine. San Francisco: Chandler, 1967. 83-94.

Brooke, John Hedley. "Natural Theology." *Science and Religion: A Historical Introduction*. Baltimore: Johns Hopkins UP, 2002. 162-218.

-----. *Science and Religion*. Cambridge: Cambridge UP, 1991.

Brookes, Gerry H. *The Rhetorical form of Carlyle's 'Sartor Resartus.'* Berkeley: California UP, 1972.

Buckley, Jerome Hamilton. *The Victorian Temper: A Study in Literary Culture.* Cambridge: Cambridge UP, 1981.

Burchell, S. C. *Age of Progress.* New York: Time, 1966.

Burgen, Arnold, et al, eds. *The Idea of Progress.* New York: de Gruyter, 1997.

Bury, J. B. *The Idea of Progress: An Inquiry into Its Origin and Growth*. New York: Dover, 1955.

Caldwell, Janis McLarren. *Literature and Medicine in Nineteenth-Century Britain: From Shelley to George Eliot.* Cambridge: Cambridge UP, 2004.

Cantor, Geoffrey N. "Between Rationalism and Romanticism: Whewell's Historiography of the Inductive Sciences." *William Whewell: A Composite Portrait*. Eds. Menachem Fisch and Simon Schaffer. Oxford: Clarendon, 1991. 67-86.

Campbell, Ian. "Thomas Carlyle." *Dictionary of Literary Biography, Volume 55:Victorian Prose Writers Before 1867.* Ed. William B. Thesing. *Literary Resource Center*. 1987. 1 July 2007. <http://galenet.galegroup.com/servlet/LitRC?vrsn=3&OP=contains&locID=nccu&srchtp=athr&ca=1&c=2&ste=6&tab=1&tbst=arp&ai=U13602455&n=10&docNum=H1200006627&ST=carlyle+thomas&bConts=16303>

Chapple, J.A.V. *Science and Literature in the Nineteenth Century*. London: Macmillan, 1986.

Clubbe, John, and Jerome Meckier, eds. *Victorian Perspectives: Six Essays*. London: Macmillan, 1989.

-----. "Introduction." *Victorian Perspectives: Six Essays*. Ed. John Clubbe and Jerome Meckier. London: Macmillan, 1989. ix-xiii.

Collini, Stefan. "From 'Non-Fiction Prose' to 'Cultural criticism': Genre and Disciplinarity in Victorian Studies." *Rethinking Victorian Culture*. Eds. Juliet John and Alice Jenkins. London: Macmillan, 2000. 13-28.

Cosslett, Tess. *The 'Scientific Movement' and Victorian Literature*. Sussex: Harvester, 1982.

-----. *Science and Religion in the Nineteenth Century*. Cambridge: Cambridge UP, 1984.

Carlyle, Thomas. *Sartor Resartus. On Hero and Hero Worship*. Ed. W. H. Hudson. London: J. M. Dent & Sons LTD, 1956.

-----. *Reminiscences* (1888). Ed. K. J. Fielding and Ian Campbell. Oxford: Oxford UP, 2000.

-----. "Characteristics" (1831). *A Carlyle Reader: Selections from the Writings of Thomas Carlyle.* Cambridge: Cambridge UP, 1984. 67-103

-----. "Signs of the Times" (1829). *The Collected Works of Thomas Carlyle*. London: Chapman and Hall, 1858. 98-118.

-----. *A Carlyle Reader: Selections from the Writings of Thomas Carlyle*. Ed. G. B. Tennyson. Cambridge: Cambridge UP, 1984.

Chandler, Alice. *A Dream of Order: The Medieval Ideal in the Nineteenth-Century English Literature*. Lincoln: Nebraska UP, 1970.

Colton, Joel. "Foreword." *Progress and Its Discontent*. Eds. Gabriel A. Almond et al. Berkeley: California UP, 1977. ix-xii.

Danaher, Geoff, Tony Schirato, and Jen Webb. *Understanding Foucault*. London:

Sage, 2000.

Dean, Mitchell. *Critical and Effective Histories: Foucault's Methods and Historical Sociology*. London: Routledge, 1994.

Dreyfus, Hubert L., and Paul Ranibnow. *Michel Foucault: Beyond Structuralism and Hermeneutics*. Brighton: Harvester, 1982.

Eckermann, Johann Peter. "1823." *Conversations with Goethe* (1836-48). Trans. John Oxenford (1906). *Digital Production by Harrison Ainsworth* 2006. 26 June 2009. <http://www.hxa.name/books/ecog/Eckermann-ConversationsOfGoethe-1823.html>

Emig, Rainer. "Eccentricity Begins at Home: Carlyle's Centrality in Victorian Thought." *Textual Practice*, 17.2 (2003): 379-390.

Ferngren, Gray B. "Introduction." *Science and Religion: A Historical Introduction*. Baltimore: Johns Hopkins UP, 2002. ix-xiv.

-----, ed. *Science and Religion: A Historical Introduction*. Baltimore: The Johns Hopkins UP, 2002.

Fisch, Menachem. *William Whewell Philosopher of Science*. Oxford: Clarendon, 1991.

Fisch, Menachem, and Simon Schaffer, eds. *William Whewell: A Composite Portrait*. Oxford: Clarendon, 1991.

Fisch, Menachem, and Simon Schaffer. "Preface (1988)." *William Whewell: A Composite Portrait*. Oxford: Clarendon Press, 1991. v-xi.

Fletcher, Robert Huntington. "Chapter XI. Period IX. The Victorian Period. About 1830 to 1901." *A History of English Literature* (1918). *About.com: Classic Literature*. New York Times Company. 2009. 12 June 2009. <http://classiclit.about.com/library/bl-etexts/rfletcher/bl-rfletcher-history-11-carlyle.htm>

Foucault, Michel. "What Is an Author?" *Modern Criticism and Theory: A Reader*.

Trans. and ed. David Lodge. London: Longman, (1969) 1991. 196-210.

-----. *Archaeology of Knowledge*. London and New York: Routledge, (1972) 1991.

-----. "Neitzsche, Genealogy, History." (1977) *The Foucault Reader*. New York: Pantheon, 1984. 76-99.

Frye, Northrop. "The Problem of Spiritual Authority in the Nineteenth Century." *Backgrounds to Victorian Literature*. Ed. Richard A. Levine. San Francisco: Chandler, 1967. 120-36.

Guald, Colin. *Ships Resource Center: for Science Teachers Using Sociology, History and Philosophy of Science*. 20 June 2007. 9 September 2008. <http://www1.umn.edu/ships/updates/wilbrfrz.htm>

Gilmour, Robin. *The Victorian Period: The Intellectual and Cultural Context of English Literature, 1830-1890.* London: Longman, 1993.

Harrold, Charles Frederick. *Carlyle and German Thought: 1819-1834.* New Haven: Yale UP, 1978.

-----. "Introductory Survey: Major Aspects of the Victorian Period." *English Prose of the Victorian Era*. New York: Oxford UP, 1968. xiii-lxxx.

Holloway, John. *The Victorian Sages: Studies in Argument*. London: Macmillan, (1953) 1965.

Houghton, Walter E. *The Victorian Frame of Mind 1830-1870.* New Haven: Yale UP, 1978.

Irvine, William. *Apes Angels and Victorians; The Story of Darwin, Huxley and Evolution.* New York: Time Incorporated, 1955.

Jessop, Ralph. *Carlyle and Scottish Thought*. London: Macmillan, 1997.

John, Juliet, and Alice Jenkins eds. *Rethinking Victorian Culture*. London: Macmillan, 2000.

Knight, David. *The Age of Science: The Scientific World-View in the Nineteenth*

Century. Oxford: Basil Blackwell, 1986.

Landow, George. *Elegant Jeremiahs: the Sage from Carlyle to Mailer*. Ithaca: Cornel UP, 1986.

-----. "Elegant Jeremiahs: The Genre of the Victorian Sage." *Victorian Perspectives: Six Essays*. Eds. John Clubbe and Jerome Meckier. London: Macmillan, 1989. 21-41.

LaValley, Albert J. *Carlyle and the Idea of the Modern: Studies in Carlyle's Prophetic Literature and its Relation to Blake, Neitzsche, Marx, and Others*. New Haven, Yale UP, 1968.

Levine, George. "Defining Knowledge: An Introduction." *Victorian Science in Context*. Ed. Bernard Lightman. Chicago and London: Chicago UP, 1997. 15-23.

-----. *The Boundaries of Fiction: Carlyle, Macaulay, Newman*. Princeton: Princeton UP, 1968.

-----. "Carlyle, Descartes, and Objectivity." *Raritan: A Quarterly Review* 17.1 (1997):45-58 EBSCOhost. 5 Jun. 2007. <http://search.ebscohost.com/>

Levine, George, and Lionel Madden, eds. *The Art of Victorian Prose*. New York: Oxford UP, 1968.

Lodge, David, ed. *Modern Criticism and Theory: A Reader*. London: Longman, 1991.

Lightman, Bernard. "Introduction." *Victorian Science in Context*. Ed. Bernard Lightman. Chicago: Chicago UP, 1997. 1-12.

Livingstone, D. N. *Darwin's Forgotten Defenders: The Encounter between Evangelical Theology and Evolutionary Thought.* Grand Rapids: Eerdmans, 1987.

McGrath, Alister E. *Science & Religion: An Introduction*. Oxford: Blackwell, 1999.

-----. *The Foundations of Dialogue in Science & Religion*. Oxford: Blackwell, 1998.

Meadows, Jack. *The Victorian Scientist: The Growth of a Profession*. London: British Library, 2004.

Neff, Emery. *Carlyle and Mill: An Introduction to Victorian Thought*. New York: Octagon Books, 1974 (c. 1926).

-----. *Carlyle*. London: George Allen & Unwin, 1932.

New American Bible. New York: Catholic Book, 1986.

Olson, Richard G. *Science and Religion, 1450-1900.* Baltimore: Johns Hopkins UP, 2004.

Paradis, James G. "Satire and Science in Victorian Culture." *Victorian Science in Context*. Ed. Bernard Lightman. Chicago: Chicago UP, 1997. 143-75.

Paley, William. "*Natural Theology; or, Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature (1802).* Chapters 1-3." *Science and Religion in the Nineteenth Century*. Ed. Tess Cosslett. Cambridge: Cambridge UP, 1984.

Peterson, Linda H. "Carlyle's *Sartor Resartus*: The Necessity of Reconstruction." *Victorian Autobiography: The Tradition of Self-Interpretation*. New Haven: Yale UP, 1986. 31-59.

Platinga, Alvin. "Religion and Science." *Stanford Encyclopedia of Philosophy*. 20 Feb. 2007. 5 July 2007. <http://plato.stanford.edu/entries/religion-science/>

Polkinghorne, John C. *Science and Creation: The Search for Understanding*. Philadelphia: Templeton Foundation, 2006.

Ross, Sidney. *Nineteenth-Century Attitudes: Men of Science*. Dordrecht: Kluwer Academic, 1991.

Ruse, Michael. "Introduction." *Of the Plurality of World*. By William Whewell. Ed. Michael Ruse. Chicago: Chicago UP, 2001. 1-31.

Russell, Colin A. "The Conflict of Science and Religion." *Science and Religion: A*

Historical Introduction. Baltimore: Johns Hopkins UP, 2002. 3-12.

-----. *Science and Social Change 1700-1900*. London: Macmillan, 1983.

Sambrook, James. *The Eighteenth Century: The Intellectual and Cultural Context of English Literature 1700-1789.* London: Longman, 1986.

Sapin, Steve. *The Scientific Revolution.* Chicago: Chicago UP, 1996.

Schenker, Mark John. "Historical Transcendentalism in the Works of Carlyle, Newman, and Browning." Diss. Cambridge U, 1988.

"Science." *Oxford English Dictionary* (*OED*). 2008. 6 June 2006. <http://dictionary.oed.com.ezproxy.lib.nccu.edu.tw:8090/cgi/entry/50215796?single=1&query_type=word&queryword=science&first=1&max_to_show=10>

Shelston, Alan. *Thomas Carlyle: Selected Writings*. New York: Penguin, 1986.

Sorel, Georges. *The Illusions of Progress.* Trans. John Stanley and Charlotte Stanley. Berkeley: California UP, 1969.

Suffin, N. W. *Science, Religion and Education in Britain, 1804-1904*. Kilmore, Australia: Lowden, 1973.

Tambiah, Stanley Jeyaraja. *Magic, Science, Religion, and the Scope of Rationality*. Cambridge: Cambridge UP, 1996.

Taylor, Charles Alan. "A Rhetorical Ecology of Science." *Defining Science: A Rhetoric of Demarcation.* Madison: Wisconsin UP, 1996. 3-20.

Tennyson, G. B. *Sartor Called Resartus: The Genesis, Structure, and Style of Thomas Carlyle's First Major Work*. Princeton: Princeton UP, 1965.

-----. "Introduction." *A Carlyle Reader*. Ed. G. B. Tennyson. Cambridge: Cambridge UP, 1984. xiii-xlv.

-----, ed. *A Carlyle Reader*. Cambridge: Cambridge UP, 1984.

Timko, Michael. *Carlyle and Tennyson*. Houndmills: Macmillan, 1988.

Turner, Frank Miller. *Between Science and Religion: The Reaction to Scientific*

Naturalism in Late Victorian England. New Haven: Yale UP, 1974.

Tuveson, Ernest Lee. *Millennium and Utopia: A Study in the Background of the Idea of Progress*. Berkeley: California UP, 1949.

Uberoi, J. P. S. *The Other Mind of Europe: Goethe as a Scientist.* Delhi: Oxford UP, 1984.

Uglow, Nathan. "Jane Welsh Carlyle." *The Literary Encyclopedia*. 28 October 2000. 5 October 2009. <http://www.litencyc.com/php/speople.php?rec=true&UID=744>

University of Cambridge. *Darwin Correspondence Project*. 2007. 19 July 2007. <http://www.darwinproject.ac.uk/darwinletters/calendar/entry-12041.html>

Von Helmholtz, Hermann. *Science and Culture: Popular and Philosophical Essays.* Ed. David Cahan. Chicago: Chicago UP, 1995.

Waring, Walter. "Thomas Carlyle." *Twayne's English Authors Series Online.* New York: G. K. Hall & Co., 1999. 2 June 2007. <http://galenet.galegroup.com/servlet/LitRC?vrsn=3&OP=contains&locID=nccu&srchtp=athr&ca=1&c=1&ste=16&stab=512&tab=2&tbst=arp&ai=U13602455&n=10&docNum=H1472000565&ST=carlyle+thomas&bConts=16303>

Welch, Claude. "Dispelling Some Myths about the Split between Theology and Science in the Nineteenth Century." *Religion & Science: History, Method, Dialogue.* Ed. W. Mark Richardson and Wesley J. Wildman. New York: Routledge, 1996. 29-40.

Willy, Basil. *The Eighteenth Century Background: Studies in the Idea of Nature in the Thought of the Period*. London: Routledge, 1940.

Williams, Raymond. *Culture and Society: Coleridge to Orwell*. London: Hogarth, (1958) 1987.

-----. *Keywords: A Vocabulary of Culture and Society*. New York: Oxford UP, 1976.

Wilson, David B. “The Historiography of Science and Religion.” *Science and Religion: A Historical Introduction*. Baltimore: Johns Hopkins UP, 2002. 13-29.

-----. “Victorian Science and Religion.” *History of Science* 15 (1977): 52-67.

White, Andrew Dickson. *A History of the Warfare of Science with Theology in Christendom*. 2 vols. Bristol: Thoemmes, 1997.

Whitman, Walter. “Specimen Days. 222: Death of Thomas Carlyle.” *Prose Works*. 1892. *Bartleby.com: Great Books Online*. 2009. 12 June 2009. <http://bartleby.com/229/1222.html>

Yeo, Richard. *Defining Science: William Whewell, Natural Knowledge, and Public Debate in Early Victorian Britain*. Cambridge: Cambridge UP, 1993.

-----. *Science in the Public Sphere: Natural Knowledge in British Culture 1800-1860.* Aldershot: Ashgate Variorum, 2001.

-----. “Scientific Method and the Image of Science 1831-1891.” *Science in the Public Sphere: Natural Knowledge in British Culture 1800-1860.* Aldershot: Ashgate Variorum, 2001. 65-88.

-----. “William Whewell, Natural Theology and the Philosophy of Science in Mid Nineteenth Century Britain.” *Science in the Public Sphere: Natural Knowledge in British Culture 1800-1860.* Aldershot: Ashgate Variorum, 2001. 493-516.

-----. “The Principle of Plentitude and Natural Theology in Nineteenth-Century Britain.” *Science in the Public Sphere: Natural Knowledge in British Culture 1800-1860.* Aldershot: Ashgate Variorum, 2001. 263-82.

-----. “Scientific Method and the Rhetofic of Science in Britain, 1830-1917.” *Science in the Public Sphere: Natural Knowledge in British Culture 1800-1860.* Aldershot: Ashgate Variorum, 2001. 259-97.

Young, Robert. *Darwin's Metaphor: Nature's Place in Victorian Culture*. Cambridge: Cambridge UP, 1985.