THE HISTORY OF ACADEMIA: FROM THE CRADLE OF CIVILIZATION TO PLATO'S ACADEMY, THE UNIVERSITY, DEPARTMENTALIZATION, INTERDISCIPLINARY PROGRAMS, INTERNATIONAL AFFILIATES AND STRATEGIC BUSINESS SOLUTIONS.

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Committee Chair:
Robert S. Corrington, B.A., M.Phil., Ph.D.,
Henry Anson Buttz Professor of Philosophical Theology

Christopher Jacob Reiss
Drew University
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ABSTRACT

The History of Academia: From the Cradle of Civilization to Plato's Academy, the University, Departmentalization, Interdisciplinary Programs, International Affiliates and Strategic Business Solutions.

Doctor of Letters Dissertation by

Christopher J. Reiss

The Caspersen School of Graduate Studies

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This dissertation reviews the extensive literature on the history of academia and education in historical context, distilling it into a concise storyline, followed by a concentrated focus on the French and German university models, departmentalization, and subsequent reactions to it. The extensive documentation provides a detailed sketch for the motivated scholar to elaborate upon with further reading. Hopefully, the interdiciplinary approach has something to offer most academics. The literature review also helped guide development of a survey assessing student educational experiences in contemporary academia (Cronbach's $\alpha = 0.717$). The endeavor included a far-reaching journey of field research across every continent of the world except Antarctica. A total of 273 universities were assessed. Qualitative notes were taken, which may lead to an illustrated travelogue, but the current dissertation aim was to survey undergraduates with the new instrument (N = 1,495 undergraduates). Results show the majority of students were pleased with the education they were receiving, though their program requirements prevented them from studying other subjects of interest,

and opportunities to take interdisciplinary courses were limited. Most students found their professors available for guidance, but did not find opportunities to collaborate on publishable research with them. Furthermore, most students did not intend to submit their work for publication, but would be more inclined to submit to a student run journal, if one was available. Finally, most students believe it is important to spend a semester or more aboard, or at affiliate university campuses, but they find the expense and logistical problems a deterrent. In closing, policy considerations are proposed as possible solutions to the problems uncovered by the survey results. The limitations and contributions of this research are discussed. Theoretically, this research places the new global network university model within the context of historical developments. It expands the construct for rating universities beyond standard criteria for rankings to include the issues mentioned above. Methodologically, this research advances the field of university rating systems by providing a new reliable measurement tool. Practically, the survey instrument increases awareness of several issues that need attention in order to improve the educational experiences of university undergraduates.

TABLE OF CONTENTS

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ACKNOWLEDGEMENTS

LIST OF TABLES

LIST OF APPENDICES

If I were asked to name the most needed of all reforms in the spirit of education, I should say: 'Cease conceiving of education as mere preparation for later life, and make it the full meaning of the present life'.

- *Self-Realization as the Moral Ideal*
  By John Dewey (1893)

There is nothing more notable in Socrates than he found time, when he was an old man, to learn music and dance, and he thought it time well spent.

- *Essays*
  By Michel de Montaigne (1580)

OVERVIEW OF THE DISSERTATION STRUCTURE

This dissertation is divided into two major sections. The first section comprises three chapters and presents, in broad strokes, a literature review on the history of education. Extensive documentation is provided for those who wish to pursue any particular outlined areas of investigation with greater intensity, a goal, which it is hoped this paper stimulates. The historical review comprises three chapters, out of which emerges various trends that demand further research in order to assist future reforms in contemporary undergraduate education. These include: the student's experience, flexibility in required curricula, opportunities for interdisciplinary studies, prospects for publication, availability of professors for guidance, possibilities for research assistantships, and the likelihood of studying abroad.

The first chapter outlines the history of cultural dissemination from prehistoric times through education in ancient Rome. It includes what we can deduce about cultures prior to a written record and covers developments in Greece prior to and following its expansion, and influential interaction with other cultures, such as Egypt, Rome and elsewhere. The impact of various political forces are also acknowledged. The Greek educational curricula are detailed, including how they were disseminated and transformed, to and by, other cultures and periods of time.

The second chapter specifies how these early advances, in liberal arts education, regressed during the Dark Ages but were still passed down, only to reemerge with the development of the first universities in Europe. Aspects of early modern reforms in the *Ancient Régime* model of university education are delineated, followed by the French model and the German reaction to it along with the political trends impacting same.

The third chapter covers educational developments in America, liberal arts colleges, research universities, critics and advocates. Then there is spotlight focused on the role of conflict in the development of academic ideas, the changing role of academics, their purpose and significance. This is followed by an example of how this controversy played out between structuralism and radical behaviorism, with pragmatism (i.e., the philosophical position of this research) emerging as the benefactor of that debate. Finally, a pragmatic vantage point is relied upon to critique trends in departmental fragmentation and concentration in contemporary university settings with an eye towards solutions.

The second section of this dissertation comprises four chapters and presents the theory, method and results of the research study measuring the various trends in order to aid future improvements in contemporary undergraduate education.

In chapter four, the constructs of concern are validated by linking them with trends that emerged in the historical review (i.e., section one), and they are summarized in a specification table. Relevant sampling strategies and data

collection tools are reviewed along with a rationale for the choices made. The epistemological position is outlined followed by a list of the research hypotheses.

In chapter five, the method is detailed, including the participants, the universities visited in the study, ethical considerations, materials utilized, and the specific procedures that were implemented.

In chapter six, the results, conclusions, and limitations of the study are presented.

Finally, chapter seven presents a general discussion concerning the research study, and the contribution the historical review of education, presented in section one, provided beyond the circumscribed goal of guiding the development of the survey questions.

SECTION ONE: HISTORICAL LITERATURE REVIEW

CHAPTER 1: PREHISTORIC & ANCIENT TRENDS IN EDUCATION

The history of education echoes history itself, the history of knowledge, beliefs, abilities, and practices. It is the history of the cultures of humanity.[1] In the study of letters, history maintains a principal position among the various forms of literature. In order to understand the future of academia, and foresee what kinds of environments will pursue research, education and scholarship going forward, we must venture back and attempt to understand the past. Similarly, the successful leaders of the world's great universities, as with every institution, must look ahead with acute forethought, empowered to probe into the future, not by chance, but by patiently attained knowledge. In this respect, to clearly comprehend the history of academia, what humankind has done and why, is to recognize, albeit imprecisely, what new developments will follow and when. How might this unfold as we endeavor forward into an academic world that includes the new global network university model? We cannot fathom ourselves, and our own direction into the future, unless we appreciate others—and we cannot do that without some understanding of the histories that have led everyone here. To truly know our neighbors, we must grasp the culture, from which they came, the conditions under which their identity emerged. Learning history, delving into another's culture, studying abroad or at an affiliate campus can facilitate that knowledge.

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[1] W. N. Hailman, *Twelve Lectures on the History of Pedagogy, Delivered Before the Cincinnati Teachers' Association* (Cincinnati, OH: Wilson, Hinkle & Co., 1874), 12.

History is an immense and astounding drama that can embrace the world with its regal grandeur, horrific acts, suspenseful plot, and seductive narrative. Yet each aspect in the drama of history remains too voluminous for any university student to read in a full and comprehensive manner. Although Charles Rollin covered ancient history up to the death of Cleopatra and Mark Antony in twenty-four books, he only penned a little more than half of *Histoire Romaine* before his own death in 1741.[2] Will and Ariel Durant summarized the history of civilization into eleven volumes, ending with Napoleon; Edward Gibbon presented the decline and fall of Rome in eight volumes; Lord Macaulay covered the history of England, from life under the Romans to the death of William the Third, in ten volumes; François Guizot took thirty-one volumes to tell but a portion of the history of France in *Collection des mémoires relatifs à l'histoire de France*; Page Smith wrote sixteen volumes on the relatively short history of America; and Edward Freeman spent five volumes solely on the history of the Norman conquest.[3] While perusing the stacks at the Paris library, *Bibliothèque Mazarine*,

[2] M. Charles Rollin, *The Ancient History of Egyptians, Carthaginians, Assyrians, Babylonians, Medes and Persians, Macedonians, and Grecians, Books 1-24,* Translated from the French (Edinburgh, UK: Charles Elliot Publisher, 1775); M. Charles Rollin, *The Roman History, From the Foundation of Rome to the Battle of Actium, Vol. 1-5,* Translated from the French (Ann Arbor, MI: University of Michigan Press, 2009).

[3] Will Durant and Ariel Durant, *The Story of Civilization Vol. 1-11* (Norwalk, CT: Easton Press Collector's Edition, 1961); Edward A. Freeman, *The History of the Norman Conquest of England: Its Causes and Its Results, Vol. 1-5* (Oxford, UK: Oxford University Press, 1870-76); Edward Gibbon *The History of the Decline and Fall of the Roman Empire, Vol. 1-8* (London, UK: The Folio Society Collector's Edition, 1776-88); M. François Guizot and Madame Guizot de Witt, *History of France, Vol. 1-31,* Translated from the French by Robert Black (New York, NY: A. L. Burt Publishing, 1869); Lord Macaulay, *History of England,*

there is estimated half a million volumes and/or incunabula, covering the history of France, alone.[4]   George Grote wrote an extraordinary history of Greece spanning ten hefty volumes, and Gaston Maspero *et al.* created thirteen massive volumes on Egypt.[5]   Even a student of the classics is hard pressed to read all that is available from the Greeks and Romans. The historical works of Herodotus in nine books, Thucydides in eight books, and Livy in forty-five books, only scratch the surface.[6]   One of the aims of this dissertation is to stimulate further exploration in the reader by undertaking a synthesis of a vast amount of documented historical material that cuts across disciplines, transforming it with a broad brush into a manageable storyline before focusing in greater depth on more critical issues concerning the current condition of academia.

Over the past two centuries, archaeological discoveries in Anatolia, Crete, Egypt, India, Iran, Mesopotamia, and Syria have upended prior notions that

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Vol. 1-10 (Norwalk, CT: Easton Press Collector's Edition, 1961); Page Smith, *The History of America* (Norwalk, CT: Easton Press Collector's Edition, 1976).

[4] Personal evaluation of the collection during visits to *Bibliothèque Mazarine* 2008-13.

[5] George Grote, *A History of Greece* (Cambridge, UK: Cambridge University Press, 2010); Gaston Maspero, A. S. Rappaport, L. W. King and M. A. Hall *History of Egypt, Chaldea, Syria, Babylonia, and Assyria, Vol. 1-13* (London, UK: The Grolier Society, 1903-06).

[6] Herodotus *The Persian Wars, Books 1-9,* Translated from the Greek by A. D. Godley (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1920); Livy *History of Rome, Vol. 1-13, Books 1-45* Translated from the Latin by B. O. Foster *et al.* (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1919-22); Thucydides *History of the Peloponnesian War, Books 1-8,* Translated from the Greek by C. F. Smith (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1919).

civilization began with the Greeks and Romans.[7] If we define history as the simple transcription of written chronicles of former generations, we can limit ourselves to the art of writing and need only go back to the time such records were first created. But the earth has its own story to tell with the evidence recorded beneath its surface, indistinct yet readable to the trained eye. With only the dry bones of a dinosaur, a decade or more before the term was even coined, George Covier reassembled the entire animal and portrayed its behaviors and its home.[8] Similarly, the archeologist tells the story from chipped flints fashioned with a point of how humans mastered their world using tools. A more recent stratum of evidence in the form of bronze tells of how humans acquired the knowledge to handle a malleable metal, to draw it from rocks and fuse it with fire. Later, still we learned how to melt iron, a harder and more useful metal. The storyline carries us across the Stone Age, the Bronze Age, and the Iron Age, throughout which we know logically, information must have been passed down the generations with some form of early education. Somewhere in this development of humanity, crude houses were built, then pictures were drawn and an alphabet of signs followed.[9]

Doubtless every group of people since the birth of civilization, by some means of communication or another, transmitted its collective knowledge, values,

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[7] H. W. F. Saggs *Civilization Before Greece and Rome* (New Haven, CT: Yale University Press, 1989).

[8] George Cuvier, *Essay on the Theory of the Earth,* Translated from the French by Baron (New York, NY: Kirk & Mercein, 1818).

[9] Werner Stein, *"Kalturfahrplan," The Timetables of History: A Horizontal Linkage of People and Events,* Translated from the German by Bernard Grun (Norwalk, CT: Easton Press Collector's Edition, 2005).

customs, approaches and talents to the succeeding generation. In the broadest terms, this is the definition of education.[10] Learning often occurs through experiences that have a formative impact on cognition, emotions and behaviors.[11] Even animals pass down specific approaches to their offspring. Group hunting behavior is an example that has been studied in many species from lions to killer whales (i.e., orcas). Consider the vast differences in hunting strategies across different schools of orcas. Although there has never been an adopted-away study to decisively answer the nature-nurture question, different strategies are highly associated with being reared in different schools.[12]

Granted, we do not have proofs concerning the earliest forms of prehistoric teaching methods, socialization practices, and the passing down of culture. Yet, logic augmented by some degree of informed speculation, tells us various forms of communication must have been at play, albeit, non-verbal, oral, and pictorial with the emergence of written histories to follow.

Prehistoric Period of Learning

Social learning theory tells us that people can learn from one another via non-verbal observation, imitation, and modeling.[13] Supplemented by language

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[10] John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York, NY: Macmillan, 1916), 1-4.

[11] Dana Kendall, *Sociology In Our Times, Ninth Edition.* (Boston, MA: Wadsworth Publishing, 2012).

[12] Timothy Halliday, *Animal Behavior* (Norman, OK: University of Oklahoma Press, 1994).

[13] Albert Bandura and Richard H. Walters *Social Learning and Personality Development* (New York, NY: Holt, Rinehart and Winston, 1964).

but in the absence of written texts, oral traditions became central in the earliest prehistoric societies.[14] In the Lower Paleolithic period (i.e., 3.3 million BCE to 300,000 BCE based on radiocarbon dating, a method for which Willard Libby received the Nobel Prize), the prehistoric archeological industry passed down the practice of using stone tools (i.e., from 2.6 million BCE to 1.7 million BCE).[15] These Mode 1 tools were originally termed *Oldowan* following their discovery in 1931 by archeologist Louis Leakey and paleontologist Hans Gottfried Reck, who uncovered them at the Tanzanian Olduvai Gorge. More advanced Mode 2, *Acheulean*, tools followed.[16]

"Prehistoric art", by definition, includes all artistic creations prior to the age of literacy marked by the development of record keeping and writing methods. Art works created by the literate cultures that followed were deemed "ancient art".[17] Other than Antarctica, by 20,000 BCE, humans had established themselves on every continent. The earliest settlements occurred in Africa and

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[14] Walter J. Ong *Orality and Literacy* (New York, NY: Routledge, 2013), 92-93.
[15] R. Cornog and Willard Libby "Production of Radioactive Hydrogen by Neutron Bombardment of Baron and Nitrogen," *Physical Review* 59, 12 (June 15, 1941): 1046.
[16] Sir John Grahame Douglas *World Prehistory: A New Outline* (Cambridge, UK: Cambridge University Press, 1969); Louis S. B. Leakey *The Stone Age Culture of Kenya* (Cambridge, UK: Cambridge University Press, 1931); Louis S. B. Leakey *The Stone Age Culture of Kenya Olduvai Gorge: A Report on the Evolution of the Hand-Axe Culture in Beds I-IV* (Cambridge, UK: Cambridge University Press, 1951); Mary Leakey "A Summary and Discussion of the Archaeological Evidence from Bed I and Bed II, Olduvai Gorge, Tanzania," *Human Origins* (1971): 431-60.
[17] T. Douglas Price and Gary M. Feinman *Images of the Past, 5th Edition* (Boston. MA: McGraw-Hill, 2006); Chris Scarre (Editor) *The Human Past: World Prehistory & the Development of Human Societies*. (London, UK: Thames & Hudson, 2005).

their art included both animal and geometric designs that were painted on (or engraved in) rocks. The oldest discovered artistic representations by humans, to date, appear to have used ground red ocher, dated to about 100,000 BCE, to make African rock art.[18] Aesthetic appetites developed in *Homo sapiens* throughout the Middle Paleolithic period (i.e., 100,000 BCE to 48,000 BCE).

Neanderthal remained on the Iberian Peninsula until 37,000 BCE (i.e., five thousand years after being supplanted by modern human beings across most of Europe). Findings from Grotte du Renne France, and Malaga Spain including decorated shells, stones and cave paintings (i.e., radiocarbon dated to 41,500 BCE) suggest Neanderthal had the capacity to create art.[19] These claims did not go undisputed and one theme of this dissertation involves how academic disputes are resolved, sometimes with new information, and other times they just die out because the proponents no longer spearhead the process for various reasons. Three major articles illustrated the Neanderthal conflict. Initially, an Oxford scientist, Thomas Higham, argued the layers were scrambled, mixing older remains of Neanderthal with younger remains of *Homo sapiens*. If that was correct, the relics adjacent to the revealing skull fragment might not have

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[18] Geoffrey Blundell (Editor) *Origins: The Story of the Emergence of Humans and Humanity in Africa* (Cape Town, SA: Double Storey, 2006); David Coulson and Alec Campbell *African Rock Art: Paintings and Engravings on Stone* (New York: Abrams, 2001); Peter Garlake *Early Art and Architecture of Africa* (Oxford, UK: Oxford University Press, 2002); Jean-Loïc Le Quellec *Rock Art in Africa: Mythology and Legend* (Paris, FR: Flammarion, 2004); J. David Lewis-Williams *Images of Mystery: Rock Art of the Drakensberg* (Cape Town, SA: Double Storey, 2003).
[19] Fergal MacErlean "First Neanderthal Cave Painting Discovered in Spain," *New Scientist.* (2012, February 10th).

belonged to Neanderthal at all. João Zilhão, an archaeologist at the University of Barcelona, Catalan Institution for Research and Advanced Studies, responded detailing how artefacts of different types were distributed, and concluding that the layers were undisturbed and that the Neanderthal link could be trusted. Jean-Jacques Hublin, a researcher at the Max Planck Institute for Evolutionary Anthropology in Leipzig presented further support for João Zilhão's claim. However, while acknowledging the evidence, he underscored the notion that Neanderthal must have encounter modern humans by the date in question and learned from them, rather than developing an artistic sense independently. Either way, whether our distant cousins developed an aesthetic independent of us, and passed it down their family tree, or we taught them, some sort of education was involved.[20]

For *Homo sapiens* relatively advanced art relics appeared during the Upper Paleolithic period, as evidenced by the discovery of the Aurignacian

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[20] Jean-Jacques Hublin, Fred Spoor, Marc Braun, Franz Zonneveld and Silvana Condemi "A Late Neanderthal Associated with Upper Palaeolithic Artefacts" *Nature* 381 (1996): 224–226; Thomas Higham, Roger Jacobi, M. Julien, Francine Davis, L. Basell, R. Wood, William Davies and C. B. Ramsey "Chronology of the Grotte du Renne (France) and Implications for the Context of Ornaments and Human Remains within the Châtelperronian" *Proceedings of the National Academy of Sciences* 107 (2010): 20234–20239; João Zilhão, Diego E. Angelucci, Ernestina Badal-García, Francesco d'Errico, Floréal Daniel, Laure Dayet, Katerina Douka, T. Higham, M. J. Martínez-Sánchez, R. Montes-Bernárdez and S. Murcia-Mascarós "Symbolic Use of Marine Shells and Mineral Pigments by Iberian Neandertals." *Proceedings of the National Academy of Sciences* 107 (2010): 1023–1028.

archaeological culture.[21] The earliest known piece of figurative art dates back about 40,000 years. It is the *Venus of Hohle Fels* figurine, which was made from an ivory mammoth tusk and discovered in Baden-Württemberg, Germany. As of 2011 the sculpture was still housed at Eberhard Karls Universität Tübingen for research purposes.[22]

Australian Aboriginal rock art dates back as far as 40,000 BCE, while Paleolithic art is exquisitely exemplified by cave paintings discovered in the Chauvet caves (30,000 BCE), and Lascaux caves (15,000 BCE) of France. Other examples have been found across Europe (i.e., especially in Spain), and also in Asia.[23]

Examples of carved female figurine sculpture (20,000 BCE) have been discovered in East and Central Asia.[24] Long before the glorious art of the dynastic period in Egypt, there were also settlements with examples of prehistoric art (17,000 BCE). Along the Levant area of the Mediterranean (10,000 BCE) examples of jewelry made of shells and bone in addition to sculpture were

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[21] P. Mellars, "Archeology and the Dispersal of Modern Humans in Europe: Deconstructing the Aurignacian," *Evolutionary Anthropology* 15 (2006): 167–182.

[22] Personal experience while living in Germany 2008-2014; and Otto Benz, *CDU und Freie Wähler wollen einen Steinzeitpark* (July 7, 2011); Nicholas J. Conard, "Palaeolithic Ivory Sculptures from Southwestern Germany and the Origins of Figurative Art", *Nature* 426 (2003): 830-832; Horst W. Janson, *History of Art* (Englewood Cliffs, NJ: Prentice Hall, 2004).

[23] Price and Feinman, *op. cit.* (2006); Chris Scarre, *op. cit.* (2005); Fergal, *op. cit.* (2012).

[24] Derev′anko, *et al.*, *op. cit.* (1998); Alexander Marshack *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol and Notation* (Mount Kisco, NY: Moyer Bell, 1991).

uncovered.[25]   South Asian art that illustrates the areas' wildlife and hunting

practices in the Mesolithic period (9,000 BCE) can be found in India.[26]   Also

dating back to about 9,000 BCE, but in North America, sites reveal colorfully

designed hunting tools that were clearly crafted for their aesthetic appeal in

addition to their utility.[27]   From the same time, prehistoric art has been found in

Patagonia, South America and also Chile.[28]

So as not to minimize the aesthetic value of music, it should be noted that

prehistoric instruments have also been discovered.   For example, well-preserved

bone flutes dating back to 8,000 BCE in China that can still play a tune today.[29]

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[25] Price and Feinman, *op. cit.* (2006); Chris Scarre, *op. cit.* (2005); Ian Shaw (Editor) *The Oxford History of Ancient Egypt* (Oxford, UK: Oxford University Press, 2000).

[26] Bridget Allchin and Raymond Allchin *The Rise of Civilization in India and Pakistan* (Cambridge, UK: Cambridge University Press, 1982); Robert Brooks and Vishnu S. Wakankar *Stone Age Painting in India* (New Haven, CT: Yale University Press, 1976); K. K. Chakravarty (Editor) *Rock-Art of India.* (New Delhi, IN: Arnold-Heinemann, 1984); Michel Lorblanchet (Editor) *Rock Art in the Old World* (New Delhi, IN: Indira Gandhi National Centre for the Arts, 1992); Erwin Neumayer *Prehistoric Indian Rock Paintings* (Oxford, UK: Oxford University Press, 1983).

[27] Anthony T. Boldurian and John L. Cotter. *Clovis Revisited: New Perspectives on Paleo-Indian Adaptations from Blackwater Draw, New Mexico.* (Philadelphia, PA: University of Pennsylvania Museum, 1999); Thomas D. Dillehay *The Settlement of the Americas: A New Prehistory* (New York, NY: Basic Books, 2000); James E. Dixon *Bones, Boats, & Bison: Archaeology and the First Colonization of Western North America* (Albuquerque, NM: University of New Mexico Press, 1999); Olga Soffer and N. D. Praslov (Editors) *From Kostenki to Clovis: Upper Paleolithic Paleo-Indian Adaptations* (New York, NY: Plenum Press, 1993).

[28] Dillehay, *ibid.* (2000); Craig Morris and Adriana von Hagen *The Inka Empire and Its Andean Origins* (New York, NY: Abbeville Press, 1993); Randall K. White *Dark Caves, Bright Visions: Life in Ice Age Europe* (New York, NY: American Museum of Natural History, 1986).

[29] Kwang-chih Chang *The Archaeology of Ancient China, 4th Edition* (New Haven, CT: Yale University Press, 1986); David N. Keightley (Editor) *The*

Passing down the skills to create tools, art and music during prehistoric periods, logically involved the earliest forms of education, most likely within families and communities of people. As we turn to ancient history, with its written records, the history of education becomes clearer.

Ancient History and the Written Record

Few would argue against the notion that a primary goal of education is to improve individuals making them better people, though many may dispute the legitimacy of certain lessons in pursuit of that goal, and question to what end, and by what means, one measures improvement. Throughout the ages, a conflict has waged on. Is education for the betterment of each individual, or for a larger purpose (i.e., God or the state)? Although most emphasize one goal over the other, the two opposing viewpoints rarely exclude the other entirely.

Early forms of academic education, such as, training scribes to write for and read to illiterate rulers, appear to have served the state, though the position doubtlessly provided certain benefits to the scribes, as well. The cuneiform system of writing, developed by the Sumerians was in use by the end of the fourth millennium BCE until the first century CE. It was used for a variety of languages including the Semitic tongues of Mesopotamia. By the middle of the third millennium BCE the technical skills of the scribes increased moving away from mere economic records to also include literary composition, letters, and

Origins of Chinese Civilization (Berkeley, CA: University of California Press, 1983).

inscriptions of historical dedication including records of the names and exploits of kings during the Early Dynastic period. The profession was often passed down within families and it was not the sole territory of men. Enheduanna, the daughter of Sargon of Agade, notably authored many hymns and laments. As highly trained specialists and bureaucrats, scribes maintained a certain degree of responsibility and privilege. Many of the writings started with instructions to the reader, for example, "Say to my Lord the King", indicating the ruler was unable to read.[30] This is not surprising, as many believed leadership entailed different abilities than those of bureaucrats.[31]

Developments in Pre-Archaic and Ancient Greek Culture

The first advanced civilization on the mainland of Greece was Mycenaean (1600 BCE – 1100 BCE). They developed urban infrastructure with advances in engineering, architecture, and the arts. Their trade routes grew throughout the Mediterranean and Mycenaean military made great advancements. The civilization was well organized under the control of palace states, and most impressively developed their own syllabic writing system, the *Linear B*, which provided records of their culture, religion and language. Their oldest writings date to 1460 BCE. Predating the subsequent Greek alphabet, Greek Mycenaean

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[30] Harriet Crawford *Sumer and the Sumerians* (Cambridge, UK: Cambridge University Press, 1991), 153; Christopher B. F. Walker *Cuneiform* (Berkley, CA: University of California Press, 1987).

[31] The practice is not as dated as it may appear give that prior to personal computers, many professionals could not type, and staffed secretaries for this purpose, as a matter of course.

script was deciphered in the mid-twentieth century and a young teenager, Michael

Ventris, set out to determine its pronunciation, which he accomplished in

collaboration with other scholars. Though not written in *Linear B* the setting of

the Ancient Greek epic cycle of poetry, illuminating the Trojan War, depicts this

period with stories doubtless passed down via oral history and recorded

subsequently.[32]

As the Bronze Age ended and the Iron Age began, there came the fall of

the Mycenaean civilization and the loss of written records; thus, the reasons for

the decline remain unclear. Some scholars, based on evidence of the Dorian

culture spreading at that time, hypothesize a Dorian invasion from Crete. Others

hypothesize natural disasters as the cause of the downfall, and an emergence into

the *"Greek Dark Ages"* (1100 BCE – 800 BCE). The dispute has not been

resolved, but we can speculate that education was informal and familial during

this period.[33]

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[32] Jonathan S. Burgess *The Tradition of the Trojan War in Homer and the Epic Cycle* (Baltimore, MD: Johns Hopkins University Press, 2001); Rhys Carpenter "Linear B" *Phoenix* 11, no. 2 (1957): 47-62; John Chadwick *The Decipherment of Linear B* (Cambridge, UK: Cambridge University Press, 1958); John Chadwick *The Mycenaean World* (Cambridge, UK: Cambridge University Press, 1976); Malcolm Davies *The Greek Epic Cycle* (London, UK: Bristol, 1989); N. Fields *Mycenaean Citadels c. 1350-1200 BC. Vol. 22.* (Oxford, UK: Osprey Publishing, 2004); James T. Hooker *Linear B: An Introduction* (London, UK: Bristol Classical Press, 1980); Andrew Robinson *The Man Who Deciphered Linear B: The Story of Michael Ventris* (New York, NY: Thames & Hudson, 2002); Andrew Robinson *Writing and Script: A Very Short* Introduction Vol. 208 (Oxford, UK: Oxford University Press, 2009); Michael Ventris "Introducing the Minoan Language" *American Journal of Archaeology* 44, no. 4 (1940): 494-520.
[33] Julian Cope *The Modern Antiquarian: A Pre-Millennial Odyssey through Megalithic Britain: Including a Gazetteer To Over 300 Prehistoric Sites.* (London, UK: Thorsons Publishers, 1998); Ian Morris "Greece: Dark Age

During the Archaic period of Greece, from the formation of the ancient Olympic Games in Olympia (eighth century BCE) to the middle of the Persian Wars, when Greece repelled the second Persian invasion, the Greek culture developed with advances in agriculture, politics (e.g., urbanization and development of the polis), international affairs (e.g., colonization), athletes, warfare (e.g., hoplite armour, spears and shields), art (e.g., red-figure pottery and life-size sculpture) and economics (e.g., development of coinage and trade around the Agean Sea). There is extensive archaeological evidence in addition to written records to rely on. There are also the writings of Herodotus (484 BCE – 425 BCE), though he was only born at the very close of the period. Herodotus estimated Homer lived around eighth century BCE when he wrote his epic poems, the *Iliad* and the *Odyssey*, still considered foundations of the modern Western canon (i.e., the art, music, and books judged by scholars to be the most influential in Western culture today).[34] Plato referred to Homer as an educational leader, the

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Greece" in Brian M. Fagan *The Oxford Companion to Archaeology* (Oxford, UK: Oxford University Press, 1996).

[34] Mortimer J. Adler (Editor) *The Great Ideas: A Lexicon of Western Thought* (Norwalk, CT: Easton Press Collector's Edition, 2001); Harold Bloom *The Western Canon: The Books and School of the Ages* (New York, NY: Harcourt Brace & Company, 1994); Charles W. Eliot (Editor) *The Harvard Classics, Vol. 1-51* (New York, NY: P. F. Collier & Son Limited Edition, 1910); Herodotus, *op. cit.* (1920); Homer *The Odyssey of Homer* Translated from the Greek by Alexander Pope (Norwalk, CT: Easton Press Collector's Edition, 1978); Homer *The Illiad of Homer* Translated from the Greek by Alexander Pope (Norwalk, CT: Easton Press Collector's Edition, 1979); Robert Maynard Hutchins and Mortimer J. Adler (Editors) *The Great Books of the Western World, Vol. 1-54* (Franklin Center, PA: Franklin Library Collector's Edition, 1976); Peter Hunt "Military Forces," in Phillip Sabin, Hans van Wees, and Michael Whitby (Editors) *The Cambridge History of Greek and Roman Warfare: Vol. 1, Greece, the Hellenic World and the Rise of Rome* (Cambridge, UK: Cambridge University Press,

first teacher and educator of Greece.[35]   The complete works of Homer that

survived are mostly oral addresses and persuasive arguments, underscoring the

importance of oral history. Although there are unresolved disputes about whether

Homer's depictions were real, or whether he was really only one individual

during the *"Greek Dark Ages"*, analyses of the vocabulary and structure of

Homer's *Illiad* and *Odyssey* definitively demonstrate how it resembles the work

of singer-poets with entire verses repeated, among other indications.   There is

almost unanimous agreement among scholars that the poems were dependent

upon, and passed down in the oral traditions, through several centuries in which

the use of written text was apparently lost from civilization, to the eventual

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2007); Jeffrey M. Hurwit "The Human Figure in Early Greek Sculpture and Vase Painting," in H.A. Shapiro *The Cambridge Companion to Archaic Greece* (Cambridge, UK: Cambridge University Press, 2007); L. H. Jeffery "Greek Alphabetic Writing," in John Boardman (Editor) *The Cambridge Ancient History, Vol. 3, Part 1: The Prehistory of the Balkans and the Middle East, 2nd Edition* (Cambridge, UK: Cambridge University Press, 1982); Koray Konuk "Asia Minor to the Ionian Revolt," in William E. Metcalfe *The Oxford Handbook of Greek and Roman Coinage* (Oxford, UK: Oxford University Press, 2012), 43–60; Glenn Markoe "The Emergence of Orientalizing in Greek Art: Some Observations on the Interchange between Greeks and Phoenicians in the 8th and 7th Centuries B.C," *Bulletin of the American Schools of Oriental Research* (1996): 47-67; H. A. Shapiro "Introduction," in H. A. Shapiro (Editor) *The Cambridge Companion to Archaic Greece* (Cambridge, UK: Cambridge University Press, 2007); Anthony M. Snodgrass *Archaic Greece: The Age of Experiment, Vol. 505* (Berkley, CA: University of California Press, 1980); Hans van Wees "The Economy," in Kurt Raaflaub and Hans van Wees (Editors) *A Companion to Archaic Greece*, *Vol. 194.* (New York, NY: John Wiley & Sons, 2012), 444-67.

[35] Plato *The Republic of Plato*, Edited by A. Bloom (New York, NY: Perseus Books, 1968); Plato *Complete Works, Vol. 1-4* John M. Cooper (Editor) Revised Oxford Translation from the Greek and Edited by Jonathan Barnes (Norwalk, CT: Easton Press Collector's Edition, 2001); Yun Lee Too *The Idea of the Library in the Ancient World* (Oxford, UK: Oxford University Press, 2010); Eduard Zeller *Plato and the Older Academy* Translated from the German by Sarah Francis Alleyne and Alfred Goodwin (London, UK: Longmans, Green and Co., 1876).

written record that has been studied in such great detail.[36] Furthermore, the

aristocratic education in Homeric style was disseminated beyond Greece.   His

works made up the majority of all Greek literary papyrus discovered in Egypt, and

is one of the oldest topics in scholarly education.[37]   Aristotle praised and

commented on Homer's unique epic poetry style focusing on his use of unified

themes.[38]

The Classical Age (510 BCE – 325 BCE), otherwise known as the

Hellenic period, included the Persian Empire's annexation of Greece and its

subsequent independence. There were various cultural advances. For example, in

literature Aeschylus wrote a tragedy, *The Persians*, based on current events of his

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[36] Erich Auerbach *Mimesis: The Representation of Reality in Western Literature, Fiftieth Anniversary Edition* Translated from the German by Willard Trask (Princeton, NJ: Princeton University Press, 2003); Robert Fowler (Editor) *The Cambridge Companion to Homer* (Cambridge, UK: Cambridge University Press, 2004); Joachim Latacz *Troy and Homer: Towards a Solution of an Old Mystery* (Oxford, UK: Oxford University Press, 2004); Michael M. Nikoletseas *The Iliad, Twenty Centuries of Translation: A Critical View* (Seattle, MA: Create Space Independent Publishers, 2012); Milman Parry and Adam Parry *The Making of Homeric Verse: The Collected Papers of Milman Parry* (Oxford, UK: Oxford University Press, 1987); L. D. Reynolds and N. G. Wilson *Scribes and Scholars: A Guide to the Transmission of Greek & Latin Literature, Third Edition* (Oxford, UK: Oxford University Press, 1968).

[37] Carl Darling Bück *The Greek Dialects* (Chicago, IL: University of Chicago Press, 1955); Joachim Latacz *Homer: His Art and His World.* (Ann Arbor, MI: University of Michigan Press, 1996); Moses Finely *The World of Odysseus* (New York, NY: New York Review of Books, 1954); Jasper Griffin "The Speeches," in Fowler, Robert. *Cambridge Companion to Homer* (Cambridge, UK: Cambridge University Press, 2004); René Nünlist "Homer as a Blueprint for Speechwriters: Eustathius' Commentaries and Rhetoric," *Greek Roman, and Byzantine Studies* 52 (2012): 493-509.

[38] Aristotle *Poetics* Translated from the Greek by Stephen Halliwell (Chicago, IL: University of Chicago Press, 1986); Aristotle *Complete Works, Vol. 1-5* John M. Cooper (Editor) Revised Oxford Translation from the Greek and Edited by Jonathan Barnes (Norwalk, CT: Easton Press Collector's Edition, 2001).

time (i.e., the second invasion of Greece in 480 BCE), and the first theatrical trilogy, *Oresteeia*, which won first place at the Dionysia Festival theatre competition in Athens (458 BCE). Euripides wrote over 90 plays that have survived. The Academy, was founded by Plato in 387 BCE near the end of the Hellenic period, and is considered the first institution of higher learning in the western world.[39] After Plato's death in 347 BCE, most scholars turned to Aristotle, Theophrastus and others at the *Lyceum*, and gave little attention to Xenocrates, Speusippus, Polemo, and those who continued at the Old Academy. In contrast, the position, herein, is that those who remained set the agenda for Platonism to spread, and carry-on into Middle Platonism, and Neoplatonism.[40]

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[39] Aeschyus *Oresteia* Michael Ayrton (Illustrator) Translated from the Greek by E. D. A. Morshead (Norwalk, CT: Easton Press Collector's Edition, 1979); Aeschyus *Persians, Seven against Thebes, Suppliants, and Prometheus Bound* Translated from the Greek by Alan H. Sommerstein (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 2009); Brian Todd Carey *Warfare in the Ancient World* (Yorkshire, UK: Pen & Sword Ltd., 2005); Harold Fredrik Cherniss *The Riddle of the Early Academy* (Berkley, CA: University of California Press, 1945); Euripides *Medea, Hippolytus, and The Bacchae* Translated from the Greek by Philip Vellacott (Norwalk, CT: Easton Press Collecor's Edition, 1980); Thomas Martin *Ancient Greece* (New Haven, CT: Yale University Press, 1996); John Dillon *The Heirs of Plato: A Study of the Old Academy, 347-274 BC* (Oxford, UK: Clarendon Press, 2003); George Grote, *A History of Greece* (Cambridge, UK: Cambridge University Press, 2010); Erestain Ortiz and Montano Guillermo *Art: Perception & Appreciation* (Makati, PH: Goodwill Trading Co., 1976); Suzanne Saïd "Aeschylean Tragedy," in *A Companion to Greek Tragedy* (Oxford, UK: Blackwell Publishing, 2006); Richard E. Wycherley "Peripatos: The Athenian Philosophical Scene—I," *Greece and Rome (Second Series)* 8, no. 2 (1961): 152-163; Richard E. Wycherley "Peripatos: The Athenian Philosophical Scene—II," *Greece and Rome (Second Series)* 9, no. 1 (1962): 152-163; Zeller, *op. cit.* (1876).
[40] Pan Aristophron *Plato's Academy: The Birth of the Idea of It's Rediscovery* (Oxford, UK: Oxford University Press, 1934); John Dillon *The Middle Platonists 80 BD to AD 220* (Ithaca, NY: Cornell University Press, 1977); Dillon, *ibid.* (2003); David Fowler *The Mathematics of Plato's Academy: A New*

Old Comedy also advanced when Aristophanes wrote *Lysistrata*, and *The Clouds*. There is no better example of the controversy between "Old-Education and the Think-Academy", than this latter comedy. For the benefit of a prospective young student, Socrates staged a debate with an elderly soldier, contrasting the advantages of the new Socratic method with Aristophanic conservativism. The soldier claimed there was a time when children were obedient desiring to someday fight and sacrifice their life for their country, "when teachers would teach that grand old song *'Athena, Glorious Sacker of Cities'*—not the strange new songs of the present day. Study with me, he boom[ed], and you will look like a real man—broad chest, small toungue, firm buttocks, small genitals". Apparently, this last characteristic was symbolic of manly self-control in the Classic Age. In contrast, Socrates argued that the youth would become a critical and pragmatic thinker about nature, moral norms and their social origins, in addition to being able to develop and utilize sound arguments, independent of authority. The old soldier protested that the new approach to learning would undermine manly self-restraint and cause youth to become obsessed with all

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Reconstruction, Second Edition (Oxford, UK: Oxford University Press, 2003); Diogenes Laertius "The Academics: Speusippus," *Lives of Eminent Philosophers, Vol. 1-2, Books 1-10* Translated from the Greek by Robert D. Hicks (Cambridge, MA: Harvard University Press Loeb Classical Library, 1925); Diogenes Laertius "The Academics: Xenocrates," *Lives of Eminent Philosophers, Vol. 1-2, Books 1-10* Translated from the Greek by Robert D. Hicks (Cambridge, MA: Harvard University Press Loeb Classical Library, 1925); Diogenes Laertius "The Academics: Polermo," *Lives of Eminent Philosophers, Vol. 1-2* Translated from the Greek by Robert D. Hicks (Cambridge, MA: Harvard University Press Loeb Classical Library, 1925); Harold Tarrant *From the Old Academy to Later Neo-Platonism: Studies in the History of Platonic Thought* (Farnham, UK: Ashgate Publishing, 2011); Zeller, *ibid.* (1876).

things sexual and rebel against authority. Reportedly, after the staged debate the young man returned home and challenged his father who subsequently attempted to resolve the dispute by burning down the Think-Academy. Based on Martha C. Nussbaum's research, it was unclear whether the son was in the academy when his father torched it. The Greek educational system will be outlined in greater detail below, following further discussion of the different historical periods.[41]

With the death of Alexander the Great (356 BCE – 323 BCE), the Hellenistic period was ushered in. This is not to be confused with the earlier Hellenic period when Greeks were not heavily influenced by outside sources. It was a shift from the relatively isolated ethnic city-states, to a time when the culture was dominated by vast monarchies and a diversity of Greek speaking individuals from various ethnic backgrounds. Greek culture advanced with developments in art, music, theater, New Comedy (e.g., Diphilus, Philemon, and Menander, all subsequently adapted for the Roman stage by Plautus), literature and poetry (e.g. the Alexandrian influence), philosophy (e.g., Epicurean, and Stoic), religion (e.g. Greek Old Testament translation from the Hebrew),

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[41] Aristophanes *Lysistrata* Pablo Picasso (Illustrator), (Norwalk, CT: Easton Press Collector's Edition, 1983); Aristophanes *Clouds. Wasps. Peace* Translated from the Greek by Jeffrey Henderson (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1998); Marcus Aurelius *Meditation,* Translated from the Greek by George Long in *Lucretius, Epictetus, and Marcus Aurelius* (Franklin Center, PA: The Franklin Library, Limited Collector's Edition, 1981), 403-509; Epictetus *Discourses,* Translated from the Greek by George Long in *Lucretius, Epictetus, and Marcus Aurelius* (Franklin Center, PA: The Franklin Library, Limited Collector's Edition, 1981), 165-402; Martha C. Nussbaum *Cultivating Humanity: A Classical Defense of Reform in Liberal Education* (Chicago, IL: University of Chicago Press, 1997).

mathematics (e.g., Archimedes, and Euclid), science, exploration, trade, economics, politics, law, architecture, engineering, and medicine.[42]

With the Battle of Actium in September of 31 BCE, in which Octavian's smaller more agile ships overtook the combined naval forces of Cleopatra and Mark Antony, the Roman Republic started to come to an end, and the Roman Empire was conceived. One year later, the Hellenistic Kingdom in Egypt was overthrown. It had been ruled by the Ptolemaic dynasty that spoke Greek instead of Egyptian up until Cleopatra's reign. With her death, Egypt became a province of Roman. The birth of the Empire occurred in 27 BCE after the senate granted Octavian expansive powers under the title Augustus, First Emperor of Rome. This will be discussed further as we turn to Egyptian and Roman history. What is important here is that it also marked the end of the Hellenistic period.[43]

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[42] Alfred John Church *Stories from the Greek Comedians: Aristophanes, Philemon, Diphilus, Menander, Apollodorus* (London, UK: Seeley, 1893); Menander. *Vol. 1-3* Translated from the Greek by W. G. Arnott (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 2000); E. J. Dijsterhuis *Archimedes* Translated from the Greek by C. Dikshoorn (Princeton, NJ: Princeton University Press, 1987); George Grote, *A History of Greece* (Cambridge, UK: Cambridge University Press, 2010); Thomas L. Heath *A History of Greek Mathematics, Vol. 1-2* (New York, NY: Dover Publications, 1981); Brad Inwood and Lloyd P. Gerson (Translators) *The Stoics Reader: Selected Writings and Testimonia* (Indianapolis, IN: Hackett Publishing, 2008); Howard Jones *The Epicurean Tradition* (London, UK: Routledge, 2013); M. Leigh *Comedy and the Rise of Rome* (Oxford, UK: Oxford University Press, 2004); Plautus *Complete in Five Volumes* Translated from the Latin by Paul Nixon (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1952); Emanuel Tov *The Greek and Hebrew Bible: Collected Essays on the Septuagint, Vol. 7* (Boston, MA: Brill, 1999).

[43] Michel M. Austin *The Hellenistic World from Alexander to the Roman Conquest: A Selection of Ancient Sources in Translation* (Cambridge, UK: Cambridge University Press, 1981); Stanley Mayer Burstein *The Reign of Cleopatra* (Westport, CT: Greenwood Publishing Group, 2004); Paul K. Davis

Education in Ancient Greece

As a result of Plato's influences and the contribution of Isocrate to education, in addition to those of the sophists who, as traveling teachers, used rhetoric and philosophy to teach moral virtue, Greek education became more accessible for freemen during this period. Plutarch's *Moralia* starts with the education of children, and how a young man should study poetry, listen to lectures, distinguish flatteres from friend, and become aware of his own progress in the development of virtue. Both formal and informal forms of education were available in Ancient Greece, with public schools, private tutors for hire, unpaid teachers, and informal non-public situations. Athenian education started at the elementary level and also included training at gymnasium in preparation for public games of competition. Secondary school followed for the wealthy teenagers and included studies in biology, science, chemistry, rhetoric, geometry, and astronomy. As we know from Aristophanes, throughout educational training, musical skills (e.g., singing, dancing, and playing the flute, lyre or harp) were stressed in Athens. At age eighteen, boys could petition for ephebic education, starting with military training and service followed by more advanced academics. The fathers with less means were encouraged to provide their sons vocational training in a trade. Also considered a Greek education, but with a very different emphasis, the Ancient Greek Spartains stressed physical and military training

100 Decisive Battles from Ancient Times to the Present: The World's Major Battles and How They Shaped History (Oxford, UK: Oxford University Press, 1999); Durant and Durant, *op. cit.* (1961); Peter Marshall Fraser *Ptolemaic Alexandria, Vol. 3* (Oxford, UK: Clarendon Press, 1972); Rollin, *op. cit.* (1775); Arthur Weigall *The Life and Times of Cleopatra* (London, UK: Putnam, 1923).

over reading, writing and arithmetic. At the age of seven, boys left their families and moved into barracks and were taught discipline and physical strength through strenuous exercise by battle-hardened soldiers. After a half-decade, those who progressed moved on to harsher training in strength and endurance. Music and dance were also part of the training, but for different ends, as it was believed these skills aided with military maneuvers, which were practiced including the covert hunt for, and killing of, a slave. If caught in the act the student would be disciplined for being discovered; if successful he received the title of *ephebe,* as one who could utilize his aggressive instincts, relying on one's senses, to hunt in a covert manner to survive. This was at age eighteen. The next stage in the education of a Spartan soldier involved more practice in staged battles with actual weapons, hunting and gymnastics. Spartan women also received formal educational training in sports, song, music and dance until the age of eighteen.[44]

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[44] Lesley Adkins and Roy A. Adkins *Handbook to Life in Ancient Greece* (Oxford, UK: Oxford University Press, USA, 1997); Aristophanes, *op. cit.* (1983, 1998); Glanville Downey "Ancient Education," *The Classical Journal* 52, no.8 (1957): 337-345; Isocrates *Vol. 1-3* Translated from the Greek by George Norlin (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1928-54); Henri Irénée Marrou *A History of Education in Antiquity* (Madison WI: University of Wisconsin Press, 1956); Plutarch *The Rise and Fall of Athens: Nine Greek Lives* Translated from the Greek by I. Scott-Kilvert (New York, NY: Penguin Classics, 1960); Plutarch *Lives, Vol. 1-14.* Translated from the Greek by Bernadotte Perrin *et al*. (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1914-67); Plutarch *Moralia, Vol. 1-16.* Translated from the Greek by Frank Cole Babbitt *et al*. (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1927-2004); Sarah B. Pomeroy *Spartan Women* (Oxford, UK: Oxford University Press, 2002); Gerald Proietti *Xenophon's Sparta: An Introduction* (Boston, MA: Brill, 1987); Thomas J. Sienkewicz *Ancient Greece, Vol. 1-2* (Hackensack, NJ: Salem Press, Inc., 2007); Katharine Mary Westaway "The Educational Theory of Plutarch," *Journal of Hellenic Studies* 43 (1923): 213.

Developments in Egyptian Culture

Egyptian history (3100 BCE – Present) can be broken into five eras, each with several distinct periods (i.e., Ancient Egypt, Classical Egypt, Middle Ages, Early Modern, and Modern). After Upper, and Lower Egypt were unified, the Early Dynastic Period began (3100 BCE – 2686 BCE). The Old, Middle and New Kingdoms followed with three Intermediate periods of decline, disarray and instability ending with the Late Period when Egyptian culture, society and the arts were strong, but rule alternated with Libyans and Persians. The Acheamenid Persian occupation ended with Alexander the Great's conquests that established the Hellenistic, Ptolemaic Kingdom (i.e., from which Cleopatra descended) one of the largest empires in ancient times stretching from Greece to India. It should be noted that Aristotle was Alexander's teacher when he was a teenager. The support of Alexander's father enabled Aristotle to establish his *Lyceum* separate from the Old Academy. It also supplied him with needed books to create a library at the school. Alexander succeeded his father to the throne at age twenty when his conquests began. Accounts of his scribe's chronicles provide valued material concerning the regions through which he marched his troops. He also acquired an abundance of animal and plant specimens for the creation of the first zoo and botanical garden that contributed to Aristotle's research and the original research that came out of the *Lyceum* including zoology, botany, chemistry, meteorology, astronomy and other sciences. It was a time when Aristotle had shifted from Platonism to empiricism and the notion that knowledge was based on perceptions that could be empirically studied. Students at the *Lyceum* were assigned science

and history projects and were rotated through a leadership position in the administration of the school based on regular elections. The Roman and Byzantine period in Egypt followed the death of Cleopatra.[45]

Greek Education in Egypt

During the Hellenistic and Roman periods *The Alexandrian School* was a shared title for certain propensities in literature, medicine, philosophy and sciences that came out of the cultural heart of Hellenistic Alexandria, Egypt. With its amalgamation of multiculturalism, including Oriental and Greek influences, and its financial resources, vast amounts of scholarly work were amassed in the Library of Alexandria.[46]

Education in Ancient Persia, India, and East Asia

The Sassanid Empire, an adversary to the Roman-Byzantine Empire, lasted from 224 CE to 651 CE. At its peak, the empire included current day

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[45] Jonathan Barnes *The Cambridge Companion to Aristotle* (Cambridge, UK: Cambridge University Press, 1995); Robin Lane Fox *Alexander the Great* (London, UK: The Folio Society Collector's Edition, 2001); J. F. C. Fuller *The Generalship of Alexander the Great* (Norwalk, CT: Easton Press Collector's Edition, 1990); David C. Lindberg *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to AD 1450* (Chicago, IL: University of Chicago Press, 2010); Maspero, *et al., op. cit.* (1903-06); Rollin, *op. cit.* (1775); Quintus Curtius Rufus *History of Alexander* Translated From the Latin by John Rolfe (Cambridge, MA: Harvard University, Loeb Classical Library Edition, 1971); Bertrand Russell *A History of Western Philosophy and Its Connection With Political and Social Circumstances from the Earliest Times to the Present Day* (London, UK: The Folio Society Collector's Edition, 2004); Shaw, *op. cit.* (2000).

[46] Joseph Walsh *Galen's Studies at the Alexandrian School* (London, UK: 1927).

Pakistan and Turkey, with the territory in between, and additional territories in Caucasus, Central Asia, Egypt, Israel, Jordan, Lebanon, Oman, United Arab Emirates, and Yemen. Under the control of the Sassanid Kings, the Academy of Gundishapur was founded in the third century CE. The Old Academy, had closed in 83 BCE, and was reopened as a Neo-Platonism center in 410 CE, but closed again in 529 CE. Many of the Greek philosophers and scholars had gone to the Academy of Gundishapur, but it was short lived, with most going to Byzantium shortly thereafter.[47]

Some might argue the new global network model of university education is not so new (e.g., The Mahavihara School in India had three campuses during the second century BCE). In the third century CE, Pushpagri was established as a school of higher education in India. In the fifth century CE, Nalanda was established as a Buddhist institution of higher learning (e.g., astronomy, fine arts, mathematics, medicine, politics, and war craft) and survived until the start of the thirteenth century. It maintained a 1 to 5 ratio of faculty to students with ten thousand students at its peak, many of who were from other lands. Takshashila was a Hindu institution of higher learning established in the fifth century (present day Pakistan). A first-hand Modern Era account of the cultural heritage, albeit, a foreigner's account, is detailed by A. Locher in his book of his adventures, *With*

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[47] Richard N. Frye *The Cambridge History of Iran, Vol. 4* (Cambridge, UK: Cambridge University Press, 1975); Elizabeth Jeffreys and Fiona K. Haarer (Editors) *Proceedings of the 21st International Congress of Byzantine Studies: London, 21-26 August, 2006. Vol. 1* (Farnham, UK: Ashgate Publishing, Ltd., 2006); Norman A. Stillman *The Jews of Arab Lands* (New York, NY: The Jewish Publication Society of America, 1979).

Star and Crescent: A Full and Authentic Account of a Recent Journey with a Caravan from Bombay to Constantinople, Finely Illustrated, during the time of Napoleon III. Some aspects of the trip suggest things have not changed significantly in the previous thousand years.[48]

During the Zhou Dynasty (1122 BCE – 256 BCE) students in China were required to learn the Six Arts (i.e., rites, music, archery, charioteering, calligraphy, and mathematics) and the followers of Confucius professed their importance. The Imperial Academy Taixue was founded in the year 3 CE. Its history was not without interruption and the Imperial University, founded in 1898 CE, is considered its continuation.[49]

Developments in Ancient Roman Culture

The historical and mythical writings of Livy, Cassius Dio, Plutarch, and Dionysius provide a glimpse within ancient Rome. The legend of *Rōmulus and Rĕmus*, of which Livy's account appears to be the earliest, depicted the formation of Rome, and was likely passed down in the oral tradition before a written record of it. Prior to conception, *Rōmulus and Rĕmus'* mother had been ordered to remain chaste and become a Priestess of Vesta by her brother, the King. When

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[48] Anant Sadashiv Altekar *Education in Ancient India*. (New Delhi, IN: Gyan Publishing House, 1934); A. Locher *With Star and Crescent: A Full and Authentic Account of a Recent Journey with a Caravan from Bombay to Constantinople, Finely Illustrated* (Philadelphia, PA: Aetna Publishing, 1888); H. Scharfe *Education in Ancient India. Vol. 2.* (Boston, MA: Brill, 2002).

[49] Arthur Cotterell *China: A History* (New York, NY: Random House, 2011); Jacques Gernet *A History of Chinese Civilisation, Vol. 1-2* Translated from the French by J. R. Foster and Charles Hartman (London, UK: The Folio Society Collector's Edition, 2002).

she gave birth to twins, fathered by the god of Mars, the King had them cast into

the Tiber River. They were miraculously saved, suckled by a she-wolf, feed by a

woodpecker and then raised by a shepherd family. When they grew older they

each had many followers and wanted to create a new city but could not agree on

the location, whereupon Rōmulus killed Rĕmus and founded Rome on the

Palatine Hill.[50]

The Roman Kingdom period (753 BCE – 509 BCE), started with

settlements on the hill along the river in Central Italy, and ended with an uprising

against Lucius Tarquinius Superbus, the last king of the period. Following

Rōmulus' legendary rule, the Roman people voted all subsequent kings into

power for the duration of their life, and they did not require military might for this

purpose. When a king would die, all power dissolved to the Senate tasked with

finding a new leader for the people to vote on. Of course, without written records

until after the Roman Kingdom transformed into a republic, the evidence remains

folklore in the oral tradition.[51]

An alternative legend also exists. Cassius Dio's account begins with

Aeneas' arrival in Italy, a character in both Homer's *Illiad* and Virgils' *Aeneid*

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[50] Cassius Dio *Roman History, Vol. 1-9, Books 1-80* Translated from the Greek by Earnest Cary (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1914-27); Dionysius of Halicarnassus *Roman Antiquities, Vol. 1-7, Books 1-20* Translated from the Greek by Earnest Carey (Cambridge, MA: Harvard University Press, Loeb Classical Library Editions, 1937-50); Livy, *op. cit.* (1919-22); Plutarch, *op. cit.* (1914- 26); Ariadne Staples *From Good Goddess to Vestal Virgins: Sex and Category in Roman Religion* (London, UK: Routledge, 1998).

[51] Dio, *op. cit.* (1914-27); Livy, *ibid.* (1919-22); Livy *The History of Early Rome* Raffaele Scorzelli (Illustrator) Translated from the Latin by Aubrey Sélincourt (Norwalk, CT: Easton Press Collector's Edition, 1978).

and other Greek and Roman mythologies. He was a Trojan hero who escaped the fall of Troy with his soldiers, had many exploits traveling the Mediterranean, including but not limited to an affair with Dido, the Queen of Carthage. After receiving a message from the gods Aeneas left under the darkness of night and found home in Rome in 753 BCE. Upon her discovery of his unannounced departure, Dido declared a curse, which according to legend, resulted in the Punic Wars between Carthage and Rome (264 BCE – 146 BCE).[52]

The Roman Republic (509 BCE – 27 BCE) shepherded in an era of expansionism. Starting in Central Italy and then covering the entire Italian peninsula, control was extended based on a combination of strategic alliances and conquests. During the second century BCE, the republic's control extended over southern France, northern Africa, and Spain. Just prior to the time of Christ, the Roman Republic's hegemony included the rest of France, Greece, and provinces east of the Mediterranean. In 59 BCE, Julius Caesar, Marcus Licinius Crassus, and Pompey the Great pulled together a ruling alliance called the *First Triumvirate* based on an agreement requiring all three to be aligned for any new legislation to be passed. The government lasted about six years until Crassus, in conflict with Pompey and without approval from the Senate invaded the Persian Arsacid Empire of Ancient Iran and Iraq, lost during the Battle of Carrhae (i.e., a town located in modern-day Turkey), and then was killed during contentious truce

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[52] F. Hadland Davis et al. *Myths of the Ancient World, Vol. 1-10* (Norwalk, CT: Easton Press, Collector's Edition, 1997); Dio, *ibid.* (1914-27); Homer, *op. cit.* (1979); Virgil *The Aeneid* Carlotta Petrina (Illustrator) Translated from the Latin by John Dryden (Norwalk, CT: Easton Press Collector's Edition, 1979).

negotiations. Several years later, tensions between Caesar and Pompey led to Caesar crossing the Rubicon in 49 BCE, initiating civil war and ending the alliance.[53]

Civil wars, conflicts, and internal strains led up to the assassination of Julius Caesar. Plutarch's accounts of the assassination plot remains factual and of great interest but a more dramatic and absorbing version with powerful linguistic energy can be found in Shakespeare's *The Tragedy of Julius Caesar*. Even though it is a play written much later and in a different culture, Shakespeare needed to remain close to the facts, given his audiences would have had prior access to the original story. Sir Thomas North's version was a most popular English schoolbook and depicted the lives of Caesar, Brutus, and Mark Antony as detailed by Plutarch. Some theatregoers may have even read the original Latin, depending on the liberal art education they receive but those aspects of this dissertation will be saved for later.[54]

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[53] Durant and Durant, *op. cit.* (1961); Harriet I. Flower *The Cambridge Companion to the Roman Republic* (Cambridge, UK: Cambridge University Press, 2004); Harriet I. Flower *Roman Republics* (Princeton, NJ: Princeton University Press, 2009); Adrian Goldsworthy *The Complete Roman Army*. (New York, NY: Thames & Hudson, 2003); Adrian Goldsworthy *Caesar: Life of a Colossus* (New Haven, CT: Yale University Press, 2008); T. Holland *Rubicon: The Last Years of the Roman Republic* (New York, NY: Anchor Books, 2007); Suetonius *The Lives of the Twelve Caesars, Vol. 1-2* Translated from the Latin by J. C. Rolfe (Cambridge, MA: Harvard University Press, Loeb Classical Library Editions, 1914).

[54] Flower, *ibid.* (2004, 2009); Plutarch *Plutarch's Lives of the Noble Grecians and Romans, Vol. 1-2* Translated from the Latin by Sir Thomas North (London, UK: David Nutt, 1895); Shakespeare "The Tragedy of Julius Caesar," in *The Histories, The Comedies, and The Tragedies of William Shakespeare, Vol. 1-3* (Norwalk, CT: Easton Press Collector's Edition, 1980), 475-554; Shakespeare

Cleopatra was a leader, possibly motivated by basic needs for power and affection, in addition to a desire to unite the otherwise very different cultures of Egypt, Greece, and Roman. To this end, she pursued the love and political commitment of Julius Caesar. When he was killed, Cleopatra set her eyes on Mark Antony. She set sail to meet him, arriving in her gold gilded sailing vessel with sterling silver oars and purple silk sails. She never lost sight of her sense of humor having servants swim and place fish on Mark Antony's hook when he was trying to impress her with his fishing skills, only to tease him about it later. This is a love story immortalized by Shakespeare, and currently taught in business schools as an example of charismatic leadership skill. More than that, the alliance had far reaching implications for education, among other consequences, during the Roman Empire that followed.[55]

The power gap created by Julius Caesar's assassination was filled by the *Second Triumvirate* (43 BCE – 33 BCE) led by Mark Antony, Gaius Octavius (i.e., Octavian), and Marcus Lepidus as the three military dictators who set out for blood revenge against Marcus Junius Brutus (i.e., Brutus), and Gaius Cassius Longinus (i.e., Cassius), declaring war for the assassination of Caesar. The final battles of the war were at Phillipi 44 BCE. The first engagement was on two fronts. Octavian's military forces battled Brutus', and Antony's battled Cassius'.

The Plays and Sonnets of William Shakespeare, Vol. 1-7 (Franklin Center, PA: The Franklin Library, The 25th Anniversary Limited Edition, 1978).

[55] Hartwick Humanities in Management Institute *Constructing Charisma: Cleopatra, Queen of Egypt* (Oneonta, NY: Hartwick College Press, 1994); Shakespeare "The Tragedy of Antony and Cleopatra," in *The Histories, The Comedies, and The Tragedies of William Shakespeare, Vol. 1-3* (Norwalk, CT: Easton Press Collector's Edition, 1980), 963-1074; Shakespeare, *ibid.* (1978).

Initially, Brutus was able to overcome Octavian but a false rumor led Cassius to believe Brutus had lost, so he committed suicide. The second engagement was victorious over Brutus, who also committed suicide, in turn.[56]

The *Second Triumvirate* lasted for a decade (i.e., two five-year terms). The competitions for power and land left Lepidus wanting after his troops in Sicily defected to Octavian. Antony had married Octavian's sister in 40 BCE, but he openly resided with Cleopatra, with whom he had children. Octavian was able to underhandedly obtain Antony's *Last Will and Testament* that left wealth and power to the children he had with Cleopatra. As mentioned earlier, while discussing the close of the Hellenistic period, the Battle of Actium defeated Cleopatra and Antony's forces in 31 BCE. The following year, the Hellenistic Kingdom in Egypt was overthrown and the birth of the Roman Empire occurred in 27 BCE after the senate granted Octavian power under the title Augustus, First Emperor of Rome.[57]

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[56] Dio, *op. cit.* (1914-27); Durant and Durant, *op. cit.* (1961); Plutarch, *op. cit.* (1914- 26); Suetonius *The Lives of the Twelve Caesars, Vol. 1-2* Translated from the Latin by J. C. Rolfe (Cambridge, MA: Harvard University Press, Loeb Classical Library Editions, 1914); Ronald Syme *The Roman Revolution* (Oxford, UK: Oxford University Press, 1939).

[57] Austin, *op. cit.* (1981); Werner Eck *The Age of Augustus* Translated from the German by Deborah Lucas (Oxford, UK: Blackwell Publishing, 2003); Antony Everitt *Augustus: The Life of Rome's First Emperor* (New York, NY: Random House Books, 2006); Burstein, *op. cit.* (2004); Davis, *op. cit.* (1999); Fraser, *op. cit.* (1972); Weigall, *op. cit.* (1923); Tacitus *Agricola, Germania, and Dialogus* Translated from the Latin by M. Hutton and W. Petterson (Cambridge, MA: Harvard University Press, Loeb Classical Library Revised Edition, 1914); Tacitus *The Annals, and The Histories* (Franklin Center, PA: The Franklin Library, The 25th Anniversary Limited Edition, 1979).

The Roman Empire had been expanded as a result of Octavian's successes. Tacitus, a Roman senator, historian, and authority on oratory and Greek rhetoric during the Silver Age of Latin Literature, picks up the history with the decline and death of Augustus. His successor, Tiberius could not claim leadership of a republic as Augustus had, but the Emperors that followed all attempted to claim that fiction. After the assassination of Caligula in 41 CE, Claudius became emperor and, with the leadership of Tacitus' father-in-law, General Aricola, further expanded the Empire by invading Britannia and conquering the area south of Caledonia. Civil war erupted again after Nero's suicide in 69 CE. Instability continued until Constantine defeated his rivals, adopted Christianity, moved the capital of the Roman Empire to Byzantium, and renamed it Constantinople in 330 CE. The last emperor of an undivided Roman Empire was Theodosius. After his death in 395 CE, the Empire was divided into the east (i.e., Byzantine) and the west (i.e., Rome), and instability resurfaced with civil wars and barbarian invasions. Rome was sacked by the Visigoths in 410 CE and then by the Vandals in 455 CE, and Romulus Augustulus was deposed in 476 CE. The Eastern Roman Byzantine Empire continued, but remained in conflict with the Neo-Persian Sasanian Empire (i.e., descended from the Persian Arsacid Empire), until it fell to the Ottoman Turks in 1453.[58]

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[58] Richard Alston *Aspects of Roman History, AD 14-117* (London, UK: Routledge Psychology Press, 1998); Dio, *op. cit.* (1914-27); Gibbon, *op. cit.* (1776-88); John Julius Norwich *Byzantium: The Early Centuries, The Decline and Fall, and The Apogee, Vol. 1-3,* (London, UK: The Folio Society Collector's Edition, 2004); Suetonius *The Lives of the Twelve Caesars, Vol. 1-2* Translated

Education in Ancient Rome

During the early Roman Republic education remained informal and within the family. By the end of the Republic, a formal educational system had emerged, but it was hardly uniform across the different socio-economic citizenry. For the most part, these were tuition-based schools for both boys and girls, educated separately. At the lower levels, the curriculum was similar to the Greek system. Those who advanced further studied rhetoric, law, and virtue (e.g., *gravitas*) in Rome, and then traveled to Greece to study philosophy. Hence, the history of education in the Roman Empire parallels the history of education in Greece.

Throughout history, the often agreed upon goal of education has been to transform individuals into good human beings and citizens. In *The Dialogues*, Plato said, "If you ask what is the good of education, the answer is easy—that education makes good men, and that good men act nobly, and conquer their enemies in battle, because they are good".[59] For Plato, the good of the country took priority over the idea of personal happiness. Though he acknowledged the latter as important, he stressed the necessity of education to prepare individuals for the position the state demands of them.

In *The Republic,* Plato engaged various literary devices and the *Socratic Dialectic* to advance a debate that philosophically established his model of an

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from the Latin by J. C. Rolfe (Cambridge, MA: Harvard University Press, Loeb Classical Library Editions, 1914).

[59] Plato *The Dialogues of Plato, Vol. 4,* Translated from the Greek by Benjamin Jowett (New York, NY: Charles Scribner's & Sons, 1897); Plato *Complete Works, Vol. 1-4* John M. Cooper (Editor) Revised Oxford Translation from the Greek and Edited by Jonathan Barnes (Norwalk, CT: Easton Press Collector's Edition, 2001); Zeller, *op. cit.* (1876).

ideal state and the educational system for the ideal citizens. He had to consider the role of the fictive arts, those creative works that share certain characteristics although made by disparate artisans (e.g., literature, poetry, drama, music, and others). He also addressed philosophies and metaphysics concerning justice, his four levels of intellect, truth and the different levels of knowledge and beliefs. In the process, Plato distinguished between liberal education (i.e., to acquire knowledge, skill and excellence in thought), moral education (i.e., to acquire excellence in action), and physical education (i.e., to acquire excellence in bodily health and proficiency).[60] Yet, the curriculum he detailed was interdisciplinary and cut across these different forms of education with some subjects playing a preparatory role to others. Plato maintained all levels of intellect are in someway united, and not unrelated. Thus, for example, both music and gymnastics instruct the body as well as the soul. The two disciplines should not be sharply distinguished; as forms of education, they both temper and balance each other. Athletic competence, work, and proficiency in the manual arts require physical skills, but also make demands on the intellect.

Plato's ideal education starts at a young age with gymnastics and music playing formative roles in developing the ideal citizen, by presiding "over the growth and decay of the body... [and] by the influence of habit, by harmony making them harmonious, by rhythm rhythmical" and developing aesthetic and moral sensibilities. The next stage in Plato's curriculum also includes music, in addition to arithmetic, mathematics and astronomy, which he maintained

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[60] Plato, *op. cit.* (1968); Plato, *op. cit.* (2001); Zeller, *ibid.* (1876).

facilitates reflection and leads "the soul towards being", as opposed to becoming, and the eventual study of dialectic, to which everything else was preparatory. According to Plato,

> when a person starts on the discovery of the absolute by the light of reason only, and without any assistance of sense, and perseveres until by pure intelligence he arrives at the perception of the absolute good, he at last finds himself at the end of the intellectual world. [61]

For Plato, the person who achieves Dialectic has already incorporated the other levels of intellect within one's growth. To this extent, liberal education teaches citizens how and what to think, but Plato appeared to add another stage of moral development. From age thirty-five to fifty, he required experience in the tasks of government and public affairs to provide the citizens in *The Republic*, the "... opportunity of trying whether, when they are drawn all manner of ways by temptation, they will stand firm or flinch". [62]

For Aristotle, like Plato before him, education is concerned with each individual's purpose and vocation in life, and develops their cognitive capacities and behavioral habits.[63] This was evident when Aristotle said,

> That which contributes most to the permanence of constitutions is the adaptation of education to the form of government... The best laws, though sanctioned by every citizen of the state, will be of no avail unless the young are trained by habit and education in the spirit of the constitution.[64]

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[61] Plato, *ibid.* (1968); Plato, *ibid.* (2001); Zeller, *ibid.* (1876).

[62] Plato, *ibid.* (1968); Plato, *ibid.* (2001); Zeller, *ibid.* (1876).

[63] Adler, *op. cit.* (2001); Aristotle *The Politics and The Constitution of Athens*, Translated from the Greek and Edited by Jonathan Barnes (Cambridge, UK: Cambridge University Press, 1996), 139; Aristotle, *op. cit.* (2001); Plato, *ibid.* (1968); Plato, *ibid.* (2001); Zeller, *ibid.* (1876).

[64] Aristotle, *ibid.* (1996); Aristotle, *ibid.* (2001).

The classical definition of liberal education also distinguished between those who were free and those who were slaves. The latter were household chattel treated as a means to achieve needed services. They were trained and not educated as an end in itself for their own good, but for the good of the owner. Many have argued this distinction remains true in all societies that distinguish between the leisure and subservient classes, that is, those who live off the labor of others in order to live well, and those who toil in order to survive. Aristotle distinguished between liberal education and illiberal education in accord with this distinction when he defined the former based on when, "... he does or learns anything for his own sake or for the sake of his friends, or with a view to excellence".[65] In contrast, Aristotle defined the latter as,

> any occupation, art, or science, which makes the body or soul of the freeman less fit for the practice or exercise of virtue... [including] those arts which tend to deform the body, and likewise all paid employments, for they absorb and degrade the mind... liberal art... [can become] menial and servile… if done for the sake of others. [66]

If liberal education fails to serve the pursuit of leisure and excellence, it fails to treat an individual as an end, but views man as a means to an end used by others or by the state. Such an education is no longer liberal, but becomes illiberal.

Aristotle (384 BCE – 322 BCE) studied at the Old Academy for two decades until he founded his own temple for higher learning, the *Lyceum*. In summary, Plato and Aristotle detailed the curriculum of an elementary Greek

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[65] Aristotle *Complete Works of Aristotle: The Revised Oxford Translation.* Edited by Jonathan Barnes, 2 *Volumes* (Princeton, NJ: Princeton University Press, 1984), 2122; Aristotle, *ibid.* (2001).

[66] Aristotle, *ibid.* (1984); Aristotle, *ibid.* (2001).

education including basic grammar, literature, music and arithmetic. The purpose was to provide a preparatory introduction for subsequent advanced studies in mathematics and philosophy, with the aim of developing wisdom, considered the ultimate goal of knowledge. Although both acknowledged the importance of education as a means in support of the state, they highly valued the significance of education as an end in the achievement of leisure and excellence. The Romans were more pragmatic and had little time for gymnastics for the purpose of a beautiful body, though its utility in the development of a superior soldier was acknowledged.[67]

During the early Roman Republic the head of the household had complete control over decisions concerning his children and their education and there was no formal system of teaching. Children obtained their moral training at home. Domestic, agricultural, business and military skills were taught by the parents. It was important to know enough reading, writing, and arithmetic to conduct basic business transactions. Apprentice arrangements provided hands-on job skills. [68]

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[67] Aristotle, *op. cit.* (1996); Aristotle, *ibid.* (2001); Plato, *op. cit.* (1968); Plato, *op. cit.* (2001); David C. Lindberg *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to AD 1450* (University of Chicago Press, 2010); Nanette R. Pascal "The Legacy of Roman Education," *The Classical Journal* 79, no. 4 (1984): 351-355; Giovanni Reale *A History of Ancient Philosophy IV: The Schools of the Imperial Age, Vol. 4* (Albany, NY: State University of New York Press, 1990); Jo-Ann Shelton *As the Romans Did: A Source book in Roman Social History* (Oxford, UK: Oxford University Press, 1998); William A. Smith *Ancient Education* (New York, NY: Philosophical Library, 1955); Zeller, *op. cit.* (1876).

[68] Beth A. Severy-Hoven *Augustus and the Family at the Birth of the Roman Empire* (London, UK: Routledge, 2003); William A. Smith *Ancient Education* (New York, NY: Philosophical Library, 1955).

Throughout the Roman Republic and subsequent Empire, education was never required by law and there was no state-sponsored education. An average citizen's family would utilize a *ludus* (i.e., private primary school of varying formality). In contrast, affluent families engaged a private *litterator* (i.e., tutor). After learning their letters and starting to read, students would memorize and recite mostly poetry texts, and some would compose their own. Assessment of progress came in the form of oral performances, followed by criticism or applause, whichever was deemed appropriate. Advancement was based on skill more than age. Thus, between the age of nine and twelve, girls would start to focus on becoming good wives and mothers, while the poorer boys would obtain apprenticeships, and wealthier boys would graduate to study with a *grammarian*, in order to improve their Latin and learn Greek, furthering their develop in oratory and poetry analysis. For the few students who would progress in preparation for positions in politics or law, the next step was studying under the tutelage of a *rhetor*. At this stage music, mythology, literature, philosophy, geography and geometry were studied. The last step was to study at an institution for philosophical thinking, which usually meant traveling to Greece for an extended period.[69]

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[69] Stanley F. Bonner *Education in Ancient Rome* (Berkeley: University of California Press, 1977); Robert A. Kaster *Guardians of Language: The Grammarian and Society in Late Antiquity* (Berkley, CA: University of California Press, 1997); Teresa Morgan "Assessment in Roman Education," *Assessment in Education: Principles, Policy & Practice* 8, no. 1 (March 2001): 15; Shelton, *op. cit.* (1998).

The Romans adopted the ancient Greek "liberal arts" curriculum (i.e., for free men and not the subservient class) as a means to an end in order to prepare citizens for law and public life. The diverse liberal arts were grouped together with the sole purpose of their mutual preparatory utility. The *trivium* or three verbal means to wisdom included grammar, rhetoric, and logic. The *quadrivium* or four mathematical means to wisdom included arithmetic, geometry, astronomy and music.[70] As detailed, herein, these curricula were clearly derivived directly from Greek philosophy. Marcus Terentius Varro (116 BCE – 27 BCE), an ancient Roman scholar and prolific writer significantly influenced the direction of education in the Roman Empire. He had been picked by Julius Caesar to supervise his planned national library for the Roman Empire. Varro, like Cicero, studied in Athens under Antiochus of Ascalon who gave birth to the philosophy of Middle Platonics reviving the doctrines of the Old Academy. Varro's *Nine Books of Disciplines* detailed grammar, rhetoric, logic, arithmetic, geometry, astronomy, musical theory, medicine and architecture as the organizing principles of liberal arts education. Marcus Fabius Quintilianus (35 CE –100 CE), a Roman authority in rhetoric from the Iberian Peninsula, considered Varro the most learned of all the Romans. Pliny the Elder (23 CE –79 CE) followed in Varro's

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[70] Gordon Leff "The Trivium and the Three Philosophies," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), 307-336; John D. North "The Quadrivium," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), 337-359; David L. Wagner (Editor) *The Seven Liberal Arts in the Middle Ages* (Bloomington, IN: Indiana University Press, 1984); Zeller, *op. cit.* (1876).

footsteps, also writing an encyclopedic work, *Natural History*, the model for subsequent encyclopedias. While eliminating medicine and architecture, many other writers utilized Varro's *Nine Books of Disciplines* to define the seven classical liberal arts taught in schools of the Middle Ages.[71]

Matianus Capella (410 CE – 439 CE) cannonized the sevenfold division on the liberal arts with his book, *The Marriage of Mercury and Philology*. According to historian Henry Osborn Taylor, it was the most widely read schoolbook in the Middle Ages. An amusing mythic allegory of courtship and marriage among pagan Gods, an encyclopedic prosimetrum in the manner of Varronian satire.[72]

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[71] K. Algra, J. Barnes, J. Mansfeld and M. Schofield (eds.), *The Cambridge History of Hellenistic Philosophy* (Cambridge, UK: Cambridge University Press, 1999); J. Dillon *The Middle Platonists, 2nd Edition* (Ithaca, NY: Cornell University Press, 1996); David C. Lindberg *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to AD 1450* (University of Chicago Press, 2010); Quintilian *The Orator's Education, Vol. 1-5, Books 1-11,* Translated from the Latin by Donald A. Russell (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 2002); Pliny *Natural History, Vol. 1-10, Books 1-37,* Translated from the Latin by H. Rackham, W. H. S. Jones and D. E. Eichholz (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1938-63); Varro *On the Latin Language, Vol. 1-2, Books 1-10* Translated from the Latin by Roland G. Kent (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1938); Zeller, *ibid.* (1876).

[72] Matianus Capella *Matianus Capella and the Seven Liberal Arts, Vol. 1, The Quadrivium of Matianus Capella* Translated from the Latin by William Harris Stahl and Richard Johnson (New York, NY: Columbia University Press, 1977); Matianus Capella *Matianus Capella and the Seven Liberal Arts, Vol 2, The Marriage of Philology and Mercury* Translated from the Latin by W. H. Stahl and R. Johnson (New York, NY: Columbia University Press, 1977); John North "The Quadrivium," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), 337-359; Henry Osborn Taylor *The Classical Heritage of the Middle Ages, 3rd Edition* (New York, NY: Macmillan Publishers, 1929).

CHAPTER 2: TRENDS IN THE MIDDLE AGES & MODERN ERA

Developments During the Middle Ages

Following Late Antiquity and the decline of Rome, the liberal arts curriculum was acquired, albeit in a transformed state, by St. Augustine of Hippo (fourth and fifth century) to teach wisdom based on faith in God and to facilitate theological understanding and mastery. The curricula were passed down by Anicius Manlius Severinus Boëthius (fifth century), known as the first of the scholastics, Flavius Magnus Aurelius Cassiodorus (sixth century), Isidore of Seville (sixth and seventh century), St. Bede (seventh and eighth century), Rabanus Maurus (eighth and ninth century), and others who made comparable compilations of similar form.[73]

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[73] Saint Augustine *On Christian Teaching* Translated from the Latin by R. P. H. Green (Oxford, UK: Oxford University Press, 1997); Boëthius *Theological Tractates: The Consolation of Philosophy* Translated from the Latin by H. F. Stewart *et al.* (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1973); Cassiodorus *Institutions of Divine and Secular Learning on the Soul* Translated from the Latin by James W. Halporn (Liverpool, UK: Liverpool University Press, 2004); Henry Chadwick *Boëthius: The Consolidations of Music, Logic, Theology, and Philosophy* (Oxford, UK: Clarendon Press, 1981); W. J. Courtney "*Antiqui* and *Moderni* in Late Medieval Thought," *Journal of the History of Ideas* 49 (1987): 3-10; Gibbon, *op. cit.* (1776-88); Thompson, A. Hamilton *Bede: His Life, Times and Writings* (Oxford, UK: Oxford University Press, 1969); Isidore of Seville *Isidore of Seville: An Encyclopedist of the Dark Ages* Edited by the Columbia University Faculty of Political Science (New York, NY: Aeterna Press, 2015); Leff, *op. cit.* (1992); James J. Murphy *Rhetoric in the Middle Ages: A History of Rhetorical Theory from St. Augustine to the Renaissance* (Berkley, CA: University of California Press, 1974); John North "The Quadrivium," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), 337-359; Plato, *op. cit.* (1968); Plato, *op. cit.* (2001); E. K. Rand *Founders of the Middle Ages* (Cambridge, MA: Harvard University Press, 1929); Dietrich Wilhelm Türnau *Rabanus Maurus, Der*

This relationship between the liberal arts foundation and theological study was institutionalized under Alcuin of York, and Charlemagne's (i.e., Charles the Great) educational reforms during the eighth and ninth centuries. Prior to Charlemagne's rule, the economic urban centers of the Roman Empire had decayed, reverting back to lesser municipalities and villages with local fiefdoms, no longer under centralized control. Reinvigorating the cities required bureaucrats and clergy, but cities are the centers that provide them, which was a dilemma. Charlemange was a trilingual (i.e., Latin, Greek, and German), but he realized education had eroded for the citizenship during the Merovingian dynasty, and was no longer up to imperial standards. In order to produce the bureaucrats he needed, he created a palace school in Aachen headed by Alcuin, an expert in Latin literature. They imported scholars from England, Ireland, Italy, and Spain. Charlemagne also stimulated literacy in the Germanic language. Although Charlemagne did not accomplish all that he set out to do, educational standards have never again regressed back to the dreadful state as was seen during the Merovingian period.[74]

Praeceptor Germaniae: Ein Beitrag Zur Geschichte Der Pädagogik Des Mittelalters (München, DE: J. Lindauer, 1900); Fernand van Steenberghen *Aristotle in the West: The Origins of Latin Aristotelianism* Translated from the French by Leonard Johnson (Louvain, BE: E. Nauwelaarts, 1955); Wagner, *op. cit.* (1984); Zeller, *op. cit.* (1876).

[74] Saint Augustine *On Christian Teaching* Translated from the Latin by R. P. H. Green (Oxford, UK: Oxford University Press, 1997); Robert B. Benson and Giles Constable (Editors) *Renaissance and Renewal in the Twelfth Century* (Cambridge, MA: Harvard University Press, 1982); Courtney, *ibid.* (1987); Gibbon, *ibid.* (1776-88); Peter Godman (Editor) *Oxford Medieval Texts: Alcuin* (Oxford, UK: Clarendon Press, 1983); Harold Lamb *Charlemagne: The Legend and the Man* (Norwalk, CT: Easton Press Collector's Edition, 1995); Leff, *ibid.* (1992);

Until the eleventh century, under the rubric of monasteries and cathedral schools, education north of the Alps followed St. Augustine's doctrine of liberal arts in the service of Christendom. Thus, as an end goal religion took its place alongside law and medicine, achieved with the aid of liberal arts. This was the state of affairs at the birth of the university. The hierarchical conception of knowledge, born of antiquity was given institutional structure by the medieval universities.[75]

During the sixth century, after the fall of Rome, the Latin culture and language remained, and the works of Latin writers were passed down along with guidebooks concerning a liberal arts education. Early on, the *trivium* emphasized the understanding of language structure as a prerequisite to further education and led to further explorations in rhetoric and logic. Roman education had not included the *quadrivium*.[76] This was a meagre foundation to build upon, but Latin translations of Arabic texts began to emerge in Spain during the tenth century.

Murphy, *ibid.* (1974); North, *ibid.* (1992); Plato, *ibid.* (1968); Plato, *op. cit.* (2001); van Steenberghen, *ibid.* (1955); Wagner, *ibid.* (1984); Zeller, *ibid.* (1876).

[75] Augustine, *ibid.* (1997); Benson and Constable, *ibid.* (1982); Courtney, *ibid,* (1987); Gibbon, *ibid.* (1776-88); Leff, *ibid.* (1992); Murphy, *ibid.* (1974); North, *ibid* (1992); Wagner, *ibid.* (1984).

[76] M. Carmago "Rhetoric" in David L. Wagner (Editor) *The Seven Liberal Arts in the Middle Ages* (Bloomington, IN: Indiana University Press, 1984), 97-124; S. Ebbesen "Ancient Scholastic Logic" in N. Kertzman, A. Kenny and J. Pinborg (Editors) *The Cambridge History of Later Medieval Philosophy* (Cambridge, UK: Cambridge University Press, 1982), 110; J. F. Huntsman "Grammar" in David L. Wagner (Editor) *The Seven Liberal Arts in the Middle Ages* (Bloomington, IN: Indiana University Press, 1984), 59-95; Murphy, *ibid.* (1974); David L. Wagner "The Seven Liberal Arts and Classical Scholarship," in David L. Wagner (Editor) *The Seven Liberal Arts in the Middle Ages* (Bloomington, IN: Indiana University Press, 1984), 10-22; R. R. Bolgar The Classical heritage and its Beneficiaries (Cambridge, UK: Cambridge University Press, 1954).

Spain became the foremost source after the Muslim twelfth century conquest, while Italy and Constantinople were important sources for translated ancient Greek texts.[77] These included the works of Aristotle in addition to non-Aristotelian texts of science, Prolemaic and Arabic astronomy, Galenic and Hippocratic medicine, Arabic mathematics, and a variety of other philosophical systems, in addition to Arabic and Moorish interpretations of Greek philosophers (e.g., Al-Farabi, the founder of Muslim philosophy).[78] The newly established universities benefitted greatly from this export of ideas. The first university was the University of Bologna, founded 1088 CE and University of Paris, currently called the Sorbonne, was established in 1150CE.[79]

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[77] Marie-Thérèse d'Alverny, R. Benson, G. Constable and C. Lanham "Translations and Translators," *Renaissance and Renewal in the Twelfth Century* 26 (1991): 421-62; Guy Beaujouan "The Transformation of the Quadrivium," *Renaissance and Renewal in the Twelfth Century* 26 (1991): 463-68; B. Dod "Aristotles Latinus," in N. Kertzman, A. Kenny and J. Pinborg (Editors) *The Cambridge History of Later Medieval Philosophy* (Cambridge, UK: Cambridge University Press, 1982), 54-55; Charles H. Haskins *Studies in the History of Medieval Science* (Cambridge, MA: Harvard University Press, 1924); Charles H. Haskins *The Renaissance of the Twelfth Century* (Cambridge, MA: Harvard University Press, 1927).

[78] Al-Farabi *Philosophy of Plato and Aristotle* Translated from the Arabic by Muhsin Mahdi (Ithaca, NY: Cornell University Press, Revised Edition, 2001); Aristotle, *op. cit.* (2001); Hippocrates and Galen *Hippocrates: Writings, and Galen: On Natural Faculties* Illustrated with Medieval and Renaissance Woodcuts, Translated from the Greek by Arthur John Brock *et al.* (Franklin Center, PA: The Franklin Library, The 25th Anniversary Limited Edition, 1979); Roy Porter (Editor) *The Cambridge History of Medicine* (Cambridge, UK: Cambridge University Press, 2006); Yossef Rapoport *An Eleventh-Century Guide to the Universe: Islamic Philosophy, Theology, Science, Texts and Studies* (Boston, MA: Brill, 2013); George Saliba *A History of Arabic Astronomy: Planetary Theories During the Golden Age of Islam* (New York, NY: New York University Press, 1995); van Steenberghen, *op. cit.* (1955).

[79] Curt F. Bühler, "The University and the Press in Fifteenth-Century Bologna," in A. L. Gabriel and J. N. Garvin (Editors) *Texts and Studies in the History of*

St. Thomas Aquinas (1225-1274) is considered to have had no equal among the medieval university scholastics. He was one of the most renowned theologians and philosophers in the Western tradition. His father, *il Conte de Aquino*, sent him to the Benedictine abbey of Monte Cassino for monastic studies from age five until age fourteen. Then he entered the University of Naples and pursued the standard curriculum of the times, which included the *trivium* and *quadrivium*, in addition to newly translated works of Aristotle with their Arabic commentaries. The University of Naples was cosmopolitan and one of Thomas' professors, Peter of Ireland, was a staunch Aristotelian in natural philosophy. In 1244, in opposition to his family's desires for him to enter the Benedictine order, Thomas entered the Dominican order. Upon hearing the news his father, the Count, had him kidnapped, and returned home for a year. Upon his release he matriculated at the University of Paris for the next few years, studying under Albert the Great, a distinguished Dominican professor. During these formative years various books had a substantial impact on Thomas' learning including: Aristotle's philosophy and what it had to say for theology, Boëthius' *Theological Tractates: The Consolation of Philosophy*, Peter Lombard's theological treatise the *Sentences*, Plotinus' *Enneads*, Dionysius the Pseudo-Areopagite's *Book of*

Mediaeval Education, Vol. 7 (South Bend, IN: University of Notre Dame Press, 1958); Charles Homer Haskins *The Colver Lectures in 1923: The Rise of the Universities* (Providence, RI: Brown University Press, 1923); Phillip M. Parker (Editor) *Sorbonne: Webster's Timeline History 1150-2007* (San Diego, CA: ICON Group, 2008); Robert S. Rait *Life in the Medieval University* (Cambridge, UK: Cambridge University Press, 2012); Hastings Rashdall "Student-Life in the Middle Ages," in Hastings Rashdall (Editor) *The Universities of Europe in the Middle Ages: English Universities and Student Life, Vol. 2, Part 2* (Cambridge, UK Cambridge University Press, 2010), 591-711.

Causes, and St. Augustine's ideas and interpretations of Plato's writings. St.

Aquinas taught at the University of Cologne, was the Dominican Chair of

Theology at the University of Paris, taught at the Papal Court in Italy, and

founded a Dominican house of study in Naples. St. Aquinas' philosophical and

theological works include a major thesis commenting on Lomdard's *Sentences*,

two dissertations incorporating Aristotelian philosophy *On Truth* and *On Being*

and Essence, an essay of the *Summa Contra Gentiles* in support of the truth of

Catholic faith, a succession of interpretations of Aristotle, and two theses *On the*

Soul and *On the Eternity of the World*. Before his death he attempted to complete

his most influential work, *Summa Theologia,* integrating Christian philosophy and

theology with the writings of Aristotle, Boëthius, and Dionysius the Pseudo-

Areopagite; but St. Aquinas died in route to the council of Lyons, called by Pope

Gregory X to explain the Latin theology of the west to representatives of the

Byzantium Greek Orthodox church.[80]

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[80] Aristotle, *op. cit.* (2001); Thomas Aquinas *The Soul: A Translation of St. Thomas Aquinas' De Anima* Translated from the Latin by J. P. Rowan (Freiburg, DE: Herder, 1951); Thomas Aquinas *On the Truth of the Catholic Faith: Summa Contra Gentiles, Vol. 1-4* Translated from the Latin by Anton C. Pegis *et al.* (Garden City, NY: Doubleday, 1955); Thomas Aquinas *On the Eternity of the World (De Aeternitate Mundi): Medieval Philosophical Texts in Translation, No. 16, Second Edition* Translated from the Latin by L. H. Kendzierski and P. M. Byrne (Milwaukee, WI: Marquette University Press, 1965); Thomas Aquinas *On Being and Essence* Translated from the Latin by Armand Maurer (Toronto, CA: Pontifical Institute of Mediaeval Studies, 1968); Thomas Aquinas *Summa Theologica, Vol. 1-2* Otto van Veen (Illustrator) Translated from the Latin by Fathers of the English Dominican Province (Franklin Center, PA: Franklin Library, The 25th Anniversary Limited Edition, 1985); Thomas Aquinas *Truth, Vol. 1-3* Translated from the Latin by R. W. Mulligan and J. V. McGlynn (Indianapolis, IN: Hackett Publishing, 1994); St. Augustine, *op. cit.* (1957-72, 1979, 1997); Boëthius, *op. cit.* (1973); David B. Burrell *Knowing the*

The University of Oxford, and others, preserved this idea of the liberal arts, but the different subjects did not always attain equal status. Prior to the mid-thirteenth century most emphasized the verbal over the mathematical means to wisdom, especially at the University of Paris. Furthermore, in the south, at the universities of Padua and Bologna, they emphasized rhetoric, while north of the Alps, at the universities of Paris, Oxford, and Cambridge logic tended to dominate over rhetoric.[81] Logic was viewed as an important preparation for theological

Unknowable God: Ibn-Sina, Maimonides, Aquinas (Notre Dame, IN: University of Notre Dame Press, 1986); Marie-Dominique Chenu *Toward Understanding St. Thomas* Translated from the Latin by A. Landry and D. Hughes (Chicago, IL: Henry Regnery, 1964); Étienne Gilson *The Christian Philosophy of St. Aquinas* Translated from the French by L. K. Shook (New York, NY: Random House, 1956); Edward J. Gratsch *Aquinas' Summa: An Introduction and Interpretation* (New York, NY: Alba House, 1985); Peter Lombard *The Sentences: The Mystery of the Trinity*. Translated from the Latin by Giulio Silano (Toronto, CA: Pontifical Institute of Mediaeval Studies, 2007); Ian P. McGreal (Editor) *Great Thinkers of the Western World* (Norwalk, CT: Easton Press Collector's Edition, 1992); Joseph Owens *St. Thomas Aquina on the Existence of God: Collected Papers of Joseph Owens* Edited by John R. Catan (Albany, NY: State University of New York Press, 1980); Plotinus *Enneads, Vol. 1-7, Books 1-9* Translated from the Greek by A. H. Armstrong (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1969-88); Pseudo-Dionysius the Aeropagite *Pseudo-Dionysius: The Complete Works* Translated from the Greek by Colm Luibheid (Mahwah, NJ: Paulist Press, 1987); J. A. Weisheipl *Friar Thomas D'Aquino: His Life, Thought, and Work* (Garden City, NY: Doubleday, 1974).

[81] Bernard R. Goldstein *Theory and Observation in Ancient and Medieval Astronomy* (London, UK: Variorum, 1985); Marshall Clagett *The Science of Mechanics in the Middle Ages* (Madison, WI: University of Wisconsin Press, 1959); A. C. Cronbie *Robert Grosseteste and the Origins of Experimental Science 1100-1700, 2nd Edition* (Oxford, UK: Oxford University Press, 1961); A. B. Emden "Northerners and Southerners in the Organisation of the University to 1509," *Oxford Studies Presented to Daniel Callus* (1963): 1-30; Margaret T. Gibson (Editor) *Boëthius: His Life, Thought, and Influence* (Oxford, UK: Oxford University Press, 1981); Edward Grant *A Source Book in Medieval Science* (Cambridge, MA: Harvard University Press, 1974); Haskins, *op. cit.* (1924); Pearl Kibre *Studies in Medieval Science* (London, UK: Hambledon Press, 1984); David C. Lindberg (Editor) *Science in the Middle Ages* (Chicago, IL: University

studies, and the Roman papacy fortified the monopoly on theology in these three northern universities, by restricting the creation of theology faculties elsewhere. Less advanced religious teachings continued at cathedral schools.[82] It is the position of this dissertation that this state of affairs created a two tier system of religion, one that was abstract in nature and another that remained concrete in its teachings. The latter may be all that someone who does not attain an abstract level of intelligence can comprehend, but a problem arises for the individual who is only taught the concrete form but attains abstraction skills, none-the-less. This

of Chicago Press, 1978); F. Maddison "Early Astronomical and mathematical Instruments: A Brief Summary of Sources and Modern Studies," *History of Science* 2 (1963): 17-50; José María Millás-Vallicrosa "Translations of Oriental Scientific Works to the End of the Thirteenth Century," in G. S. Metraux and F. Crouzet (Editors) *The Evolution of Science: Readings From the History of Mankind* (New York, NY: New American Library, 1963); Murphy, *op. cit.* (1974); John D. North "1348 and All That: Science in Late Medieval Oxford," in Asger Aoboe, J. L. Berggren and Bernard R. Goldstein (Editors) *From Ancient Omens to Statistical Mechanics: Essays in the Exact Sciences Presented to Asger Aaboe, Vol. 1* (Copenhagen, DK: Copenhagen University Library, 1987); John D. North *Chaucer's Universe* (Oxford, UK: Oxford University Press, 1988); John D. North *Horoscopes and History: Warburg Institute Surveys and Texts XIII* (London, UK: The Warburg Institute, 1986) 96-105; Hastings Rashdall (Editor) *The Universities of Europe in the Middle Ages: Salerno, Bologna, Paris, Vol. 1* (Cambridge, UK Cambridge University Press, 2010); Hastings Rashdall (Editor) *The Universities of Europe in the Middle Ages: English Universities and Student Life, Vol. 2, Part 2* (Cambridge, UK Cambridge University Press, 2010); R. W. Southern *Robert Grosseteste: The Growth of an English Mind in Medieval Europe* (Oxford, UK: Oxford University Press, 1986); Lynn Thorndike and Pearl A. Kibre *Catalogue of Incipits of Mediaeval Scientific Writings in Latin* (Cambridge, MA: Mediaeval Academy of America Publication, 1963); Stephen K. Victor *Practical Geometry in the High Middle Ages: 'Artis cuiuslibet consmmatio' and Pratike de geometrie'* (Philadelphia, PA: The American Philosophical Society, 1979).

[82] George V. Coyne, Michael A. Hoskin and Olaf Pedersen (Editors) "Proceedings of the Vatican Conference to Commemorate its 400th Anniversary 1582-1982" *Georgian Reform of the Calendar* 1 (1983); Ebbesen, *op. cit.* (1982); Etienne Gilson *History of Christian Philosophy in the Middle Ages* (London, UK: Burns & Oates, 1955).

latter individual remains at risk of rejecting religious notions, in total, without further instruction to help resolve inner conflicting notions.

The southern universities, such as, Salamanca, Padua, and Bologna did not have theology faculties until after the mid-fourteenth century. As a result, they experienced less conflict between Christian teachings and the liberal arts. Then by the mid-thirteenth century *trivium* and *quadrivium* were augmented by natural, moral, and metaphysical philosophies, not previously part of these two ancient classifications of curriculum. In England the emphasis was on the natural philosophy, while in Paris metaphysics was stressed.[83]

As also detailed, herein, there were various differences in the implementation of the ancient theories and practices of a liberal arts curriculum across Europe. However, commonalities remained paramount. This trend was facilitated from mid-eleventh to mid-thirteenth century by a succession of Latin translations of philosophy, science and medicine from Greek and Arabian origins. The chief beneficiaries of these texts were the universities, which had to

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[83] Rashdall, *op. cit.,Vol. 1* (2010); Hastings Rashdall (Editor) *The Universities of Europe in the Middle Ages: Spain, France, Germany, Scotland, Etc.,Vol. 2, Part 1* (Cambridge, UK Cambridge University Press, 2010); Leff, *op. cit.* (1992); John North "The Quadrivium," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), 337-359; J. A. Weisheipl "The Classification of the Sciences in Medieval Thought" *Mediaeval Studies* 27 (1965): 54-90; J. A. Weisheipl "The Place of the Liberal Arts in the University 'Curriculum' During the XIVth and XVth Centuries," in L. Koch (Editor) *Art libéraux et philosophie au Moyen Age, Actes du IVe Congrés international de philosophie mediéval* (Montréal, CA: Université de Montréal, 1969) 209-13; J. A. Weisheipl "The Structure of the Arts Faculty in the Mediaeval University" *British Journal of Educational Studies* 19 (1971): 263-71; J. A. Weisheipl "Developments in the Arts Curriculum at Oxford in the Early Fourteenth Century," *Mediaeval Studies* 28 (1966): 151-75.

accommodate to, and assimilate, the expanded newly rediscovered knowledge. Aristotle's works were now arbitrated with Arabic elucidations, altering the natural, moral, and metaphysical philosophies, thereafter. Its impact on theology continued into the fourteenth century.[84]

The fundamental institutional characteristics of the university system within the *Ancient Régime* (15th century – 18th century) and its early modern developments that followed need some specification, including their insufficiencies, before one of the theories of this dissertation can be argued. It is maintained, herein, that those inadequacies were, in part, the impetus for the restructuring that followed, and did not mark a period of disorganization and decline, as has been commonly assumed.[85]

Developments in the Modern Era

The Early Modern Period (sixteenth – eighteenth century) was marked by the Renaissance and the Age of Discovery with advances in knowledge, literature and the arts. The development of the printing press by Johannes Gutenberg in

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[84] Ibid.; W. J. Courtney and K. H. Tachau "Ockham, Ockhamists, and the English—German Nation at Paris, 1339-1341," *History of Universities* 2 (1982): 53-96; A. C. Cronbie *Medieval and Early Modern Science, Vol. 1-2* (New York, NY: Doubleday Anchor, 1959); N. Kertzman, A. Kenny and J. Pinborg (Editors) *The Cambridge History of Later Medieval Philosophy* (Cambridge, UK: Cambridge Unniversity Press, 1982); D. L. Leader "Philosophy of Oxford and Cambridge in the Fifteenth Century," *History of Universities* 4 (1984): 25-46; Gordon Leff *Paris and Oxford Universities in the Thirteenth and Fourteenth Centuries* (New York, NY: John Wiley & Sons, Inc., 1968); Christopher Wordsworth *The Ancient Kalendar of the University of Oxford From Documents of the Fourteenth to the Seventeenth Century* (Oxford, UK: Oxford University Press, 1903-4).

[85] Cf. de Ridder-Symoens, *op. cit.* (1992); de Ridder-Symoens, *op. cit.* (1996).

1440 and its spread from Mainz, Germany, facilitated the dissemination of knowledge. By many accounts, Leonardo da Vinci (1452-1519) represents the true personification of the period. The Greek term *poluistōr*, meaning greatly learned in many disciplines, has been used to describe him. Leonardo's interests included: anatomy, architecture, botany, chemistry, engineering, geology, geometry, history, hydrodynamics, ichnology, invention, literature, mathematics, metallurgy, music, ship-building design, optics, painting, paleontology, philosophy, physics, physiology, plate-tectonics, pyrotechnics, science, sculpting, solar power, writing, and zoology. As such, the "Renaissance Man" has been claimed by both Italy and France, as their native son (i.e., Léonard de Vinci in the latter case). Born and raised in the Republic of Florence, which was ruled by the House of Medici, he obtained an informal education in geometry, Latin, and mathematics. At fourteen years of age, he continued his education as an apprentice at the artist studio of Andrea del Verrocchio, a renowned Florentine painter. At twenty-eight years of age, he was working at the Neo-Platonic *Accademia in Piazza San Marco di Firenze*, an interdisciplinary group of artists, poets, and philosophers. He also worked professionally in Bologna, Milan, Rome, and Venice. Then after Francis I of France recaptured Milan, Leonardo entered service and the French monarch provided him with *Château du Clos Lucé,* closely situated near the king's residence, *Château d'Amboise*, in France where Leonardo spent his last few years of life.[86]

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[86] David A. Boruchoff "The Three Greatest Inventions of Modern Times: An Idea and Its Public," in Klaus Hock and Gesa Mackenthun *Entangled Knowledge:*

Life in the European university was significantly altered by the Protestant

Reformation (1517-1648) and the subsequent Catholic reforms with their need to

fill new clerical positions, and the strengthening of monarchical states, with their

need for bureaucrats. These forces, and loyalties to Church and state, were

intertwined, with the latter more predominant. As a result of this dynamism,

university growth experienced extensive expansionism during the sixteenth and

early seventeenth century. Latin remained the language of scholars and the

curriculum was still based on the works of Aristotle, albeit, filtered through St.

Augustine and medieval scholarship and instilled with classical humanism in the

sixteenth century. The Catholic reforms, which came out of the Council of Trent,

gave bishops control of theology in the seminaries, which produced many priests

with the minimal education needed to serve in mostly rural parishes. Higher

clerical positions required degrees; thus, the seminaries were connected with

theology faculties for these purposes. Canon law was mostly dropped from the

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Scientist Discourses and Cultural Difference (Münster, DE: Waxmann, 2012), 133-163; Leonardo da Vinci *Leonardo Da Vinci: Notebooks* Edited by Irma A. Richter and Thereza Wells (Oxford, UK: Oxford University Press First Edition, 1952); Leonardo da Vinci *Leonardo da Vinci on the Human Body: The Anatomical, Physiological, and Embryological Drawings of Leonardo da Vinci* Translated and Edited by C. D. O'Mally, J. B. de C. M. Saunders and C. M. De (New York, NY: Schuman, 1952); Angela Ottino della Chiesa *The Complete Paintings of Leonardo da Vinci* (London, UK: Weidenfeld & Nicolson, 1969); Dmitri S. Merejcovski *The Romance of Leonardo da Vinci* (Norwalk, CT: Easton Press Collector's Editions, 1998); John Simpson (Editor) Th*e Oxford English Dictionary, Second Edition, Vol. 1-20* (Oxford, UK: Clarendon Press, 1989); Jack Wasserman *Leonardo Da Vinci: Library of Great Painters Series* (New York, NY: Harry N. Abrams, 1975).

Protestant universities, but rhetoric, scholarship and Bible studies expanded in their theology faculties, which produced ministers.[87]

Following the Thirty Years War *cuius region, eius religio* became the law of the land permitting rulers the right to dictate the sole state religion. Regional universities fully controlled by the local ruler, became the norm in both the Catholic and Protestant regions of Germany, with Calvinists developing academies in a few urban areas. In England and Ireland, the monarchy dismissed all that was not Anglican about Oxford and Cambridge, and founded an Anglican university in Dublin at the very end of the sixteenth century (i.e., Trinity College). Presbyterianism was not instituted in the Scottish universities until after the 1688 revolution. Neither Holland nor Switzerland had strong centralized monarchies; thus, those universities were controlled by urban loyal aristocrats and nobles who inculcated the faculties with dynastic nepotism. This did not always result in a single state religion, in Leiden the university was founded following a revolt against Spanish rule and in order to appease the Catholic minority it became

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[87] R. D. Anderson *European Universities from the Enlightenment to 1914* (Oxford, UK: Oxford University Press, 2004); Aristotle, *op. cit.* (2001); Augustine *The City of God, Vol. 1-7, Books 1-22* Translated from the Latin by George E. McCraken *et al.* (Cambridge, MA: Harvard University Press, Loeb Classical Library Edition, 1957-72); Augustine *The Confessions of St. Augustine* (Norwalk, CT: Easton Press, Collector's Edition, 1979); Augustine *On Christian Teaching* Translated from the Latin by R. P. H. Green (Oxford, UK: Oxford University Press, 1997); John Boccaccio *The Decameron* (Norwalk, CT: Easton Press Collector's Edition, 1980); Alain J. Lemaitre and Erich Lessing *Florence and the Renaissance* (Norwalk, CT: Easton Press Collector's Edition, 2002); Carter Lindberg *The European Reformantions, Second Edition* (Oxford, UK: Blackwell Publishing, 2010); Murphy, *op. cit.* (1974); Rachel Annand Taylor *Leonardo the Florentine: A Study in Personality* (Norwalk, CT: Easton Press Collector's Edition, 1991).

tolerant and admitted students from different religions, making it a draw internationally. Only a few other universities were like this through the early eighteenth century.[88]

The overall structure of educational institutions in Catholic Europe was dominated by the Society of Jesus, and the Jesuits transformed the relationship between secondary schools, colleges and universities. During the eighteenth century, universities were corporate organizations with a substantial amount of independence from the Church and state that oversaw their operations. The four faculties continued as the prevailing structure with the arts faculty (i.e., humanities and philosophy) providing the general preparatory education for theology, law and medicine (i.e., the three professional faculties). Until the French revolution when anyone could practice the learned professions, university degree qualifications were a prerequisite to profession practice. During the eighteenth century the arts faculty went through a significant transformation, and residential colleges started to emerge in some areas of Europe. Prior to that universities students utilized various inns for their accommodations.[89]

The Society of Jesus ran most of the universities and schools in the Catholic areas of Germany, Poland, the dominions of the Habsburgs, Hungary and

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[88] Anderson, *ibid.* (2004); Rashdall, *op. cit., Vol. 2, Part 1* (2010); Rashdall, *op. cit., Vol. 2, Part 2* (2010); P. A. Vandermeersch, "Teachers," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 227-229.

[89] Anderson, *ibid.* (2004); G. B. Nicolini *The History of the Jesuits: Their Origin, Progress, Doctrines, and Designs* (London, UK: Henry G. Bohn Publisher, 1854).

the area that was historically Czech land in Eastern Europe. They emphasized the humanities, philosophy and science education. Nevertheless, medicine and law largely stayed external to Jesuit control. They educated adolescents in local schools throughout Catholic regions of Europe, substantially impacting the edifice of the privileged university education. The Society of Jesus transferred the humanities and philosophy into the local schools and away from the universities, altering the structure of the four faculties. In Paris, for example, and much of France, the faculties of the arts were removed from the universities. Rulers regularly approved of this change, believing young men require the discipline of regional schools that was not usually available away at universities, and regional rulers were not opposed to the idea of their local colleges becoming transformed and/or promoted to university status with the addition of theology and philosophy being added to the other studies. As a result of the Jesuit reforms, the lines between colleges and universities faded, and the age when students could move on to university was no longer set in stone.[90]

Although the prominence of the Society of Jesus was substantial in France, it did not go unchecked. Since the Declaration of the Clergy of France in 1682, the Gallican Church was the Roman Catholic Church of France and was under the control of both an independent monarch, and the Pope. In the Gallican tradition the universities embraced the opinions of lay people, including those of

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[90] Anderson, *ibid.* (2004); Willem Frijhoff "Patterns," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 43-110; Nicolini, *ibid.* (1854).

the French judicial bodies and *Parlements*. Additionally, the Jesuits had strong competition from the Oratorian priests of the *Société de l'Oratoire de Jésus et de Marie Immaculée*.[91]

In Spain, the Jesuits competed with the Dominicans of the Order of Preachers, which include friars, nuns and lay teachers. As the result of Spanish wealth and power, there were many more Catholic universities to vie for, little gems that maintained local distinctiveness even as power became more centralized. Uniformity across universities was devoid in Italy due to political divisions. Many of the lesser municipal universities were under the power of the local bishops. The Spanish Bourbons ruled in Sicily and Naples. The Austrian Habsburgs had sway over the universities in Tuscany and Lombardy (i.e., Pisa and Pavia, respectively), but the Pope maintained full control over the universities in the Papal states, including the oldest university of all in Bologna.[92]

University insufficiencies that were identified by reform minded rulers included the fact that universities tended to be entrenched in the local complexes of nepotism and patronage. The universities in the early modern period retrenched to servicing merely local interests and lost their international appeal.

[91] Roger Ariew "Oratorians and the Teaching of Cartesian Philosophy in Seventeenth-Century France," in *History of Universities, Vol. 17* (Oxford, UK: Oxford University Press, 2001-02), 47-80; William Henley Jervis *The Gallican Church: A History of the Church of France from the Concordat of Bologna, AD 1516, to the Revolution, Vol. 1* (London, UK: John Murray Publishing, 1872); Nicolini, *ibid.* (1854); David D Thayer "The French School," in Peter Tyler and Richard Woods (Editors) *The Bloomsbury Guide to Christian Spirituality* (London, UK: Bloomsbury Academic, 2012).

[92] Anderson, *op. cit.* (2004); Rashdall, *op. cit., Vol. 1* (2010); Rashdall, *op. cit., Vol. 2, Part 1* (2010); Nicolini, *ibid.* (1854); Simon Tugwell *Early Dominicans: Selected Writings* (Mahwah, NJ: Paulist Press, 1982).

Many professors were lazy and corrupt, and were appointed based on familial and regional sway over intellectual distinction. Civil society in university towns and cities disliked the disruptive and unruly nature of the students. Methods for finding talented scholars failed, but the rulers of the day identified these problems and attempted to make some reforms.[93]

Endowments allowed universities to avoid calling for state support. For example, Uppsala's endowment in the early seventeenth century lasted over two hundred years before needing state support. Independent revenues provided some universities a degree of autonomy but also contributed to intellectual lassitude and social insensitivity. Oxford and Cambridge lived on endowments and fees until the early twentieth century. Other universities became dependent on student fees and state subsidies in order to to pay salaries, support poor students and maintain facilities after 1789 when secularization and seizures eliminated the mixture of endowments, ecclesiastical plums, contributions, and the right to levy taxes.[94]

Colleges in France had provided a way of recruiting poor students for the Church and had been connected to the universities, but as they merged into secondary schools the faculties of art lost their more scholarly professors. In contract, the colleges in England actually developed more power than the universities they were attached to. They attracted affluent benefactors and

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[93] Anderson, *ibid.* (2004);

[94] Anderson, *ibid.* (2004); Elisabeth Leedham-Greem *A Concise History of the University of Cambridge* (Cambridge, UK: Cambridge University Press, 1996); Rashdall, *op. cit., Vol. 2, Part 2* (2010); Hilde de Ridder-Symoens, "Management and Resources," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 155-209.

monarchs, whose endowments fortified their influence, and wealth.[95] By the sixteenth century, the colleges became central to teaching at 'Oxbridge'.[96]

University examinations began to deterioration. Belonging to a college was mandatory and they were prized for their disciplinary control. Scholarships for the poor were averted to affluent families. Poor recruits for the Anglican church were not as indispensable because the church had grown in its wealth, too, and appointments for the younger sons of the aristocracy helped develop patronage. Some of the colleges, such as Eton and Winchester, were aristocratic and the lifestyle remained too expensive for the middle class. The less well endowed colleges could not afford to recruit talent.[97] Fellowships were available but the requirement of being both a clergyman and celibate meant the fellows considered it transitory as they looked for a better opportunity. Like the poet Lord Byron, who said Cambridge was "sunk in dullness", Edward Gibbon, a renown historian, said his year at Oxford was "the most idle and unprofitable of my whole life", and he derided the scholarly inactivity of the dons, "steeped in port and prejudice".[98] In other parts of Europe (e.g., Italy, and Belgium) colleges

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[95] Anderson, *ibid.* (2004); Rashdall, *op. cit., Vol. 2, Part 2* (2010);

[96] A convenient collective name for the two British universities first used by a nineteenth-century novelist in W. M. Thackeray *The History of Pendennis: His Fortunes and Misfortunes, His Friends and His Greatest Enemy, Vol. 1-3* (Leipzig: Bernard Tauchnitz, 1849).

[97] S. Rothblatt, *The Revolution of the Dons: Cambridge and Society in Victorian England* (Cambridge: Cambridge University Press, 1869), 29-47.

[98] E. Gibbon, *The Autobiography and Correspondence of Edward Gibbon, the Historian* (London: Alex Murray & Son, 1869), 24, 49; P. Searby, *A History of the University of Cambridge, Vol. 3, 1750-1870* (Cambridge: Cambridge University Press, 1997), 237.

were also immersed in patronage but they did not take over the role of education, which was left to the universities. [99]

At Alcalá, Salamanca, and Valladolid in Spain, the aristocratic *colegios mayores* had control over the profession of law and other high bureaucratic positions, and they would recruit graduates over regular students creating another insufficiency in need of reform by enlightened rulers.[100]

Enrollment research demonstrated that university enrollments grew dramatically in the sixteenth and early seventeenth century, reaching a peak in 1630, and there were not momentous declines before the eighteenth century. Lawrence Stone has been called the pioneer of enrollment research, starting with his study of Oxford a half century ago covering 1580 to 1910, but there ought to be some dispute on this title because the German statistician, Franz Eulenburg, completed similar research fifty years earlier than Stone. Other nation states (e.g., France, Italy, Poland, and Spain) attempted similar research, but their records were not as detailed as the Germans. Generally speaking, the data supported the conclusion that with the growing number of posts in the bureaucracies and churches and the need for doctors at the start of the seventeenth century, bourgeoisie and nobility sought higher education to attain these positions. As the positions became inundated with graduates, the interest in education declined.

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[99] D. Maffei and H. De Ridder-Symoens (Editors), *I College Universitari in Europa Tra il XIV e il XVIII Secolo* (Milan: Giuffrè, 1991); R. A. Muller, "Student Education, Student Life," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 333-39.

[100] R. L. Kagan, *Students and Society in Early Modern Spain* (Baltimore: The Johns Hopkins University Press, 1974).

The cyclic overcrowding of professions and posts appear to be highly correlated with ambition and incentives to matriculate *v.* pursue alternative opportunities. With falling enrollments, universities decayed in some countries, but enrollments were restored in other countries in the late eighteenth century. From 1701 to 1790 twenty-eight universities were restored or newly founded, often based on specific reform efforts. Twenty-nine universities were cut back to college status, merged or closed.[101]

The counter argument is that declines could not be fully attributable to labor market demands. The age cohort was narrowed, which would impact the enrollment statistics, when students were transferred into secondary colleges and schools. In contrast, Scotland would take younger aged students straight out of local schools that emphasized the study of Latin over more advanced mathematics and the philosophy. As a result, the university age cohort was large. The

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[101]   Anderson, *op. cit.* (2004);   L. Brockliss "Patterns of Attendance at the University of Paris 1400-1800," *Historical Journal* 22 (1978): 503-44;   R. Chartier, *The Cultural Origins of the French Revolution* Translated from the French by Lydia G. Cochrane (Durham, NC, Duke University Press, 1991);   M. H. Curtis, "The Alienated Intellectuals of Early Stuart England," *Past and Present*, 23 (1962): 25-49;   P. Denley, "University Records, Social History, and the Creation of Large Databases." *History of Universities*, 8 (1989): 219-29;   M. R. de Simone, "Admission," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe. Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 285-325;   Frijhoff, *op. cit.* (1996), 43-110;   Willem Frijhoff "Graduation and Careers," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe. Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 415;   Kagan, *ibid.* (1974);   L. Stone "The Size and Composition of the Oxford Student Body," in L. Stone (Editor), *The University in Society, Vol. 1, Oxford and Cambridge from the 14th to the Early 19th Century* (Princeton: Princeton University Press, 1975), 3-110;   L. Stone "The Educational Revolution in England 1560-1640," *Past and Present*, 28 (1964): 41-80; Cf. Searby, *History of the University of Cambridge*, 60-65.

universities at Aberdeen, St. Andrews, Edinburgh, and Glasgow had an impressive enrollment of 2,850 by the end of the eighteenth century, out of a population of about one and a half million.[102]

Additionally, enrollment research demonstrated the move toward regionalization in most states during this period as local rulers applied reform policies that kept local students at home, reducing the opportunity for international study. Furthermore, the increased tolerance of students of a different confession permitted religious minorities to be educated locally. Possibly in reaction to the reduced international interchange, at about this time, *Respublica literaria* became popular in which literary figures and scholars would exchange handwritten letters through the postal system, on various topics, stimulating discussions across boundaries and across the Atlantic.[103]

Not all citizens stayed at home, their are other reasons enrollments started to decrease. Poorer students became less attractive to those who pulled the levers of matriculation and patronage in an attempt to lure the aristocracy in much of northern Europe back to university. As an alternative to university studies many sought refinement taking the *Grand Tour* with a *cicerone* (i.e., a tutor, or guide). Less affluent students might obtain sponsorship for the tour, and the well heeled

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[102] R. L. Emerson, "Scottish Universities in the Eighteenth Century 1690-1800," *Studies on Voltaire and the Eighteenth Century*, 167 (1977): 473.
[103] Lorraine Daston "The Ideal and Reality of the Republic of Letters in the Enlightenment," *Science in Context* 4, no. 2 (1991): 367-386; H. de Ridder-Symoens "Mobility," in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 2. Universities in Early Modern Europe 1500-1800* (Cambridge: Cambridge University Press, 1996), 436-47; Dena Goodman *The Republic of Letters: A Cultural History of the French Enlightenment* (Itaca, NY: Cornell University Press, 1996).

individuals would set sail with an entourage of servants. The practice flourished from about 1660 and the itinerary varied extensively from a few months to a few years. The trip could prove a scholarly endeavor, depending on the *cicerone* and the young aristocrat in question, but that would be the exception, rather than the rule. It did, however, provide an opportunity to meet polite society on the continent, listen to more diverse forms of music, and view certain masterpieces, sculpture and architecture, exploring the legacy of the Renaissance and classical antiquity. Typically the ship left out of Dove, England, obtained a guide who was French-speaking, and traveled to Paris and then Lausanne or Geneva. Then the group would cross the Alp at the St. Benard pass, obtain an Italian-speaking guide, visit Turin, and spend a more considerable amount of time in Florence due to the Anglo-Italiano culture their. Bologna, Padua, and Pisa were important side trips including some study time at the historic universities of Italy, for the ambitious. Of course, Venice and Rome were essential. Some visited Naples and a few sailed to Sicily or Malta. Given the Turkish rule of Greece, it remained off the itinerary. Traveling north and obtaining a German-speaking guide, visits often included Heidelberg, Muich, Vienna and Berlin before heading home.[104]

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[104] Anderson, *op. cit.* (2004); Elizabeth Bohls and Ian Duncan (Editors) *Travel Writing 1700–1830: An Anthology* (Oxford, UK: Oxford University Press, 2005); James Buzard "The Grand Tour and After (1660–1840)," in Tim Youngs (Editor) *The Cambridge Companion to Travel Writing* (Cambridge, UK: Cambridge University Press, 2002); Edward Chaney *The Grand Tour and the Great Rebellion: Richard Lassels and 'The Voyage of Italy' in the Seventeenth Century* (Genève, CH: Slatkine, 1985); John Eglin *Venice Transfigured: The Myth of Venice in British Culture, 1660-1797* (New York, NY: Macmillan, 2001); Thomas Freller *Malta and the Grand Tour* (Santa Venera, MT: Midsea Books, 2009); J. Isaacs "The Earl of Rochester's Grand Tour," *The Review of English*

The ways in which university education functioned within societal structure may have been adjusted some but did not substantially change following the *Ancient Régime* model. Additionally, evidence demonstrates scholarship never pedagogically died, and intellectual pursuits continued to live on and thrive to varying degrees during these periods.[105]

In summary, scholars including the authors and editors of the "*History of the University in Europe*" date the creation of European universities to the Middle Ages followed by their development in the early modern European era starting 1500 CE. Most mark the next transition to 1800 CE. They claim this was the point at which, to quote Robert Frost, "two roads diverged", in pivotal though conflicting directions. Most credit Napoleon with the creation of the French model, a centralize educational system run by the government, with the goal of social unity and practicality. Scholars credit Wilhelm von Humboldt with the alternative path, the German model, in which research is an end alone, without practical objectives serving the intellectual growth of humanity.[106]

Studies 9 (1927): 75-76; C. E. McClelland "The Aristocracy and University Reform in Eighteenth-Century Germany," in L. Stone (Editor) *Schooling and Society: Studies in the History of Education* (Baltimore, MD: Johns Hopkins University Press, 1976), 146-73; Bruce Redford *Venice & the Grand Tour* (New Haven, CT: Yale University Press, 1996).

[105] Anderson, *ibid.* (2004); de Ridder-Symoens, *op. cit.* (1992); de Ridder-Symoens, *op. cit.* (1996).

[106] Anderson, *ibid* (2004); Edward Connery Lathem (Editor) *The Poetry of Robert Frost* (Franklin Center, PA: The Franklin Library, Limited Collector's Edition, 1979); W. Rüegg, in Hilde de Ridder-Symoens (Editor), *A History of the University in Europe, Vol. 1, Universities in the Middle-Ages.* (Cambridge, UK: Cambridge University Press, 1992), *xxiv*.

The position of this dissertation is that for clarity purposes it may be expeditious to draw these clear distinction between conflicting French and German models, but during the nineteenth century the former did not completely neglect pure research, and the latter did not completely ignore research applications and societal utility. Furthermore, this dissertation maintains these two diverging roads were already visible, albeit, mere paths walked by informed rulers before 1800 CE. Napoleon was astute at integrating old ideas into new policies, *par excellance,* but he did not create the idea underlying the French model. Similarly, Wilhelm von Hemholtz may have provided the material for the Germans to more fully highlight the importance of pure research as an end alone, but we saw this distinction between liberal arts education and illiberal forms in the works of Aristotle, and the aim of attaining individual excellence for its own sake can be found in the works of Plato, though both stressed the citizen's role in society, as well.[107]

It was the different degrees of emphasis on personal happiness and societal utility, and/or on pure and applied research, rather than absolute distinctions, that fixed French and German models in opposition to one another, not to mention a degree of national pride. History demonstrates numerous examples of pre-Napoleon rulers, attempting to secularize and centralize their educational systems for utilitarian purposes. A survey of universities in Europe

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[107] Anderson, *ibid.* (2004); Plato, *op. cit.* (1968); Plato, *op. cit.* (2001); de Ridder-Symoens, *op. cit.* (1992); de Ridder-Symoens, *op. cit.* (1996); Rüegg, W. (Editor). *A History of the University in Europe, Vol. 3 Universities in the Nineteenth and Early Twentieth Centuries (1800–1945).* Cambridge, UK: Cambridge University Press, 2004.

from 1789 to 1850, suggested these reforms of the ruling classes failed, dooming the university at the dawn of the nineteenth century, until the Germans created the research university.[108]

In contrast, Laurence Brockliss maintained that during the eighteenth-century, educating the aristocracy and transferring knowledge remained relatively efficient.   Regional rulers were adapting and attempting to transform and revitalize the university model of the *Ancient Régime*, which had been an manifestation of the partnership between church and state, echoing the particularism and corporate privilege of the society embedded in the local system of patronage and kinship. Colleges, without the burden of bureaucratic oversight were also attempting to provide alternatives. It is the position, herein, that these enlightened eighteenth century reforms did not fail. Rather, they were taken up and adopted by Napoleon in a more sweeping yet repressive manner, and the Humboltian model was a mere reaction in opposition to dominance by the French.[109]

> State systems of the Napoleonic kind did not lose their attraction in the nineteenth century, and the French separation of education in vocational schools from research in specialized institutes seemed as valid to many as the German ideas of the unity of knowledge and humane education through original research. By the later nineteenth century it was widely accepted that research was the universities prime mission, but the balance between teaching, research, specialization, and general liberal education has never ceased to be disputed.[110]

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[108] Ibid.

[109] Anderson, *op. cit.* (2004); Laurence Brockliss, "The European University in the Age of Revolution 1789-1850," in M. G. Brock and M. C. Curthoys (Editors) *The History of the University of Oxford, Vol 6, Nineteenth-Century Oxford, Part 1* (Oxford, UK: Oxford University Press, 1997), 77-133.

[110] Anderson *ibid.* (2004), 4-5.

Reforms in general education and the requirements for examination to obtain bureaucratic positions were repeatedly attempted until Louis XIV's reign came to an end in 1715. The Late Modern Period followed, but the Seven Years War (1754-1763) was a world war in many respects, and the focus was not on educational reform. Then in 1775 thinkers of the Enlightenment put forth numerous proposals to Catherine the Great for a nationalized education system. The French monarchy failed to centralize control as had been accomplished in eastern Europe. This eventually led to the revolution in 1789. The Jesuit control of education in France had dissolve in 1762-63. The predominant thinking of the French Enlightenment criticized the utility of traditional classical education, and philosophy. Instead, they professed the foundation of educational curricula should serve utilitarian purposes developed from science and the sensible hierarchy of disciplines. Their reforms focused more on secondary schools and colleges than the faculties of law, medicine and theology. Some significant advances were accomplished with these reforms, but the number of highly educated unemployed intellectuals grew and with it came the revolution. Then starting in 1791 various reports and policy proposals emerged, not to reinstitute the old university system, but to create a new hierarchy of education of a different name. At the top would be a national institute or *la société nationale* for the training of lawyers, military officers, medical doctors, clergy and decisions concerning professorial appointments. Below that would be a system of *Lycées* comparable to universities. After the revolutionaries took control, some of the

authors of these proposals were sent to the prison of the Terror (e.g., Marquis de Condorset). The proposals were studied by other nations and philosophically bridged the gap between scientific positivism and the radical Enlightenment. Robespierre advanced the notion that all bureaucratic and professional positions should remain open to all citizens, *la Déclaration des droits de l'homme.* The revolutionaries combatted aristocratic patronage, privilege, regional particularism, and the rights of corporations. In sum, they opposed all that the old universities represented and they avenged the system of education that stood in the way of their advancement, and discarded it, *dans toute.* By 1793, twenty-two French universities were closed and any citizen, so inclined, could practice the professions of law and medicine. Shortly after this extreme state of affairs, three schools of health were opened in Montpellier, Paris, and Strasbourg. Faculties of law remained closed for some time afterwards, but private initiatives filled the need in the interim. Thus, when Napoleon took power, ideas of centralized educational reform had already been floating around. The Catholic Church would now be run by the state that paid clergy salaries and the state took ownership of all teaching corporations. Education became more secular, yet, moved away from the new modern scientific ideas, and towards the humanism and classical traditions of the *Ancient Régime.*[111]

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[111] Anderson, *op. cit.* (2004); Brockliss, *op. cit.* (1997); Chartier, *op. cit.* (1991); Julian C. Corbett *The Seven Years War: A Study in British Combine Strategy* (London, UK: The Folio Society Collector's Edition, 2001); R. R. Palmer "The Old Regime Origins of the Napoleonic Educational Structure," in Ernst Hinrichs, Eberhard Schmitt, and Rudolf Vierhaus *Vom Ancien Regime zur Französischen*

Napoleon's expressed aim was to pragmatically direct public consciousness, political positions, and moral beliefs. He was open to the support of anyone, including old rivals, as long as they professed and became loyal to him. Napoleon created state scholarships, *bourses*, but they were utilized to reward families that had served the state in some capacity, usually those of high status who had fallen on hard times. Scholarships were not based on merit.[112] The liberals in Italy supported Napoleon's authoritative reforms in that it protected them from the local aristocracy and religious clergy, who also accepted these changes; by doing so they retained a degree of influence so as to maintain some of the cultural traditions of the region, separate from France. At its peak in 1812, the empire maintained thirty-five academies across France, Belgium, Italy, and the Rhineland with close to nine thousand students. The French model, sired by Napoleon, was a monopoly that stifled educational freedom of ideas, liberty, egalitarianism, individual initiative, and the diversity of knowledge. After the defeat of France in the Franco-Prussia war (1870-71) the German model thrived.[113]

Revolution, Forschungen und Perspektiven (Göttingen, DE: Göttingen University Press,1978).

[112] Anderson, *op. cit.* (1975).

[113] Anderson, *ibid.* (2004); M. Broers Europe under Napoleon 1799-1815 (New York, NY: I. B. Tauris & Co., 2014); J. A. Davis "Cultures of Interdiction: The Politics of Censorship in Italy from Napoleon to the Restoration," in David Laven and Lucy Riall *Napoleon's Legacy: Problems of Government in Restoration Europe Vol. 3* (Oxford, UK: Berg Publishers, 2000); Dorinda Outram "Education and Politics in Piedmont, 1796–1814," *The Historical Journal* 19, no. 3 (1976): 611-633; Dorinda Outram "Military Empire, Political Collaboration, and Cultural Consensus: The *Université Impériale* Reappraised, The Case of the University of Turin," *History of Universities* 7 (1988): 287-303.

During the latter half of the eighteenth century increasing numbers of the royal nobility that had heretofore dominated social, economic and political life through ownership of property, found it necessary to sell their land to newly prosperous commoners. The new aristocracy was not of noble lineage and redefined social status based on educational accomplishments, position, and wealth.[114] For most practical purposes, attempts at reforming higher education functioned the same whether the reformers were drawn from nobility, or some other source of power. What is of note is that these developments facilitated the advancement and importance of intellectuals like Johann Wolfgang von Goethe (1749-1832). Born in Frankfurt, which at the time was an Imperial Free City of the Holy Roman Empire, his father provided him educational opportunities starting with a private tutor in a half-dozen languages in addition to gymnastics with fencing, riding, and dance. He studied law at Leipzig University, was appointed Imperial Councilor, but became a philosopher, poet, and public intellectual concerned with the arts and sciences, in his own right, with secular appeal and great notoriety, so much so the period of Weimar Classicism is often referred to as the Age of Goethe.[115] Goethe obtained nobility through his

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[114] James J. Sheehan *German History, 1770-1866* (Oxford, UK: Oxford University Press, 1993).

[115] Johann Wolfgang von Goethe *The Auto-Biography of Goethe: Truth and Poetry from my Own Life, Vol. 1, Books 1-13* Translated from the German and Edited by John Oxenford (London, UK: Henry G. Bohn, 1848); Johann Wolfgang von Goethe *The Auto-Biography of Goethe: Truth and Poetry from my Own Life, The Concluding Books, with Letters from Switzerland and Travels to Italy Vol. 1, Books 1-13* Translated from the German by Rev. A. J. W. Morrison (London, UK: Henry G. Bohn, 1849); Johann Wolfgang von Goethe *The Dramatic Works of Goethe: Comprising Faust, Iphigenia in Tauris, Torquato*

accomplishments and not by birth. The *Universität Frankfurt am Main*, founded

1914, was renamed in 1932 as the *Johann Wolfgang Goethe-Universität*

Frankfurt am Main, in his honor. Goethe wrote a version of the tragedy of Faust

in two parts. *Faust, Part One* was published in 1806. Faust, Part Two was not

completed until 1831, the year before Goethe's death. Johann Christoph Friedrich

von Schiller was Goethe's contemporary, friend, and collaborator. He was a

German physician, philosopher, historian, poet, and playwright. Schiller and

Goethe founded the Weimar Theater together and opposed their philosophical

adversaries through satirical poetry, *Xenien*, which they co-authored. Schiller

encouraged Goethe to complete *Faust, Part Two* at the end of his life. Goethe's

Faust is considered by many to be one of the greatest examples of German

classical literature, while Schiller was considered one of the greatest German

classical playwrights. [116]

Tasso, and Egmont Translated from the German by Anna Swanwick, Goetz von Berlichingen and Edited by Sir Walter Scott (London, UK: Henry G. Bohn, 1850); Johann Wolfgang von Goethe *Novels and Tales by Goethe: Elective Affinities; The Sorrows of Werther; German Emigrants; The Good Women, and A Nouvelette* Translated from the German by R. D. Boylan (London, UK: Henry G. Bohn, 1854).
[116] Hjalmar H. Boyesen "Biographical Introduction," in Johann Christoph Friedrich von Schiller *The Works of Schiller with Illustrated Engravings by the Greatest German Artists, Vol. 4* Translated from the German and Edited by J. G. Fischer (Philadelphia, PA: George Barrie Publisher, 1883), 345-63; Nicholas Boyle *German Literature* (Oxford, UK: Oxford University Press, 2008); Goethe *op. cit.* (1850); Johann Wolfgang von Goethe *Faust: Parts One and Two* Translated from the German by George Madison Priest and Illustrated by Mark Bellerose (Franklin Center, PA: Franklin Library Limited Edition, 1978); Schiller *ibid.* (1883); David E. Wellbery, Judith Ryan and Hans Ulrich Gumbrecht *A New History of German Literature, Vol. 15* (Cambridge, MA: Harvard University Press, 2004).

Schiller's life is an interesting example of the tensions between local rulers and the community of people they ruled during this period, in addition to the various alternatives someone from modest means had in those times. Schiller was known for cutting primary school classes with one of his sisters. Schiller's parents intended him to become a pastor and had him instructed in Latin and Greek, but his father, under the pressure of Karl Eugen, Duke of Württemberg, enrolled Schiller in the *Karlsschule Stuugart*, an elite military academy founded by Duke Eugen. The Duke had a bad reputation for not paying well and selling his subjects as mercenaries to fight against the revolution in the New World. Schiller was to study law but eventually petitioned to switch to medicine with the promise of a great position upon graduation. Instead he was commissioned as a military surgeon, which he hated, eventually writing *The Robbers*, critiquing social corruption, and deserting his post. Schiller revered Jean-Jacques Rousseau, and classical ideals, in addition to bringing together the ideas of Immanuel Kant with Karl Leonhard Reinhold's German Idealism.[117] In fact, German idealism, rejected by Arthur Schopenhauer, was closely associated with Romanticism,

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[117] Boyesen, *ibid.* (1883); Boyle, *op. cit.* (2008); Frederick Charles Green *Jean-Jacques Rousseau a Critical Study of His Life and Writings* (Norwalk, CT: Easton Press Collector's Edition, 1994); Karl Leonhard Reinhold "The Foundation of Philosophical Knowledge," *Between Kant and Hegel: Texts in the Development of Post-Kantian Idealism* (1791): 51-103; Jean-Jacques Rousseau *The Confessions of Jean-Jacques Rousseau* (Norwalk, CT: Easton Press Collector's Edition, 1980); Schiller, *op. cit.* (1883); Wellbery, *et al., ibid.* (2004).

Weimar Classicism, and the Enlightenments revolutionary politics, and it was a reaction against Kant's *Critique of Pure Reason.*[118]

The research university, born in Germany, spread across Europe and abroad; but we are getting ahead of ourselves. Reform in Germany was closely related to the educational philosophy at *Universität zu Berlin*, founded in 1810 by Wilhelm von Humboldt and repeatedly renamed until 1949 when it was named *Humboldt-Universität zu Berlin* in honor of its founder and his brother Alexander von Humboldt. Indeed, the German model has been referred to as the "Humboldtian model" ever since Wilhelm's writings on the subject of educational reform were discovered after his death.[119]

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[118] Immanuel Kant *Critique of Pure Reason* (Norwalk, CT: Easton Press Collector's Edition, 1969); Immanuel Kant "Foundations of the Metaphysics of Morals," Translated from the German by Lewis White Beck, in *The Great Philosophers Series, Vol. 1-12.* (Norwalk, CT: Easton Press Collector's Edition, 1995); Arthur Schopenhauer *The Essays of Schopenhauer, Vol. 1-7* Translated from the German by T. Bailey Saunders (New York, NY: A. L. Burt, 1892).

[119] Anderson, *op. cit.* (2004); Karl-Heinz Günther "Profiles of Educators: Wilhelm von Humboldt (1767–1835)," *Prospects* 18, no. 1 (1988): 127-136; Wilhelm von Humboldt *Humanist Without Portfolio: An Anthology of the Writings of Wilhelm von Humboldt* Edited by Marianne Cowan (Detroit, MI: Wayne State University Press, 1963); Wilhelm von Humboldt "On the Spirit and Organisational Framework of Intellectual Institutions in Berlin," *Minerva* 8, no. 2 (1970): 242-250; Karl Jaspers *The Idea of the University* (London, UK: Owen, 1959); C. E. McClelland *State, Society , and University in Germany 1700-1914* (Cambridge, UK: Cambridge University Press, 1980); L. O'Boyle "Learning for its Own Sake: The German University as Nineteenth-Century Model," *Comparative Studies in Society and History* 25 (1983): 8-10; Rainer Christoph Schwinges *Humboldt International* (Basel, CH: Schwabe & Co., 2001); P. R. Sweet, *Wilhelm von Humboldt, Vol. 1-2* (Columbus, OH: Ohio State University Press, 1978-80); R. S. Turner University Reformers and Professorial Scholarship in Germany 1760-1806," in L. Stone (Editor), *The University in Society, Vol. 2, Europe, Scotland, and the United States from the 16th to 20th Century* (Princeton: Princeton University Press, 1976), 495-531.

During his life, Wilhelm von Humboldt was not widely associated with the educational reforms, though both he and his brother were known as members of Weimar Classicism, a collective term that represents the interdisciplinary collaborations between the likes of Johann Wolfgang von Goethe, Johann Christoph Friedrich von Schiller, Johann Gottfried von Herder, Johann Gottlieb Fichte, Karl Wilhelm Friedrich von Schlegal, and others.[120]

In 1809, Frederick William III of Prussia asked Humboldt to run the directorate of education. As such, he created a department within the ministry to supervise textbook and curriculum development, instituted a system of public elementary and secondary education, founded the University of Berlin, and standardized state examinations. Wilhelm von Humbodt was the power behind the curtain at Berlin until his writings were more widely disseminated at the start of the twentieth century.

His own background included home schooling, and he was a dropout from universities in Göttingen and Frankfurt. His thesis, *Theory of Human Education,* and other writings maintained that the definitive job in life is to place the greatest

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[120] Johann Gottlieb Fichte *Fichte: Addresses to the German Nation* Translated from the German and Edited by Gregory Moore (Cambridge, UK: Cambridge University Press, 2008); Johann Gottfried von Herder *Herder: Philosophical Writings* Translated from the German and Edited by Michael N. Forster (Cambridge, UK: Cambridge University Press, 2002); Johann Christoph Friedrich von Schiller Schiller *The Works of Schiller with Illustrated Engravings by the Greatest German Artists, Vol. 1-4* Translated from the German and Edited by J. G. Fischer (Philadelphia, PA: George Barrie Publisher, 1883); Friedrich von Schlegel *Lectures on the History of Literature, Ancient and Modern* Translated from the German and Edited by John Frost (Philadelphia, PA: Moss & Brother, 1848); Friedrich von Schlegel *The Aesthetic and Miscellaneous Works of Frederick von Schlegel* Translated from the German and Edited by E. J. Millington (London, UK: George Bell & Sons, 1889).

emphasis on humanity in our own individuality, through the influence of actions in life, as a result of our relationships within society and the world. He stressed the importance of self-education following the development of the necessary building blocks through formal education. For Humboldt, truth and virtue are spread through education, and produce an idea about mankind that creates better citizens as each individual interacts with, and digests the vast amount of knowledge, as much as possible, recasting the information in a way that is appropriate for each individual in communication with fellow citizens. More than mere vocational training, Humboldt believed everyone in society required an understanding of humanity and what it means to be a good citizen, something acquired through the cultivation of the mind via education.

Humboldt established the middle-class university based on the notion of a synthesis between teaching and research, and aligned with ideas of nationalism, liberalism and industrialization. From 1870, the German model spread far and wide external to the German cultural sphere. Intellectual, religious, and political reforms fortified true autonomy for universities, and started a period of vibrant growth and expansion. Prior to that, liberalism struggled while rulers used their local universities to impose political and religious orthodoxy.[121]

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[121] Anderson, *op. cit.* (2004); Christopher M. Clark *Iron Kingdom: The Rise and Downfall of Prussia, 1600-1947* (Cambridge, MA: Harvard University Press, 2006), 332; Johann Gottlieb Fichte and Gregory Moore *Fichte: Addresses to the German Nation* (Cambridge, UK: Cambridge University Press, 2008); Günther, *op. cit.* (1988); von Humboldt, *op. cit.* (1963); von Humboldt, *op. cit.* (1970; Jaspers, *op. cit.* (1959); McClelland, *op. cit.* (1980); O'Boyle, *op. cit.* (1983); Schwinges, *op. cit.* (2001); Sweet, *op. cit.* (1978-80); Turner, *op. cit.* (1976), 495-531; R. S. Turner "Historicism, Kritik, and the Prussian Professoriate 1790-

According to R. D. Anderson, the German model stands "for academic freedom, original research, and critical thinking, which was less in evidence for the previous 600 years, but which still define the ideal university today". [122]

The drive for reform was not limited to Germany. In his first hand account, Lorenzo Benoni wrote of how the Spanish Constitution became the law of the state for a brief period following the 1821 rebellion that broke out in the Sardinian states. It was a joint proclamation by the military and the people of Alexandria, Genoa, Turin and others. Austria intervened, restored rule and pursued those responsible for the insurrection, in order to convict and hang them. The vast majority had escaped abroad though some were put to death. University students were among those who undertook the constitutional drama. Not satisfied with the convictions and death sentences for the rebels, the universities in Genoa and Turin were also closed, but this state of affairs did not last long. Too many were being denied the path to a profession; thus, a commission for the reform of education was made up of those loyal to the government, and hostile to the cause of the youth.

Their goal in reform was twofold: first, to have only a few students matriculate, and second, to make them as miserable as possible. They created two forms of examination, simple and straight forward procedures for the landed class, and complicated, extremely difficult procedures for the others. The commissioners failed at the first goal of having only a few matriculated students.

1840," in M. Bollack, H. Wismann, and T. Lindken *Philologie und Hermeneutik im 19 Jahrhundert* (Göttingen, DE: Göttingen University Press, 1983), 476.

[122] Anderson, *op. cit.* (2004), 3.

There had been such a backlog waiting for the universities to reopen that many entered the first year. The commissioners did, however, succeed at the second goal, subjecting, "them to a host of petty, puerile, humiliating regulations and restraints, and abandoned them as a prey to the systematic ill-will of all the persons in any way connected with the universities". [123]

Rome was under siege in 1849 after a crushing Piedmontese defeat by Giuseppe Garibaldi and his ragtag militia, the *redshirts*, including many students. A heroic American correspondent who supported the rebellion, Margaret Fuller, was present in Rome with her lover, Giovanni Ossoli, and chronicled the drama in her dispatches and letters. They rallied in support of the newly proclaimed Roman Republic, while the French forces fought to restore Pope Pius IX and the Papal states, which they did. Ms. Fuller died with Giovanni Ossoli and their child in a shipwreck in sight of the American coast off Fire Island in 1850.

Garibaldi returned to fight again in 1854 but was defeated. In January of 1860 he married a teenage woman from Lombardy, only to be told that she was pregnant with another man's child, where upon he left her in favor of a continued fight for independence. By October, Garibaldi had acquired territory to the south, and the Piedmontese, under the leadership of King Emannuel II, had amassed the majority of the Pope's territories. In a political move in favor of Italian unification over his own power, Garibaldi ceded his territories to the Piedmontese crown, and retired to the Isle of Caprera. The ideas of Italian unification and the

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[123] Lorenzo Benoni *Passages in the Life of an Italian* (Leipzig, DE: Bernhard Tauchnitz, 1861), 105-07.

opposition to religious dogma, advanced among students, was finally realized in 1870.[124]

Bertrand Russell carried the torch of agnosticism. He was a historian, logician, mathematician, Nobel laureate, pacifist, political activist, social critic, and writer. Russell influenced many a student but none as so gifted as Ludwig Wittgenstein who went on to revolutionize the fields of philosophy with respect to language, logic, mathematics and the mind.[125]

The Institute for Social Research, *Institut für Sozialforschung,* was formed as an affiliate of *Universität Frankfurt am Main* in 1923. The Marist-Hegelian approach to study, the dialectical method of research, and critical theory all led to the collective name of *The Frankfurt School* being applied to the thinkers of the institution. It was a group made up of many disciplines including anti-positivist social and political scientists, existential philosophers, and psychoanalysts. It was

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[124] Margret Fuller *The Letters and Dispatches From Rome 1849-1850* (New York, NY: Correspondence on Display at the Morgan Library & Museum, July 21, 1916); Megan Marshall *Margret Fuller: A New American Life* (New York, NY: Houghton Mifflin Harcourt, 2013); John Pinto (Curator) *City of the Soul: Rome and the Romantics* (New York, NY: Exhibition Presented at the Morgan Library & Museum, June 17 – September 11, 2016); John Pinto, Megan Marshall, and David Kertzer (Lecturers) *Rome on the Cusp of Modern Era: 1849-1870* (New York, NY: Lecture Presented at the Morgan Library & Museum, July 21, 1916).

[125] Bertrand Russell *Autobiography* (London, UK: George Allen & Unwin Ltd., 1975); Russell, *op. cit.* (2004); Ludwig Wittgenstein *Tractatus Logico-Philosophicus: The German Text With a Revised English Translation* Translated from the German by D. F. Pears and B. F. Mcguinness, and With an Introduction by Bertrand Russell (London, UK: Routledge & K. Paul, 1963); Ludwig Wittgenstein *Philosophical Investigations: The German Text With a Revised English Translation* Translated from the German by G. E. M. Anscombe (Oxford, UK: Blackwell Publishing, The 50th Anniversary Commemorative Edition, 2003).

truly interdisciplinary. During the build-up of the Nazi era the school escaped to Geneva and then onto New York, eventually returning to Frankfurt after the war. The mantel has been carried on into the present day by Jürgen Habermas and others.[126]

In 1933 The New School for Social Research, in New York, set up a graduate level University in Exile as a safe haven for academics escaping Nazi Germany.[127] The cultural shifts in Berlin from the Weimar intelligentsia, to Nazi oppression, followed by the split during the Cold War, are all well documented. Few have studied the period between the end of the Third Reich and the start of the Cold War. This was a time when people emerged from the devastation and attempted to reconstruct a Republic of Letters as a way of carrying on an intellectual dialogue that was of a neo-Weimar nature. Their attempt varied in seriousness but ultimately failed.[128]

Freedom of speech, based on the First Amendment, states everyone is entitled to an opinion. The concept was opposed by Nazi Germany. In some small manner of speaking, the Nazis prevailed after the war in that the concept

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[126] Andrew Arato and Eike Gebhardt (Editors) *The Essential Frankfurt School Reader* (New York, NY Continuum Publishing, 1990); Jürgen Habermas *The Structural Transformation of the Public Sphere* Translated from the German by Thomas Burger and Frederick Lawrence (Cambridge, MA: Harvard University Press, 1989); Rolf Wiggershaus *The Frankfurt School: Its History, Theories, and Political Significance* Translated from the German by Michael Robertson (Cambridge, UK: Polity Press, 1994).

[127] Ira Katznelson "Reflections on the New School's Founding Moments, 1919 and 1933," *Social Research: An International Quarterly* 76, no. 2 (2009): 395-410.

[128] Wolfgang Schivelbusch *In a Cold Crater: Cultural Intellectual Life in Berlin 1945-1948* Translated from the German by Kelly Barry (Berkley, CA: University of California Press, 1998).

came under attack during the McCarthy era in the America. Indeed, many professors left Columbia University for The New School because of the Ivy League institution capitulation to McCarthyism.[129]

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[129] Robert C. Post *Democracy. Expertise, Academic Freedom: A First Amendment Jurisprudence for the Modern State* (New Haven, CT: Yale University Press, 2012).

CHAPTER 3:   EDUCATIONAL TRENDS IN AMERICA

With the suppression of the Society of Jesus in 1773, and John Carroll's desire to establish Georgetown University in the nation's capital, America began its tradition of accepting exiled academics but it was not with a certain degree of trepidation as is seen in a letter to Thomas Jefferson from John Adams in 1816.

> I do not like the late resurrection of the Jesuits. They have a general now in Russia, in correspondence with the Jesuits in the United States, who are more numerous than anyone know. Shall we not have swarms of them here, in as many shapes and disguises as ever a king of the gypsies... himself assumed... in the shape of printers, editors, writers, schoolmasters, etc.? I have lately read Pascal's letters over again, and four volumes of the history of the Jesuits. If ever any congregation of men could merit eternal perdition on earth and in hell, according to these historians... it is this company of Loyola. Our system, however, of religious liberty must afford them an asylum; but if they do not put the purity of our elections to a severe trial, it will be a wonder.[130]

In America, colleges were created during the colonial period based on the Puritan notion of the gathered church in which the local community commits to each other with a covenant of allegiance and mutual edification. Eventually, they were forced to reform as a result of the new research university concept exported from Germany in the nineteenth century. Despite this emphasis on original research attributed to the German model, notwithstanding its heritage in Aristotle and before, they did not forget the importance of gymnastics. College football took its place in history starting with the first game in 1869 between Princeton

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[130] Robert Emmett Curran *The Bicentennial History of Georgetown University: From Academy to University 1789-1889* (Washington, DC: Georgetown University Press, 1993), 57.

University, which was called the College of New Jersey at the time, and Rutgers, their rival and the victor.[131] Then in the twentieth century, universities started to gradually admit the poor, minorities, and women. Title IX, the Educational Amendment of 1972, went a long way to end discrimination in higher education. Historically, college was a time to explore and test ideas and values, while realizing one's passions with the assistance and guidance of professors within the milieu of fellow students, which gradually became more diverse. With the globalized economy, higher education in America has become commercialized. Students are matriculating as a stepping-stone to a job or profession. Humanistic liberal arts education is giving way to technical, vocational, and scientific curricula.[132]

The Spirit of the University in Contemporary America

So how do we define and enumerate the aims and purposes of the university today? History can help but it will not bring us to universal consensus.

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[131] Aristotle, *op. cit.* (2001); Leland H. Carlson "The Rise of Elizabethan Separatism," *Rice Institute Pamphlet-Rice University Studies* 46, no. 4 (1960): 15-40; Fredrick Rudolph *The American College & University: A History* (Athens, GA: The University of Georgia Press, 1962); John Sayle Watterson *College Football: History, Spectacle, Controversy* (Baltimore, MD: Johns Hopkins University, Press, 2002).

[132] Andrew Delbanco *College: What It Was, Is, and Should Be* (Princeton, NJ: Princeton University Press, 2012); Jesssica Gavora *Tilting the Playing Field: Schools, Sports, Sex and Title IX.* (San Francisco, CA: Encounter Books, 2002); Christopher J. Lucas *American Higher Education; A History* (New York, NY: St. Martin's Griffin, 1994); Rudolph, *ibid.* (1962); Barbara Miller Solomon *In the Company of Educated Women: The History of Women and Higher Education in America* (New Haven, CT: Yale University Press, 1985); Wayne Urban and Jennings Wagoner *American Education: A History, Second Edition* (New York, NY: McGraw Hill, 2000).

Harvard, the College of William & Mary, the University of Pennsylvania, and Johns Hopkins all have claims on being the first depending upon how you define the concept. Countless methods have been proposed, resulting in contradictory policies. Some see knowledge as its own end (i.e., individual self-actualization). Some see it as a means to a better society. Others see it as a commodity to be bought and sold, and the research university as an engine for the creation of valuable patents. Some just see it as a hot bed of discontent and anarchy. Is it for the privileged few, or is open access the future, like public libraries and the Internet? Massachusetts Institute of Technology started the open access movement when they started posting their syllabi and course lectures online for all to see. Many universities argued against them asking why they would give their property away for free. Realizing people still had to matriculate for a degree that was not of an honorary basis, many universities eventually followed suit. [133]

The classic position on this subject of disseminating knowledge could be linked with what was iterated by John Henry Newman, the rector of the Catholic university in Dublin, in a series of lectures between 1852 and 1859. Above all else, he argued that the exploration, and dissemination of knowledge was the main purpose for the university. Many local aristocrats opposed him, claiming he was producing an unruly group of students. However, his lectures were published, disseminated and have been very influential throughout the ages.[134]

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[133] See MIT Open Course Ware at http://ocw.mit.edu/index.htm (Last Accessed July 23, 2016).

[134] Steven Jones "The University," *The Hedgehog Review* 2, no. 3 (Fall 2000), 144-152; John Henry Newman *The Idea of a University* (New Haven, CT: Yale

Aside from the purpose of the university, the age-old questions, "What is knowledge?" "How do we acquire it?" and "How do we disseminate it?" continue to be debated along with the concept of the university and its structure. Is not the debate of ideas the cornerstone of university education? If so, we see the university remains healthy.[135]

Similar to the European university with its French and German models, the history of the university in America, which predates the actual birth of America, also appears to follow diverging paths. However, in the states we see relatively clear choices between liberal arts colleges, and the research universities that follow the Humboldtian model. Over time, that distinction has blurred. Indeed, universities in different parts of America used to maintain very individual regional characteristics unique to each. With the homogenization of education, departments often teach the same subjects and use the same textbooks all over America. American university life is much more secular than its American origins within religious institutions, and the impact of returning soldiers with the GI Bill following World War II was profound in the democratization of higher

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University Press, 1996).

[135] Jacques Barzun *The American University: How It Runs, Where It Is Going* (New York: Harper Colophon, 1968); Derek Bok *Beyond the Ivory Tower: Social Responsibilities of the Modern University* (Cambridge, MA: Harvard University Press, 1982); A. Bartlett Giamatti *A Free and Ordered Space: The Real World of the University* (New York: Norton, 1976); Jones, *ibid.* (1963); Christopher J. Lucas *Crisis in the Academy: Rethinking Higher Education in America* (New York: St. Martin's, 1996); G. Neil McCluskey (Editor) *The Catholic University: A Modern Appraisal* (Soth Bend, ID: University of Notre Dame Press, 1970); Jaroslav Pelikan *The Idea of the University: A Reexamination* (New Haven: Yale University Press, 1992); Henry Rosovsky *The University: An Owner's Manual* (New York, NY: Norton, 1990).

education.[136]

Academics and scholars of the social sciences and humanities often stress the need for broad based liberal arts educational curricula reforms for preparing excellence in the pursuit of knowledge and truth. Where else will our young citizens ponder the meaning of life and humanity, if not at university? Yet, defining liberal arts is not a straightforward process. Historically, the liberal arts involve universal truth and the study of astronomy, geometry, grammar, logic, mathematics, music, and rhetoric. Not all are included in today's university education, though many are included in various combinations. Post-modernism questions the notion of universal truth passed down from the Greek philosophers. Where else will our youth ponder the notion of relative, individual truths, if not at university? Business representatives and politicians often stress the need for

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[136] Thomas Bender and Carl Shorske (Editors) *American Academic Culture in Transformation: Fifty Years, Four Disciplines* (Princeton, NJ: Princeton University Press, 1997); John S. Brubacher and Willis Rudy *Higher Education in Transition: A History of American Colleges and Universities, Fourth Edition* (New Brunswick, NJ: Transaction, 1997); Roger L. Geiger *To Advance Knowledge: The Growth of American Research Universities, 1900-1940* (Oxford, UK: Oxford University Press, 1986); Roger L. Geiger *Research and Relevant Knowledge: American Research Universities Since World War II* (Oxford, UK: Oxford University Press, 1993); Hugh Davis Graham and Nancy Diamond *The Rise of American Research Universities: Elites and Challengers in the Postwar Era* (Baltimore, MD: Johns Hopkins University Press, 1997); Jones, *ibid.* (1963); George Marsden *The Soul of the American University: From Protestant Establishment to Established Nonbelief* (Oxford, UK: Oxford University Press, 1994); David Riesman *On Higher Education: The Academic Enterprise in an Era of Rising Student Consumerism* (San Francisco, CA: Jossey-Bass, 1980); Julie Reuben *The Making of the Modern University: Intellectual Transformation and the Marginalization of Morality* (Chicago, IL: University of Chicago Press, 1996); George P. Schmidt *The Liberal Arts College: A Chapter in American Cultural History* (New Brunswick, NJ: Rutgers University Press, 1957); Laurence Veysey *The Emergence of the American University* (Chicago, IL: University of Chicago Press, 1965).

highly specialized and technical educational curricula reforms to prepare the workforce (i.e., a good university experience will prepare individuals for these necessary jobs after graduation). The projections of the Georgetown University Center on Education and the Workforce, indicate that American universities need to produce one million more graduates per year until the year 2025 in order to catch up with the needed workforce. There are currently thirty-seven million adults with some college and no degree. Furthermore, half of the thirty million students currently enrolled in American universities will dropout without graduating, many with good GPAs. Both of these concerns (i.e., an intellectual space for liberal arts, and career preparation) have value and it is the position of this dissertation that each needs attention during the university years.[137]

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[137] Stanley Aronowitz *The Knowledge Factory: Dismantling the Corporate University and Creating True Higher Learning* (Boston, MA: Beacon, 2000); David Bromwich *Politics By Other Means: Higher Education and Group Thinking* (New Haven, CT: Yale University Press, 1992); Anthony P. Carnevale Nicole Smith and Jeff Strohl *Help Wanted: Projection of Jobs and Education Requirements Through 2018* (Washington, DC: Georgetown University Press, 2010); Henry Crimmel *The Liberal Arts College and the Ideal of Liberal Education: The Case for Radical Reform* (New York, NY: University Press of America, 1993); Nicholas Farnham and Adam Yarmolinsky (Editors) *Rethinking Liberal Education* (Oxford, UK: Oxford University Press, 1996); Darryl Gless and Barbara Herrnstein Smith (Editors) *The Politics of Liberal Education* (Durham, NC: Duke University Press, 1992; Ralph Hancock (Editor). *America, the West, and Liberal Education*. Lanham, MD: Rowman and Littlefield, 1999); Robert Maynard Hutchins *The Higher Learning in America* (New Haven, CT: Yale University Press, 1936); Jones, *ibid.* (1963); Anya Kamenetz "Dropouts: College's 37-Million-Person Crisis, and How to Solve It," *The Atlantic* (December 2012.); Alvin Kernan *In Plato's Cave* (New Haven, CT: Yale University Press, 1999); Bruce Kimball *Orators and Philosophers* (New York, NY: College Entrance Examination Boards, 1995); Nussbaum, *op. cit.* (1997); Plato, *op. cit.* (1968); Jean-Jacques Rousseau, *Emile or On Education* Edited and Translated from the French by Allan Bloom. (New York, NY: Basic Books, 1979); Raphael Sassower *A Sanctuary of Their Own: Intellectual Refugees in the*

Criticism of the American educational system is not new. After World War I, the social critic and intellectual, Upton Sinclair, wrote a scathing four-volume attack on higher education in the states, which he saw as a plutocratic society controlled by a minority of capitalist elites set on maintaining the *status quo*. He, in contrast, supported and meritocracy, where scholarship potential is rewarded. His study of the elementary and secondary education the following year (i.e., 1924) was similarly contemptuous. Today, the jury remains out on whether the American university system is doing well. Critics from both the conservative and liberal circles are found in the academic journals, and the popular publications and periodicals. Topics for attack include: the relationship between corporate America and the American universities with the commodification of education and its products, the stifling demands for political correctness, unruly students and suppression of free inquiry. Lewis Sinclair's novel, *Elmer Gantry*, based on student life in the early twentieth century depicts a college football player who is hard drinking, and a womanizing bully, eventually falling into an academic career as a minister, with his character not changing significantly, just a little lazier. Some would argue, the morals in the American university system have not changed much in a century.[138]

Academy (Lanham, MD: Rowman and Littlefield, 2000); Wagner, *op. cit.* (1984).
[138] Martin Anderson *Imposters in the Temple: A Blueprint for Improving Higher Education in America* (Stanford, CA: Hoover Institution, 1996); Allan Bloom *The Closing of the American Mind* (New York, NY: Simon and Schuster, 1987); Dinesh D'Souza *Illiberal Education: The Politics of Race and Sex on Campus* (New York, NY: Free, 1991); John Ellis *Literature Lost: Social Agendas and the Corruption of the Humanities* (New Haven, CT: Yale University Press, 1997); Jones, *ibid.* (1963); Roger Kimball Tenured Radicals: How Politics Has

On the positive side, many scholars, intellectuals and commentators counter every point made by the various critics. Some acknowledge a bright future and others trumpet significant accomplishments. Above all, many argue the notion that simply debating these questions is a testament to the energy of the American university today.[139]

The growth of a full curriculum on international human rights was slow in developing following the Universal Declaration of Human Rights in 1948. At most there were a few courses on the subject for the first two decades that

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Corrupted Our Higher Education (New York: Harper & Row, 1990); Alan C. Kors and Harvey A. Silvergate. *The Shadow University: The Betrayal of Liberty on America's Campuses* (New York, NY: Free, 1998); Sinclair Lewis *Elmer Gantry* (San Diego, CA: Harcourt Brace, 1927); George Roche *The Fall of the Ivory Tower: Government Funding, Corruption, and the Bankrupting of American Higher Education* (Washington, DC: Regnery, 1994); Upton Sinclair *The Goose-Step: A Study of American Education, Vol. 1-4* (Girard, KS: Haldeman-Julius Publications, 1923); Upton Sinclair *The Goslings: A Study of American Education* (Girard, KS: Haldeman-Julius Publications, 1924); Paige Smith *Killing the Spirit: Higher Education in America* (New York, NY: Viking, 1990); Charles Sykes *Profscam: Professors and the Demise of Higher Education* (Washington, DC: Regnery Gateway, 1988); Veblen, Thorstein *The Higher Learning in America: The Annotated Edition: A Memorandum on the Conduct of Universities by Business Men* (Baltimore, MD: Johns Hopkins University Press, 2015); Bruce Wilshire *The Moral Collapse of the University: Professionalism, Purity, and Alienation* (Albany, NY: State University of New York Press, 1990).
[139] Michael Bérubé and Cary Nelson (Editors) *Higher Education Under Fire: Politics, Economics, and the Crisis of the Humanities* (London, UK: Routledge, 1995); William K. Buckley and James Seaton (Editors) *Beyond Cheering and Bashing: New Perspectives on the Closing of the American Mind* (Bowling Green, OH: Bowling Green State University Popular Press, 1992); Gerald Graff *Beyond the Culture Wars: How Teaching the Conflicts Can Revitalize American Education* (New York, NY: Norton, 1992); Jones, *ibid.* (1963); Lawrence W. Levine *The Opening of the American Mind* (Boston, MA: Beacon, 1996); Eugene Y. Lowe (Editor) *Promise and Dilemma: Perspectives on Racial Diversity and Higher Education* (Princeton, NJ: Princeton University Press, 1999); Cary Nelson *Manifesto of a Tenured Radical* (New York, NY: New York University Press, 1997); Robert Solomon and Jon Solomon *Up the University: Re-Creating Higher Education in America* (Reading, PA: Addison-Wesley, 1993).

followed.   Since then universities have taken up the debate from an interdisciplinary perspective, developing curricula, and participating in the nongovernmental human rights movement.[140]

Becoming a professor in America has been consistently rated one of the most appealing jobs to attain. Some maintain it remains the life of Elmer Gantry, but in a research university, the motto "publish or perish" prevails, and it can be very taxing work in America. A similar push to publish does not appear to exist among undergraduates. The current model in France also remains more leisurely. As professors have declared during visits here and abroad, once you obtain a position in France, teachers have security. They do not have to publish anything. Rather it is a matter of putting in the time. Salaries are uniform at different levels and instructors progress up the ranks of professorship based on how long they have worked. Academic freedom, responsibility to stake holders, the balance between time doing research and teaching, ethical problems with external corporate funding sources, ownership of intellectual property under the employ of universities, and the roles of the intelligentsia remain at issue.[141]

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[140]   Henry Steiner (Editor) *The Role of the University in the Human Rights Movement: An Interdisciplinary Discussion Held at Harvard Law School September 1999* (Cambridge, MA: Harvard Law School Human Rights Program Publications, 2004).

[141]   James Axtell *The Pleasures of Academe: A Celebration and Defense of Higher Education* (Lincoln, NE: University of Nebraska Press, 1998); Jacques Barzun *Teacher in America* (New York, NY: Doubleday, 1959); Thomas Bender *Intellect and Public Life: Essays on the Social History of Academic Intellectuals in the United States* (Baltimore, MD: Johns Hopkins University Press, 1993); Norman Bowie *University-Business Partnerships: An Assessment. Issues in Academic Ethics* (Lanham, MD: Rowman and Littlefield, 1994); Steven M. Cahn (Editor) *Morality, Responsibility, and the University: Studies in Academic Ethics*

There has been another trend, separate from the traditional four-year college program in America. It included literary salons and clubs of diverse intellectual company starting in Philadelphia in the eighteenth century, spreading with uniquely local characteristics depending on the community they were in, in addition to self-improvement and adult education courses and programs dating back to 1750. As an early pioneer in this respect, The New School for Social Research was set up for adult students in 1919.[142]

With the development of the Internet, distance learning has taken a new direction but it is not new. Education by correspondence has been around since the days when England sent books and assignments on tall sailing ships to individuals in the colonies. The University of London still sends a box of all the materials to each student studying by distance, although the material is now

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(Philadelphia, PA: Temple University Press, 1990); Lewis Coser *Men Of Ideas: A Sociologist's View* (New York, NY: Free, 1965); David Damrosch *We Scholars: Changing the Culture of the University* (Cambridge, MA: Harvard University Press, 1995); Russell Jacoby *The Last Intellectuals: American Culture in the Age of Academe* (New York, NY: Basic Books, 1982); Jones, *op. cit.* (1963); Peter Markie *A Professor's Duties: Ethical Issues in College Teaching: Issues in Academic Ethics* (Lanham, MD: Rowman and Littlefield, 1994); Louis Menand (Editor) *The Future of Academic Freedom* (Chicago, IL: University of Chicago Press, 1996); Stuart Palmer *The Universities Today: Scholarship, Self-Interest, and Politics* (New York, NY: University Press of America, 1998); Jaroslav Pelikan *Scholarship and Its Survival: Questions on the Idea of Graduate Education* (Princeton, NJ: Carnegie Foundation for the Advancement of Teaching, 1983); Ross Posnock *Color and Culture: Black Writers and the Making of the Modern Intellectual* (Cambridge, MA: Harvard University Press, 1998); Edward Shils *The Academic Ethic* (Chicago, IL: University of Chicago Press, 1983).
[142] Joseph F. Kett *The Pursuit of Knowledge Under Difficulties: From Self-Improvement to Adult Education in America, 1750- 1990* (Stanford, CA: Stanford University Press, 1994); Gilman Ostrander *Republic of Letters: The American Intellectual Community, 1776–1865* (Madison, WI: Madison House, 1999); *The New York Times* "Research School to Open," (30 September 1919).

augmented by online material, too. It is the largest university in the United Kingdom, rivals 'Oxbridge' with respect to its intellectual influence on the nation, and was the first to admit women. The University of London is made up of seventeen colleges or professional schools, but unlike other universities, for the sake of university ratings each of the seventeen institutions is rated separately. Thus, for example, the resources and academic honors of the School of Economic and Political Science are not credited to the University of London. Yet, a large number of the seventeen institutions still attain very high rankings in their own right. It is the position of this dissertation that these rankings are wanting. If the University of London was ranked as one university, with all its attached institutions, it would likely monopolize the first ranking, above all others.[143]

With the creation of the European Union, many questions arose concerning the impact it would have by adding an extra layer of bureaucracy to the running of European universities. Various battles were fought concerning tuition for "in-state" and "out-of-state" students, with some countries (e.g., England) trying to discourage matriculation of students from other regions. With the Brexit, formerly resolved issues will likely resurface.[144]

A comparative study looked at higher educational systems in the late 1970s and early 1980s, across Australia, Canada, France, Germany, Italy, Japan, Mexico, Poland, Sweden, Thailand, United Kingdom, United States, and the

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[143] F. M. L. Thompson *The University of London and the World of Learning, 1836-1986* (London, UK: The Hambledon Press, 1990).
[144] Peter Maassen and Johan P. Olsen (Editors) *University Dynamics and European Integration* (Dordrecht, NL: Springer, 2007).

former Yugoslavia. The focus was an examination of the disciplinary and institutional divisions of labor, state support structures for academics, the foundations of knowledge, the distribution of authority, and the relationships with the state and commerce. Conclusions support the need for flexible adjustments, dividing powers, and encouraging diversity.[145]

Conflict and the Development of Ideas

For many of those who study the history of science, controversy has had a significant organizing influence on intellectual shifts in perspective and advances in understanding.[146] One of the aims of this dissertation, in addition to detailing what happens in university settings and the importance of developing critical thinking among its students, is to also take a broad view of controversy in the development of academic ideas, the changing role of academics and critics in society, their purpose and significance. Few would disagree with the notion that critical thinking remains central to any rigorous effort to resolve controversies in a specific domain of inquiry. Robert H. Ennis has spearheaded much of the research in this area. He defines critical thinking broadly as follows:

> Critical thinking is reasonable reflective thinking focused on deciding what to believe or do... a person characteristically needs to do most of these things (and do them interdependently): 1. Judge the credibility of sources. 2. Identify conclusions, reasons, and assumptions. 3. Judge the quality of an argument, including the acceptability of its reasons, assumptions, and evidence. 4. Develop and defend a position on an issue.

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[145] Burton R. Clark *The Higher Education System: Academic Organization in Cross-National Perspective* (Berkley, CA: University of California Press, 1983).
[146] T. S. Kuhn *The Structure of Scientific Revolutions* (Chicago, IL: University of Chicago Press, 1962).

5. Ask appropriate clarifying questions. 6. Plan experiments and judge experimental designs. 7. Define terms in a way appropriate for the context. 8. Be open-minded. 9. Try to be well informed. 10. Draw conclusions when warranted, but with caution. [147]

John Dewey's functionally unique contribution within a long tradition of intellectuals at American universities is of particular interest and will be considered within the social context and capacity that he served.[148] A review of his writings and an analysis of his approach to critiquing the divergent philosophical viewpoints of other intellectuals in the field, conclude with several identifiable themes.[149] True to his pragmatic nature, Dewey often identified two opposing and controversial positions. While presenting them with fair representation, he moved towards conflict resolution by building upon the constructive aspects of each and developing a new vision that would qualitatively transcend a simple modal compromise between the two. When specific theoretical perspectives are explored below, it is hoped that they will serve a plurality of purposes. Not only are the ideas of interest in there own right, but it is of practical importance to identify the process within which different theorists behaved, adapting and modifying their positions, given their goals in the changing

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[147] Robert H. Ennis "Critical Thinking Assessment," *Theory Into Practice* 32, no. 3 (1993): 179-186.

[148] John Dewey's Alma mater included University of Vermont, and Johns Hopkins University, and professionally he had appointments at University of Michigan, University of Chicago and Columbia University.

[149] John Dewey *The Early Works of John Dewey 1882-1898, Vol. 1-3* Edited by Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 2008); John Dewey *The Middle Works of John Dewey 1899-1924, Vol. 1-15* Edited by Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 2008); John Dewey *The Later Works of John Dewey 1925-1952, Vol. 1-17* Edited by Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 2008).

intellectual zeitgeist within which they interacted, as a model of how ideas develop and change in our universities. The quality of those interactions, along with the institutional changes that have historically impacted and been associated with them, will also be considered. It is a model for how the university of ideas morph and grow over time. Cognizant of Dewey's belief that contemplation of ideas is only a prerequisite to acting upon them, the conclusion will propose some actions to take.[150]

Like the stream of consciousness referred to by James, the development of philosophical thought and knowledge, so often linked with Plato and Aristotle, is ever changing. Alfred North Whitehead once said,

> There remains the final reflection, how shallow, puny and imperfect are efforts to sound the depths in the nature of things. In philosophical discussions, the merest hint of dogmatic certainty as a finality of statement is an exhibition of folly. [151]

Clarence J. Karier placed the pragmatic conception of society and man within its historical position. He outlined how optimistic European thought at the end of the eighteenth century, in search of the law of progress, was divested of any sense of hope. He also placed the mantel of change and despair at the feet of Friedrich Nietzsche, who called for a transvaluation of values, stripped clean of Enlightenment presuppositions. Karier portrayed the intellectual elite of the time as alienated, the proletariat as frustrated with revolution in their hearts and the, as

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[150] Clarence J. Karier *The Individual, Society and Education: A History of American Educational Ideas, Second Edition* (Chicago, IL: Illini Books, 1986).
[151] Alfred North Whitehead *Process and Reality* (New York, NY: Simon & Schuster, 2010). Alfred North Whitehead's Alma mater University of Cambridge Trinity College, and professionally he had appointments at University of London Imperial College, and Harvard University.

yet, unrecognized bourgeoisie as unsure of their own existent. With the discovery

of the unconscious, rational science and moral values came into question.[152] As

further outlined by Karier, men like Nietzsche, Sigmund Freud, and Charles

Darwin were controversial, questioning the legitimacy of the Enlightenment and

its conception of society and man.[153] While some responded by regressing to

positions from a Pre-Enlightenment era, others pushed on and completely

demolished the Newtonian view of the universe.[154]

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[152] For a further discussion of the influences of such people as Ferdinand Brunetiere, Freud, Andre Gide, Ernst Junger, Machiavelli, and Proust please refer to: Ferdinand Brunetière *Brunetière's Essays in French Literature* (London, UK: T. F. Unwin, 1898); Sigmund Freud *The Standard Edition of The Complete Works of Sigmund Freud, Vol. 1-24,* Edited by James Strachey (New York, NY: W. W. Norton, 1976); Andre Gide *The Andre Gide Reader* Edited by David Littlejohn (New York, NY: Knopf, 1971); Ernst Jünger *On the Marble Cliff* Translated from the German by Stuart Hood (London, UK: John Lehmann, 1949); Ernst Jünger *A Storm of Steel* Translated from the German by Michael Hofmann (New York, NY: Allen Lane Publishers, 2003); Karier, *op. cit.* (1986); Thomas R. Nevin *Ernst Jünger and Germany: Into the Abyss, 1914-1945* (Durham, NC: Duke University Press, 1996); Niccolo Machiavelli *The Prince* (Norwalk, CT: Easton Press Collector's Edition, 1990); Niccolo Machiavelli *The Art of War* (Norwalk, CT: Easton Press Collector's Edition, 1990); Nietzsche The Birth of Tragedy and the Genealogy of Moral," Translated from the German by Francis Golffing, in *The Great Philosophers Series, Vol. 1-12* (Norwalk, CT: Easton Press Collector's Edition, 1995); Marcel Proust *In Search of Lost Time, Vol. 1-6* (London, UK: The Folio Society Collector's Edition, 2000).

[153] Charles Darwin *The Descent of Man* (Norwalk, CT: Easton Press Collector's Edition, 1979); Charles Darwin *On the Origin of Species* (Norwalk, CT: Easton Press Collector's Edition, 1991); Freud, *ibid.* (1976); Nietzsche, *ibid.* (1995). Friedrich Nietzsche's Alma mater included University of Bonn and Leipzig University, and professionally he had an appointment at University of Basel; Sigmund Freud's Alma mater was University of Vienna where he also had an appointment; Charles Darwin's Alma mater included University of Cambridge Christ's College and University of Edinburgh, and professionally he had an appointment at the Geological Society of London.

[154] For a discussion of the impact of mathematicians and physicists between the late Renaissance and present day, including, among others, Einstein's view on time and space, Planck's quantum physics, and Heisenberg's observation that

It was with this backdrop that pragmatism emerged as a uniquely American process, albeit with its roots planted within the optimism of a new Nation, the evolutionary thought of the English, the idealism of the Germans, and the positivism of the French. It was a time in American universities and elsewhere, when intellectuals from various disciplines interacted on a smaller more intimate scale than today, mutually adjusting to each other's vantage point. Thus, for example, *The Metaphysical Club* included the likes of Charles Sanders Peirce, a logician, William James, a psychologist, Oliver Wendell Holmes, Jr., a lawyer, among others and including John Dewey, a social philosopher.[155] This is

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minute particles lacked conformity to typical causal sequences, please refer to: Gale Christianson *In the Presence of the Creator: Isaac Newton and His Times* (Norwalk, CT: Easton Press Collector's Edition, 1989); Albert Einstein "The Photoelectric Effect," *Annals of Physics* 17, no. 132 (1905): 4; Albert Einstein *The Meaning of Relativity: Including the Relativistic Theory of the Non-Symmetric Field* (Norwalk, CT: Easton Press Collector's Edition, 1994); Werner Heisenberg *Physics and Philosophy* (New York, NY: Harper, 1958); Walter Isaacson *Einstein: His Life and Universe* (Norwalk, CT: Easton Press Collector's Edition, 2007); Karier, *op. cit.* (1986); Sir Isaac Newton "Preface to the Philosophiae Naturalis Principia Mathematica," in Charles W. Eliot (Editor) *The Harvard Classics, Vol. 39* (New York, NY: P. F. Collier & Son Limited Edition, 1910); Sir Isaac Newton *Sir Isaac Newton's Mathematical Principles of Natural Philosophy and His System of the World* Translated from the Latin by Florian Cajori (Norwalk, CT: Easton Press Collector's Edition, 1992); Max Planck "On the Law of Distribution of Energy in the Normal Spectrum," *Annalen der Physik* 4, no. 553 (1901): 1; Max Planck *The Origin and Development of the Quantum Theory* (Oxford, UK: Clarendon Press, 1922).

[155] A. Alschuler *Law Without Values: The Life, Work, and Legacy of Oliver Wendell Holmes* (Chicago, IL: University of Chicago Press, 2000); Steven J. Burton *The Path of the Law and its Influences: The Legacy of Oliver Wendel Holmes* (Cambridge, UK: Cambridge University Press, 2000); Robert S. Corrington *An Introduction to C. S. Peirce: Philosopher, Semiotician and Ecstatic Naturalist* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 1993); Dewey, *op. cit.* (2008); Jerome Frank "Mr. Justice Holmes and Non-Euclidean Legal Thinking," *Cornell Law Quarterly*, 17 (1932): 568; Thomas C. Grey "Holmes and Legal Pragmatism," *Stanford Law Review* 41, no. 787 *869* (1989): 10-2307;

not to imply that controversy was not at play. It was controversy, to a greater or lesser degree that often fueled change, or rigidity in positions trying to avoid change.[156] Nor is it to imply that controversy in intellectual debate always results in mutual understanding, or that misunderstanding always serves negative purposes. Ralph Baron Perry once observed that, "Perhaps it would be correct, and just to all parties, to say that the modern movement known as pragmatism is largely the result of James' misunderstanding of Peirce".[157] According to David L. Krantz and David Allen, "If science were a totally rational enterprise, controversy would, in all likelihood, not exist".[158] The experimental psychologist, Edwin G. Boring, reverted to a psychoanalytic assessment when he concluded, "Given clashing ego-involvement, reason diminishes and scientific battles are

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Oliver Wendell Holmes *The Common Law* (New York, NY: Little Brown, 1881); William James *The Principles of Psychology* (New York, NY: Holt, 1890); Louis Menand *The Metaphysical Club*. (New York, NY: Macmillan, 2001); Charles Sanders Peirce *The Essential Peirce: Selected Philosophical Writings Vol. 1-2* Edited by Nathan Houser, Christian Kloesel and The Peirce Edition Project (Bloomington, IN: Indiana University Press, 1992-98). Charles Sanders Peirce's Alma mater was Harvard University, and professionally he had an appointment at Johns Hopkins University; William James' Alma mater was Harvard University where he also had an appointment; Oliver Wendell Holmes, Jr.'s Alma mater was Harvard University, and professionally he had an appointment to the U.S. Supreme Court.

[156] Of course, it sometimes influenced greater rigidity and adherence to dogmatic dicta, and an example of this is detailed below in a discussion of Titchner's reaction to functionalism.

[157] Ralph Baron Perry *The Thought and Character of William James* (Cambridge, Mass: Harvard University Press, 1948), 281; Karier, *op. cit.* (1986), 124.

[158] David L. Krantz and David Allen "The Rise and Fall of McDougal's Instinct Doctrine," *Journal of the History of the Behavioral Sciences* 3 (1967): 326-338.

engaged", and further attributed the warfare to, "Egoism … prestige … [and] self-consistency … when a man takes up a position, his pride prevents retraction".[159]

Failure to reach resolution has been attributed to the role of passion in controversy. It blinded the scientist to his opponent's viewpoint, prejudiced reason, and pulled together colleagues intensifying their agreement in opposition to any foreign ideas. What Boring saw as a, "perseverative tendency in scientific thinking", Mary Henle viewed as "perseverance…[in] problem solving".[160] She felt the passion should be in the desire to do scientific work itself (i.e., in the process of critical thinking and seeking solutions to questions).[161] Persevering to solve a problem did not involve heading blindly forward; rather, direction was contained within each problem. Errors in resolution often mirrored the characteristics of general cognitive processes, such as a failure to achieve reorganization of already organized data, or failure to see the relevance of data in a particular context because of its known relevance in some other context. As noted by John Stuart Mill,

> We can not believe a proposition only by wishing, or only by dreading, to believe it. The most violent inclination to find a set of propositions true,

[159] E. G. Boring "Psychological Factors in the Scientific Process," *Scientific America* 42 (1954): 639-645; E. G. Boring "Dual Role of the Zeitgeist in Scientific Creativity," *Scientific Monthly* 80 (1955): 101-106.

[160] E. G. Boring The Psychology of Controversey," *Psychological Review* 36 (1929): 97- 121; Mary Henle "On Controversey and its Resolution," in Mary Henle (Ed.), *Historical Conceptions of Psychology* (New York, NY: Springer Publishing, 1973), 47-59.

[161] Henle, *ibid.* (1973) remained consistent with the position articulated Kuhn, *op. cit.* (1962), preferring to view science as normal problem solving with the demands of the problem evolving with the curiosity of the scientist. She didn't deny the involvement of passions, rather she acknowledged them in relation to the work, but not egoism.

will not enable the weakest of mankind to believe them without a vestige of intellectual ground – without any, even apparent, evidence.[162]

Although not always settled by facts, generally, controversy in pursuit of resolution gives birth to research and changes in methods or techniques. In the words of James, "Facts are facts, and if we only get enough of them they are sure to combine. New ground will from year to year be broken, and theoretical results will grow".[163]

Henle made a case for the useful function of controversy. In spite of the perceived appearance of emotional factors in science, controversy can make positive contributions. While addressing this in her chapter, *On Controversy and Its Resolution,* Henle went on to state that, "We seem…to be a little ashamed of our controversies…Psychology does not have a very good record in resolving [them]; rather, we lose interest".[164]

In contrast, it is the position of this dissertation that Dewey often dealt with controversies in a straightforward and adaptive manner, attempting to achieve resolution and a new, more functional understanding of the issues. It would not be difficult to look back into his life experiences and generate psycho-historical speculation about why he appeared to make a habit out of attempting conflict resolution between apposing views, but it would be just that, speculation.

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[162] John Stuart Mill *Collected Works of John Stuart Mill, Vol. 1-33* (London, UK: Routledge, 1991).

[163] James, *op. cit.* (1890).

[164] Mary Henle's Alma mater included Smith College and Bryn Mawr College, and professionally she had appointments at Swarthmore College, University of Deleware, Bryn Mawr College, Sarah Lawrence College, and The New School for Social Research.

In keeping with the tradition of pragmatism, it is more useful to consider the function it served. In effect, Dewey invited the proponents from opposite camps to engage in a process that would move in the direction of ever-evolving understanding and application of knowledge in the situations that society and man confront. The ideal form of resolution has not always been achievable and the controversies have not been insignificant.

For example, it would be a mistake to minimize the issue between James M. Baldwin and Edward B. Titchner as if the small difference in reaction time merely represented unnecessary hair splitting. It set functionalism in contrast to structuralism and addressed legitimate data collection conditions.[165] Yet, the Baldwin-Titchner debate was not resolved by the evidence, indeed both were well advised of the facts before the struggle started. Rather, the battle just died out by the turn of the century. Baldwin was arrested in a raid on a "colored" brothel around 1908, a scandal that put an end to his American career. Forced to leave Johns Hopkins he looked for residence in Paris. He was to reside in France till his death in 1934.[166] The war on this issue was not resolved, however, and it reemerged, with new battles for the structuralists and functionalists to fight.[167]

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[165] James Mark Baldwin's Alma mater was The College of New Jersey (aka Princeton University), Leipzig University and Berlin University, and had professional appointments at The Salpêtrière Hospital de Paris, Princeton University, and Johns Hopkins University; Edward B. Titchner' Alma mater was Clark University, and he had a professional appointment at Cornell University.

[166] David Hothersall *History of Psychology, Fourth Edition* (New York, NY; McGraw-Hill, 2004).

[167] Henle, *op. cit.* (1973); David L. Krantz "The Baldwin- Titchner Controversey," in D. L. Krantz (Editor) *Schools of Psychology* (New York, NY: Appleton-Century-Croft, 1969), 1-19.

Of course, misguided perseverance could be a purely emotional affair. Foolhardy, and counterproductive are probably the best ways to describe Titchner's response to functionalism.[168] Edna Heidbreder described Titchner's structuralism as, a "gallant and enlightening failure".[169] Said enlightenment, was seen as merely salvation from having to go down the same erroneous line of investigation that Titchner had so precisely documented.[170]

As early as 1898, Titchner envisioned wonderful things for functionalism, to the degree that he could adapt it and reshape it within his structuralist experimentalism at Cornell. As the controversy waged on, he systematized his own conceptualization of science, becoming ever so much more rigid in his pronouncements, realizing that functionalism could not be assimilated into structuralism.[171] By the time he wrote *Systematic Psychology*, he described functionalism as, "A parasite, and the parasite of an organism doomed to extinction".[172]

An alternate attempt at resolving the war between structuralism and functionalism was made by Mary Whiton Calkins. She viewed the conflict from a larger vantage point, contemplating what needed to be reconciled after deciding

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[168] Edward Bradford Titchener "The Postulates of a Structural Psychology," *The Philosophical Review* 7, no. 5 (1898): 449-465; Edward Bradford Titchener *Systematic Psychology: Prolegomena* (New York, NY: Macmilliam, 1929).

[169] E. Heidbreder *Seven Psychologies* (Engelwood Cliffs, NJ: Prentice Hall, 1933).

[170] Henle, *op. cit.* (1973).

[171] Titchener, *op. cit.* (1898).

[172] Titchener, *op. cit.* (1929).

on the central elements of both.[173] Thus, with the broader framework of her self-psychology, Calkins was able to reconcile what seemed irreconcilable in the heat of battle. Henle has pointed out that we are no longer concerned with the Baldwin-Titchner debate. In general, we have lost interest in the debate and its solution.[174] In fact, even Calkins became disinterested in her own solution over time, increasingly coming to, "…question the significance and the adequacy, and deprecate the abstractness [of structuralism]".[175] After Titchner's death, structural problems fell out of favor, and for various reasons, functionalism never fully developed into a school of psychology, however, it never stopped influencing the development of general psychology.

Institutions of Intellectual Discourse

This dissertation also maintains that while the institutions of intellectual discourse changed, functional pragmatism continued to significantly impact several disciplines, in analogous ways, often blind to one another for failure to debate ideas across disciplines. They are like trains on parallel tracks, relatively

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[173] Since the "atomistic unit" could not be reconciled, she only retained and reconciled the method of structuralism along with the notion that consciousness for functionalism is a process of conceiving relations to the environment and its meaning. Mary Whiton Calkins "A Reconciliation Between Structural and Functional Psychology," *Psychological Review* 13 (1906): 61-81.

[174] It was not because Calkins resolved the controversy completely or even failed to do so. According to Henle, we just lost interest in the, "Stuctural problems in the Titchnerian sense; and, on the other hand, functionalism never became a developed system of psychology, but has persisted as a flavor, an interest of contemporary psychological theories." Henle, *op. cit.* (1973), 57.

[175] Calkins, *op. cit.* (1906).

unaware and unconcerned with each other's progress.[176] Functional interactionist

psychology, George Herbert Mead's social psychology, symbolic interactionism

(i.e., a field of sociology), contemporary revival of pragmatic philosophy

including pragmatism in aesthetics, conflict literature, feminism, multiculturalism

and, no doubt, other disciplines that adopt a pragmatic approach, often fail to

intersect.[177]   A train wreck is not proposed here, but some anticipation or

consideration of possible controversial problems between the different viewpoints

would be practical.   Peirce, James, Dewey and other members of *The*

Metaphysical Club, though having some similarities, each maintained

idiosyncratic differences in their perspective.   The social institution, or club as is

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[176] Developments in game theory followed similar parallel tracks. It is the study
of mathematical models, conflict, and collaboration between intelligent rational
decision-makers. The social sciences, economics, and then law, broadly adopted
it. As originally conceived, the theory assumed completely rational players, but
the data did not fit, and the theory was adjusted in the field of psychology to deal
with irrational decisions. When jurisprudence finally adopted original game
theory notions, they eventually realized the data did not fit. If they had only read
the psychology journals, or spoke with psychologists in the field, they could have
avoided unnecessary conflict and debate among themselves. Daniel Kahneman,
Paul Slovic and Amos Tversky *Judgment Under Uncertainty: Heuristics and
Biases* (Cambridge, UK: Cambridge University Press, 1982); John von Neumann
Collected Works, 1903-1957 Edited by Abraham Haskel Taub (Oxford, UK:
Pergamon Press, 1961).

[177] A recent attempt at interaction within the philosophical and humanistic fields
can be found in: "Pragmatism: What's The Use?" *The Hedgehog Review:
Critical Reflections on Contemporary Culture* 3, no. 3 (Fall 2001). For writings
on symbolic interactionism, see E. Goffman *Frame Analysis: An Essay on the
Organization of Experience* (Boston, MA: Northeastern University Press, 1986);
H. S. Becker and M. M. McCallm *Symbolic Interactionism and Cultural Studies*
(Chicago, IL: University of Chicago Press, 1990); George Herbert Mead *Works
of George Herbert Mead, Vol. 1-3* (Chicago, IL: University of Chicago, 1967).
George Herbert Mead's Alma mater included Oberlin College and Harvard
University, and had professional appointments at University of Michigan and
University of Chicago.

often referred to, provided the opportunity to interact, develop understanding and misunderstanding of one another's ideas, engage in a changing process of assimilation and accommodation of perspective, implement plans, assess the results and adapt over time.[178]

As noted, herein, institutions of intellectual exchange have had a long history with varying missions since antiquity, through the Renaissance, the Enlightenment, modern times and present day departmentalization. The debate over pure and applied knowledge dates back to antiquity.

Starting with the Renaissance, Lewis A. Coser studied the changing settings of intellectual life. A central role was played by women in the courts of the Italian Renaissance, a model for the literary salons of France in the seventeenth century and the subsequent French Rococo salons of the eighteenth century. These salons, that immediately followed the baroque, were no longer restricted to the Aristocracy. By the mid-eighteenth century, worldly men, dilettantes, men of letters and also middle-class men of letters could come together, interact, share ideas and even dominate the exchange if their argument was functionally superior, with little, if any regard for their aristocratic or bourgeois status. The development of ideas and their utility determined their survival; an intellectual Darwinianism and the institutional setting facilitated a healthy process of competitive intellectual controversy and resolution. A similar situation evolved in London in the form of eighteenth century coffeehouses. Coser dealt with these, including the emergence of Royal Societies during the rise

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[178] Menand, *op. cit.* (2001).

of modern science, in great depth in his book, *Men of Ideas: A Sociologist's View*. He failed, however, to consider the full extent of the role our founding fathers played in the development of institutions for the dissemination of knowledge.[179]

During the infancy of our Nation, controversy was set in motion between two apposing forces. John Adams and the Federalists fought for elitist intellectual institutions and government, while Thomas Jefferson argued for republican ideals. The debate waged on through President Washington's years in office and some political battles were fought and won, during Mr. Jefferson's years in office, starting with his election. Through Mr. Jefferson's political skill, both West Point and the American Philosophical Society emerged and prospered with their doors remaining open to more than just the aristocrats.[180]

For a significant amount of time Cambridge, Massachusetts was a center for intellectual development. During Dewey's lifetime, higher education dispersed across the Nation. Further examination of more current developments in the process and function of institutionalizing ideas, will follow in a subsequent section.[181]

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[179] Lewis A. Coser *Men of Ideas: A Sociologist's View* (New York, NY: First Free Press, 1997).

[180] Jennings L. Wagner, Jr. and Christine Coalwell McDonald "Mr. Jefferson's Academy: An Educational Interpretation," in Robert McDonald (Editor) *Thomas Jefferson's Military Academy: Founding West Point* (Charlottesville, VA: University of Virginia Press, 2004).

[181] Dewey *op. cit.* (2008).

Theories of Learning and Education

First, it is important to magnify the focus on the study of Dewey's life and influence, his followers and the future developments in pragmatism. Educated at Johns Hopkins, he went on to establish The Chicago School at The University of Chicago. Many developmental outgrowths have remained true to John Dewey's social philosophical traditions. The degree to which they have remained true, however, has resulted in the reemergence of some old controversies. In order to understand Dewey's role and influence in historical context, please see Table 1 on the following page.[182]

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[182] Ibid.

TABLE 1: MAJOR FIGURES IN THE FORMATION OF SIX PSYCHOLOGICAL SYSTEMS[183]

1870	1880	1890	1900	1910	1920	1930	1940	1950
	STRUCTURALISM							
	Wundt	Titchener						
		FUNCTIONALISM						
	James		Dewey	Angell	Carr	McGeoch	Melton	Underwood
					Woodworth			
		ASSOCIATIONISM						
		Ebbinghaus	Pavlov	Bekhterev	Thorndike	Guthrie		Estes
						BEHAVIORISM		
					Watson	Hunter	Skinner	
				Meyer	Weiss	Tolman Hull	Miller	Spence
						GESTALT THEORY		
	Mach	von Ehrenfels		Wertheimer	Kohler			
				Koffka				
	PSYCHOANALYSIS							
	Breuer	Freud	Adler Rank	Jones		Horney	Sullivan	Fromm
			Jung Ferenczi					

(Adapted from Marx and Hellix, 1973, 86**)**

Although one can debate the inclusion or exclusion of certain names, Marx and Hillix have provided a useful time line. As already noted, Titchner's structuralism, a continuation of Wilhelm Wundt's work in Germany, was the *status quo* that functionalism reacted in controversy with. Given the failure of the Republic of Letters, and prior to the development of Internet communication,

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[183] Marx and Hellix *Systems of Psychology* (New York, NY: Holt Rinehart, 1973).

Gestalt psychology also reacted against Wundt's structuralism, in a parallel but isolated fashion in Germany, without much cross fertilization of ideas. Radical behaviorism grew out of functionalism. John B. Watson discussed his ideas with Dewey and other functionalists and his decision to restrict the definition of psychology had very pragmatic consequences, improving the ability to conduct statistical research measuring variance in behavior.[184] Dewey, in his usual manner for resolving controversy, saw a place for structure and behavior within the overall functional process.[185] To this day it remains debatable whether or not Watson accepted the ideas put forth by pragmatism, choosing just to consider it as outside the scope of his research, or if he rejected Dewey's ideas, whole cloth. One could speculate that Watson, while fully cognizant of functional positions, decided to avoid dealing with certain issues for practical purposes only. It is possible that Watson accepted Dewey's position concerning the ongoing transaction that evolved when an individual engaged his environment, but he decided it was too difficult and impractical to measure, preferring to limit himself to stimuli and responses, avoiding the complexities of the mind for his purposes. Taking this argument one step further, B. F. Skinner's instrumental conditioning could also be viewed as an outgrowth of Dewey's functionalism (i.e., instrumentalism). Unlike Jean Piaget, who's process of assimilation and

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[184] Karier, *op. cit.* (1986); John B. Watson "Psychology as the Behaviorist Views It," *Psychological Review* 20, no. 2 (1913): 158; John B. Watson *Behaviorism, Revised Edition* (Chicago, IL: University of Chicago Press, 1930).

[185] Dewey's method of resolving seemingly dissonant constructs involved a pragmatic eclecticism very distinct from "anything goes" eclectic attitudes. Dewey *op. cit.* (2008).

accommodation along preordained stages of development, loosing sight of functionalism's postulate concerning the lack of any *a priori* knowledge of where evolution is going, Skinner remained true to the postulate, never predicting causal relations, only defining instrumental relationships by the data, after the fact. The argument stops there. Although, behavioral approaches may have been a practical development following functionalism, it remains pure speculation and the divergence from functionalistic philosophy has been too great to place them in the same category.[186]

Dewey's method for resolving controversy did not involve denial of the refined and critical distinctions that separate ideas for comparison. Just as Dewey had to clarify the fact that some unstructured naturalistic approaches to education missed parts of his major thesis, some developments in general psychology that purported to grow out of pragmatism, had to be identified as in conflict with functional concepts.[187]

Heidbreder divided functionalism at Chicago into three phases with Dewey's article, *The Reflex Arc Concept in Psychology,* marking the beginning of the first phase. Like James, Dewey was apposed to psychological atomism.[188] A child's lesson in the kitchen was not made up of simple sequences involving 1)

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[186] E. G. Boring *The History of Experimental Psychology, Second Edition* (Engelwood Cliffs, NJ: Prentice Hall, 1950); Dewey *op. cit.* (2008); Jean Piaget *The Origins of Intelligence in Children* (Madison, CT: International Universities Press, 1952); Burrhus Frederic Skinner *The Behavior of Organisms: An Experimental Analysis* (Cambridge, MA: B. F. Skinner Foundation, 1990); Watson *ibid.* (1913, 1930).
[187] Dewey *op. cit.* (2008).
[188] Heidbreder, *op. cit.* (1933).

Seeing, 2) Reaching, and 3) Getting Burned. Sensations did not necessarily precede movements, because in the act of looking, seeing could not be separated out from adjustments of the eyes and head attending to light. Likewise, seeing did not necessarily precede reaching since the latter required the former to persist throughout the sequence in order to accomplish the task. Dewey described the distinction of S-R based upon what processes did, not what they were. Without reference to a goal and the different aspects that the S and the R played in attaining that goal, acts (i.e., processes) simply followed a temporal sequence as a whole (i.e., total) coordination. No break between the activities of the organism was postulated; instead, only the activities' functions could vary and change. Accordingly, the unity of an act was functional, not existential. Dewey was against dualism and since he did not separate mental processes from the conditions and consequences, the next step in the direction of applied psychology followed naturally. For Dewey, habits were the key to social psychology and were formed by the interaction (i.e., transaction) between the organism's biological aptitudes and his social environment. It was not surprising that aptitude testing had been associated with functionalism (i.e., measuring functions) in spite of the different philosophies.[189]

Heidbreder (1933) marked the second phase by James Rowland Angell's work at Chicago. Angell insisted that functionalism should not be misidentified as the psychology of The Chicago School, but the development of the school did, indeed, accounted for much of the dissemination of its philosophy. This was

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[189] Heidbreder, *op. cit.* (1933); Dewey *op. cit.* (2008).

Angell's chief contribution, a practical contribution at that. Angell was made president of American Psychological Association in 1906, as a result of his advances in the field. His famous presidential address, *The Province of Functional Psychology,* was classic. He indicated that functionalism dealt with operations and how mental processes operated, what they accomplished and under what conditions. Although you could not have the same idea twice (i.e., as per James' original concept of the stream of consciousness), Angell acknowledged that you could have different ideas with the same function, and he emphasized Darwin's influence by indicating how consciousness aided the organism in adapting to the environment (i.e., the function of mental activities was survival), yet, the specific utility varied with different processes (e.g., judging, feeling and willing). For Angell, the task was to discover the fundamental utility of conscious activity (i.e., "selective accommodation" was the general role of consciousness).[190]

Like Dewey, Angell was against dualism of the mind and body, instead he viewed them as being in interplay. He made a methodological rather than a metaphysical distinction (i.e., both were of the same order with easy passage from one to the other), which did not commit anyone to one particular mind-body theory (i.e., the distinction was only a useful instrument for dealing with experience but they really weren't different). Unfortunately, confusion on this point, by subsequent theorists and historians categorizing different schools of

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[190] J. R. Angell "The Province of Functional Psychology," *Psychological Review* 14 (1907): 61-91; Darwin, *op. cit.* (1979 and 1991); Heidbreder, *op. cit.* (1933).

psychology, often lead to mistakes. Some individuals, such as was the case with Marx and Hillix, failed to realize the concept of pluralism as a solution distinct from monism and dualism.[191]

Heidbreder's third phase was marked by Harvey A. Carr, who's work, as was the case with Angell, could not be separated from his administrative duties at The Chicago School. His book, *Psychology,* is consistent with today's functionalism that some fail to realize still exists. For Carr the subject matter of psychology was mental activity (e.g., perception, memory, imagination, feeling, judging, and will), which was concerned with the acquisition, fixation, organization, and evaluation of experience in order to guide conduct (i.e., adaptive behavior). He saw mental activity as psychophysical (i.e., one knew of the activity and it was a reaction of the physical organism). For Carr "Mental" referred to the whole process (i.e., psychological and physical) they weren't separate entities. He was eclectic methodologically but, like Dewey, he did not practice anything goes eclecticism. He used objective observation, introspection, and common observation. He noted that structure and function were closely related, so he did not ignore information about anatomic structures as input. To study the process in the setting from the standpoint of utility, he shifted the focus away from introspection towards observation from the outside, but he did not totally discard the former. Carr's reflex arc concept inferred: 1) All stimuli had some effect on the organism, 2) The activity (i.e., ideation or motor) was initiated

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[191] Angell, *ibid.* (1907); Heidbreder, *op. cit.* (1933); Marx and Hellix, *op. cit.* (1973).

by sensory stimuli (i.e., internal or external), and 3) There was a continuous process of interaction between the sensory stimuli and the motor response (i.e., every R to a sensory S intern modifies the incoming S and subsequent activity). Thus, an individual may have noticed someone on the fringe of his visual field and respond by focusing on the person directly and this focusing action altered the visual field so the eyes were subjected to different visual stimuli.[192]

Carr described three characteristics of adaptive acts: 1) Motivating stimuli, 2) Sensory stimuli, and 3) A response that altered the situation in a way that satisfied the motivating condition. Carr's discussion of motivation set the stage for Woodworth's dynamic psychology that followed and bridged today's psychology with the functionalism at its birth. For Carr, motives were stimuli that determine the direction of activity in response to sensory stimuli. When the act ceased it was because the situation had changed so the motivating condition and stimulating object were no longer effective. He always emphasized how the total sensory situation was involved and he defined two stages of an adaptive act: 1) Attention, and 2) Reaction. He also distinguished two consequences of an adaptive act: 1) It satisfied the motivating condition, and 2) There were ulterior results, which did not explain the act but had utility. Carr was clear that an act couldn't be explained in terms of the consequence, rather proximate conditions, sensory situations, and motivating conditions. Hence it was an error to conclude that functionalism's interest in utilities explained mental acts in teleological

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[192] H. Carr *Psychology* (New York, NY: Green & Company, 1925); Heidbreder, *op. cit.* (1933); Marx and Hellix, *op. cit.* (1973).

terms. For example, you could not explain the eyes by saying they were for seeing.[193]

This dissertation maintains that although functionalism grew out of a controversial reaction to structuralism, it failed to grow into a fully circumscribed system of psychology. Functionalism, partly because of its common sense foundation, never provided a controversial backdrop to react against. Granted, functionalism did stand out in contrast to what came before (i.e., structuralism), and what temporarily followed (i.e., radical behaviorism), but it was the rigid unreasonable nature of these viewpoints as bookends to functionalism, combined with the stature of Dewey that temporarily propped it up, almost to the level of a school, in its own right. After the death of Titchner and the dissolution of his structuralism, combined with Watson's termination from Johns Hopkins along with the resulting stumble of radical behaviorism, functionalism became integrated into general psychology, loosing its identity as a separate school.[194] Indeed, Dewey, for the sake of its broad dissemination, would have wanted it that

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[193] Woodworth's dynamic psychology, its consistency and departure from functionalism can help link the birth of functionalism with psychology concepts today that are still related to functionalism. Carr, *ibid.* (1925); Heidbreder, *op. cit.* (1933); Marx and Hellix, *ibid.* (1973); Robert Sessions Woodworth *Dynamic Psychology* (New York, NY: Columbia University Press, 1918).

[194] Watson completed the same research Master & Johnson conducted on sexual response, but several decades earlier. His wife refused to be a participant but his research assistant consented. Court documents show that during the divorce, the Judge concluded the detailed lab notes proved Watson was not the "Father of Behaviorism", but the "Father of Misbehavior." He awarded Watson's wife the notes to dispose of and Watson was fired from Johns Hopkins, setting back science for decades. He married his research assistant, moved to Chicago, went into advertising and made millions. William H. Masters and Virginia E. Johnson *Human Sexual Response* (Boston, MA: Little Brown, 1966); Watson *op. cit.* (1913, 1930).

way. The downside to this non-controversial acceptance of functional concepts into general psychology negatively impacted the evolution of psychology as a science in that it became fragmented and departmentalized, separate from the humanities, literature, art, philosophy and other disciplines that are the foundation of knowledge.[195]

Fragmentation and Concentration

The need for interdisciplinary studies, its utility, how to implement a program and realize the advantages while avoiding failure is a hot topic that recurs from time-to-time. The Center for Interdisciplinary Studies, *Zentrum für interdisziplinäre Forschung*, has been instrumental in advancing this research. Historically, universities would bring professors from different departments to teach courses together from an interdisciplinary perspective. The plan was to facilitate communications across departments. Determining which department contributed what percentage to the salaries of interdisciplinary professors was always an open question. Eventually, interdisciplinary studies became its own department in many American universities with its own journals, and national and international conferences. The end result is that it is often difficult to obtain a teaching position in an interdisciplinary department unless you were taught in an interdiciplinary program. There is less cross-departmental communication since everything is contained in its own microcosom. This trend is not unusual. It used to be that the faculty of business schools were drawn from departments of

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[195] Dewey *op. cit.* (2008).

economics, finance, accounting, and organizational psychology. Now the Association for Advanced Schools of Business requires a certain percentage of a schools faculty to have graduated from a business school, per se, in order to attain certification. When Alexis de Tocqueville praised the ability of Americans to form associations for almost anything, the downside was not emphasized. Small fiefdoms like the rural universities under a local ruler, tend to isolate among themselves.[196]

The trend toward specialization and isolation with little cross fertilization with other divisions within a field, well enough, other disciplines in other fields, remains a growing problem that must be dealt with, but first it must be studied and understood more fully.

By incorporating and applying Dewey's philosophy to contemporary problems, it makes his ideas meaningful, relevant and practical in todays' world. His approach to resolution of controversy in the process of understanding and developing a plan that can be implemented, assessed, and adjusted should help cope with seemingly disparate problems of fragmentation and concentration. As noted by Lewis Coser,

> Cultural life, generally, and intellectual life, in particular, are characterized in America by an apparently contradictory process. They show a high degree of fragmentation and diversification concurrently with a tendency

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[196] AACBS website http://www.aacsb.edu (Last Accessed July 24, 2016); Alexis de Tocqueville *Democracy in America* Translated from the French by Harvey C. Mansfield and Delba Winthorp (London, UK: The Folio Society Collector's Edition, 2004); Peter Weingart and Britta Padberg (Editors) *University Experiments in Interdisciplinarity: Obstacles and Opportunities* (Bielefeld, DE: Universität Bielefeld Verlag, 2014).

toward the integration of most cultural activities within a co-ordinated cultural establishment.[197]

He studied and described intellectual and cultural life in America today, as dispersed geographically (i.e., intellectuals have become dispersed across various reputable community colleges, technical institutes, universities, public and private organizations, professional associations and/or think tanks integrated throughout all fifty states and within a relatively short commute of each and every citizen). As a result, significant regional differentiation has been on the decline. For a generation concerned with diversity, regional literary and cultural distinctions are non-existent. When Dewey went to Chicago, an indigenous movement was born that was idiosyncratic to the area. Just as Greenwich Village, New York was the home of intellectual bohemia, Chicago had its own character. In the social sciences, The Chicago School was an incubator and included social thinkers like John Dewey, George Herbert Mead, Robert Park, and Ellsworth Faris. Together they represented a distinct regional American northern mid-western sociology. In literature, Carl Sandburg, Vachel Lindsey, and Margaret Anderson characterized a style unique to the windy city on the lake.[198]

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[197] Coser, *op. cit*. (1997).
[198] Ibid; Margaret Anderson *Forbidden Fires* (Tallahassee, FL: Naiad Press, 1996); (Vachel Lindsay *The Collected Poems, Revised Illustrated Edition* (New York, NY: Macmillan, 1925); George Herbert Mead *Works of George Herbert Mead, Vol. 1-3* (Chicago, IL: University of Chicago, 1967); Robert E. Park, Ernest W. Burgess and Roderick D. McKenzie *The City* (Chicago, IL: University of Chicago Press, 1925); Carl Sandburg *Collected Poems* (Franklin Center, PA: Franklin Library Limited Collector's Edition, 1985); Carl Sandburg *Abraham Lincoln: The Prarie Years and The War Years, Vol. 1-6* (Norwalk, CT: Easton Press Collector's Edition, 1995), Albion W. Small, Ellsworth Faris and Ernest W.

According to Cosner, research universities in America currently pursue ideas that are not distinguishable from each other. That is to say, most theoretical perspectives can find a home somewhere in large universities across the nation. Regionalism has given way to a homoganized intellectual nationalism, albeit, diversely represented on each campus. Differences remain but regional individuation is on the decline. This development is even happening in radio and television with large national corporations swallowing up and discarding regional music, folklore, and news in favor of national trends. Even regional accents are giving way. Intellectuals connected with the universities, are now mostly tied into the national scene, at least within their field of specialization.[199]

With departmentalization, intellectuals sitting down the hall from each other in university buildings rarely have the time to really discuss the problems of their separate disciplines. Specialists from all over the country will buy the same journals and attend the same conferences, exchange emails and discuss the same issues. There are a few exceptions that ordinarily include interdisciplinary programs, government policy committees, and sometimes the Courts. Students may take courses with professors from different disciplines but they are often left to their own devices when it comes to considering and resolving controversies between apposing disciplinary viewpoints. Policy decision-making in the current climate often needs to be informed at various points in the process and from multiple perspectives. Committees are often convened with representation from

Burgess *The American Journal of Sociology, Vol. 1-25, Primary Source Edition* (Chicago, IL: University of Chicago Press, 1925).
[199] Coser, *op. cit*. (1997).

different specializations (e.g., Senators with economic, business management, education, and specific minority cultural backgrounds, respectively, will call in experts in each area to be questioned about a policy issue that covers each area). The committee representative with background in an area, will be relied upon to summon the best experts in the field and ask the right questions, but all to often, the different experts are not present when people from other disciplines are answering questions. They are shuffled in and out of the Committee chambers, merely passing in the halls, with no significant interchange. Similarly, court cases often subpoena various experts. Although the Judge, attorneys and jurors receive a multidisciplinary presentation of data and its interpretation, the experts that testify never have the benefit of hearing each other's testimony. Once the case is settled, there is little motivation for attorneys to review what transpired with the experts.[200]

In spite of the dispersion of intellectual life nationally, specialization has some regional quality. As noted by Coser although the specialists come from all over the nation and often do not permanently reside in the region that is consistent with their specialty, Los Angles is still the movie capital, publishing flagship offices and financial institutions are in New York, and political life centers in Washington, DC. More recently loosing its monopoly, Silicone Valley is still an information technology center and there are other industries one could consider. Of particular note is the rarity with which a single specialist will bridge more than

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[200] Some experts, hired to sit in the second chair, listen to all the testimony and consult on the case, but usually they are hired to listen to experts from their own field. Although any expert can purchase a copy of transcripts, it rarely happens.

one or several specialties.[201]   Cross-fertilization, like that describe in *The Metaphysical Club,* is nonexistent.[202]

The despair that can result from this state of affairs tends to lead critics to affiliate with universities or other institutions of knowledge. The days of the independent practitioner of intellectual criticism are past. Freud, Nietzsche and similar independent thinkers no longer exist. According to Richard Hofstadter, "Many of the most spirited young intellectuals are disturbed above all by the fear that, as they are increasingly recognized, incorporated and used, they will begin merely to conform and will cease to be creative, critical, and truly useful".[203]

Michael Walzer distinguished between the alienated and disillusioned intellectual and the critic. Whereas, the intellectual (e.g., despairing college student) might withdraw from interaction with other people, restricting their activities to television and the like, the critic will criticize the social situation that contributes to his despair.[204] Clearly the latter is more pragmatic and consistent with Dewey's philosophy, which included testing out one's ideas in a practical manner.

Richard Posner has also studied this tendency of intellectuals becoming affiliated with academia, while also moonlighting as consultants. He fears an increasing trend of unqualified individuals offering opinions outside their areas of

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[201] Coser, *op. cit.* (1997).

[202] Menand, *op. cit.* (2001).

[203] R. Hofstadte *Anti-intellectualism in American Life* (New York, NY: Alfred A Knopf, 1963) 393.

[204]   M. Walzer *The Company of Critics: Social Criticism and Political Commitment in the Twentieth Century* (New York, NY: Basic Books, 2002).

expertise for financial gain, selling biased and uninformed positions until they are eventually found out and criticized, only to return to academia, unnoticed and replaced in the media by some other unqualified "expert". He suggests some solutions, such as, having all academics submit a list of every outside consulting job they have engaged in, what services they offered, what they said and how much they were paid.[205] Posner believes full disclosure is the key.[206]

David Reisman once stated, "Were not intellectuals of more use to this country when they had less use for it?"[207] Coser in turn, stated that, "Only those intellectuals who preserve a certain distance from their society can be of maximum use to it".[208] This might be true for intellectual social critics but this dissertation maintains that less distance, more interdisciplinary interaction, and exchange of ideas is called for if intellectual growth, stimulation, scientific discovery, and new applied advancements are to take place. A greater integration of intellectuals across disciplines is what is proposed here.

It may be true that with increased diversification in colleges, there may have been a trend against traditional liberal arts education, viewed as elitist. The controversial debate concerning privileged access to university education is an old one that reappeared with W. E. B Du Bois arguing for equal opportunity for the

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[205] You see this criticism being levelled in medical schools all the more often now that pharmaceutical companies are seeking and paying doctors for solicited opinions. The amount of the stipend would help the public decide how much weight to give to an opinion acquired in this fashion.

[206] R. A. Posner *Public Intellectuals: A Study of Decline* (Cambridge, MA: Harvard University Press, 2001).

[207] D. Reisman "Comments on American Intellectuals," *Daedalus* (Summer, 1959) 493.

[208] Coser, *op. cit.* (1997).

African-American to traditionally white male educational opportunities, in contrast with the "Atlanta Compromise" that Booker T. Washington proposed as a solution to the southern problem.[209] Similar concerns were raised concerning woman's education and the GI bill led to an increased number of older students more focused on the practical application of college studies, often choosing engineering and similar studies. Currently, with postmodern influences and increased diversification throughout most institutions of knowledge, there has been an increased focus on minority studies and the cultures of Asian, African, Latin America, Third World countries, and elsewhere.[210]

Dewey would not see it as an either or situation (i.e., general liberal arts, idiosyncratic cultural studies, or applied technologies). He would consider, find,

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[209] W. E. B. Du Bois *Dusk of Dawn: An Essay Toward an Autobiography of a Race Concept* Romare Bearden (Illustrator), (Franklin Center, PA: Franklin Library Limited Edition, 1980); Louis R. Harlan (Editor) *Booker T. Washington: The Making of a Black Leader 1856 1901, Vol. 1* (Oxford, UK: Oxford University Press, 1972); Louis R. Harlan (Editor) *Booker T. Washington: The Wizard of Tuskegee 1901-1915. Vol. 2* (Oxford, UK: Oxford University Press, 1972); Louis R. Harlan (Editor) *The Booker T. Washington Papers, Vol. 3* (Urbana, IL: University of Illinois Press, 1974) 583-587; David Levering Lewis. *W. E. B. Du Bois: Biography of a Race 1868-1919, Vol. 1* (New York, NY: Henry Holt & Company, 1993); David Levering Lewis *W. E. B. Du Bois: The Fight for Equality & the American Century 1919-1963, Vol. 2* (New York, NY: Henry Holt & Company, 2000); Richard H. Pildes "Democracy, Anti-Democracy, and the Cannon," *Constitutional Commentary* 17 (2000): 295; Jennings L. Wagoner, Jr. "The American Compromise: Charles W. Elliot, Black Education and the New South," in R. K. Goodenow and A. O. White (Editors), *Education and the Rise of the New South* (Boston, MA: G. K. Hall & Company, 1981) 26-46.

[210] Christine Sleeter "Preparing Teachers for Culturally Diverse Schools," *Journal of Teacher Education* 52, no. 2 (March/April 2001) 94-106; George Lowery "Minority Studies Program: A Model of Interdisciplinary Collaboration," *Cornell Chronicle* (June 1, 2006), Last Accessed Online at: http://www.news.cornell.edu/stories/2006/06/minority-studies-program-model-other-universities

and implement the positive aspects of each. Martha Nussbaum pinpointed the practical opportunities ahead. Noting that The University of Chicago Law School devoted considerable attention to the interests of their students with respect to racial issues, she indicated how they focused on both factual knowledge and the humanistic imagination. She summarized their present approach as follows:

> Our campuses educate our citizens. Becoming an educated citizen means learning a lot of facts and mastering techniques of reasoning. But it means something more. It means learning how to be a human being capable of love and imagination. We may continue to produce narrow citizens who have difficulty understanding people different from themselves, whose imagination rarely venture beyond their local setting. It is all too easy for the imagination to become narrow in this way. Think of Charles Dickens' image of bad citizenship in *A Christmas Carol,* in his portrait of the ghost of Jacob Marley, who visits Scrooge to warn him of the dangers of a blunted imagination. Marley's ghost drags through all eternity a chain made of cash boxes, because in life his imagination never ventures outside the walls of his successful business to encounter the lives of the men and women around him, men and women of different social class and background. We produce all too many citizens like Marley's ghost and like Scrooge before he walked out to see what the world around him contained. But we have the opportunity to do better, and now we are beginning to seize that opportunity. That is not 'political correctness'; that is the cultivation of humanity.[211]

One can see the integration of traditional liberal studies with minority cultural issues, in a manner that makes it both meaningful and practical. If this were an example of how The University of Chicago Law School resolved the age-old controversy between pure and applied knowledge, while stimulating interdisciplinary studies in the lives of students and our nation, John Dewey would be proud.

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[211] Nussbaum, *op. cit.* (1997).

What is the next direction for the university? Many believe it is in the form of a new global network model espoused by New York University with their many campuses around the world. In an information demanding culture, the research university is a crucial organization for societal and commercial development. The goal is to produce knowledge and scholars in an international environment. Recent research has identified eight features important to this model. They include:

> [A] global mission, research intensity, new roles for professors, diversified funding, worldwide recruitment, increasing complexity, new relationships with government and industry, and global collaboration with similar institutions. The worldwide reach of the [global model] means that nation-states have less influence over their universities than in the past.[212]

Only time will tell how these reforms will ultimately impact higher education in the world. We have seen reforms with the greatest of intentions fail in history, and we have seen relatively non-orchestrated changes succeed but usually knowledgeable policy decisions developed by critical thinking prove best.

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[212] K. Mohrman, W. Ma and D. Baker "The Research University in Transition: The Emerging Global Model," *Higher Education Policy* 21, no. 1 (2008): 5-27.

SECTION TWO: SURVEY FIELD STUDY

CHAPTER 4: THE CURRENT RESEARCH APPROACH

In order to assess various aspects of undergraduate experience at university, the questions of interest need to be identified along with a clear methodology for measurement. The creation of a specifications table remains a pivotal part of survey development.[213] The table lists those things the literature review, and qualitative interviews with students, professors and administrators identified as important to measure. This provides construct specificity of the parameters in question, and helps with establishing the validity for the survey.[214] These methods can utilize quantitative methods of analysis (e.g., factor, cluster and/or component analyses), qualitative methods of analysis (e.g., eliciting the issues to be investigated, extracting the elements and constructs, and constructing a table), or both in a mixed-methods format.[215]

Specifications Table

Survey items guided by the literature review are determined in an evolving process, undergoing alterations following feedback from various sources.

Relevant Sampling Strategies

It is often impractical to test an entire population. Sampling a subset usually

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[213] Marty Sapp *Psychological and Educational Test Scores: What Are They?* (Springfield, IL: Charles C. Thomas Publisher, Ltd., 2002).

[214] Floyd, J. Fowler Jr. *Survey Research Methods 4th Edition* (London, UK: SAGE Publications, Ltd., 2009); Robert F. DeVellis *Scale Development: Theory and Application, Third Edition* (London, UK: SAGE Publications, Ltd., 2012).

[215] Fowler, Jr. *ibid.* (2009).

involves probability strategies, nonprobability strategies, or purposive strategies. Although convenience sampling does not guard as well against bias, the use of student participants in psychology studies in this manner remains the most common due to accessibility issues.[216] The aim strives for balance between sampling error and practicality based on the sampling frame and the sample size. In the current study the extremely large sample size (N = 1,495 students) made the drawbacks of convenience sampling less of a concern.[217] In a mixed methods model, individuals who participate in the qualitative exploratory phase of the study are usually different and significantly less numerous than those involved in the quantitative phase from which the goal is to conduct statistical tests that meet basic assumptions in order to be able to generalize to the broader population.[218]

Purposive sampling strategies involve the selection of critical informants based on a decision that they will have sufficient relevant knowledge of the topic under study.[219] Purposive sampling was used, herein, to select informed participants for the qualitative phase of the study, discussing the results of the literature review and helping with specification of possible test items for the

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[216] R. B. Johnson and L. Christensen *Educational Research: Quantitative, Qualitative, and Mixed Approaches, Third Edition* (London, UK: SAGE Publications, Ltd., 2008).

[217] Alvin C. Burns and Ronald F. Bush *Marketing Research, Sixth Edition* (New York, NY: Prentice Hall, 2010).

[218] Abbas Tashakkori and Charles Teddlie *The SAGE Handbook of Mixed Methods in Social & Behavioral Research, Second Edition* (London, UK: SAGE Publications, Ltd., 2010).

[219] Kathleen M. T. Collins "Advanced Sampling Designs in Mixed Research: Current Practices and Emerging Trends in the Social and Behavioral Sciences," in Tashakkori, Abbas & Teddlie, Charles *The SAGE Handbook of Mixed Methods in Social & Behavioral Research, Second Edition* (London, UK: SAGE Publications, Ltd., 2010).

survey. Convenience sampling was used to select participants in the quantitative field research, while remaining cognizant of the limitations.

Relevant Data Collection Tools

Qualitative data collection included handwritten diary notes of discussions with consultants. Data analysis consisted of coding, followed by thematic and template analyses.[220] The newly developed ten-item survey was used to collect quantitative data. SPSS software was employed to perform quantitative analyses determine frequencies, and calculate Cronbach's alpa.[221]

Epistemological Position

Mixed methods research (MMR) often generates much debate between opposing positivists and anti-positivists. However, the position of this dissertation maintains that they are not mutually exclusive. Their compatibility can be summarized as follows:

Methodological Eclecticism: Freedom to use a combination of methods, picking the best procedures for solving our research questions.
Paradigm Pluralism: The philosophy behind MMR can draw on a variety of paradigms.
Diversity at all Levels of the Research Enterprise: e.g., mixed methods can simultaneously address a diverse range of exploratory and confirmatory issues, while a unitary approach addresses one or the other.

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[220] Handwritten diary entries proved adequate for the analysis, without the need for nVivo software.
[221] Andy Field *Discovering Statistics Using SPSS, Third Edition,* (London, UK: SAGE Publications, Ltd., 2009); Julie Pallant *SPSS Survival Manual, Fourth Edition* (New York, NY: McGraw Hill, 2010); Naresh K. Malhotra *Marketing Research: An Applied Orientation, Third Edition* (London, UK: Prentice Hall, 1999).

Emphasis on Continua, Not a Set of Dichotomies: Replacement of the "either-or" with a range of options.

Cyclical Iterative Approach: A cycle of research including logic of both a deductive and an inductive nature, moving from 1) grounded results (observations, facts) through 2) inductive logic to 3) general inferences (or theory) and through 4) deductive logic to 5) tentative hypothesis or predictions (research can start at any point).

Research Question Foci: Decide on interests to research, then specify research questions, and make modifications throughout the course of the study.

Set of Basic Research Designs: Various mixed methods designs in which combinations occur in an independent manner.[222]

Research has no rudder without philosophy.

> Philosophy asks for public deliberation instead of the usual contest of power. It asks us to choose the view that stands the test of argument, rather than the view that has the most prestigious backers, the view that gets all the details worked our coherently and clearly, rather than the view whose proponents shout the loudest.[223]

The perspective of this dissertation is congruent with classic pragmatism:

1) Rejecting either-or dichotomies.
2) Accepting Dewey's position that knowledge comes from a person-environment interaction.
3) Maintains knowledge is both constructed and develops from empirical understanding.
4) Accepts pluralistic ontological (i.e. realities are multiple and complex).
5) Epistemologically knowledge can be derived in many ways.
6) Theories are instrumental in that they vary in their ability to predict, explain or influence thing.
7) Is not value free but incorporates values, such as, equality, freedom and democracy into the process of investigation.[224]

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[222] C. J. Reiss *Institutional Foundations and Policies: Measures of Civil Society & Civil Disobedience* (Charlottesville, VA: University of Virginia, 2013).

[223] Martha Craven Nussbaum *Women and Human Development: The Capabilities Approach* (Cambridge, UK: Cambridge University Press, 1999), 300.

[224] Reiss *op. cit.*(2013); R. B. Johnson and L. B. Onwuegbuzie "Mixed Methods Research: A Research Paradigm Whose Time Has Come," *Educational Research* 33 (2004): 14-26; Burke Johnson and Robert Gray "A History of Philosophical and Theoretical Issues for Mixed Methods Research," in Abbas Tashakkori and Charles Teddlie *The SAGE Handbook of Mixed Methods in Social & Behavioral Research, Second Edition* (London, UK: SAGE Publications, Ltd., 2010).

Hypotheses

1. The survey is expected to be reliable and obtain an acceptable Cronbach's alpha.

2. The majority of students are expected to be pleased with the education they are receiving.

3. Program requirements are expected to interfere with studying other subjects of interest, even though they would otherwise be available, including interdisciplinary subjects.

4. The majority of students expected to find their professors available for guidance purposes.

5. Opportunities to collaborate with faculty on publishable research are expected to be limited.

6. The majority of students would be more inclined to submit to a student run journal, if one was available.

7. The majority of students believe it is important to spend a semester or more aboard, or at affiliate university campuses.

8. Expenses and logistical problems of studying abroad are a deterrent.

CHAPTER 5: METHOD

Participants

Expert Consultant

An expert in the field of test construction who has consulted in previous survey construction research.

General Consultants

Three professors, and two college students acted as general consultants.

Respondents

One thousand four hundred and ninety-five undergraduate students from a total of two hundred and seventy-three universities across every continent of the world except Antarctica.

Ethical Considerations

The principles that guided this study included: 1) Non-maleficence (not causing harm); 2) Beneficence (doing good); 3) Autonomy (treating people with respect and enabling their free choice); and 4) Justice (risks/benefits; who will be advantaged and/or disadvantaged).

Non-maleficence always remains the utmost concern. Standard university research ethics guidelines were followed. Surveys are comparatively non-intrusive forms of investigation, especially when the anonymous nature of the response is insured, as was done in the present design. Participants did not have to provide any identifying or demographic information. Thus, their answers to the survey could not be linked back to them. They were provided with informed

consent. Their free autonomous consent was required in order for them to proceed with survey questions and they were always free to choose to discontinue their participation at any point maintaining their sense of autonomy. Although there were few risks, there were only small benefits to the participants with respect to their sense of participation in advancing knowledge, which met the justice criterion. Ultimately, the goal of the research was to do good (i.e., beneficence) by providing new knowledge.

Materials

The brief ten-item survey is presented Appendices 1. The format is a five-point Likert style scale ranging from *"Strongly Disagree"* to *"Strongly Agree"* (Cronbach's $\alpha = 0.717$).

Procedures

Review Literature

The literature helped guide the first phase of the survey construction. As the development of knowledge in the area of education especially higher education was read and studied, ideas emerged and contributed to an operational definition of the construct in question (i.e., the factors, not usually focused on in typical university rankings, that contribute to a good university educations).

Obtain Expert Opinion

It was important to discuss the developing ideas with the expert consultant before completing the literature review. The consultant's insights helped guide the review, and the specification table during this iterative process.

Develop A Specifications Table

The dimensions and objectives of the "good university education experience" construct were specified and related to the proposed survey items. The construct was defined operationally, linking it with the literature review while guiding survey item development. A "bad university education experience" is sometimes the precise opposite of a "good university education experience". Thus, some critics of university education are good at detailing what constitutes excellence in education and *vice versa*. Given the nature of five-point Likert style scale ranging from *"Strongly Disagree"* to *"Strongly Agree"* some citations that are pertinent to a good experience may be listed alongside citations that are pertinent to a bad experience. This is because, depending upon how a participant answers the item, the answer can range from one end of the continuum to the other. Not included in Table 2, are the references that were utilized with respect to the process of item development as compared with the specifications, per se, in addition to the consultant's opinions. [225]

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[225] Robert F. DeVellis *Scale Development: Theory and Application, Third Edition* (London, UK: SAGE Publications, Ltd., 2012); M. Easterby-Smith, R. Thorpe and P. R. Jackson *Management Research, Third Edition* (London, UK: SAGE Publications, Ltd, 2010); B. Johnson and Robert Gray "A History of Philosophical and Theoretical Issues for Mixed Methods Research," in Abbas Tashakkori and Charles Teddlie *The SAGE Handbook of Mixed Methods in Social & Behavioral Research, Second Edition* (London, UK: SAGE Publications, Ltd, 2010); Burke Johnson and Larry Christensen *Educational Research: Quantitative, Qualitative, and Mixed Approaches* (London, UK: SAGE Publications, Ltd, 2008); R. B. Johnson and L. B. Onwuegbuzie "Mixed Methods Research: A Research Paradigm Whose Time Has Come," *Educational Research* 33 (2004): 14-26; F. Kerlinger and H. Lee *Foundations of Behavioral Research, Fourth Edition* (New York, NY: Harcourt, 2002); Naresh K. Malhotra *Marketing Research: An Applied Orientation, Third Edition.* (London, UK: Prentice Hall,

TABLE 2: CONSTRUCT AND ITEM SPECIFICATIONS

Research Construct & Related Survey Items 1-10	Construct Definitions & Item Sources
1. Pleased with education received.	Al-Farabi (2001); Aristotle (2001); Axtell (1998); Plato (2001); Plutarch (1927-2004).
2. Required courses prevent taking electives of interest.	Anderson (2004); Aronowitz (2000); Bromwich (1992); Carnevale *et al.* (2018); Crimmel (1993).
3. Plenty of opportunities for interdisciplinary courses.	Marrou (1956); Plutarch (1927-2004); Walsh (1927); Weingart and Padberg (2014); Westaway (1923).
4. Intend to submit work for publication.	Damrosch (1995); Jacoby (1982).
5. Availability of professors for guidance.	Bok (1982); Markie (1994); Vandermeersch (1996).
6. Competition prevents publication.	Morgan (2001); Palmer (1998); Pelikan (1983).
7. Would submit work to a student journal.	Posnock (1998).
8. Study abroad is important.	Anderson (2004); Bohls and Duncan (2005); Buzard (2002); Chaney (1985); de Ridder-Symoens (1992); Eglin (2001); Emerson (1977); Freller (2009); Kerr (1963); Mohrman (2008); Rashdall (2010); Redford (1996).
9. Cost and logistics prevent study abroad.	Anderson (2004); Bohls and Duncan (2005); Buzard (2002); Chaney (1985); de Ridder-Symoens (1992); Eglin (2001); Freller (2009); Jones (2000); Mohrman (2008); Redford (1996).
10. Plenty of opportunities for collaboration with professors on publications.	Markie (1994); Shils (1983).

1999); J. P. Stevens *Applied Multivariate Statistics for the Social Sciences, Fourth Edition* (Mahwah, NJ: Erlbaum, 2002); Abbas Tashakkori and Charles Teddlie *The SAGE Handbook of Mixed Methods in Social & Behavioral Research, Second Edition* (London, UK: SAGE Publications, Ltd., 2010).

Create Preliminary Surveys

Several iterations of the survey evolved over successive discussions with the consultants. Only the final product is presented in Appendix 1.

General Consultation

The survey items were individually shared with the consultants with suggestions being discussed as the consultants read and responded to the drafts. A true/false format was considered in an early iteration, but it was discarded in favor of the five-point Likert style scale. Demographic items were also considered in addition to a question identifying the university attended, but a power analysis determined the expected number of participants from each university would be too small for statistical purposes and by leaving out demographic, the survey would be anonymous with all the related advantages. Transparency in experimentation is important and the simple straightforward nature of the questions, the transparency of the survey, such that anyone taking the survey surely knew its purpose.

Obtain Second Expert Opinion

As the survey took form it was discussed with the expert consultant and the final survey was agreed upon.

Revise Survey

After final discussions with consultants, no additional changes were made.

Informed Consent

Prospective participants were obtained by visiting universities and talking with students. They were asked to read the survey before agreeing to fill it out and told it would be anonymous. After completing the survey it was slid back into a file among many others and no identifying information was contained on any surveys. This approach keeps the survey less intrusive and less likely to cause harm. By maintaining the anonymous nature of the results, each participant's dignity was maintained.

CHAPTER 6: RESULTS

The descriptive statistics can be found in Table 3. The range of scores on each item varied from the lowest to the highest level (i.e., 1 to 5) indicating individual differences in strong agreement to strong disagreement. The total scores did not range from the two extremes (i.e., 10 as the lowest possible score, and 50 as the highest possible score). The range was from 12 to 42. Anything more extreme might reflect a response set. The majority of students endorsed items 1, 5, 7, and 8.

TABLE 3: Descriptive Statistics [a.]

Item No.	Mean Score [b.]	Standard Deviation	Variance	Min. Score	Max. Score	Range
1.	3.8508	1.12109	1.257	1.00	5.00	4.00
2.	1.7853	1.00069	1.001	1.00	5.00	4.00
3.	1.8094	1.04410	1.090	1.00	5.00	4.00
4.	1.8415	1.11921	1.253	1.00	5.00	4.00
5.	3.5906	1.42070	2.018	1.00	5.00	4.00
6.	1.7886	0.97671	0.954	1.00	5.00	4.00
7.	4.2154	0.88519	0.784	1.00	5.00	4.00
8.	3.7826	1.39524	1.947	1.00	5.00	4.00
9.	2.7913	1.71514	2.942	1.00	5.00	4.00
10.	1.9786	0.91152	0.831	1.00	5.00	4.00
Total	27.4341	6.30257	39.722	12.00	42.00	30.00
LowerHalf	20.2296	4.09517	16.770	12.00	27.00	15.00
UpperHalf	31.3564	2.92584	8.561	28.00	42.00	14.00

a. N = 1,495
b. Reverse Coding for Items 2, 6, and 9.

Table 4 presents the results of a T-Test to assess whether or not the survey was able to distinguish individual difference. The scores were split in half for this purpose. The mean of the upper-half of the scores are significantly different than than the mean of the lower-half ($p\leq0.001$).

TABLE 4: T-Test Statistics [a]

	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval (lower)	99% Confidence Interval (upper)
LowerHalf	113.402	526	0.000 *	20.22960	19.7684	20.6908
UpperHalf	333.437	967	0.000 *	31.35640	31.1137	31.5991

a. *: $p\leq0.001$

Table 5 presents the reliability internal consistency statistic. Cronbach's alpha is at an acceptable level of 0.717, which is between the appropriate parameters of 0.8 and 0.7.

TABLE 5: Reliability Statistic [a]

Cronbach's Alpha	Number of Items
0.717*	10

a. * Acceptable: $0.8 > \alpha \geq 0.7$

Conclusions and Limitations

All the hypotheses were correct. The survey is a reliable and valid instrument for measuring what it purports to measure with respect to student satisfaction in their undergraduate education. It provides useful information about the student, which the standard surveys (e.g., U.S. News & World Report) fail to accomplish, often preferring to focus on the ratings of faculty.

Although the validity of the survey was established through standard procedures with a specification table and testing to see if the predicted hypotheses were supported, there was no previously validated measure of the construct in question to compare the results of this survey with. Of course, if such a measure had been available, there would not have been a need to develop a new survey in the first place.

This was cross-sectional research, thus conclusions about causation could not be made. Additionally, there were not enough students from each university; thus, statistical comparisons between universities could not be made, either.

CHAPTER 7: GENERAL DISCUSSION

At the onset, this dissertation had several goals. The first was to present, in broad strokes, a literature review on the history of education along with extensive documentation for those duly motivated to pursue further study with greater concentration. This goal was accomplished.

The spread of culture from the prehistoric era through education in ancient Rome was detailed. It encompassed what we have learned about cultures before the written record and comprised advances in Greece before and after its growth, and instrumental exchanges with neighboring cultures, including Egypt, Rome and others. The impact of numerous political influences were also described. The Greek educational curricula was enumerated (e.g., the *trivium* and *quadrivium*), how they were disseminated and transformed, to and by, other cultures and periods of time. This was followed by details concerning how early advances, in liberal arts education, regressed during the Dark Ages but were still passed down, only to reemerge with the development of the first universities in Europe. Aspects of early modern reforms in the *Ancient Régime* model of university education were delineated, followed by the French model and the German reaction to it along with the political trends impacting same.

The educational developments in America, liberal arts colleges, research universities, critics and advocates were also covered. A spotlight focused on the role of conflict in the development of academic ideas, the changing role of academics, their purpose and significance. This was followed by an example of

how this controversy played out between structuralism and radical behaviorism, with pragmatism (i.e., the philosophical position of this research) emerging as the benefactor of that debate. A pragmatic vantage point was relied upon to critique trends in departmental fragmentation and concentration in contemporary university settings with an eye towards solutions.

From this historical review emerged several developments that required further examination to help with contemporary undergraduate education reforms. These included how pleased students were with their education, the relative burden of required courses in their program, opportunities for interdisciplinary study, possibilities for publishing their work, availability of support from professors, interest in student run journals, studying abroad or at affiliate campuses, and opportunities to work with professors on their research projects in the hope of publication.

The constructs of concern were validated by linking them with trends that emerged in the historical review, and they were summarized in a specification table. Relevant sampling strategies and data collection tools were reviewed along with a rational for the choices made. The epistemological position was outlined followed by a list of the research hypotheses and the methods used to test them.

The format was a five-point Likert style scale ranging from *"Strongly Disagree"* to *"Strongly Agree"*. Negatively worded items were reverse coded for statistical purposes. This was followed by many years to complete a far-reaching journey of field research across every continent of the world except Antarctica. A total of 273 universities were assessed. The scale obtained an

acceptible Cronbach's alpha of 0.717. Extensive qualitative notes were taken in a diary format, which may someday lead to a sort of illustrated travelogue, but that will be for another book. An aim of the current dissertation was to sample a large number of undergraduate students across many universities surveying them with the new instrument. This was accomplished. A sample of 1,495 students was obtained.

Results showed that individual differences across students traversed all the possible item choices from the most positive to the most negative, but on the majority, students were pleased with the university education they were receiving though the required courses in their programs prevented them from studying other subjects, and opportunities to take interdisciplinary courses that looked at an issue from various perspectives were limited. Most students found their professors available for guidance, but did not find opportunities to collaborate on publishable research with them. Furthermore, most students did not intend to submit their work for publication, but would be more inclined to submit to a student run journal, if one was available. Finally, most students believed it was important to spend a semester or more aboard, or at affiliate university campuses, but they found the expense and logistical problems a deterrent. Clearly, some concrete reforms seem called for.

Bridging the gap between disciplines can be analogous to the divide that separates people and nations. In this age of specialization our society risks fragmentation. Specialists in a particular field tend to subscribe the same journals, attend the same association meetings and discuss the same issues with each other.

Cross-fertilization with people in different departments can be lacking. The problems we face today call for multidimensional solutions that grow out of interdisciplinary collaboration. Flexibility in view, at the micro and macro level, is required. The advantages of diverse learning organizations, interdisciplinary professoriate and student body partnerships, and multicultural community exchanges, albeit local or international, can only be achieved through active deliberation and communication of ideas with people of different vantage points. We seek diversity in perspective, at home and globally, because it develops humanity. It is through the process of coming to understand and fully apprehend the similarities and differences that we have with one another, which lays the foundation for well functioning relationships, whether interpersonal, interdepartmental or international.

The Mission of a proposed university based center for interdisciplinary collaboration is as follows, promoting cross-disciplinary partnerships in the humanities, liberal arts, sciences, health, education, communications, technology, business, law, engineering, and policy development.

The core Values that inform the work are …

· An understanding that the future of the globe and of its communities are closely intertwined with one another.

· A sincere respect for the role of each discipline in informing and guiding cultural research and teaching.

· A commitment to the creation of knowledge and its dissemination across academic disciplines and diverse communities of the world.

· A belief that the issues facing academic disciplines and diverse global communities are complex, and often require collaboration across both academic and non-academic settings.

The Vision of the Center is to…

· Facilitate equal partnerships across disciplines, in which everyone works together to set research and instructional agendas and to generate new knowledge to solve problems.

· Foster scholarship to address cross-disciplinary needs and issues and connect the learned and the learner to the world outside of academia.

· Broker relationships and resources needed to achieve solutions and change.

· Provide an easy point of access to people and resources, both within academia and in the broader global community.

The Center's Objectives are to …

· Serve as both a facilitator and catalyst for interdisciplinary collaborative research and instructional activities.

· Facilitate cross-disciplinary access and the exchange of ideas by collecting, organizing and disseminating information about the Center's resources and collaborations.

· Inform Center partners of points of engagement within the diverse communities, both academic and non-academic, privileged and underserved.

· Develop effective media to communicate opportunities for cooperation, engage new partners, and foster commitment to scholarship that is informed by, and informs, the needs across academic disciplines and diverse global communities.

· Develop a series of collaborative workgroups that foster exchange, network-building, and project-related partnerships.

· Create a climate of trust and cooperation supportive of pragmatic partnership, so that Center-sponsored workgroups can tackle increasingly larger issues and deepen their impact across academia and the diverse communities of the world.

· Enhance the role of the Center as an international model for effective partnerships.

· Create a student based academic journal for students to compete with one another to publish their work.

· Develop funding sources to create scholarships for undergraduate study abroad, and research apprenticeships for undergraduate students to assist faculty in their research agendas and publications.

In closing, this paper provided a roadmap of the motivated scholar interested in further pursuing research on the history of academia. Policy considerations were proposed as possible solutions to the problems uncovered by the survey results. Theoretically, this research placed the new global network university model within the context of historical developments. It expanded the construct for rating universities beyond standard criteria for rankings to include the issues mentioned above. Methodologically, this research advanced the field of university rating systems by providing a new reliable measurement tool. Practically, the survey instrument increased awareness of several issues that needed attention in order to improve the educational experiences of university undergraduates.

APPENDIX 1

*Please Indicate How Strongly You Agree or Disagree
With The Following Statements.*

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
1. I am pleased with the university education I am receiving.	_____	_____	_____	_____	_____
2. There are many required courses for my program, which prevent me from taking courses in other subjects.	_____	_____	_____	_____	_____
3. There are plenty of opportunities to take interdisciplinary courses that look at a subject from different perspectives across university departments.	_____	_____	_____	_____	_____
4. I intend to or have submitted some of my work for publication.	_____	_____	_____	_____	_____
5. Professors are available to help if I have difficulty with something.	_____	_____	_____	_____	_____
6. I will not bother submitting my work for publication because the competition is too great.	_____	_____	_____	_____	_____
7. If there was a student journal that only accepted articles from students I would be more likely to submit my work.	_____	_____	_____	_____	_____
8. Taking advantage of opportunities to study a semester or more at different universities, as part of my current program, is important.	_____	_____	_____	_____	_____
9. The additional expense and logistical problems of taking a semester or two abroad makes the option unlikely.	_____	_____	_____	_____	_____
10. There is sufficient opportunity to work with professors on their research projects in order to get your name added to their publication.	_____	_____	_____	_____	_____

APPENDIX 2

List of Universities

-A-
Aarhus University, Denmark
Aberdeen, University of
Aberystwyth University
Academy of Fine Arts Vienna
Academy of Performing Arts Prague
Al Akhawyn University, Morocco
American College Dublin
American University
American University of Acapulco
American University of Cairo
American University of Paris
American University of Rome
Amsterdam, University of
Applied Arts Vienna, University of
Aristotle University of Thessaloniki
Autonomous University of Madrid

-B-
Barcelona, University of
Bari, University of
Basel, University of
Bath, University of
Bayreuth, University of
Beijing Broadcasting Institute
Beijing Univ. Int'l Business & Econ
Beijing University Posts & Telecom
Bern, University of
Birmingham, University of
Bogazici University, Istanbul
Bologna, University of
Bonn, University of
Boston College
Boston University
Brandenburg Univ. of Technology
Bremen, University of
Brighton, University of

-C-
Ca' Foscari University of Venice
Cairo University
California Berkley, University of
California Los Angles, University of
Cambridge, University of
Cape Town, University of
Cardiff University
Carnegie Mellon University in Qatar
Catholic University of America
Catholic University of Lille
Catholic University of Paris

Central European Univ., Budapest
Charles University in Prague
Chicago, University of
City University of Hong Kong
City University of New York
Cologne, University of
Columbia University
Comillas Pontifical Univ., Madrid
Complutense University of Madrid
Conservatoire de Musique, Genève
Conservatorio della Svizzera Italiana
Copenhagen, University of
Cork Institute of Technology
Cornell University
Courtauld Institute of Art, London
Czech Technical University, Prague
Czech Univ. Life Sciences Prague

-D-
Dalhousie University
Delaware, University of
Dresden University of Technology
Dublin Business School
Dublin City University
Dublin Institute of Advanced Studies
Dubrovnik, University of
Dublin Institute of Technology
Duke University
Düsseldorf, University of

-E-
École Centrale de Lyon
École Centrale de Marseille
École Centrale de Paris
École des Beaux-Arts
École Normale Supérieure des Paris
École Polytech. Fédérale, Lausanne
Economics Prague, University of
Edinburgh, University of
Erasmus University Rotterdam
Erlangen-Nuremberg, University of
European University Cyprus
European University of Rome
European University of Valencia

-F-
Florence, University of
Florida Institute of Technology
Fordham University
Frankfurt am Main, University of
Free University of Berlin
Fribourg, University of

-G-
Galway-Mayo Institute of Tech.
Geneva, University of
Genoa, University of
Georgetown University
George Washington University
Ghent University, Belgium
Glasgow, University of
Goethe University Frankfurt
Goldsmiths, University of London
Göttingen, University of
Greenwich, University of
-H-
Halle-Wittenberg, University of
Hamburg, University of
Harvard University
Hebrew University of Jerusalem
HEC- Business School Paris
Heidelberg, University of
Helsinki, University of
Heythrop College London
Holy Cross University
Hong Kong, University of
Humboldt University of Berlin
-I-
IE University, Madrid
Illinois Chicago, University of
Indian Institute of Tech, Bombay
Innsbruck, University of
INSA- Toulouse
Institute for Advanced Study, Pavia
International Univ. of Andalusia
International Univ. of Catalonia
International University of Monaco
Istanbul Technical University
Istanbul University
Italian Institute of Human Sciences
Iuav University of Venice
-J-
Johns Hopkins University
Jordon, University of
-K-
Kent, University of
King Saud University, Saudi Arabia
King's College London
Konservatorium Wien
-L-
Lausanne, University of
Leeds, University of
Leicester, University of
Leipzig University

Leonardo da Vinci Univ.- Paris
Libera Università Mediterranea
Limerick, University of
London, University of
London Business School
London School of Economics
London School of Tropical Medicine
Long Island University
Louisiana State University
Loyola Univ. Andalusia, Córdoba
Lucerne, University of
Ludwig Maximilian Univ. Munich
Lugano, University of
LUISS University of Rome
Lund University
Luxembourg, University of
-M-
Maastricht University
Malta, University of
Maine, University of
Mainz, University of
Manchester, University of
Manchester Metropolitan University
Mannheim, University of
Marburg, University of
Marconi University
Marmara University, Istanbul
Maryland, University of
Marymount University
Massachusetts, University of
Massachusetts Institute of Tech.
McGill University
Menéndez Pelayo Int'l University
Milan, University of
Monmouth University
Montclair State University
Mozarteum University of Salzburg
Munich, University of
Music & Perf. Arts Vienna, Univ. of
-N-
Nanjing Univ. of Posts & Telecom.
Naples Federico II, University of
National College of Art & Design IR
National Grad. Institute, Japan
National Univ. of Ireland Galway
National Univ. of Ireland Maynooth
Natural Resources and Life Sciences
New Mexico, University of
New School University
New York Institute of Technology
New York Medical College

New York University
New York University Abu Dhabi
New York University Shanghai
Nottingham, University of
-O-
Open University of Catalonia
Oslo, University of
Oxford, University of
-P-
Pace University
Padua, University of
Panthéon-Sorbonne University, Paris
Paris Dauphine University
Paris Diderot University, Paris
Parma, University of
Pennsylvania, University of
Pisa, University of
Polytechnic University of Milan
Polytechnic University of Valencia
Pompeu Fabra Univ., Barcelona
Pontifical University of Salamanca
Potsdam, University of
Princeton University
-Q-
Qatar University
-R-
Richmond, University of
Regent's University London
Rome III, University of
Royal Irish Academy of Music
Rutgers University
-S-
Saarland University
Salamanca, University of
Salerno, University of
Salzburg, University of
São Paulo Brazil, University of
Sapienza University of Rome
Schiller International Univ., Paris
Sciences Po, Paris
Seville, University of
Shanghai Conservatory of Music
Shanghai Univ. of Int'l Business
Sheffield, University of
Sigmund Freud University Vienna
South Africa, University of
St. Andrews, University of
St. Galen, University of
St. John's University
St, Lawrence College
St. Petersburg State Univ. Russia

Stanford University
Stevens Institute of Technology
Strasbourg, University of
Stuttgart, University of
Swiss Federal Tech., Lausanne
Swiss Federal Tech., Zurich
Syracuse University
-T-
Technical University of Cologne
Technical University of Madrid
Tel Aviv University
Texas at San Antonio, University of
Tokyo, University of
Tokyo Institute of Technology
Toronto, University of
Trier, University of
Trinity College Dublin
Tulane University
Turin, University of
-U-
Università Cattolica del Sacro Cuore
Université Libre de Bruxelles
University College Cork
University College Dublin
University College London
Uppsala University, Sweden
US Merchant Marine Academy
Utrecht University
-V-
Valencia, University of
Vassar College
Vermont, University of
Verona, University of
Victoria University, Australia
Vienna, University of
Vienna Univ. of Econ. & Business
Vienna University of Technology
Virginia, University of
Vrije Universiteit Brussel
VU University Amsterdam
-W-
Waterford Institute of Technology
Webster University Vienna
Weimar, University of
West Point Academy
Würzburg, University of
-Y-
Yale University
-Z-
Zurich, University of

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The End.

VITA

Full name: Christopher Jacob Reiss

Place and date of birth: West Long Branch, NJ on July 7, 1955

Parents' Names: Raymond Henry Reiss, Jr. (deceased)
Doris Mullen Reiss (deceased)

Educational Institutions:

School	Place	Degree	Date
Glen Ridge High School	Glen Ridge, NJ	Diploma	1973
The George Washington University	Washington, DC	B.A.	1977
New School for Social Research	New York, NY	M.A.	1979
Florida Institute of Technology	Melbourne, FL	Ph.D.	1982
Long Island University	Brookville, NY	M.B.A.	2005
University of Kent	Canterbury, UK	LL.M.	2007
University of Virginia	Charlottesville, VA	Ed.D.	2013
Drew University	Madison, NJ	D.Litt.	12/2016