TEACHING EXCELLENCE IN AMERICAN HIGHER EDUCATION: A HISTORY OF DISSONANCE BETWEEN THEORY AND PRACTICE

by

Robert A. Bernard
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Dedication

With appreciation for the generous leeway and support my wonderful wife Elizabeth has given me to complete this endeavor, without which it would not have been desirable or possible. Also, for the invaluable counsel of my good friend Ralph Johnson during this process. I also wish to recognize my father, Albert Ralph Bernard, Jr. – his short life posthumously inspires a desire to try.

Acknowledgements

If patience is indeed a virtue, then I have the most virtuous committee in the history of higher education (and I can now be considered quite knowledgeable in these matters). Thank you for the "gentle" nudging and inspiration provided by Dr. Lesley Smith, the guidance through the methodological labyrinth and overall support provided by Dr. L. Earle Reybold, and to Dr. John O'Connor for his depth and breadth of knowledge in this subject matter. I would also like to thank George Mason University for awarding the Dissertation Completion Grant, which greatly assisted in the completion of this work.

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Abstract

TEACHING EXCELLENCE IN AMERICAN HIGHER EDUCATION: A HISTORY OF DISSONANCE BETWEEN THEORY AND PRACTICE

Robert Bernard, Ph.D.

George Mason University, 2015

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This dissertation places the term "teaching excellence" within the historical context of higher education in America to study how conceptions of teaching excellence and teaching practices are formed and evolve over time. Utilizing genealogical and time sampling methodology as well as historical text analysis within the context of critical theory, this work traces how conceptions of teaching excellence originated in 12th century Europe, evolved at the beginning of the early modern period, and then later transferred to and can be identified in American higher education history. The research findings indicate that many core elements of higher education teaching practices in the 20th century have their origins in the 12th century, and that these elements do not substantially change with cultural, technological or ideological shifts in society. The dissonance between teaching theory and practice identified in the research has implications for how contemporary conceptions of excellent teaching practices are understood and encouraged, as well as how these conceptions are applied today.

Chapter One

My interest in this dissertation topic was inspired by two events that occurred in close succession while teaching in an interdisciplinary department that actively advocated contemporary pedagogical practices: competency-based orientation and assessment, student-centered learning, and a learning community classroom model, among others. The first event was a comment by a faculty member, and the second was an experience teaching the senior synthesis course for this department. It should be noted that the pedagogical terminology was in the department literature, and most of the students in the department were familiar with them, and the seniors in particular.

At a faculty retreat for the department, the faculty were together engaging in a general conversation about learning communities. One faculty member, in an offhand remark, emphatically stated "we do not really practice learning communities in our department." At first, I was a bit stunned, and I took the comment quite personally. However, the comment inspired me to research the meaning and practice of learning communities, and afterward I had to admit that his assessment was for the most part accurate. Examining the origins of learning communities, and their contemporary practice (especially at Evergreen State College), revealed that the typical class structure in our department was much closer to "traditional" than I had imagined. So, I took this as a challenge, and decided to make the senior synthesis course I was teaching that semester

as close to a “true” learning community as possible.

To implement this learning community I arrived on the first day of class with a one-page handout that only covered basic information about course objectives, which were to encapsulate their college experience, communicate knowledge and abilities to future employers or graduate schools, and produce a senior portfolio that could provide evidence that the students had met the objectives. How we went about this, I told them, was completely up to them. The challenge I offered them was how would they, as students in a student-centered, competency-based, learning community program, design a senior synthesis learning experience that would be most effective for their needs? What assignments would we construct together to help them prepare for portfolio production and job interviews? I assured them that given their ideas and what they agreed on I would help them fill in the blanks with texts, the wording of assignments and facilitate discussions that would yield a fruitful capstone experience.

This process, which I hoped would liberate students from the confines of a prescribed curriculum, engage the students in a course of their own construction, and unleash unbridled creativity, was met with unanimous and aggressive resistance. Although the semester proceeded fairly well, and the portfolio products students delivered were better than I usually received, the course evaluations were scathing. Students determined, almost unanimously, that I was unprepared, that the class (which they co-constructed) had little structure, that the assignments (which they co-designed) were not effective, and that they were denied a meaningful capstone class. Given a degree of freedom from the confines of the educational paradigm that all of them had

been placed in for sixteen (or more) years, almost every student found the experience decidedly unsatisfactory. The question was, why?

When reflecting upon the course – its challenges, opportunities, and the students' reactions – it seemed clear that the participants were fundamentally challenged by the structure because they had intransigent expectations for what comprised good teaching practices, and neither the course nor I met those expectations. Given their exposure to (although perhaps not practice of) uncommon teaching and learning paradigms in this particular department, I surmised that these expectations must be resilient; evidence of a structured educational paradigm that they adhered to either actively or passively.

These experiences led directly to an interest in the project of examining educational paradigms in higher education. Using Thomas Kuhn as a guide, I became intrigued with examining the prevailing paradigm that housed these students' expectations and uncovering its origins. I was also interested in history's answer to my current problem. If three-to-four years around contemporary pedagogical practices were not able to shift their expectations, what would?

My initial research in the history of higher education began with a general survey of its origins in Paris and Bologna in the 11th and 12th centuries, and from there time periods were selected at various stages of its evolution into the late 20th century where dramatic intellectual, social, cultural and political shifts might threaten existing paradigms. I began this research with the assumption, again influenced by a close reading of Kuhn, that contradictory theories inspired by historical events would at points in history reach a critical mass and overthrow prior conceptions, leading to the formation

and re-formation of teaching practices over time. My thought was that historical research could uncover the impetus for change in each circumstance, providing a "blueprint" that could be applied in contemporary circumstances. That is, if the historical conditions for change could be determined and were somewhat consistent, those conditions could be "packaged" and re-applied in a contemporary context in order to overcome student resistance.

However, rather than uncover a "paradigm shifting tool," these initial research efforts indicated that although there have been substantial changes to general higher education structure and student demographic, the changes to perceptions of good teaching practice (and consequently to actual teaching practice) were relatively mild, and in most cases non-existent. As I read, the image of two students sitting in university classrooms, one in the 13th century and one in the 21st century, each transported to the other's time and place kept coming to mind. In what should be a completely foreign environment, these students would instead feel disoriented by the social customs, language, technology and material but completely at home with the structure and practices within the classroom. That is, despite the displacement in culture and time, these students would be familiar enough with each other's environment to know where they were and what they were expected to do.

Given these initial findings, and this persistent image, the original exploration for a way to shift paradigms evolved into a historical exploration for pedagogical resilience. The focus became the possibility of a truly persistent status quo in teaching practice throughout the history of higher education, as well as the attempt to find historical

moments where the paradigm may have been more pliable. The objective of this dissertation is to situate perceptions of teaching excellence within a historical framework in order to reveal and examine the persistence of higher education pedagogical practice despite radical social, cultural, political, philosophical and/or technological shifts over its 800-year time span. The research uncovered pockets of change, but also substantial resistance to change, and these discoveries necessitated qualifying the initial proposition that perceptions of teaching excellence are both resilient and persistent. In fact, historical research generally indicated that even during times of vigorous sociocultural activity, or even during times when higher education itself is going through major structural and curricular changes, there is little to suggest that perceptions and practices of excellent teaching dramatically change.

This study provides a selective but "longitudinal" examination of teaching excellence in higher education. Given the data that emerged, I consider how perceptions and practices of teaching in higher education are influenced, while bringing to the forefront some select elements that have upset paradigms historically. The purpose of the research is to provide a historical lens to contemporary efforts oriented on changing higher education teaching practice, and to demonstrate a possible long-term resilience of teaching paradigms despite changing sociocultural conditions.

Background of the Problem

This section is typically reserved for an overview of prior research on the problem. However, the research performed thus far for this project has not revealed that the problem identified above has a background, nor is it identified as such. For instance,

Perry and Smart (1997) suggest that the research on college teaching does exist over the last 70-80 years, and it is "high quality, adhering to the rigors of sound experimental design and statistical analysis" (p. 3). However, they argument that this research has been summarily ignored, and has not lead to substantial changes. They suggest that "the responsibility for ignoring this wealth of scientific knowledge lies with the instructors themselves who feel secure in the knowledge that they know all there is to know about teaching, simply because they are actively engaged in the teaching process. Personal experience and shared myths about teaching are often deemed sufficient to equip oneself to teach effectively" (1997, p. 3). One reading of Perry and Smart suggests that even when the research was present, respectable and available over the last 70 or so years, the general conception of teaching in higher education has been that it is assumed by professors and administrators in higher education to be excellent, perhaps by the very fact of where it is situated.

As far as can be determined from the research, the act of examining the conception and practice of teaching excellence as a historical problem has not been attempted in a systematic, "longitudinal" manner. This study should fill a gap in the literature on higher education teaching and learning and be exceedingly useful by providing a vital perspective for the ongoing attempt to implement contemporary practices. The research and analysis place the current movements within a historical framework, demonstrating a resilient pedagogical culture in the higher education setting. Although there have been several texts devoted to examining different historical aspects of higher education, they have all focused on very specific time periods (for example:

Anderson, 2006; Bogue & Aper, 2000; Davies, 2009; Feingold & Navarro-Brotons, 2006; Geiger, 1986, 2000; Grafton & Jardine, 1982; Ridder-Symoens, 1992; Rüegg, 2004).

In order to provide a "barometer" for examining both the historical and contemporary understanding and practice of teaching excellence, a contemporary definition will be offered. Given the different terminology surrounding the use of "teaching excellence," the historical examination of this term will require a flexible application of terms within the confines of the methodology (described below).

General Statement of the Problem

The problem being examined in this research is the existence of a resilient model for excellence in higher education teaching, with a very long history, that operates outside of the influence of the dramatic intellectual and cultural shifts within the communities it was formed to serve (local, national, global, academic, etc.). A corresponding problem that also appears in this examination is the seemingly tenuous connection between teaching theory and practice. As noted in the discussion section, this problem was refined and gained clarity through the examination of the periods of intellectual and cultural paradigm shift selected and pursued in the historical research.

Given the 800-year history of higher education as a fairly cohesive institution, there seems no historical evolution of scholarship on the problem; rather, with the exception of the last few decades, there exist only "pockets" of reference to the existence of perceptions of teaching excellence or the briefest mention of what good teaching is. Therefore, there was a definitive gap in the historical literature on higher education

teaching to be explored. Some elements of this exploration were 1) the lack of cogent definitions of teaching excellence; 2) the absence of placing definitions of teaching excellence into practice; 3) the lack of historical data examining the effectiveness of teaching; 4) faculty and student resistance to change (of conceptions and practice of teaching excellence); and 5) the lack of paradigm shift in the conceptions or practice of teaching excellence despite intellectual and social paradigm shifts.

Research Questions

The purpose of this investigation was to perform a historical, textual analysis of teaching excellence while employing the following research questions:

1. Within the time periods chosen under investigation, how do conceptions or theories of teaching excellence in higher education change historically, and why?
2. If conceptions or theories change, how does teaching practice change in order to accommodate this shift, and why?

In order to apply these research questions, I narrowed the examination to select time periods where social, cultural, scientific, philosophical and/or political shifts *should* have necessitated changes in teaching practice, while using the anchor of the similar context of higher education as a temporal anchor so that the difficulties inherent in comparing time periods (given those same shifts) could be bracketed. If the research uncovered that teaching theory and/or practice did not change despite societal shifts, the intention was to attempt to discover if it was because theoretical conceptions were resistant to sociocultural influences (that teaching theory has essentially remained unchanged, and practice is in line with theory), or if teaching practice was resistant to changes in

theoretical conceptions (practice resists theory). In the discussion for this dissertation I address how historical and contemporary contexts can be compared in order to examine similarities and differences between the conceptions and practice of teaching excellence, and a consideration of whether historical stimuli for change exist and can be conveyed to a modern context.

Definition of Terms

For a genealogical approach, which is explained in the methodology section, the defining of terms is essential in order to develop the "lens" through which to perceive, analyze and criticize culture and power. In the research for this project, the foundational term is "teaching," and the meaning of the term is determined by the context of higher education. Connecting it to the modifier "excellence" further refines the term, and the genealogical effort will seek that term in specific historical contexts. Complicating this endeavor is the fact that the term "teaching excellence" is rarely addressed as such in the historical literature that examines higher education teaching. Although it could be the case that excellent teaching is a concept generally assumed to be present in any education identified as higher, this research will explore instances where expectations are defined, and ideally where records indicate if these expectations are placed in practice. Given the relative absence of the term in the historical literature examined thus far, the genealogy for the term will include other possible derivations found in the literature that suggest "teaching excellence" such as:

1. "Good teaching," and other modifiers that denote quality, as well as descriptions of low-quality teaching as excellent teaching can be determined in contrast.

2. "Appropriate teaching," or modifiers that denote standard practices.
3. "Teaching is," when describing practices in higher education contexts that are assumed to be excellent given the environment in which they reside.
4. Other possible terms that could be substituted for teaching, such as "instruction" and its modifiers, when referred to in a higher education context.

It is important to note the indelible connection between teaching and learning, for it is reasonable to assume that for teaching to occur, learning must occur as well. However, in this research on teaching excellence this connection to learning will be suspended. That is, the focus here is on the *perception of* teaching excellence (what it is determined to be, theoretically, given the available literature in the time periods being examined) and teaching practices, not necessarily on the *evidence for* teaching excellence (that data collection and analysis demonstrates high quality learning has occurred as a product of teaching practices determined to be excellent, or that it does not exist in environments where these practices are absent). Even so, establishing a modern baseline for "teaching excellence" will require simultaneously examining a term that is sometimes used interchangeably, "teaching effectiveness," which is considered to be data driven (establishing criteria for learning and measuring whether it occurs). However, for the purposes of this historical research, none of the terms will be reliant upon *evidence of* learning, but rather records concerning teaching practice and *perceptions* of teaching excellence with or without the collection of evidence determining that learning occurred.

It also should be noted that there is some confusion in the literature regarding the differences between "teaching excellence" and "teaching effectiveness." For instance,

Noel Entwistle (2009) states that effective university teaching depends on "establishing a relationship between the specific subject content and the ways in which students are helped to engage with the ideas, so as to develop their own understanding," while keeping in mind the diversity of pedagogy in higher education and the importance of a broad understanding within the discipline one is attempting to convey (p. 3). If Entwistle's understanding is placed next to Kenneth Eble's (1970) analysis of teaching effectiveness through an examination of teaching evaluations, the two conceptions seem fairly incompatible, while neither actually accounts for teaching effectiveness.

In *Recognition and Evaluation of Teaching*, Eble (1970) assembles the results of a "factor analysis of forty-one items most frequently mentioned in the literature" as the basis for a University of Washington questionnaire for students regarding teaching effectiveness (pp. 8-9). That questionnaire includes the following items in order for students to evaluate their instructors:

1. Interprets abstract ideas and theories clearly
2. Gets me interested in his subject
3. Has increased my skills in thinking
4. Has helped broaden my interests
5. Stresses important material
6. Makes good use of examples and illustrations
7. Has motivated me to do my best work
8. Inspires class confidence in his knowledge of his subject
9. Has given me new viewpoints or appreciations

10. Is clear and understandable in his explanations

Eble goes on to state that evaluations at other universities, such as University of California and University of Michigan, seek to evaluate similar attributes. In his introductory defense of student evaluations, he concludes they have two closely related purposes, to "render judgment on an individual teacher's effectiveness as part of passing on his competence as a faculty member; and (2) to afford the teacher the means of developing his own skill" (Eble, 1970, pp. 15–16). Even though a student could perceive value in these attributes, they are not evaluating learning in any quantifiable sense. Rather, it is the student's *perception* of their professor's effectiveness that Eble is analyzing. To be clear, neither Entwistle nor Eble are actually evaluating learning, and therefore at best they are examining good teaching practice, and perhaps only as an anecdotal accounting.

In order to define "teaching excellence," there is an initial exploration in the literature review focusing on contemporary understandings of the term, as well as a synopsis definition of the term given these understandings. This baseline definition will provide a way of comparing historical interpretations and understandings of what excellent teaching is thought to be in different time periods. Through the comparison, it can be revealed how the perception of excellent teaching has evolved, or remained static, despite dramatically different historical and cultural contexts. This is in line with Foucault's genealogical efforts, which are being used as a methodological model in this work.

Chapter Two

The literature review begins with an examination of contemporary perspectives, research and definitions of teaching excellence in order to provide a "baseline" definition for the methodology. This includes: 1) articles and documents that provide a definition of the term; 2) articles and documents that examine attributes of teaching excellence; and 3) articles that find difficulty with the concept of teaching excellence altogether. This is followed by the understanding of teaching offered by university teaching centers, and a summary of the findings of two reports provided by Great Britain's Higher Education Academy. Finally, given the literature presented, a synopsis definition is offered that will be utilized in the exercise of the research methodology.

The literature review continues with an examination of two theories that provide context and support for the methodology: paradigm shifts and historical analysis. In the literature review of paradigms shifts, an overview of the theory will be offered, followed by examples of how paradigm shifts have appeared in education literature. The purpose for examining the use of paradigm shifts is to support the approach of limiting the research on teaching excellence to specific time periods where societal shifts are widely recognized to have occurred. In the section on historical analysis, the purpose of the literature review is to examine practices that lend support to the methodology intended

for this dissertation, as well as establish the efficacy of historical examination in social science research.

Contemporary Perspectives on Teaching Excellence

Performing a historical analysis of teaching excellence is not always a direct endeavor, as it is often difficult to discern how teaching is described in a university context. However, understandings of teaching excellence can often be extracted from the available information. For instance, if a text describes what an ideal student does, an element of teaching excellence can be understood from what is implied; an excellent teacher would provide an environment for an ideal student to be ideal. Therefore, it is possible to extract temporally specific understandings from texts that describe elements such as expectations of students, complaints about students, expectations of faculty and policies. As the historical conceptions are temporally situated, and the purpose of this work is to perform a historical analysis of the term, it is both useful and appropriate to obtain a contemporary definition of teaching excellence to serve as a baseline and a method of comparison across time periods. The process of deriving baseline understandings and making historical cross-comparisons is supported by Foucault's genealogical methods, as well as historical analysis methodology, both of which will be addressed in subsequent sections.

Work on teaching excellence falls into three basic categories. There are authors that focus on the theoretical or practical constructs of what excellent teachers do (and/or the impossibility of identifying this) garnered from case studies and research; interviews with teachers recognized for their excellent teaching followed by an analysis of their

practices; and authors that address the institutionalization of teaching excellence recognition. Many articles mention these three categories in part, but then focus on one aspect of teaching excellence in particular.

To begin, a basic, contemporary definition of teaching excellence would seem a necessity for a genealogical historical analysis. There are several approaches to defining the term, although some qualify the definition by stating that a universal or singular understanding of teaching excellence is not possible, since the term is too fluid and open to interpretation. All of them, in one form or another, describe the attributes of excellent teachers, or what those designated as excellent teachers believe that excellent teachers do.

The Schreyer Institute for Teaching Excellence (2013) defines excellent teaching as: "an academic process by which students are motivated to learn in ways that make a sustained, substantial, and positive influence on how they think, act, and feel; a process that elevates students to a level where they learn deeply and remarkably." The categories of attributes include subject matter expertise, pedagogical expertise, excellence in communication, being student-centered, and systematic assessment.

Carpenter and Tate cite the Griffith Institute for Higher Education's 1994 definition as an entrée into the way they define good teaching. It states, "good teaching is teaching that helps students to learn. It promotes active engagement with the subject matter, motivation to learn, desire to understand, independence, confidence and sustained effort" (Carpenter & Tait, 2001, p. 5). It should be noted that the Griffith Institute for Higher Education no longer exists, and current documents concerning teaching excellence from Griffith University address only the qualifications and attributes for the

teaching excellence award.

The University of Wisconsin at Eau Claire (2010) defines effective teaching in their faculty handbook (under "Criteria for Periodic Review of Faculty Performance") as: "the success of the instructor in securing interest, effort, and progress on the part of students. The primary consideration is that students are stimulated to better standards of scholarship, to keener interest in learning, to greater professional understanding, and to more effective effort toward self-improvement" (p. 19). The Center for Excellence in Teaching and Learning at University of Wisconsin further simplifies this definition by offering the following, "effective teaching elicits student learning," coupled with an adaptability to change methodologies if student learning is not occurring (Reynolds, Avin, Bao, Eirman, & Freitag, 2010, p. 2). The evaluative criteria for this are included in a table with other interpretations located in Appendix A. This definition does raise an important question – if student learning is occurring, does this necessarily mean that effective teaching is occurring?

As mentioned above, the majority of the literature on teaching excellence either addresses what it is that excellent teachers do or describes their attributes. For instance, a case study involving Queensland University of Technology's faculty and policies (that also included some historical research), found that excellent teaching has two central features: it is student-centered, and it is deemed "innovative" (Carpenter & Tait, 2001). Another case study focusing on four exemplary faculty at Tel Aviv University deduced (from this sample) that excellent teachers are: 1) well-prepared and organized; 2) present the material clearly; 3) stimulate students' interest, engagement, and motivation in

studying the material through their enthusiasm and expressiveness; 4) have positive rapport with students, show high expectations of them, and encourage them; and 5) generally maintain a positive classroom environment (Hativa, Barak, & Simhi, 2001).

Some authors look at discipline specific notions of teaching and then generalize them for a broader audience. Kenneth Elzinga (2001), for instance, focuses specifically on economics instructors when determining that excellent teaching practices include: 1) self-assessment; 2) purposeful classroom structure; 3) lectures that are received as "good stories;" 4) the effective use of technology; 5) student-centered learning; and 4) relating to students generally. After collecting and analyzing over 300 characteristics of extraordinary teachers, Frederick Stephenson (2001) concludes that the six key characteristics (although not necessarily practices) excellent teachers have in common are: 1) they have great passion; 2) they know what and how to teach and how to improve; 3) they excel at creating exciting classroom environments; 4) they connect well with students; 5) they challenge students; and 6) they achieve extraordinary results.

In a review of the research on teaching beliefs and practices Kane, Sandretto and Heath (2002) find the existing analyses on teaching somewhat questionable, and conclude that the espoused theories of action of academics have generally not been distinguished from their theories-in-use (practices) in scholarship of teaching and learning research. They contend that research that examines only what university teachers *say* about their practice, and then in turn does not directly observe what it is that they *do*, is at risk of telling only a partial (and, to some degree deceptive) story. Kane et al. suggest that the lack of data on actual teaching practices in these studies yields several unsupported

claims about university academics' teaching, and raises concerns about data gathering and analysis methods that warrant close consideration when moving forward with analyzing and defining teaching excellence.

Given the research that Kane, et al. examine (primarily from the 1990s), they find that these unsupported claims take three basic forms. In the first form, the authors find that conclusions were drawn from teacher interviews or questionnaires about teaching practices with no reported evidence of observations of those teaching practices in the classroom. That is, these researchers relied solely on what the teachers reported about themselves, rather than what was evident in the classroom practice. Further, that the conclusions drawn were then offered as generally applicable, evidence-based descriptions or determinations of good teaching practices (or, as excellent teaching). Kane et al. did not discount the findings based on the evidentiary deficiency, but rather strongly suggested that the findings would gain validity through actual observations of teaching practices. It should also be noted that many of the authors of these studies noted their own lack of faculty observation and suggested that it would be a good area for future study (Kane et al., 2002, pp. 191–192).

The second type of research that Kane et al. believe provide unsubstantiated conclusions are those that identify the lack of direct claims about teaching practices as a shortcoming of their research. Thus, links made between evidence gathered through surveys and interviews could not make explicit or direct connections between concepts compiled through research of actual teaching practices (Kane et al., 2002, p. 193). This, it would seem, was an evidentiary deficiency determined by both Kane et al. and the

authors they were examining.

Finally, Kane et al. noted the concern in the literature with the research design itself in many studies, and how conclusions from problematic research designs can be further perpetuated within the literature. For instance, they determined that the research design of Dennis Fox's (1983) "Personal Theories of Teaching" has been criticized by many for determining findings not supported by the empirical research, and yet his study was cited by 25% of the studies examined in their analysis of the literature on teaching beliefs (Kane et al., 2002, p. 196). Other studies indicate research that has "failed to make explicit the epistemological and theoretical assumptions that have guided the focus of inquiry and gathering, analysis, and presentation of data" (Kane et al., 2002, p. 196).

Kane, et al. were also critical of many attempts to use surveys, questionnaires and forms of multiple choice responses in order to gather information about teacher's beliefs. They suggest that in several studies, such as the ones performed by Moses and Ramsden (1992) and Murray and MacDonald (1997), responses obtained could have been influenced, if not determined by the questions being asked. For instance, asking a professor if they practice good teaching will obtain an affirmative response, whether or not the response is accurate (Kane et al., 2002, pp. 197–198). In their conclusion, Kane, et al. argue that "what is clear is that further research is needed to make explicit the links between tertiary teachers' espoused theories and their teaching practice so that we can understand better how university academics learn to teach and, especially, so that novice teachers may benefit" (p. 204). For these authors, the existing literature does not provide a compelling connection between the conclusions of the research on teaching practices,

and in particular those deemed to be excellent teaching practices, and the *actual* practices of teachers.

Similarly, Roth, Lawless and Tobin (2000) examine what they consider to be a large gap between teaching theory and its practice on a daily basis. The authors conceptualize the gap by examining the difference between descriptions of practice and practice itself – a look at how theories of teaching translate into actual classroom practices and the inherent difficulties in this transition. In their view, given the disparity between teaching theory and practice, *descriptions* of classroom practice are inherently "out of synchrony" with *actual* practice. They conclude that teaching instruction must therefore be devoted not simply to the dissemination of pedagogy, but rather to the development of habits of mind that would allow teachers to practice these pedagogies in the dynamic and unstable environment of the classroom. In any case, as evidenced in this type of research, there seems to be some question in the contemporary literature of how teaching theory actually manifests itself in teaching practice.

It is also apparent that not all researchers portray research on excellent teaching as concrete, or even necessarily positive. Carpenter and Tait (2001), for instance, examine much of the contemporary literature on teaching excellence generated in Australia (Griffith Institute for Higher Education, 1994; Hoskin, 1993; Preston & Symes, 1992; Ramsden, 1993), as well as their own Queensland University of Technology *Teaching and Learning Plan* 1998-2000, in their critique of the term. In particular, they are troubled by the binary between the instrumentalist and progressive in education, and the generally accepted congruity between progressiveness and good teaching.

They specifically question four arguments for, or components of, teaching practices typically associated with teaching excellence. First, they question the connection between good teaching and student-centered learning (which is founded on the ideals of progressive education), suggesting that it is neither a historical inevitability nor theoretically unproblematic. Second, irrespective of discipline, good teachers in some way espouse the use of a "progressive" teaching philosophy, even though, in practice, teaching style appears to be determined primarily by subject-matter and may or may not be progressive. Third, since in practice the progressive model seems to suit some faculties and subject areas better than others (for instance, education, as opposed to science and law), this has significant implications for the teachers concerned. Finally, rather than promoting a "progressive" pedagogy, the use of technology in teaching actually appears to reinforce traditional teaching techniques. The authors conclude that singular understandings of excellent teaching, when applied across the academy irrespective of context, are often inappropriate, ineffective and unfair. Also, that universities need to think through their teaching policies and programs more thoroughly (Carpenter & Tait, 2001).

University teaching centers. Many (if not most) universities house a university teaching center (which has a variety of other designations, such as center for teaching excellence, center for teaching and learning, etc.) for faculty, staff and students to obtain assistance with their pedagogy and research. These teaching centers are also often tasked with identification and recognition of excellent teachers. However, only a few

universities, such as the University of Wisconsin, define what excellent teaching is in their literature.

The University of Bristol, in its published guidelines for promotion, is another university that attempts to provide a working definition of excellence.

> "The starting assumption is that all staff are performing at a satisfactory level. Excellence is therefore seen as performance that is qualitatively and decisively superior to satisfactory. However, it is recognised that excellence is not an absolute quality, measured by simple objective criteria, but rather it requires the judgement by academic peers of the evidence provided. In general, it is the *quality of the contribution* in the different areas of activity or roles undertaken, rather than the *quantity of activity*, that distinguishes excellence from satisfactory performance." (University of Bristol, n.d.)

Having set the baseline definition for excellence, the University of Bristol outlines those elements that are "decisively superior to satisfactory" in the teaching environment. This involves external and national recognition for teaching efforts, publication in the realm of teaching, dramatic improvements in teaching in the subject area, and of course, superior teaching in the classroom. The designation of external recognition and publication as requirements for recognition were unusual in the sample of university teaching excellence sites examined (University of Bristol, n.d.).

Dublin City University is included in the majority of universities that do *not* define teaching excellence, but rather describes, "the type of activities and qualities, which where appropriate, might contribute to Teaching Excellence and the support of

Teaching Excellence" (Dublin City University, n.d.). Another example is from University of Brighton, which focuses on the "attitudinal and behavioural qualities" determined through student survey, states that in "summary, teaching excellence is largely described as inspiring, accessible, imaginative and responsive. It is an academic process through which students are motivated to learn in positive and sustained ways as a result of the teacher's role and attributes" (University of Brighton, n.d.). They also note "qualities that engage students," such as "creativity, proactivity, problem solving, enthusiasm, passion, dedication, patience and going the extra mile" (University of Brighton, n.a.). However, how these characteristics are determined or evaluated is not clear.

Many universities that offer a teaching excellence award do not define what teaching excellence is, or do not highlight the criteria in an easily accessible way. Some examples of universities that award teaching excellence but do not define what it is they are awarding include University of North Carolina, Texas A&M University, Marquette, University of Illinois, George Mason University, Ohio State University, University of Maryland, Duquesne University, and Harvard University (which presents its teaching excellence awards solely based on student evaluations). This could be for several reasons. For instance, there may be an underlying assumption in higher education that teaching excellence is easily identified, and therefore it merely needs to be recognized without having specific criteria. It could also be that there is such a high level of fluidity around the term of teaching excellence that it becomes too difficult to quantify. Or perhaps defining teaching excellence before recognizing its actual practice in a university

setting is not enough of a concern to warrant its definition.

There are universities that do make the attempt to describe excellent teaching as well as award it, usually in an effort to either provide advice for teachers that are seeking pedagogical assistance, or to determine the qualities sought in those considered for a teaching excellence award. Nine such examples can be found in Appendix A. It should also be noted that British universities (and those from former British colonies) are more likely to explore and define excellence than American universities.

The Higher Education Academy. The Higher Education Academy is an organization in the United Kingdom funded by the four higher education funding bodies - the Higher Education Funding Council of England, Scottish Further and Higher Education Funding Council, Higher Education Funding Council of Wales, and Department of Employment and Learning - and is also the entity that recognizes excellent professors in the United Kingdom with the National Teaching Fellowship Award. Under the direction of the Higher Education Academy, a commissioned report on teaching excellence was initially performed in 2007 by the Open University and entitled "Excellence in teaching and learning: a review of the literature for the Higher Education Academy," widely known as the CHERI Report. It was later updated in 2013 with a report entitled "Considering teaching excellence in higher education: 2007-2013."

In the 2007 literature review, the authors were tasked with addressing three primary questions: "How is the term 'excellence' used in the context of teaching and the student learning experience?; What are the key conceptualisations of excellence?; and What are the implications of usage and conceptualisations for future policy in relation to

promoting or developing excellence?" (Little, et. al., 2007, p. 1). In pursuit of these questions, they performed a review of literature published since 1995 using various search criteria (using keywords such as excellence, teaching, effectiveness, university, etc.). They then narrowed down their examination from an initial finding of over 2,500 to approximately 450 sources, and then further narrowed their review to approximately 140 texts (primarily comprised of books, articles, and policy documents from the United Kingdom) by eliminating announcements of award winners and unrelated material.

In their executive summary (Little et al., 2007, pp. 1–4), the authors offered the following responses, applicable to the focus of this dissertation, to their three questions driving the literature review:

- Excellence is linked to teaching aspirations, teaching quality, and student learning - where process and form may take precedence over content.
- Debates about teaching excellence seem to confuse excellence with the idea of "good enough."
- Perspectives on teaching excellence are closely tied to the disciplines they serve.
- Excellence in student learning may not require excellence in teaching.
- External reviews conducted by the Higher Education Funding Council for England (HEFCE) have shifted their focus from examining excellence, high quality or effectiveness in teaching to the improvement in the quality of student learning. However, the HEFCE continues to pursue quality in teaching, and funds over seventy Centers for Excellence in Teaching and Learning (CETL).
- Although there is a significant body of literature concerning the recognition and

reward of excellent teaching, there is little research on students' perceptions, and what might constitute an excellent learning experience.

And they reached the following conclusions:

- There is an effort to provide a systematic and standardized method to determine the quality of teaching. This method tends to preface process and form over substance.
- There needs to be a national effort to clarify the meaning of "excellence." Determinations of this clarification need to be disseminated widely for review.
- It needs to be acknowledged that teaching and student learning are "distinct, although related phenomena."

In the follow-up report, *Considering Teaching Excellence in Higher Education, 2007-2013: A Literature Review since the CHERI Report of 2007* (Gunn & Fisk, 2013), a methodology similar to the 2007 Report was used, with the addition of searches for teaching excellence awards criteria. The 2013 literature determined that there were approximately 130 texts of significance produced since 2007. The report states that the updated literature review was necessitated by the prevailing complexity, and lack of clarity, in three different but related relationships: between teaching excellence and learning excellence; between the criteria for teacher excellence and the changing nature of academic roles; and between rewards for teaching and research (p. 6).

In the Executive Summary (Gunn & Fisk, 2013), the authors make the following assertions:

- There is ambiguity between what is considered satisfactory or good teaching, and

what is definitively excellent teaching;

- Notions of teaching excellence are unsophisticated, especially when considering the changing roles of faculty over an academic career;
- There is a lack of diversity in the conceptualization of teaching excellence; specifically between research- and teaching-oriented higher education institutions;
- There is a gap in the research literature between teaching excellence as practiced and educational theory concerning teaching excellence (p. 47).

Both of these reports offer a comprehensive examination of the literature regarding teaching excellence and the questions surrounding how it is defined, practiced, measured and rewarded.

Synopsis: Defining Teaching Excellence

Given the contemporary literature examined here, as well as documents procured from several university centers for teaching practice and/or excellence, a conclusion can be drawn that there is no common or standard definition that can be derived from these texts and the understandings they provide. For the moment, and for the purposes of historical research, the simple definition provided by the University of Wisconsin-Eau Claire provides a flexible conceptual framework that should work across disciplines, and represents a theme across the three definitions currently available. However, in line with the Higher Education Academy report (see the section below), I will amend this definition slightly to include a notion of quality. The working definition of teaching excellence for this dissertation is:

Excellent teaching elicits student learning beyond what is considered average or satisfactory.

Determining attributes (what excellent teachers do) for teaching excellence that are in agreement with every text examined thus far is also difficult. However, Appendix A organizes a collection of attributes from nine different universities that is representative of those found in the research thus far. There are also "pitfalls" that excellent teachers should avoid. In particular, to avoid binaries and concretizations. It also should be considered that understandings of teaching excellence may be discipline specific.

It is important to note that excellence is awarded because it is unusual, unique, and greater than the average. There are exceptional practitioners in every field, and excellence is recognized because it is not the average practice. In examining teaching excellence and situating the understanding of it historically, this research is highlighting what those that comment on teaching describe as best practices, but also attempting to differentiate best practices from standard practices. As Perry and Smart (1997, p. 3) note above, commentary and research on excellence does not necessarily affect common practice – in fact, it seems to have little affect on the average at all. Research has indicated thus far that for the majority of the history of higher education best practices in teaching were not an area of research. It is therefore reasonable to assume that common practices were considered to be best practices – something Perry and Smart's research also indicates in contemporary contexts.

Paradigm Shifts

As the foundational question of the dissertation relies on the assumption that conceptions of teaching *should* change during times of extreme social, political or cultural transition, the literature review continues with an examination of the concept of paradigm shifts. The concept of paradigm shift provides a context for understanding radical change, the possible conditions for such change to occur, as well as support for the type of historical analysis that will be attempted in this dissertation.

Paradigm shifts have been, if not generally accepted, then at least a generally discussed approach to understanding instrumental changes in the perception of knowledge since 1962 when Thomas Kuhn (1970) brought the concept to the intellectual dialog in *The Structure of Scientific Revolutions*. By taking a historical approach to understanding shifts in scientific knowledge, he established a way of understanding the processes through which the introduction of new knowledge forces a shift from one "paradigm" to something entirely different. These techniques and constructs, and the very terminology, have been widely applied across disciplines since Kuhn introduced them. The concept of paradigm shifts is now entrenched in the academic vernacular, and is generally used both as a way of identifying entrenched worldviews as well as a tool for uncovering when the way that we know and learn has fundamentally altered. The process itself becomes both a method of inquiry and a way of knowing the landscape under investigation. The focus in this section of the literature review will be on Kuhn's work, and on authors that address the veracity of paradigm shifts as an orientation in education.

Thomas Kuhn was fascinated by the unquestioned historical and contemporary belief (by scientists and non-scientists alike) in the certainty of science despite the historical evidence of its plasticity and fallibility. Kuhn determined that an explanation of shifts in perceptions and certitude must lie outside the realm of the actual science being done. As von Dietze (2001) notes, his description of paradigm shifts relies on the social element in knowledge; this provided an explanatory power that diverted his attention away from physics and toward a historical perspective (p. 2). When examining scientific shifts through (and throughout) history, it became readily apparent to Kuhn that in each case the scientific knowledge in opposition or contradiction to existing paradigms existed (often for long periods of time) and was compelling, and yet there remained resistance to change. Why, then, was there such a resistance to change?

Kuhn's (1970) conclusion was that a scientific paradigm's resilience was not based in science, but was instead social in nature, and therefore required specific human elements to overcome (p. 110). As Gary Gutting (1980) states, "the real significance of Kuhn's work is that the ultimate locus of science's rational authority is the scientific *community*. The objectivity of science's rational judgments is not simply a matter of following transcendent rules but depends essentially on the social origins and context of judgments" (p. 11). Throughout history scientific communities of scholars have trained in certain elements of science that they used to explain the natural world, and held tightly to specific worldviews. The paradigm, or "normal science," is the lens through which nature is interpreted and articulated at any given time - progress within the paradigm

during its "lifespan" has the appearance of being rapid because the questions asked are so limited (Kuhn, 1970).

The internal explanatory power (where the scientific community focuses on things it can explain, and tends to ignore or dispel things it cannot) of this lens yields a definitive tenacity; a communal disposition that requires a significant act to overcome (Kuhn, 1970, p. 11). As Behar-Horenstein (2000) notes, the fact that "paradigms or worldviews are comprised of epistemological and ontological beliefs" causes those beliefs to be tightly held (p. 8). The paradigmatic worldview becomes a "habit of mind," yielding "entrenched responses that ordinarily occur without conscious attention, and that even if noticed are hard to change" (Margolis, 1993, p. 7). Habits of mind in turn yield predictable patterns of intuition, so that ideas and intentions generated by those within the paradigm tend to be similar. In everyday life, a paradigm shift does not necessarily mean a change in habits of mind, as one can imagine that when an ordinary citizen found out that the earth revolved around the sun, his or her life did not change dramatically (Margolis, 1993, p. 11). However, Kuhn's discussion concerns habits generated through membership in a specific scientific community as well as the social elements tying members together – the habits are no less entrenched in science than they are for any individual's worldview, but the affect of a paradigm shift can be dramatic.

Kuhn (1970) defines a paradigm shift as "non-cumulative developmental episodes in which an older paradigm is replaced in whole or in part by an incompatible new one" (p. 92). Normal science contributes to the shift by unearthing contradictions that cannot be explained internally, and eventually these elements cause the paradigm as a whole to

be called into question (p. 96). The contradictions yield a crisis of incommensurability, which is the first of the three basic stages Kuhn identifies as occurring during the paradigm shift.

Given the intransigence of a scientific paradigm due to the unconscious yet closely held habits of mind (and the efficacy of the science itself), the existence of a strong and apparently contradictory alternative view must be present in order for the process to begin. At first, this alternative view is made possible by insecurities "generated by the persistent failure of the puzzles of normal science to come out as they should." As Kuhn (1970) describes it, a "failure of existing rules is the prelude to a search for new ones" (p. 68). The breakdown of the explanatory power of normal science creates a crisis, one that a new conception of science has the opportunity to quell (pp. 75-77).

As noted above, the intransigence of scientific worldviews means that scientists do not automatically reject a paradigm for its inability to solve puzzles - failure is an integral part of inquiry, and indicates the failure of the scientist rather than the system. Furthermore, in Kuhn's (1970) conception, a paradigm is never rejected without the availability of an alternative to replace it (p. 79). The response to the crisis is the second stage in Kuhn's description of the paradigm shift. In order for this response to be effective, there must be a strong group of scholars acting as agents of change to guide science through the transitional stage. A group of scientists band together in some form to ascertain that failures in one paradigm are indeed insurmountable, and that the new paradigm can provide avenues to answer those questions (that is, provide a path to

certainty that the old paradigm no longer has). The shift in science is not necessarily immediate, and can cause more difficulties than the unanswered questions of the older system. A shift also does not mean that the new paradigm necessarily has more explanatory power than the old, at least not immediately. For instance, it took many years before ship navigation via a heliocentric construction of the solar system was more efficient than the geocentric model. However, when enough evidence is presented, and a majority of scholars become convinced by that evidence, the transitional phase comes to an end and the shift occurs.

The third element is the completion of the shift to the alternative view – the scientific revolution in the end yields the adoption of the new paradigm. Put quite simply, “to be persuaded, someone must find it easier to believe the new idea than not to believe it” (Margolis, 1993, p. 30); although the transition is anything but simple. For Kuhn (1970), this process is far more radical than just the reinterpretation of existing data, but one where the "scientist who embraces a new paradigm is like the man wearing inverting lenses. Confronting the same constellation of objects as before and knowing that he does so, he nevertheless finds them transformed through and through in their details" (p. 122). A new paradigm is not a different interpretation of old perceptions – this fails to appreciate the imperviousness of paradigms, and the magnitude of a shift from one to another. It is literally a new vision that is made available through the scientific revolution. "Scientists then often speak of the 'scales falling from the eyes' or of the 'lightning flash' that 'inundates' a previously obscure puzzle, enabling its components to be seen in a new way that for the first time permits it solution" (Kuhn,

1970, p. 122). This, for Kuhn, is the social aspect of knowledge as it is manifested in science. The material within the scientist's purview does not radically change – the same objects are being observed as before. However, the scientist is seeing these objects with a new vision, a new worldview, using a newly developed habit of mind. The way of knowing for the scientist has completely altered through the paradigm shift. It is an epistemological and ontological revolution as well as a scientific one.

It should be noted that there is often also an "other" that inspires the shift, such as the introduction of a new technology. For instance, the data gathered from more modern telescopes was instrumental for providing evidence for Galileo's assertion of a heliocentric solar system (see Kuhn, 1959 for an exhaustive account). There might also be epistemological revolutions that make possible scientific ones, such as the re-discovery of Aristotle's texts in the 11th century which in many ways instigated the scientific revolutions that were to follow (Rubenstein, 2003). Paradigm shifts and their causes frequent human history; the difficulty lies in identifying them and ascertaining the impact they have. In a discipline such as science, Kuhn's methodology seems to maintain an element of clarity. There are at least recognizable historical moments where a crisis of incommensurability can be identified, and that crisis yields a shift from one scientific worldview to another (although the process may be lengthy). However, the practice of applying Kuhn's methodology in other subject areas, although a fairly ubiquitous occurrence, does not maintain the same level of clarity.

Paradigm shifts are an often-used methodology, or at least terminology, that has permeated just about every facet of education. For example, a general search on the term

“paradigm” in a database such as Educational Research Complete yields approximately 2,000 results covering a wide variety of topics. There seems to be a common conception in the literature that to understand the actors in an educational situation means knowing their paradigmatic stance – which suggests that these stances can be different, yet still coexist within the same basic structure. As Behar-Horenstein (2000) states, “understanding what a paradigm is and identifying what paradigmatic conception one ascribes to is crucial to comprehending the practical applications of various conceptions of curriculum for school practice” (p. 8). The following are examples from the literature that demonstrate how the term is used for both curriculum and research paradigms in education, and includes a discussion concerning the relevance of paradigm use in education in relation to Kuhn’s conception.

There are numerous examples of Kuhnian influence on education research, and these are important to establish a history of this type of research in education. However, many of these sources are from primary and secondary education research, as the concept is not as prevalent in higher education, where the scholarship of teaching and learning is far less in evidence.

Curriculum. In the forward to Paradigm debates in curriculum and supervision, Starrat (2000) situates what is to follow squarely within a conception of paradigms. Starrat depicts the human need for “ontological security,” a term coined by Anthony Giddens in The Constitution of Society. That is, the very real need that human beings experience “to feel secure in their social relationships," and for a social life that is "reasonably ordered and predictable." The need for ontological security breeds a

tendency to "produce conditions and structures of their social context. Thus, innovations, either in thought or in practice, will be spontaneously resisted if they take them too far beyond the familiar and routine" (Starrat, 2000, p. xi). The need for ontological security and the resistance to change that it breeds fit well with the resistance depicted by Kuhn.

An example of this resistance can be found in the modernist/postmodernist debate described by Behar-Horenstein (2000). Behar-Horenstein identifies two distinct paradigms in curriculum research, the modernist and the postmodernist. At the heart of the modernist view are contemporary social-cultural practices and memory: public perceptions, parental memories (of what education was and should be again), societal expectations for a productive adult citizenry, standardized testing, and teacher accountability for student outcomes. The modernist or “traditionalist” view “is grounded in the belief that curriculum content should be characterized by the inclusion of classical subjects and essential skills" (2000, p. 8). Behar-Hornstein subdivides the modernist view into several categories depending upon the methodological emphasis. In *perennialism* the focus is on the teacher's role in developing student capacity for rational thinking and the development of "permanent knowledge." For *essentialism*, the focus is on learning in the context of content-based principles and facts. The essentialist perspective dictates that students never question authority (instructional or textual), which means that students’ individual interests are irrelevant for curriculum development. The *progressivists* seek to integrate students' interests through an interdisciplinary curriculum that investigates national and international issues. *Reconstructivists*, on the other hand, encourage students in a more practical fashion to use

their knowledge for the "betterment of society and humankind." Finally, the *modernists* use a "technocratic approach to curriculum making" because "curriculum was presumed to be comprised of identifiable components and procedures that are knowable and predetermined" (2000, pp. 8–10).

At the heart of the postmodernist view is the critique of the modernist view. According to the postmodernists, the modernists/traditionalists have failed to ensure open access to education, are classist, are enmeshed in and blinded by current policy and practices, actively suppress human/student needs, and disregard the demands of multi-culturalism and pluralism (Behar-Horenstein, 2000, pp. 6–7). The postmodernists argue for an unplanned, emergent and evolving curriculum (for example, the 2007 work of on the constructivist/problem-based learning approach, and Diaz-Lefebvre's 2006 examination of the learning-styles approach) as opposed to the structured, technocratic and often bureaucratic, policy-driven curriculum of the modernists. For the postmodernists, the modernists suffer from and are limited by a focus on rendering quantifiable outcomes, which drives the curriculum. At its worst, the modernist/traditionalist curriculum serves as an instrument to coerce, control, and oppress students' thinking (Behar-Horenstein, 2000, pp. 17–18). However, it should be noted in all three time periods studied, there was always present a dialog similar to the modernist-postmodernist debate. For each social/cultural paradigm shifting time period, there was always a faction that held on to what was considered old after the paradigm shift, and another that argued for what was current or future-looking. How this dialog manifested in the curriculum, and in the classroom, was different for each period.

In Behar-Horenstein's closing remarks, she reveals a disconnection between the paradigms in curriculum, or at least the way that she (and others) perceives them, and Kuhn's conceptions. She states, “rather than summarily dismiss the modern view, I suggest that professors and practitioners explore how the modern view of curriculum can be refined. Thoughtful analysis of the postmodern critique may be helpful in improving curriculum delivery, promoting successful student achievement, and providing insight into alternative methods of implementing the curriculum” (2000, pp. 28–29). She is situated in the terminology of paradigm, and insinuating the same conception of paradigm that Kuhn is, but these two conceptions of paradigm are not the same. For Kuhn, two paradigms only co-exist contemporarily during a period of transition, and even so the two paradigms generate a crisis of incommensurability. As Starrat notes, “if schools are functioning according to and, in fact, teaching a rationality grounded in the assumptions and beliefs of modernity when society is already facing the conditions of postmodernity, then schools may indeed be dysfunctional” (2000, p. x). If this is the state of affairs, it places the nation at risk, as the educational system does not match the needs of the community. For Starrat, there seems to be a paradigm crisis, and one where the correct paradigm must be in place for needs to be met. However, in Behar-Horenstein's description of curriculum paradigms, there is clearly no crisis of incommensurability, as she is suggesting the efficacy of a synthesis. There is no definitive shift, but rather two methodologies co-existing under a larger, unspecified paradigm umbrella, neither capable of negating the other.

In Short's (2000) *Shifting Paradigms: Implications for Curriculum Research and Practice*, he examines another aspect of curriculum; the apparent disconnect between curriculum theory and curriculum practice/decision making. Historically, the paradigm for curriculum was one where theory was generated by educational researchers, and then that theory was put into practice by teachers in the field. For Short, the linear path in the "knowledge-production-and-utilization" paradigm from researcher to practitioner is no longer workable, and in many respects has shifted to a new conceptualization of curriculum practice (pp. 41-43).

Short argues that the traditional, modernist paradigms no longer accurately depict the actual state-of-affairs in education, nor function well within it, and that "Curriculum practitioners know that they do not need to rely on the recommendations of outside authorities to make their curriculum decisions and that they do not need to turn to codified curriculum research which they merely apply to their own situation" (2000, p. 43). Rather, practitioners have realized that it is their job to make choices amongst many options, and to make the decision that best fits their particular circumstances. In the new curriculum paradigm, research informs, rather than determines, actually curriculum practice. As decisions about practice in this paradigm are circumstantial, practical, and made in the field, curriculum theorists have difficulty setting guidelines for practice. Short argues that the simple guidelines of the past may need to make way for more complex guidelines that cover a broader scope of possibilities (p. 45).

There is an incommensurability of sorts between the old and new paradigm. A paradigm that calls for prescribed enactment of curriculum as determined by theorists

seems incommensurable with a paradigm that calls for choices concerning curriculum and practice to be made in the field. However, much as in the paradigms discussed by Behar-Horenstein above, the two actually *do* co-exist. The crisis then is not one of incommensurability, but of making a choice between methods of curriculum practice given the available options and the social-cultural context. A shift might eventually occur on the grounds of effectiveness (and this research has not yet been done), but as Kuhn notes, there are social-cultural contexts at play that might make effectiveness a very particular determination.

Education research. Educational research, which Short is referring to above, has the same difficulties fitting into a Kuhnian process as curriculum does. Popkewitz (1984) notes that social inquiry, which includes educational research, emerges from a "communal context in which there are norms, beliefs and patterns of social conduct" (p. vii). These communities amount to an “invisible college," an informal group of influential scholars in any field that communicate with each other, often indirectly (for instance, personal communication rather than through the literature and other official settings). These social circles both “resist as well as stimulate new developments” (1984, p. 3). Popkewitz mimics Kuhn's analysis of the obstructions to change when he states that "the very search for scientific reasoning reflects commitments which go beyond the coherence of findings or methods." These commitments beyond the science itself, coupled by the fact that "underlying the practice of social research are assumptions about society,” make the status quo tenacious (1984, p. 3).

Popkewitz (1984) identifies three competing paradigms in social science research. Although the work is a bit dated, the same basic paradigms can still be identified today. He identifies the most dominant paradigm in Western social science as "empirical-analytic." The worldview of this paradigm asserts that “theory is to be universal, not bound to a specific context or to actual circumstances in which generalizations are formulated” (p. 36). Incorporation into the empirical-analytic paradigm is a "commitment to a disinterested science” independent of individual goals or values (p. 37). This paradigm holds that "the social world exists as a system of variables,” and that these variables are distinct and studied independently of one another (p. 37). There is also a belief in “formalized knowledge," with clear and precise variables that are determined prior to research. The belief in formalized knowledge also lends itself to a reliance on mathematics in the construction of theory (p. 38).

The second paradigm, which Popkewitz identifies as the symbolic sciences, define “social life as created and sustained through symbolic interactions and patterns of conduct” (1984, p. 40). There is a belief in this paradigm that the rules that sustain and govern people are made through their interactions. Rules, which are invariant in the empirical-analytic paradigm, are generated in the “field of action, intent and communication” in the symbolic (p. 40). Theories generated by this paradigm are still considered to be neutral (detached from specific social situations), much like empirical-analytic (p. 43).

In the last paradigm, critical science, Popkewitz (1984) argues that the goal is to “demystify the patterns of knowledge and social conditions that restrict our practical

activities" (p. 44). There are two major movements within the critical science paradigm. The residual movement incorporates past culture into its critique for considering "alternatives to the dominant culture." The emergent movement "offers arguments that are in opposition to the dominant culture and institutions" (p. 45).

In the three paradigmatic stances above, the "problem of change becomes tied to the manner in which the problem of schooling is articulated: each paradigm locates the issue of schooling in different patterns of social life" (Popkewitz, 1984, p. 53). This assertion concerning paradigms suggests that Popkewitz disagrees with Kuhn's notion of paradigm shifts. For Popkewitz, conflict is always present, as are different conceptual lenses – these are imperative in science as well as education; the cross-fertilization of ideas are "important for the development of imagination and prevention of stagnation" (1984, pp. 5–6). However, despite the presence of different conceptual lenses he also finds that there are commonalities among the paradigms, and these provide the foundation for much of educational research (1984, pp. 19–20). For instance, he notes that educational research paradigms are modeled after the physical sciences, and aspire to be a deductive system of propositions (that is, provide predictions in much the same way the physical sciences do). Educational research paradigms strive for objectivity, and make full use of mathematical expressions. If this is the case, even though there are differing "conceptions," are they not all within the parameters of the same paradigm? As suggested above, the different paradigms discussed here may be part of a larger "umbrella paradigm" and hold the same fundamental characteristics.

Given the fundamental similarities, it is not surprising that Popkewitz (1984) finds that the focus of education research, despite the evident paradigmatic choices, tends to be "to find more efficient ways of obtaining correct performances from children. To test these performances, criterion-referenced measures are constructed" (p. 22). Therefore, curriculum is no longer an ethical task, it is rather a "technical" one (p. 24). Although a way to force his perspective into Kuhn's model might be to state that symbolic sciences answer the abnormalities found in the empirical-analytic paradigm (1984, p. 90), it is still the case that these paradigms can and do co-exist within the same area of research.

Synopsis. Although paradigms are thought to be prevalent, as are the worldviews or habits of mind that accompany them, incommensurability is not the factor in education that it is in science – nor is it as readily apparent. Rather, different paradigms do seem to co-exist quite readily within the same areas of education, despite their incommensurability with each other and paradigm shifts in society. As noted above, multiple paradigms are identified in curriculum and research, and even though they may identify often insurmountable difficulties in other paradigms in the same area, these difficulties do not seem to equate to incommensurability.

However, the application of Kuhn's concept as a way of identifying appropriate time frames for investigating changes in conceptions of excellent teaching can still be a productive undertaking. As Margolis (1993) notes, "the history of an episode can show us there was something strikingly difficult (or not so) about the emergence or contagion of an idea. But the surface criteria do not tell us what *made* a discovery revolutionary rather than normal. Taking note of these criteria only sets the stage for the main inquiry,

which concerns characterizing and teasing out the consequences of the habits of mind . . . to account for cognitive difficulties" (p. 28). The historical approach that Kuhn undertakes is still an effective instrument for "teasing out the consequences" of both the emergence and existence of a differing worldview. It might also be the case that the existence of multiple paradigms can identify areas of education, such as curriculum and research, that are still in a transitional period. As such, it may be that in the future, given the right set of circumstances, a complete shift could occur. However, the research in this dissertation suggests that the transitional period is a state that never quite comes to completion.

A greater difficulty for applying paradigm shift to the investigation in this study could be that Kuhn's foundational orientation on the social is antithetical to the project of education generally. The purpose of education, at least ideally, is to instill the critical mindset into rational thinkers so they can investigate knowledge claims, reasons and justifications. Kuhn's depiction of entrenched worldviews and paradigms challenges this notion of education, since for Kuhn it is in the nature of a paradigm, educational or otherwise, to be "bound in the first instance and cannot be critically evaluated outside the paradigm" (von Dietze, 2001, p. 115). It is in the nature of a worldview, any worldview, to be self-limiting, and in a sense uncritical. Although it seems illogical, the first move for an investigation of education using Kuhn's concept is to declare an environment whose core mission is to instill the critical mindset as inherently uncritical. Of course for Kuhn, this is the nature of paradigm across all disciplines, and would be just as evident in education as elsewhere.

As Margolis keenly observes, any discovery, however seemingly mundane, upsets some expectation developed through our habits of mind and informs us in some way about knowledge. However, moments of Kuhnian incommensurability are much more telling and radical since they:

> "give us cases that are not only of wide general interest, but that yield special insight into the way science works . . . and more broadly yet, into the way that persuasion and belief formation work in general. Features that are characteristic of every instance of persuasion, belief, and judgment can here be seen in the large, so that details that cannot be clearly discerned ordinarily may now be plainly on view." (Margolis, 1993, p. 27)

Kuhn's work is revealing for science because he is able to locate, portray and learn from those instances that provide the most possible clarity about how knowledge changes; this approach could also be effective for examining education.

This study explores how the conditions in higher education are effected during times of cultural, scientific, social, political and philosophical paradigms shifts, which should in turn instill a recognition that modes of teaching are incommensurable with other changes in knowledge and understanding. It is also revealing when, given the condition of incommensurability, no shift actually occurs; this would indicate a resilience seemingly impervious to obvious contradictions. This occurs in two distinct ways. The first is when theories concerning excellent teaching do not change despite the incommensurability with social, philosophical and political shifts. The second is when teaching theory does shift, but teaching practice is not adjusted despite the

incommensurability. These conditions have been explored in this dissertation, guided by the research questions and the application of the methodology.

Historical Analysis

Historical analysis is, quite literally, an analysis of history. As Marshall and Rossman (2006) note in *Designing Qualitative Research*, it serves the particular purpose in qualitative methodologies to establish a "baseline or background prior to participant observation or interviewing" (p. 196). This baseline can be obtained through the examination of either primary or secondary sources, and is used for pursuing "knowledge of unexamined areas and reexamining questions for which answers are not as definite as desired," while enhancing the "trustworthiness and credibility of a study." They also state that the use of historical research traditions in qualitative research is particularly useful because they demand procedures "to verify the accuracy of statements about the past, to establish relationships, and to determine the direction of cause-and-effect relationships" (p. 196).

Qualitative historical analysis, on Thies' (2002) account, applies qualitative methodologies to primary and secondary historical documents in order to develop and test theories that address the "presence or absence of qualities or attributes in some phenomenon of interest" (p. 352). Thies offers a "pragmatic set of guidelines" for qualitative researchers in political science that minimizes the "problems that persistently face qualitative historical analysis, namely investigator bias and unwarranted selectivity in the use of source materials" (p. 352). The first step after determining the research

question is the selection of source materials that avoid this bias and selectivity. For primary sources, once pertinent sources are determined, it is important to:

- Avoid documents where origin and authenticity cannot be adequately determined;
- Make sure the documents are consistent with what is known about the subjects involved;
- Choose a variety of documents that address the event in question (see below on triangulation);
- Consult with a professional historian who has experience with primary sources. (pp. 357-359)

For secondary sources, Thies recommends minimizing bias and selectivity by:

- Using multiple historical accounts;
- Be aware of the historian's tone, and the author's own awareness of bias;
- Be aware of socio-cultural context of the author;
- Start with the most recent accounts and work backwards;
- Immerse yourself in the literature, including those that offer contradictory perspectives. (pp. 359-364)

Simonton (2003), writing from the discipline of psychology, offers a similar approach to data collection for qualitative historical analysis. For work in psychology, the analysis of data involves two common methods. The first is the comparative method, which compares two or more individuals or events to reveal "common components or attributes" (p. 626). The second method is more particular to psychobiographers, and involves the author "interpreting historical data as if it came from an actual session with a

client" (p. 626). He also notes some distinct advantages and disadvantages to qualitative historical analysis. Advantages include superior external validity (as historical research generally is incapable of contaminating the evidence), it provides a means to establish the generality of results obtained from other research methods, that the historical record contains information of practical importance readily applicable to the contemporary world, and it allows (through the great diversity of the data available) the determination of "cross-cultural and even transhistorical universals" (p. 630). Disadvantages of historical data are that it can be considered "weak according to the criterion of internal validity," the possibility of unreliable data, and the prospect of an analysis that has limited applicability (p. 628).

Schutt (2009) suggests that comparative historical research in the social sciences can be used effectively as a method of comparing "nations or other units" in order to identify specific features, as well as identify "general historical patterns" (p. 438). This type of research focuses on a sequence of events, rather than a single historical event, and helps to identify "causal processes at work" that may have had some influence on the present (p. 438). Schutt identifies four stages for a systematic qualitative comparative study:

1. Specify a theoretical framework and identify key concepts or events that should be examined;
2. Select cases…that vary in terms of the key concepts or events;
3. Identify similarities and differences between the cases (in regard to) the outcome being explained;

4. Propose a causal explanation for the historical outcome and check it against the features of each case. (p. 438)

In "Analyzing Text and Talk," Peräkylä and Ruusuvuori (2005) discuss Foucault's approach of historical discourse analysis (HDA), which "focuses on tracing the interrelatedness of knowledge and power in studying historical process through which certain human practices and ways of thinking have emerged" (p. 531). They go on to suggest that this method is readily present in contemporary studies of government, although since Foucault did not provide a definitive set of methods, the approaches to HDA vary widely. However, a common theme in HDA is the examination of "how a set of 'statements' comes to constitute objects and subjects. The constitution of objects and subjects is explored in historical context – or, in Foucault's terms, through archeology and genealogy" (p. 531).

There are many examples of historical analyses of higher education, but the majority of these texts are written by and for other social science disciplines (sociology, policy research, and psychology in particular). Examples of studies focused on the higher education realm include Edirisooriya's (2003) case study concerning the University of Delaware, where the historical relationship between the state and the university is examined, and general determinations are then made concerning the state-university relationship. Johnson's (1988) analysis of the importance of rhetoric for developing both the ability to write clearly as well as a sense of taste or culture in 19th century Canadian universities. Bebbington's (2011) segmentation of Christian higher education in Europe into seven eras from the 12th to the 21st centuries, examining how these institutions

address the increasing secularization and pluralization of knowledge. There is also Harper, Patten and Wooden's (2009) use of critical race theory to investigate policy efforts to increase access for African-Americans in higher education. When examining policies extending from the emergence of land-grant universities and Historically Black Colleges and Universities (and their forced desegregation) to the late 20th century, they find that racial issues have been present at every point in this time frame and that access and equity have shown both improvement and setbacks.

A case study by Bergh and Soudien (2006) uses (non-Foucaultian) genealogy to examine how South African education is problematically embedded with Western conceptions. As an extension of prior research on the effect of South African democratization on higher education, they look at comparative education curriculum from the 1940s through the late 20th century and find that the post-democratization restructuring of higher education brought about new and vibrant discourses across different epistemic traditions.

Although these examples of historical analysis do provide some background to the types of research that have been performed in the past, none provide a model for Foucault's genealogical methodology in practice. A few examples of genealogical studies that are more applicable to this dissertation are included in the Methodology section below.

Chapter Three

The methodology section of this dissertation begins with a focus on providing a context for the methodology through an exploration of objectives and practices in postmodernism and critical theory, and then matching those to the objectives in the dissertation. It continues with an explanation of Foucault's construction and use of genealogical methodology, how it will be applied in the dissertation, as well as a two examples of genealogies that have been executed in a higher education context. The section ends with an explanation of factors that will influence the quality of the research and analysis, followed by an overview of how the data collection and analysis will work for a genealogical approach to the dissertation.

Before approaching the question of the appropriate methodology for examining historical perceptions and practices of what is understood as excellent teaching, it is important to begin by noting two things. First is the "recognition" of the philosophy that supports the pedagogy in higher education. The prevailing philosophy during the 13th century foundation of what we now call higher education was metaphysics, inspired by both the ideological ubiquitousness of western Christian theology as well as the re-emergence and spread of ancient Greek texts. Initially, the works of Aristotle were the foundation for a new theological and epistemological movement, attempting to find logical "proofs" for biblical text as well as reconcile the realms of faith and reason

(Ridder-Symoens, 1996; Rubenstein, 2003). The approach that truth was singular (it either was truth, or it was not truth) worked its way into pedagogy, as truth was transmitted by those trained and qualified to relay it. This paradigm was enforced by governing boards, administration, and even students who would force the firing of faculty deviating from this paradigm, sometimes literally chasing them out of town (Grafton & Jardine, 1986; Grendler, 2002, 2006). The metaphysical bent slowly, through the renaissance and enlightenment, morphed into a positivistic philosophical influence, but the same pedagogical paradigm remained. There is not an extreme departure from the singular truth modality, whether that truth is scientific or theological, and well into the 19th century the essential classroom elements were held over from their origins in the Middle Ages for the vast majority of colleges and universities.

The second element that needs to be considered is that a historical investigation will, by necessity, be primarily textual in nature. Tuchman (1998) states that historical research necessarily has two elements – a point of view or interpretive framework that "contains some notion of the meaning of history," and a methodology that "captures" the "object" of study (p. 225-226). Given these elements, which might be at odds, a social scientist performing historical research must grasp that "(a) history is more than the passage of events whose sequence may be memorized and (b) that the past has continuing relevance for the present" (p. 240). However, Peräkylä (2005) asserts that qualitative researchers who use written texts actually do not follow any "predefined protocol for executing their analysis," and it is through the reading and rereading of texts that themes and meanings emerge (p. 870).

Rationale for the Methodological Choice

Given the philosophical underpinnings of higher education instruction that I am investigating (metaphysics, modernism, positivism), primarily through historical research, it is imperative to choose the appropriate approach to investigating the research question given the historical context. For this type of research, which involves a critique of enmeshed and socially constructed power structures, the philosophical underpinnings for this research should have its roots in the postmodern.

The difficulty when pursuing history through a foundation in postmodernism is that historians are, for the most part, disposed to be modernist. However, for a qualitative researcher the postmodern disposition can inform approaches to history by challenging the types of questions that are being asked and the methods that are being used (deMarrais & Lapan, 2004, p. 41). Postmodernism orients historical research on discovery and experimentation, and forces historians to "consider writing history from a variety of different viewpoints or perspectives; and to continue the exploration of historical topics that have as of yet been considered unavailable to historians because of the absence of traditional historical sources" (deMarrais & Lapan, 2004, p. 41).

With these elements involved, critical theory is best suited for examining an entrenched ideology of practice (Benton & Craib, 2001), such as the one investigated in this study. The foundational endeavor of critical theory is critique rather than simply description or explanation (Baert, 2005, p. 106). The critical theorists that were part of the Frankfurt School were opposed to the positivist conception of social research and its emphasis on accurate prediction and control, although they appreciated the movement as

it enabled the departure from the metaphysical orientation of the Middle Ages (Baert, 2005, p. 108). Inherent in their critique of the positivists is the idea that embedded in any conceptual framework is messages of truth, power and justice. The endeavor of critical theory is to expose these messages in order to critique and eventually change society (Patton, 2002, p. 130).

Kincheloe and Mclaren (2005) describe a criticalist as one who recognizes "that all thought is fundamentally mediated by power relations that are socially and historically constituted" and attempts to use research as a form of "social and cultural criticism" (p. 304). In the postmodern tradition, the criticalist sees no fact, assumption, concept-object relation, or language as outside of a social, cultural and ideological construction. The authors suggest that critical theorists see oppression effectively reproduced when the victims "accept their social status as natural, necessary, or inevitable" (much like Karl Marx's critique, which is influential). Finally, they describe critical theorists as believing that mainstream research practices perpetuate ideologies, and therefore ideas of gender, race and class (p. 304). As such, critical theorists are self-conscious in their approach, attempting realization of their own ideological context and "normative reference claims" (p. 305).

The focus of research for the critical theorists is not simply to provide a mirror (as Howe describes above), but rather to have that mirror be the instrument of change (Patton, 2002, p. 131). The end goal is not merely to increase knowledge, but to "emancipate" the subjects involved in the dialog. It is in opposition to oppressive ideologies that "critical research attempts to expose the forces that prevent individuals

and groups from shaping the decisions that crucially affect their lives" (Kincheloe & McLaren, 2005, p. 305). The critical theorists, given the project of both revealing and emancipating, must directly confront the obvious in a way that makes the natural appear unnatural through the critique of the interests of the parties involved within particular institutional arrangements (Kincheloe & McLaren, 2005, p. 321).

The postmodernist, critical theorist approach is applicable to a historical examination of higher education teaching paradigms on several fronts. The first is its potential effectiveness for historical research, and specifically the kind of historical research I am oriented on in this endeavor. An understanding of the social and cultural contexts that situate higher education within a historical situation is imperative for this project. Specifically, the notion being pursued in this study that higher education teaching paradigms are, in essence, ahistorical; they exist relatively undisturbed by events and philosophical shifts. The postmodern disposition filtered through critical theory allows an exposition of this dynamic (if it exists) over an extended time frame.

The critical theorist approach is also appropriate given its determination to expose ideologies and subjective interests. The power dynamic within the classroom, the teacher-student relationship, is entrenched in an ideological perspective that creates, delineates and determines the appropriate methods for transferring knowledge. A critique of teaching paradigms will need to directly confront this ideology. The educational ideology that supports the paradigm is, for the most part, shared by all parties involved – this in spite of general, temporal epistemological developments.

Last, the postmodern critical theorist approach has as its goal more than the exposition of historical artifacts, but also the orientation of that exposition on the objective of change. It is the intent of this project to not only reveal an understanding of teaching excellence in its historical context(s), but also highlight those places and times where this understanding has been more vulnerable. Although the research suggests that this understanding is generally resilient, there have been conditions where "anomalies" have emerged. The research also suggests that although these anomalies seem to be isolated, the environment from which they emerged provides both an understanding of the intransigence of teaching practices as well as insights into elements that might instigate change.

Critical Theory

Choosing the appropriate method is paramount to the success of any qualitative research study. For the project of historical research, for which typical qualitative methods such as interviewing and observation are not available, the choice of method and the design of the study are especially challenging. The place to start is "to get clear about purpose" (Patton, 2002, p. 215), and with a compelling, focused and engaging research question which asserts what it is I want to know (Janesick, 1998) – the intention of this study is to situate this purpose within the mandate of critical theory.

Critical theory, as Rogers, Malancharuvil-Berkes, Mosley, Hui and O'Garro (2005) note, "a set of theories that attempt to locate and confront issues of power, privilege, and hegemony," although it is "not a unified set of perspectives. Rather, it includes critical race theory, post-structuralism, post-modernism, neo-colonial studies,

queer theory, and so on" (p. 368). Critical theory is concerned with issues of power and justice, and how conceptions that inform and engage issues of power and justice reproduce themselves in specific facets of society that are under investigation by the researcher. Rogers, et al. assert that although there are many different conceptions of critical research, they do share some assumptions. For instance, that "thought is mediated by historically constituted power relations," that "facts are never neutral and are always embedded in contexts," and that "one of the most powerful forms of oppression is internalized hegemony" (p. 368). Critical theorists are committed to discovering the specifics of these elements, revealing them, and eventually changing them.

The focus of this dissertation is on moments in history where definitive social and cultural shifts in society *should* instigate pedagogical change in higher education, which may include content, curriculum, systematic change, or the focus of this study, changes in perceptions and practice of excellent teaching. The study requires extensive examination of primary and secondary textual sources (for a good synopsis of utilizing primary and secondary sources in social science research, see Tuchman, 1998, pp. 249–256). If the focus of the work was also its purpose, then Patton (2002) would describe this as "basic research," or knowledge for the sake of knowledge oriented on scholarly publications. However, the intention of this historical research is to locate and reveal pedagogical shifts in higher education in order to "contribute knowledge that will help people to understand the nature of a problem in order to intervene, thereby allowing human beings to more effectively control their environment" (p. 217). This dissertation is intended to provide insights that might be *applied* in order to institute contemporary pedagogical change. If

no pedagogical shifts are located, then it can provide a mirror that depicts a centuries-old pedagogical stasis in higher education, which may also, with a pointed analysis, be effective for instituting change.

Since the intention of this work is for it to be applied, it may be problematic that Patton describes this type of research as usually confined by time and space boundaries, and the need to cross time and space boundaries is essential in order to address the intended research question and purpose. Since the findings of this dissertation indicate that foundational conceptions of teaching theory and actual practice have become embedded in stasis for a long period of history, then the key to affecting change in the present is applying knowledge gained by pursuing that history and understanding the environments in which any divergence has occurred.

As this is a historical analysis, over an eight-hundred year time span, toward a specific and applied purpose, the study will need to accommodate research oriented on *both* breadth and depth (Patton, 2002, pp. 227–228). An initial examination of four time periods identified as demonstrating significant social, political and epistemological shifts have occurred thus far: the foundations of higher education Europe during the Middle Ages; the Renaissance and scientific revolution during the early modern period; late 19th century, post-civil war and post-Darwinian United States; and post-World War II through the early 1970's United States. There has also been an examination of contemporary conceptions of teaching excellence, which was included with the literature review. Research material from these time periods has come from a wide variety of sources, and the types of sources available are not consistent between time periods. For instance, as

primary source material during and prior to the Renaissance, when it exists, is almost entirely in Latin, Greek or Italian, I have been reliant upon secondary sources and translations of scholarly works on teaching (regarding the validity of secondary sources, see the "historical analysis" section above). However, the 19th century research has relied on secondary source material as well as on primary texts such as letters, reports, documents, diaries, pedagogical treatises, and transcendentalist papers and other philosophical and pedagogic work that indicate possible epistemological shifts within higher education.

Time Sampling

The unit of analysis (Creswell, 2008, p. 151), given the breadth of the study, has relied on time sampling in order to narrow the "units" to a manageable amount. Patton suggests time sampling is an effective method for overcoming difficulties with time (Patton, 2002, pp. 228–230). For Patton, this is intended to overcome very limited difficulties with time, such as conducting observations of students during a school year when they are most able to focus on their work (i.e., not at the beginning or end of the year, and not around holidays). This dissertation is taking a broad look at the influences (or lack of influences) on higher education teaching in order to understand and interpret affects and change. Time samples are needed in order to hone in, as Patton recommends, on periods of time that will be the most fruitful for collecting the units of analysis. The selection of time samples will be based on two factors – an X- and Y-axis of sorts. The first factor is the identification of a social, cultural, and/or epistemological shift (either local, such as the transcendentalist movement, or more widespread, such as the scientific

revolution). There are a significant number of such shifts that can be identified, so the selection will need to be limited by historically significant epistemological shifts that have had an impact on higher education (structure, content, faculty make up, student demographic, etc.), chosen in consultation with the dissertation committee. The second is the historically situated space of higher education. At the convergence of the X- and Y-axes, I will examine the elements, theories and practices that encompass higher education teaching. In a sense, and with a very liberal use of the definition, this is a study of historical "illuminative cases" (Patton, 2002, p. 232) in higher education teaching.

As the entire eight hundred year history of higher education would be difficult to encompass in a single study, other sampling considerations could also be helpful. For instance, critical case sampling will play a role in selecting appropriate historical moments to investigate. As Patton (2002) notes, "it makes strategic sense to pick the site that would yield the most information and have the greatest impact on the development of knowledge. While studying one or a few critical cases does not technically permit broad generalizations to all possible cases, *logical generalizations* can often be made from the weight of evidence produced in studying a single, critical case" (p. 234), and "identification of critical cases depends on recognition of the key dimensions that make for a critical case" (p. 237). The key dimensions for the purpose of this study are based on social, cultural and historical assessments.

Foucault's Genealogical Method

Given the research needs of this dissertation, Foucault's work, although not focused on education, provides the most significant methodological influence. As Rogers

(2005) states, "Foucault sought to understand the history and evolution of constructs that were considered natural (normality, justice, intellect, and so forth) and how such constructs are a product of power/knowledge relationships" (p. 369). The methods he constructed and employed are highly invested in the historical, examining paradigmatic and often static structures that he perceived as problematic – this orientation closely matches the research focus of this dissertation. Although Foucault's work could be perceived as too theoretical, it is widely recognized in social science research, concerned with change, and the techniques he employs are valuable for this project.

Foucault, who was greatly influenced by Nietzsche's work as well as his contemporaries in France (especially Georges Canguilhem), derived methodologies for pursuing a postmodern "assault" on history and conceptions of knowing. Of Foucault's methodologies, archeology and genealogy provide some interesting parallels to and insights for this study and are most applicable for the qualitative research being attempted (Scheurich & McKenzie, 2005, p. 843). Although genealogy is more important for providing ideas to frame my research, a familiarity with archeology is also quite useful. An understanding of Foucault's notion of archeology depends on two terms, *savoir* and *connaissance*. *Connaissance* describes formal bodies of knowledge, such as disciplinary or theological knowledge. *Connaissance* is knowledge that is taken to be authoritative, consistent and predictive over long periods of time. *Savoir* also describes formal knowledge but of a different type – it is the conditions that make formal bodies of knowledge possible, such as institutions and common/normative practices. What we consider to be formal knowledge emerges not in a vacuum, but rather within complex and

"irrational" conditions that are intimately involved with its construction. In works such as *The Order of Things* and *The Archeology of Knowledge* Foucault attempts to reveal, through exploring the historical and social situatedness of knowledge, that universal conceptions are born out of unstable and irrational conditions (Scheurich & McKenzie, 2005, pp. 846–848).

A good demonstration of archeology is offered in the first chapter of *The Order of Things*, where Foucault (1971) pursues an understanding of the Diego Velázquez 1656 painting *Las Meninas*. Foucault begins with a cinematographer's eye, pursuing meaning through light, shading, and exploring what is both inside and outside the scene depicted in the painting. He then uses the mirror at the center of the painting as a window to understand its meaning, and that meaning is steeped in the context within which the painting was constructed. For Foucault, a superficial understanding of the painting is to simply see the depiction of the daughter of King Phillip IV of Spain surrounded by her maids of honor. However, this is not the meaning for Foucault, and also perhaps not the painter's intention. With the prevalence of the painter in the foreground, who has been painted into the scene, and the mirror which brings that which is outside of the scene into the scene, Foucault believes this to be a representation of the cognitive turn that was occurring in the mid-17th century as a result of the publication of Galileo's *Dialogue Concerning the Two Chief World Systems*. It is a visual representation of the merging of *connaisance* (painting technique, philosophy, science, theology) and *savoir* (religion, culture, subjectivity). As Foucault (1971) states in the Preface of *The Order of Things*, "archaeology, addressing itself to the general space of knowledge, to its configurations,

and to the mode of being of the things that appear in it, defines systems of simultaneity, as well as the series of mutations necessary and sufficient to circumscribe the threshold of a new positivity" (p. xxiii). The site for this "space of knowledge," both as a creation of the artist and of Foucault, is the painting.

Foucault's conception of genealogy is derived fairly directly from Nietzsche's work, and in a sense the notion of genealogy is itself a contradiction. As Foucault (1977) notes, genealogy "rejects the meta-historical deployment of ideal significations and indefinite teleologies. It opposes itself to the search for 'origins'" (p. 140). However, in the opposition of the search for origins the performance of the genealogy is in itself a search for origins, or the perception of origins in order to either enlighten or dispel current understandings of words and concepts. Nietzsche, who was by training an philologist, used the search for the origins of words and traced the evolution, or the "transvaluation" of words that have tremendous ethical and cultural value in society, and thus transforming ethics and values for the society. For instance, in *On the Genealogy of Morals*, Nietzsche (1967) investigates how the words "good" and "bad" are defined by society, how those definitions are intimately tied to a sense of morality, and how the definitions have been transformed over time. Foucault (1979) used his own version of this technique as he pursued how the words "discipline" and "punish" were socially constructed and shifted over time in the aptly titled *Discipline and Punish, the Birth of the Prison*. A more contemporary practice of the method can be found in Fraser and Gordon's (1994) work as they investigate the social/historical construction of the word

"dependency," or in the two examples described below (as the authors pursue the terms "adult learner" and "pregnant teen," respectively).

For Foucault, and others attempting the methodology, it is important to understand words as representations of actions, and that these actions are not simply the actions of individuals or the function of a larger structure. Rather, these words are linked to processes, a collection of "reasons or causes," that are not entirely rational but are emblematic of a conglomeration of power and forces while not representative of any one in particular. The power associated with the word is oppressive in nature, and something to be realized and (especially for the critical theorist) overcome (Scheurich & McKenzie, 2005, p. 855).

Rose (2007) suggests that Foucault's methodologies and theories can be understood through the concept of discourse. Under Rose's understanding, discourse refers to groups of statements which structure the way a thing is thought, and the way we act on the basis of that thinking" (p. 142). For Rose, the analysis of discourse in Foucault can be broken into two types, discourse analysis I and II. Discourse analysis I pays more attention to how discourse is articulated through images and texts than it does to specific practices. Discourse analysis II pays more attention to the practices of institutions than it does to images and texts, and tends to be more explicitly concerned with issues of power (p. 146). Performing a discourse analysis assumes that the researcher is focused on the "discursive production of some kind of authoritative account . . . and with the social practices both in which that production is embedded and which it itself produces," and can involve an examination of a tremendous range of sources (p. 148).

Although Rose is primarily concerned with the visual, the methodological steps that she outlines (which she believes are in line with Foucault's thinking) are worth considering as a method for textual historical research. She first recommends the attempt to "forget all preconceptions you might have about the materials you are working with" (p. 156), which is a practice also noted by Foucault. Given this forgetting, the texts may offer elements that would be inhibited by preconception. The next step is to immerse oneself in the materials involved in the area of investigation – in the case of this dissertation, to read as many written and visual materials necessary for a saturation point to be reached. This is followed by a coding of those materials in order to examine relations between statements. Last, the discourse analysis involves "reading for what is not seen or said" (p. 165). That is, looking for what is missing in the materials and whatever meanings can be discerned from that absence.

This dissertation, which attempts a (lengthy) longitudinal perspective in order to gain insight into the resilience of conceptions of teaching, uses an admittedly generous interpretation of saturation. Bowen (2008), for one, is highly critical of this tendency toward generosity in the research when examining the concept of saturation for grounded theory, even though he notes that there are no standard guidelines for determining when it is achieved. He explores several seminal works in grounded theory in an attempt to bring some clarity to the concept of saturation, and then begins his analysis by splitting the concept of saturation into two parts; data saturation and theoretical saturation. Data saturation occurs when the data set is complete and replication and redundancy occur. That is, when "the researcher gathers data to the point of diminishing returns, when

nothing new is being added" (p. 140). Morse (1995) cites a Margaret Mead descriptor of data saturation where Mead states that one indicator that saturation has been reached was "the boredom that occurred when investigators had 'heard it all,' and then later emphasizing that the "quantity of data in a category is not theoretically important to the process of saturation. Richness of data is derived from detailed description, not the number of times something is stated" (1995, pp. 147–148).

Theoretical saturation, then, is when "no new insights are obtained, no new themes are identified, and no issues arise regarding a category of data" – this is when the categories can be considered to be established and validated (Bowen, 2008, p. 140). For this dissertation, the point was reached when the research was providing nothing new to add to the themes being developed – in essence, and perhaps generously, a theoretical saturation. However, data saturation had admittedly not been reached given the parameters of this research. The possibility for new data to be found, given that historical research is exceedingly expansive, is always present, and the possibility of potentially finding and adding new elements is always a real one. This is recognized weakness of saturation generally as well. As O'Reilly and Parker (2012) state (citing Wray, Markovic, & Manderson, 2007) concerning data collection, "each life is unique and in this sense data are never truly saturated as there will always be new things to discover" (p. 194).

It is also important to keep in mind Hodder's (2002) argument in "The Interpretation of Documents and Material Culture." For Hodder, the interpreter of texts must simultaneously consider three areas of evaluation. First, "the interpreter has to

identify the contexts within which things had similar meaning" (p. 274). Context is imperative and always relevant when different data are being compared and the interpreter is analyzing the similarities (to see if they are indeed comparable). Second, in conjunction with context, is the recognition of similarity or difference – the interpreter argues for context validity through this process of recognition. Third, the interpreter of data needs to evaluate whether general theories about the data being examined are relevant for understanding the data (pp. 274-275).

Scheurich and McKenzie (2005) suggest that most educational theorists who use Foucault's methodologies "cherry pick" terminologies and use them in ways that are not necessarily in line with, or in the context of, Foucault's intentions, and that this practice is problematic (p. 859). While considering Foucault's methodologies as a potential model for my own work, I will attempt to stay close to the intention of his work so as not to circumvent it. However, I do believe that these methodologies can help frame the type of research necessary for this project.

Examples of genealogical studies. Although the use of postmodern, Foucaultian genealogical methodology (as described below in the methodology section) in the higher education realm is seemingly rare, two examples of studies that use this method have been uncovered that offer at least a tangential relation to the research for this dissertation. Pillow (2003) constructs a feminist genealogy based on Foucault's work that she uses to explore the impact of notions of "body" in policy formulation. On Pillow's account, a feminist genealogy "builds from the work of Foucault read through and with race-feminisms and focuses specific attention upon the discursively structured raced, gendered

and sexed body" (p. 146). She specifically uses feminist genealogy to examine educational policy through the lens of pregnant teens by shifting the focus on the discourses that shape and define teen pregnancy (p. 148). Pillow finds that the pregnant teen girl becomes a policy "Other," a problem that is separate from "our" lives (p. 154).

In the other use of genealogical method, Fejes (2005) examines how the "adult learner" is constructed in Swedish education, and how that construction determines how the adult subject is governed. Fejes traces this construction from the mid-20th century forward, and finds that the contemporary techniques used to govern the adult are both similar and different to those that can be traced back to the mid-20th century. For instance, study counselors are used to create individual study plans for adult learners from the mid-20th century forward, but this guidance has become more individualistic over time (pp. 80-81). As the conception of what constitutes "adult learner" or "adult subject" changes, so does the interaction with higher education governing bodies and their representatives.

These iterations of genealogy, as well as the articles about examples of historical analysis, yield processes that are useful for both methodological construction and notions of quality for this study. That is, since no model has been uncovered for using these methods in higher education research, these guidelines for performing the research are critical for ensuring quality when examining the time periods under consideration.

Synopsis of Foucault's genealogical method. To place this dissertation in the context of Foucault's methodologies, this research is a genealogy that focuses on the term "teaching excellence" and all of its derivatives (such as teaching, teaching effectiveness,

good teaching, teaching practice or praxis…see above section on the term) within the higher education context. As I do have an extensive background in higher education teaching, the exploration required some recognition of my preconceptions to prevent inhibiting or tainting the research. After intense exploration of each time period, common themes were revealed as the documents were analyzed, and those themes formed the foundation of a response to the research questions.

To place this research squarely back into the concerns of critical theory, the research will be informed by an awareness of ideologies, paradigms, hegemonies and other potential elements of oppression. The research will be historically situated, and it will achieve this situatedness strategically through the utilization of appropriate sampling techniques. Foucault's work was used to guide to the research methods until a trustworthy response to the research questions emerged from the data.

Methodological Quality

Quality is being pursued in this study given the methodology that seems most appropriate for the task at hand. However, it should be noted that this is an effort to apply notions of quality for a methodology that has not yet been concretized. As Rogers (2005) noted above, critical theory is "not a unified set of perspectives" (p. 368), and Foucault himself never described his genealogical method, therefore refining the methodology will need to in some respects emerge as the research is pursued. However, there are accepted practices, or at least expectations, within qualitative research generally and genealogy specifically that served as a foundation for pursuing the research.

In this exploration of quality in critical theory research, I will for the moment circumvent a focus on ethical considerations. There are ethical ramifications when doing historical research, but as most of the texts that were considered had been published in the past, or were readily available in and part of the public realm, ethical considerations beyond generally accepted writing standards (citation, representation, etc.) were not in evidence. The question then remains - what is quality research in the realm of critical theory? That is, how can an appropriately performed historical genealogy in higher education be recognized by peers and evaluators as emulating the rigors of good research?

Before pursuing quality notions of genealogy within a critical theory framework directly, I will begin by setting a foundation for quality by examining generally accepted practices for both general research and qualitative research. In this vein, the guidelines distributed by the American Educational Research Association (AERA) for analysis and interpretation establish general expectations for qualitative research that are a useful starting point when considering notions of quality. The AERA (2006) guidelines generally address concerns for clarity and transparency. For instance, the guidelines stress that the procedures should be "precisely and transparently described" through the report, and the alignment between the analysis procedures and research question should be clear. Analytic techniques should be described in detail, and both intended and unintended circumstances should be revealed. Lastly, conclusions should clearly indicate the connections between interpretation and research findings, how those findings support or challenge previous findings, and any implications of the study (pp. 36-37).

The AERA guidelines also recommend that the qualitative research process remain iterative in nature, and this may involve forming, reforming, testing, and retesting conclusions during the process of data collection. This iterative process yields support for the eventual interpretations and conclusions. Data collection can only end (at least temporarily) when the researcher determines that there is enough evidence to support the conclusions, which I believe has happened for this research. Inevitably, the AERA argues that it is the researcher's responsibility to demonstrate to the reader that the research can be trusted through the transparency in the reporting (this includes both the process itself and revealing researcher predisposition) and through procedures for establishing warrant such as triangulation, participant review of findings, offering detailed examples and descriptions of social contexts, as well as the consideration and presentation of differing perspectives, disconfirming evidence and other techniques (2006, pp. 37–38).

Similarly, the American Evaluation Association (AEA) guidelines (2004) also outline best practices in research, although their focus is more on the evaluator than on the process of research. These guidelines note the importance for evaluators of performing a "systematic, data-based" inquiry to insure the accuracy of the evaluation. However, from there the guidelines focus on the qualities inherent in good evaluators (or researchers). For instance, the evaluator should acquire and maintain competence through education and demonstrable cultural understanding. They should also exhibit integrity and honesty through open negotiations with stakeholders and full disclosure of predisposition concerning the research. A respect for everyone involved in the research

process, as well as a sense of responsibility for the "general and public welfare," are also noted as important characteristics of evaluators.

The AERA and AEA guidelines provide a general set of principles concerning best practices (and characteristics), but the next step is to investigate and refine those practices so that they can apply to the methodology under consideration. However, quality in methodological practice must first be situated within the purpose of the methodological choice itself. In this case, notions of quality are established by examining what it is that Foucault's method is supposed to do.

Baert's (2005) analysis of Foucault's genealogical methodology provides assistance in this endeavor by segmenting the purpose of Foucault's method of genealogy into four parts. First, "by juxtaposing past and present, genealogy erodes the present constellation. The present becomes manifest and is found not to be as universal as was once thought" (p. 165). For this dissertation, the genealogy places present conceptions of teaching within the historical framework in order to reveal if it is unique to a contemporary context, or if there is some historical consistency. Through this process of bringing past and present together, a genealogy "undermines those justifications of the present that portray it as inevitable – as a necessary outcome of the past." The past is tied to a "network of contingencies," and by making the connections to the past the genealogy suggests that the present constructions are similarly contingent (p. 165). Third, "genealogy undermines those justifications of the present configuration that portray it as the product of a continuous progression" (p. 165). This third purpose of genealogy is especially important in the context of this historical study in higher education, as the

juxtaposition of past and present will indicate the level of resiliency of the teaching construction. Fourth, "genealogy challenges the present configuration because it shows how various belief systems, practices and institutions, which appear innocuous or honourable, are tainted by power struggles" (p. 165). The power dynamics under investigation are numerous for higher education pedagogy, and include faculty/student, administration/faculty, society/administration, as well as the influence of ideology on the perception of higher education generally. Power dynamics within academia, and in the classroom in particular, should bring some clarity to the examination of teaching methodologies, the connection or disparity between theory and practice, and what is considered to be "excellent."

Quality is reliant upon the performance of method appropriate to its purpose, and if that purpose is realized through the research it can reasonably be recognized as satisfying this component of quality. In this case, it would need to satisfy the purpose of performing a genealogy, at least as derived by Foucault. However, as Baert (2005) further explains, even though Foucault's aim was to provide the tools for people to realize their assumptions about the present and to see things differently, in his published works he stopped at that point (pp. 168-169). Stopping at the provision of tools, for the most part leaves any change initiative up to individual understanding and interpretation of the work, and the capabilities of the reader. Foucault has also been criticized for suggesting that every interpretation is simply an artifact of "particular regimes of power/knowledge" (Scheurich & McKenzie, 2005, p. 861). This criticism, if justified, leaves the reader enmeshed in an extreme form of relativistic paralysis with no real

notion of how to apply the knowledge. These criticisms, however, need to be balanced by an appreciation of Foucault's large body of work. For instance, in interviews Foucault did make inroads into the application of his work toward change by suggesting methods for implementing his work in a more practical way (Scheurich & McKenzie, 2005). In any case, within the mandate of critical theory, understanding these criticisms will be important for adjusting the genealogical methodology as the research is being performed so that it is appropriate for the research *and* the intended application.

It should also be noted that Foucault's project itself, as one manifestation of the postmodern agenda, is intended to place notions such as quality under consideration. To take postmodernism seriously is to understand that quality is not tied to a universal, scientific, positivistic determination, but rather is multiple and not subject to a "great interpreter" that can make exacting and specific determinations (Lather, 2004, p. 215; see also Patton, 2002, pp. 252-253). Quality, although multiple, must rely on criteria specific to the purpose of the study, and this is the case with genealogy as well. As in all qualitative research, a quality genealogy would have certain characteristics defined by the purpose of the enterprise that indicate its appropriateness and effectiveness. The AERA and AEA guidelines above provide a starting point, but those elements were made specific for this research while it was being pursued. As Foucault did not expressly state his method, and as there are no firm models to base this study on, the research process will need to be somewhat iterative in nature.

It is important for any determination of the elements of quality to engage the emphasis on the intersection between quality and criteria highlighted by Patton (2002).

Quality, notes Patton, flows from the selection of criteria. General criteria are provided in both the AERA and AEA guidelines above, but Patton specifies five sets of contrasting criteria to more closely refine the quality/criteria connection. Of those criteria sets – traditional scientific, social construction/constructivist, artistic and evocative, critical change and evaluation standards and principles – none seem a perfect match to a genealogical analysis of higher education pedagogy (pp. 544-546). Traditional scientific criteria, with an emphasis on objectivity and systematic procedures, is both at odds with this type of research and somewhat in contradiction to the postmodern approach (G. Anderson, 1989). Artistic and evocative criteria with its focus on aesthetics, creativity and the "expressive voice" (Patton, 2002, p. 548), are not the focus of this research. Evaluation standards and principles, established above through institutions such as AEA and AERA, are relevant but not particular enough in order to reveal definitive notions of quality for genealogical research. However, both social construction criteria, which views the world and human understanding as socially, politically and psychologically constructed (Patton, 2002, p. 546), and critical change criteria which sets out to "use research to critique society, raise consciousness, and change the balance of power in favor of those less powerful" (Patton, 2002, p. 548) contain elements that can be useful. The final analysis of quality will most likely combine elements of the criteria from critical change and social construction, and determine how to manage the tension between them. It is my expectation that the conditions for relieving that tension will emerge as the data is explored more fully.

A common and effective way of increasing the level of quality in research, especially in the realm of critical theory, is through having participants check and participate in the analysis, as this can circumnavigate some of the power issues involved in interpretation (Rose, 2007, p. 194). This is also an effective way of pursuing a type of triangulation (Patton, 2002), or transactional validity (Cho & Trent, 2006). Although participant involvement is not available for the historical research pursued here, there are definitive merits to triangulation.

As Cho and Trent (2006) note, "relying on the virtues of triangulation, the researcher believes that this technique, like member checking, will lead to a more consistent, objective picture of reality" (p. 323). There are variants of triangulation that would be appropriate for historical research as envisioned in this study. For instance, triangulation of qualitative data sources (Patton, 2002, p. 559) was practiced as notions of teaching and social norms were being investigated using a variety of sources. Given the extensive use of secondary sources, the fact that many of the primary sources examined will also have been utilized by other authors, as well as the complexity of performing a genealogy, triangulation with multiple analysts (Patton, 2002, p. 560) was helpful for determining whether or not the research maintained consistency. Although triangulation did not guarantee certainty in the analysis, it did provide an increased level of quality. Again, as the process was somewhat iterative, methods of triangulation were adapted as the research was performed.

Another element that must appear in any qualitative study, and something that should be especially detailed in a work involving critical theory and issues of power, is revealing

the predisposition of the researcher. This both adds to the transparency of the research as well as establishes the self-reflexive stance that is essential in critical theory (G. Anderson, 1989). As Hays (2004) notes, "because much of the collected data is analyzed through the researcher's lens, the researcher needs to provide information concerning the researcher's perspective and relationship to the case (p. 233). Hays further suggests that the audience for the research needs to understand the researcher's perspective if they are going to trust the findings of the research. For Lather (2004), the importance of the revealing is examined in terms of potential power relationships as she asks "how do I struggle with the task of an I becoming an *eye* without the anxiety of voyeurism that entangles the researcher in an ever more detailed self-analysis" (p. 213). It is also important to avoid self-deception in the revealing of predisposition, and careful attention must be paid to this problematic (Reason, 1998, pp. 267–268). The narrative at the beginning of this dissertation was intended to address this issue.

Another method of determining quality that could be important for this research is what Cho and Trent (2006) term "transformational validity," or more specifically transgressive validity, which they believe to be a subset of transformational validity. Transformational validity, as the term indicates, is revealed through the "the resultant actions prompted by the research endeavor" (p. 324). Transgressive validity "emphasizes a higher degree of self-reflexivity. For example, qualitative researchers are encouraged to examine meanings that are taken for granted and to create 'analytic practices' in which meanings are both deconstructed and reconstructed in a way that makes initial connotations more fruitful. Advocates of transgressive approaches believe that, when

such analytic practices are seen as ironic, the qualitative work is valid" (Cho & Trent, 2006, p. 324). As it is the purpose of genealogy to examine meanings that are taken for granted and to deconstruct those meanings, transgressive validity may be a factor in determining the quality of this research.

I find myself in agreement, as Cho and Trent (2006) highlight, with Maxwell's (1996) assessment of validity in qualitative research. Namely that "concepts such as bracketing, member checks, and triangulation do not necessarily mean that, through employment, the researcher is endowed with God's magic stick" (p. 333). Or as Peshkin (1993) puts it, "no research paradigm has a monopoly on quality. None can deliver promising outcomes with certainty. None have the grounds for saying 'this is it' about their designs, procedures, and anticipated outcomes" (p. 28). There is no panacea for validity, and no foolproof process for assuring quality.

Although conceptions may shift as the historical research emerges, at this stage of research expectations of quality will include the following:

1. Transparency (of self, of method, of process) and clarity (of writing, of method) will be of utmost importance and should continue regardless of final methodological formulations.
2. Multiple forms of triangulations should also be in evidence, to include data and multiple analyst triangulation, and perhaps others.
3. Clear evidence of engagement with the principles of genealogy within the confines of critical theory. This will include a well-supported focus on power

relationships, social/cultural epistemological constructions, change, and the historical pursuit of the term "teaching excellence" within these constructs.

With these principles providing a framework for evaluating the research, a quality study in the mode of critical theory and genealogy should emerge.

Conclusions. With the research questions as a guide, I used Foucault's genealogical process of searching historically for a term and tracking its meaning over time. As noted above, Foucault's genealogical process was never practically delineated by Foucault himself, and thus there are varied interpretations of how to perform this type of research. My own process was enhanced by paying attention to Russel Schutt's four stages for systematic qualitative comparative study, which provided some structure to Foucault's intentions. Given the elements described thus far, below is a sketch of the three time periods selected and some sample resources given the objectives of the research, followed by the basic approaches for collecting and analyzing data for the dissertation being proposed.

Data Collection

The first step to data collection was a broad understanding of what Patton (2002) describes as activity focused time sampling (pp. 228-230), with the identification of the time periods noted above in consultation with the dissertation committee. The initial search was guided by Thies' (2002) suggestions concerning the selection of primary and secondary sources that avoid bias and selectivity (pp. 352-359). The search began by first determining the appropriate time periods for investigation based on conference with committee as well as paradigm shift theory. In the process of researching the selected

time periods this study searched for and captured the different manifestations of the term "teaching excellence," in accounts of both its theoretical understandings as well as actual practice, through extensive examination of the available historical primary and secondary source material. This endeavor was also guided by the contemporary synopsis definition derived above as a means of comparing historical perceptions and practices to a contemporary understanding.

For example, the early modern time sample was selected because of the tensions between humanism, science, the influence of Greek texts and the continuation of teaching practices from the Middle Ages. The data collection began with extensive database searching for various combinations of the terms "teaching" and "higher education" within the Middle Ages and early modern period, and then the search continued through examining and cross-referencing bibliographies until a "saturation point" within the dialog on higher education teaching and learning in the time period was reached. That is, when enough of the texts in English and images had been located that some duplication of information within the texts became evident, and the concepts that were being developed seemed stable.

Data Analysis

In a sense, genealogical methodology requires that an analysis of data happen while the data is being connected, as it is difficult to determine if the data are connected to the research without analyzing it within its social and historical context. As Pillow (2003) notes, the "form of critical inquiry Foucault calls genealogy provides a forum for decentering what we think we know and for tracing how we come to know it" (pp. 149-

150), and this decentering happens for both myself and the reader at both the site of collection as well as in the end process of analysis.

The analysis of the data includes the formation of concepts and categories using the contemporary and historical instances of "teaching excellence," both how the term is understood theoretically as well as practiced, while paying particular attention to connections (or lack thereof) between theory and practice. Through research on the term, and by comparing historical and contemporary conceptions, the extent of resiliency of was revealed, including the power relations involved. Schutt (2009) contends that the performance of historical research can be very useful for comparing elements in order to identify historical patterns (p. 438), and that was also the hope for this dissertation. Foucault sought to understand the evolution of constructs such as punishment, justice, intellect, sex and normality in order to unsettle what is considered normative, and the intention of this dissertation is to similarly unsettle the construct of excellent teaching in higher education.

Chapter Four

Historical Context: Early Modern Higher Education

Introduction

The were many elements in place that would encourage, if not mandate, a paradigm shift in teaching practice in higher education during the early modern period. The cultural phenomenon of the Renaissance, which had started with such force in Southern Italy, was making its way across Europe. Art, architecture, philosophy and literature were being infused with the ideas of the ancient Greeks and the results were being both seen and heard. The ideas of humanism, influenced by ancient Greek thought, were becoming increasing popular while advocating the re-placing of the human subject at the center of understanding. The invention of the printing press was making it possible for mass dissemination of ideas in multiple languages, greatly expanding on the limited availability of hand-copied Latin derivations available only to elite scholars, clergymen and nobles. And of course, the scientific revolution, buttressed by new discoveries in astronomy and medicine, was in full bloom.

This chapter will be examining all of these elements in an attempt to understand the changes that could have, and perhaps *should* have occurred in Western higher education given the tremendous shift in the socio-cultural landscape during the early modern period. Although the structure, curriculum and teaching practices within higher

education appear in sync with the ideas and dispositions of higher education's origins during the Middle Ages, they seem in contradiction to the movements, thoughts and discoveries during this time. This section begins with a description of the foundation of higher education in the Middle Ages in order to establish a basis for comparison, continues by outlining the elements that should have mandated changes in higher education, provides an overview of higher education during the early modern period with a focus on attributes that had the greatest impact. Some of the analysis of teaching theory and practice during these time periods will be reserved for the "Discussion" chapter of the dissertation as part of the overarching analysis.

It should be noted that the examination of this time period is more extensive than the coverage of the 19th century and 1960s American sections that follow. The intention of having a more extensive account in this section is to demonstrate the elements involved when selecting an appropriate time period for examination in this dissertation. Coverage of similar elements is present in the time periods subsequently covered, although less extensive given that a general "process" is established in the early modern section. Also note that the format in this section is established to orient the reader on early modern history within the context of this dissertation. Therefore, historical elements and research pertinent for establishing the time period and perceptions of teaching excellence are housed under each subtitle, interspersed with analysis that relates these elements to the overarching purpose of the dissertation.

Foundations

It can be argued that the foundation for higher education during the early modern period, as well as the dissemination and understanding of text generally, was established during the Middle Ages through two events that happened nearly 400 years apart. The first was the order of the *Epistola de litteris colendis* by Aachen Charlemagne in 785ad, to be carried out by Alcuin, a leading scholar and teacher in the Carolingian court. This order outlined a program for the study of Latin language and texts, both the sacred and the profane, throughout all cathedral and monastic schools in the empire (E. L. Johnson, 1981, p. 7). The order was another of the Carolingian edicts, and followed ones intended to heighten the morality (*honestus morum*) of the church. This edict, however, was designed to introduce the study of letters as a "cure for what ails the church and kingdom" and as "an addition to the discipline of good behavior" (Jaeger, 2000, p. 25). The teaching of Latin, both spoken and written, was to be open to any able to learn. Charlemagne's intention was to emphasize proper speech in the language of religious texts in order to please God through right living and speaking. The result, whether intended or circumstantial, was to centralize scholarship around a common language, which would later make possible the fairly efficient propagation of ideas among scholars throughout Europe.

The second event, which would instigate and establish a prominent framework for educated discussion of text into the early modern period and beyond, was the "discovery" and translation of Aristotle's works, beginning approximately in the year 1150. The works of Aristotle were not discovered as much as translated; his texts had been in

circulation in the Arab world since they “disappeared” in the West after the fall of the Roman Empire 700 years earlier (Dresden, 1968, p. 26). Since the Arab civilization ranged from Persia to Spain, and Aristotle's works had been fully absorbed into its society (along with many other Greek scholars of antiquity) copies of Aristotle's works were rediscovered as Christian knights liberated and occupied areas that had formerly been under Islamic control. In cities that had extensive libraries such as Lisbon and Toledo, the Christian knights discovered, or rediscovered, the works of antiquity in Arabic; and especially long sought after copies of Aristotle’s Logic and Physics.

The translations of these works into Latin, executed primarily by Jewish and Arab scholars, had a rapid and profound effect on the cultural and philosophical landscape. The rediscovery of Aristotle's works, of which more than 3,000 pages would eventually be translated, intensified a spirit of inquiry into natural processes that had already begun to emerge in the 12th century. As Rubenstein (2003) notes, "taken together, these books represent the most important documentary discovery (or 'rediscovery') in Western intellectual history. One historian (Dales, 1990, p. 144) calls the discovery of Aristotle's works 'a turning point in the history of Western thought . . . paralleled only by the later impact of Newtonian science and Darwinism" (pp. 16-17). Haskins (1957) describes the re-emergence of Aristotle, as well as other works of Greek and Roman antiquity, as the impetus for an essential shift in the nature of universities:

> So long as knowledge was limited to the seven liberal arts of the early Middle Ages, there could be no universities, for there was nothing to teach beyond the bare elements of grammar, rhetoric, logic, and the still barer notions of arithmetic,

> astronomy, geometry, and music, which did duty for an academic curriculum. Between 1100 and 1200, however, there came a great influx of new knowledge into western Europe, partly through Italy and Sicily, but chiefly through the Arab scholars of Spain – the works of Aristotle, Euclid, Ptolemy, and the Greek physicians, the new arithmetic, and those texts of the Roman law which had lain hidden through the Dark Ages. (pp. 4-5)

After Aristotle's works again became available, a community of scholars communicating in the common language of Latin accelerated the process and practice of attempting to reconcile the thoughts of Greek antiquity, and especially ideas related to understanding the natural world, with those of the church. This activity, later defined as "scholasticism" (scholars for whom this was a focus were called "scholastics"), would apply Aristotelian logic and thoughts about natural processes to passages of the bible and attempt to establish the viability of those passages through reason.

The most famous northern university lecturers in the Middle Ages – Albert the Great, Boethius of Dacia, Peter Abelard, Peter Lombard, Siger de Brabant, Saint Anselem and others – were all scholastics in some way using Aristotle works to publish in their fields, achieve recognition, and fill their lecture halls. For the first universities, at Paris in the north and at Bologna in the south, obtaining insights into a singular truth where Aristotle could live in tandem with biblical texts was the primary mission of lecturers, and the expectation of students. However, when faith and reason became at odds, faith was always the victor. In the late 12th century Siger de Brabant of the University of Paris stated that, "One should not try to investigate by reason those things

which are above reason or to refute arguments for the contrary position. But since a philosopher, however great he may be, may err on many points, one ought not to deny the Catholic faith because of some philosophical argument, even though he does not know how to refute it" (Dales, 1990, p. 144).

Many scholars pushed the boundaries of this process of reconciliation, often winding up in contradiction with, or at least gaining the ire of, the Catholic Church, which did not consistently recognize the benefit of the philosophical exploration of faith. For the church at this time, philosophy produced questions and contradictions, not truth. A focus on truth was intended for only the most learned within the church. For instance, in one reaction to these philosophical explorations, the Bishop of Paris effectively banned the Aristotelian inspired doctrines in 1270 when he declared and published his thirteen heretical propositions; which he later expanded to over 400. Knowingly teaching these propositions would lead to excommunication (Rubenstein, 2003, p. 216). Eventually, the Aristotelian inspired "radicals" began to leave the University of Paris as a new rector took control in 1272, and by 1277 the split between faith and reason seemed complete as the church became more and more aggressive toward those who took a philosophical approach to faith (Rubenstein, 2003, pp. 228–238).

Amidst these discussions and controversies, scholars began to congregate together to form *universitas magistrorum et scholarium*, “communities of master’s and scholars,” which were initially an extension and amalgamation of cathedral schools and monastic centers. These centers of learning became known in the Western world as universities, derived from the Anglo-French translation of *universitas; “université*.” These organized

groups of scholars tended to congregate in one of two ways, as exemplified by the first such groups that formed in Paris and Bologna in the late 11th and early 12th centuries.

In Paris, higher education was initially attached to a cathedral (as most initially were in Northern Europe), and students arrived at a *université* for reasons that are contemporarily familiar. That is, they journeyed to Paris because of the opportunity to learn from the scholars that were in residence. For instance, scholars/lecturers Peter Lombard at the cathedral school of Notre Dame, Hugh and Richard at St. Victor, and perhaps most famously Abelard at Mont-Sainte-Genevieve drew students in large numbers (Haskins, 1957, pp. 12-16; Johnson, 2000, p. 9). It was the opportunity to learn from these scholars, and to obtain a degree that would lead to employment (primarily as a teacher, tutor, or clergymen), that attracted students to Paris.

In Bologna, however, it was the students, usually foreign to the city, which attracted the scholars/lecturers by pooling their resources in order to pay them. These students were mimicking other unions or guilds common in Italian cities, and unionization produced tangible benefits. It offered a form of protection for the students from unfair pricing, for as more students moved into town the prices of goods, services and room rentals rose dramatically (at least for the students). In the beginning this university was a guild without a fixed location, so the students could threaten to leave the city and take their resources elsewhere. It also served as protection from the instructors that they hired. As the "masters" were completely reliant upon student fees, the students could threaten to boycott their classes if their performance was not adequate (Haskins,

1957, pp. 8–9). The elements of adequate performance, which are pivotal to this dissertation, will be discussed below.

For all European universities during the Middle Ages and into the early modern period, Latin was the language of the university, used for all texts, lectures, disputations and examinations. Professors generally chose the books of Aristotle for their lectures on logic, natural philosophy, and metaphysics; while Hippocrates, Galen, and Avicenna were used for medicine. Although universities of this time generally explored all subjects, there were basic geographic tendencies toward areas of study – in most cases, differences in the quality of instruction were closely related to the university's area of focus.

When referring to southern European higher education, most scholars direct their attention to universities located in Italy, but there were also esteemed higher education institutions in Spain and Portugal. The southern European universities focused on law and medicine and primarily awarded the doctoral degree. Northern universities, located at first in Germany, France, and the British Isles before spreading elsewhere, were focused on the arts and theology and primarily awarded the Bachelor of Arts degree, although doctorates were sometimes awarded for theology (in the south, theology was taught in monasteries, not the universities). Those that graduated from universities in the north most often became teachers or entered the clergy, while those in the south usually pursued professional positions (Grendler, 2004, pp. 2–8). Irrespective of their focus, universities became popular all over Europe, as rulers and city governments began to create them to satisfy a European thirst for knowledge, and the belief that society would

benefit from the scholarly expertise generated by these institutions. As Grendler (2004) observes, "princes and leaders of city governments believed that scholarly expertise and analysis were needed to solve difficulties, to create solutions, and to attain desired goals" (p. 2).

Europe during the Middle Ages was held together by two primary forces, the church, which was ubiquitous, powerful and hierarchical, and the constant presence of war, which had the affect of keeping authority in the hands of the nobility due do the populace's need for protection (Rabb, 2006, pp. 7–9). These two omnipresent forces provided a boundary of sorts for culture and knowledge during this time period. However, there were signs that these forces were beginning to lose their grip on society as Europe transitioned toward the early modern period, and several elements emerged that broke the hold significantly. These elements propagated a break between the conception of knowledge in the Middle Ages and the way knowledge was pursued during the early modern period.

A sign that change was possible, and perhaps imminent, was the decline in papal authority, which in turn allowed for more freedom in and around universities. As Grendler (2002) notes, it became clear (at least to scholars) that papal authority was dwindling when the church was no longer able to absorb criticism. Where in the past the ideas of dissenters such as St. Francis, who called for simpler forms of devotion, were able to be accommodated, by the late 14th century criticisms were met with persecution and violence (Grendler, 2002, pp. 186–195; see also Rabb, 2006, p. 25). Theodore Rabb (2006) also points to this importance of this shift when he states that the:

> erosion of papal authority was the most dramatic sign of dissatisfaction with the received wisdom of the high Middle Ages, and in some respects it was the most astonishing. In the first half of the thirteenth century, the pope's triumphs in the investiture controversy had seemed unequivocally to confirm his claims to supremacy over secular rulers. Less than a hundred years later those claims were in ruins. (p. 23)

Questioning of the religious authority and a general discontent was also motivated by the widespread famine caused by rapidly rising population during the high Middle Ages. Rapid population growth and the congregation of more (malnourished) people into tighter quarters greatly assisted in the spread of the Black Death once it made its way to Europe, eventually eliminating more than one half of the European population by the mid-fifteenth century (Courtenay, 1980; Rabb, 2006, p. 28). War, famine, plague, criticisms of corruption all led to the waning power of the church; and as this authority over the prevailing conception of truth diminished, so opened the possibilities for different conceptions of society, culture, knowledge and personhood (for the purposes of this dissertation, this will be considered a paradigm shift). The possibility of change allowed for different elements to emerge, which in turn solidified a transition to the early modern period. In order to demonstrate what this socio-cultural transition meant for higher education, the existing conditions present in this environment will first be illustrated so that the Middle Ages and early modern period can be effectively compared.

Scholasticism: Higher Education During the Middle Ages

Figure 1. Illustration from a fourteenth-century manuscript shows Henry of Germany delivering a lecture to university students at University of Bologna. (de Voltolina, 1350)

The structure of higher education during the late Middle Ages was fairly consistent, with the basic curriculum consisting of the seven liberal arts. For the degree, students were required to gain proficiency in the Trivium, which included rhetoric, logic and grammar. For the master's degree, in addition to the Trivium, students needed to demonstrate proficiency in the Quadrivium, which included arithmetic, astronomy, geometry and music. In the thirteenth century an additional "level" was added that included the three philosophies: natural, moral and metaphysical. These elements of education, taught in Latin, became fairly standardized across all universities by the thirteenth century (Rabb, 2006, p. 14).

The consistency across universities was made possible, and concrete, by what Fubini (2006) suggests was a unity:

> assured through an institutional and normative network (the Church, the universities, the religious orders, the doctoral colleges, etc.). Medieval culture was principally a public matter in that it was a patrimony of sanctioned truths that had been handed down by tradition through an authoritative witness, the exegesis of doctrine, and the transmission of teaching; hence the identification of doctrine with teaching. (p. 130)

The *transmission* of doctrine in Latin, whether it was theological, grammatical, Aristotelian, canon law, or from one of the few other sources available, was considered the standard objective across all higher education institutions.

The process of "conveying" this education was a fairly rigid affair. Entry into higher education was virtually impossible without a demonstrable proficiency with Latin, the language of the university, and many schools required that a prospective student pass an entrance examination in order prove that proficiency (Rait, 1912, p. 134). Higher education during the Middle Ages was centered on the understanding that truth was fixed, and that the training received in higher education should provide the tools needed to better engage with this truth. As Fubini (2006) states, pulling from the work of Schönberger (1997), "the magister was not a learned man who elaborated his own thoughts; on the contrary, his task was to transmit 'the heritage of truths he had received.' Therefore, teaching was a strictly regulated procedure through which tradition was handed down" (pp. 130-131). Methods and material were passed from generation to generation with very little variation, and the training of future teachers recognized and embraced the importance of integrating the individual into the whole – an indoctrination

somewhat comparable to modern day disciplines. It was the integration into the scholastic whole, a normative network, that sustained scholars and teachers in higher education during this period, even through (and despite) the contradictions within knowledge or truth that were often uncovered (Schönberger, 1997, p. 123).

The method and types of instruction were fairly consistent within higher education, although the terminology might be slightly different between universities. For instance, at Cambridge and Oxford, lectures were either ordinary (held in the morning, and led by a master) or cursory (held in the afternoon, organized by a master but often guided by a graduate student). In Italy, essentially the same curriculum, offered by essentially the same teaching methodologies, would have been called "extra-ordinary;" in Germany, this curriculum would have been called "extense." Ordinary lectures were required for students and were delivered in public and in the morning by masters. These lectures usually involved a formal and methodical examination of the book under investigation, and no more than one chapter of the text at a time so the students did not become overwhelmed by the effort involved. Students were exposed to the work of Alexander de Villa Dei and Ælius Donatus for grammar, Cicero for rhetoric, Aristotle for the liberal arts, and other texts as they became available in Latin translations (such as Aristotelian criticisms, the astronomy of Ptolemy and John Hollywood, Euclid for mathematics, and the poetry of Virgil). Texts for the ordinary lectures would vary if the student were pursuing medicine or law.

Cursory lectures were delivered in the afternoon, often by bachelors, and were perceived as supplementary to the morning lectures. Cursory lectures were exceedingly

popular with the students and well attended, although masters were reprimanded for teaching them for personal gain, especially en lieu of teaching ordinary lectures. There was often a substantial tax imposed by the town for cursory lecturer attendance – perhaps evidence that they were seen as extraneous rather than necessary by both the town and the University (J. W. Baldwin, 1971, p. 60; Rait, 1912, pp. 138–141).

The structure and method of lecturing for students in a similar environment (an undergraduate ordinary lecture, a law student, a medical student, etc.) would experience approximately the same thing at any university in Europe at this time. For instance, the classroom practice for discussing canon law at the University of Vienna is indicative of any law classroom in Europe. The instructors at Vienna were limited to reading the Decretum Gratiani in the morning's ordinary lectures, and were to follow the same pattern for discourse in every class: 1) statement of the case; 2) reading of the text; 3) restatement of the case; 4) remark on important elements; 5) discuss questions; and 6) address the glosses (Rait, 1912, pp. 140–141).

In fact, faculty lectures at all universities in the Middle Ages were so similar that instructors and administrators became concerned that the students might be able to capture and circulate the lectures by taking notes, (as the lectures were generally the same and on a limited selection of books). In order to address this concern at the University of Paris, faculty began to speak with such speed that it was not possible to capture the master's words on paper. For about 200 years starting in the early 1200s, this quick delivery became mandatory for the faculty of arts, who were instructed to speak during their lectures as if they were practicing a speech when no one else was present. The

penalty for a faculty member breaking this rule was a one-year suspension, and students who showed their disdain for this delivery method "by shouting, hissing, groaning, or throwing stones" were sent down a level for one year (Rait, 1912, p. 142). Note taking during ordinary lectures was also a concern at other universities, but Paris was the first to formally address it.

A typical day for students across universities during the Middle Ages was fairly similar. Every student was required to study the lesson for the hours before the first lecture (often between 5 a.m. and 7 a.m.). Students would then attend the ordinary lectures in the morning, and cursory lectures in the afternoon. Generally, students were forbidden to attend more than two lectures in a day, another precaution for avoiding fatigue due to the difficulty of the material, and also so they had ample time to reflect upon each lecture. Rashdall's (1964) *The Universities of Europe in the Middle Ages* illustrates a student's typical day at a university by revealing a student's notes from the opening lecture of Odofredus, a celebrated Roman law professor at the University of Bologna. These notes from the opening lecture, Rashdall argues, describe the format of any lecture, on any topic, at any university during the Middle Ages:

> First, I shall give you summaries of each title before I proceed to the text; secondly, I shall give you as clear and explicit statement as I can of the purport of each Law (included in the title); thirdly, I shall read the text with a view to correcting it; fourthly, I shall briefly repeat the contents of the Law; fifthly, I shall solve apparent contradictions, adding any general principles Law (to be extracted from the passage), commonly called "Brocardica," and any distinctions of subtle

> and useful problems (questions) arising out of the Law with their solutions, as far as Divine Providence shall enable me. And if any Law shall seem deserving, by reason of its celebrity or difficulty, of a Repetition, I shall reserve it for an evening Repetition. (pp. 219-220)

A guided reflection followed the afternoon lectures, led by instructors of grammar and philosophy through what was called "repetitions" or "resumptions." For the post-lecture repetition, students returned home and repeated the lecture to each other, and often to the instructor as well. Alternatively, students might be required to return home to annotate and memorize the lecture, then after dinner and without the benefit of texts or notes repeat the lecture and answer questions. This was often followed by disputations, where a thesis was offered, interrogated, and defended using syllogistic reasoning, which required students to arrive at a true or inevitable conclusion given two propositions that were assumed to be true. These disputations were also intended to provide practice for examinations, which took on a similar format (Rait, 1912, pp. 142–146).

Graves (1919), an education professor at University of Pennsylvania in the early 20th century, asserts that although lectures at universities during the Middle Ages were "simply a slavish following of the text" and required diligent attention to the instructor, post-lecture debates served as a laboratory, forcing students to demonstrate and apply what they learned during the lecture and reflection. In a laboratory, conclusions would be based upon experimentation and evidence, and the same was true of the debates, although the evidence was primarily the works of Aristotle. Graves argues that the debates fulfilled a purpose not achieved in the lectures, "to afford some acuteness and vigor of

intellect, and, compared with the memorizing of lectures as a method, it served its purpose well" (pp. 445-446). In fact, the skills acquired in the debates were imperative for the students' graduation:

> When the student was able to perform the final art of "determining" as well as disputing, he was ready for graduation. This public graduating disputation was in these early days ordinarily called a "determinance" and the candidate a "determiner," but at the University of Cambridge he was known as a "commencer" and the public ceremony as a "commencement." It marked the formal graduation of the students and his reception into the body of teachers. This is the real origin of the word "commencement" as now used in the academic world…Later, the disputation became largely a formal argument or set speech by the candidate. It has been perpetuated in the omniscient and highly moral commencement addresses that were until recently exploited by choice members of the graduating class at colleges and universities, and the species is still extant in the mosaic combinations of the best thoughts of parents, teachers, and family preachers that proceed "out of the mouths of babes and sucklings" at our present day high school commencements. (p. 446)

The process of obtaining a Bachelor's degree was a lengthy affair, involving at least four years of training (unless money or title intervened), successful completion of the examination for a teaching license, and a public disputation where the subject was chosen by the candidate. However, the examinations were, to some extent, perfunctory. That is, the students knew for the most part the content of the exam. At Oxford, for

instance, the exam questions from each discipline were contained in small books of approximately forty to fifty questions, and the questions were handed down from generation to generation. Examinations were performed by faculty that the students chose themselves. It was expected that their exams would be similar and their treatment and the questions posed would be fair (that is, that no master's exam would be more difficult than another). Finally, if the student had successfully completed the public disputation (which was almost always the case if they were allowed to reach that point), they moved forward with the inception ceremony (Rait, 1912, pp. 148–151).

Higher education in the Middle Ages, primarily under the auspices of scholasticism, was fundamentally based on sameness. That is, given that truth and knowledge emanated from a limited number of sources that were thought to be fixed and relatively unassailable, the pursuit of knowledge was based on acquisition. Therefore, teaching of that knowledge was understandably based on a few methods of conveyance that were proven to be successful, and fit within the limited scope that knowledge was assumed to embody. As truth and knowledge were basically limited and the same for everyone, everyone was considered basically the same in relation to truth and knowledge, and therefore (again, understandably) in this exceedingly rigorous higher education environment of sameness, there were limited methods for teaching as conveyance.

However, in the late Middle Ages several elements emerged that started to fissure the concretized notions of truth and knowledge, which in turn affected the scholastic approach and higher education generally. Those specifically addressed here are humanism, the scientific revolution, and the printing press. The purpose, as mentioned

above, is to establish that the elements for a shift in teaching practice, and what was considered excellence in teaching, were in place as Europe transitioned from the Middle Ages to the early modern period.

Humanist Beginnings

Francesco Petrarca, or Petrarch, is generally considered to be the father of humanism and the Renaissance. Although he was trained in the scholastic educational environment of the Middle Ages, he would eventually rebel against it. As Fubini (2006) describes him, "Petrarch contrasted approved traditions with his own subjective truth, turning it against the scholastic quest for 'concordance' (in the sense of necessary harmony between the manifold appearances of reality and truth)" (p. 130). In the midst of the declining power of papal authority, and perhaps steeped in the epiphanies collected through his own scholastic pursuits, Petrarch often and pointedly illustrated contradictions between the expectations and intentions of current conventions and their actual results.

An example of Petrarch's ability to pinpoint the contradictions between perception and result is effectively illustrated in a letter he wrote to Giovanni Boccaccio, who was another prominent Renaissance humanist. Here Petrarch reflects on Boccaccio's experience of being treated by physicians when seriously ill, and is "shocked by the very paths through which that vulgar error had arisen in such a lofty mind; for God did all things and your noble nature. Doctors did nothing nor could they have, except what a chattering dialectician can do, one abounding in tedium powerless to cure" (Quillen, 1992, p. 179). Petrarch determines that doctors who are enmeshed in (or

perhaps indoctrinated into) Aristotelian methods are incapable of fulfilling the pragmatic obligations of their profession due to their theoretical intransigence.

Petrarch also laments in this letter the firm belief these doctors have in their capabilities, and that others have as well; a belief that often leads them to extend their expertise outside of the medical profession for which they have been (supposedly) trained and venture into the liberal arts. In the process, these doctors are guilty of confounding, or juxtaposing, medicine and philosophy. Quillen (1992) argues that the "manifest connection between medicine and philosophy helps to explain Petrarch's desire to articulate a definition of philosophy in opposition to the one prevalent in universities" (p. 184). Petrarch is articulating his belief that relying on textual, philosophical proof for conclusions that should be immersed in evidence and experience is inherently problematic. A state-of-affairs therefore exists where physicians are claiming expertise constructed from their belief that knowledge of Aristotelian theory has direct, applicable value for practice without any evidence to support the claim, and their authority of interpretation and application naturally flows from this knowledge of theory.

Petrarch's discontent with Medieval precepts concerning knowledge and knowing stretched across a broad (and often ambiguous) canvas but contained some central precepts: these precepts became the foundational tenants of the Renaissance thinking that was beginning to evolve:

1. Antiquity (Roman at first, and later to include Greek) produced better models for human existence than anything currently or since.

2. In order to reveal the knowledge of antiquity, the recovery and careful study of these writings was necessary, as well as the mastery of Latin (and often Greek).
3. To recover the lost *meanings* of antiquity, the texts needed to be analyzed using rhetoric, since understanding the effect of words in context was crucial to understanding these texts.
4. A new kind of education based on the ancient texts was needed in order to pursue and understand antiquity. (Rabb, 2006, pp. 31–33)

Rabb (2006) argues that these precepts were in turn focused on issues that became central to every facet of the Renaissance, and to the humanist movement in particular:

> the study of ancient sources, the competition between the active and the contemplative life, the interest in nature, the creation of a system of logic free of medieval dialectic, and in general the need to turn from immediate precedents to the distant past in an effort to improve education, morality, and scholarship. (p. 33)

An example of "turning away from immediate precedents," which for humanists is the work done by the scholastics, can be found in Petrarch's reproach of historical post-antiquity scholarship in his Preface to *De viris illustribus* (On illustrious men), a biography of 135 authors written by 4th century Church Father Jerome. Here, he states that "the bold and futile diligence of those who repeat the words of all other historians in order to appear to have omitted anything and, in so doing, facing contradictory sources, they only shroud the text of their history in hazy clouds of inextricable tangles" (Fubini, 2006, p. 129).

Petrarch is critical of the scholastic mindset while lamenting the fact that his era is one where nothing new is generated – and he believes that the way out, or the way forward, is through the study of antiquity. The humanist position was an odd attempt at intellectual and cultural "revolution" in that its ideas were firmly entrenched in the past rather than projecting forward into the future (Fubini, 2006, pp. 131–132). It also comfortably existed simultaneously with scholasticism as well as nominalism for more than 200 years (Rabb, 2006, p. 44). Humanism was an intellectual revolution that had difficulty displacing what had come before it.

This "backward-looking reform," as Rabb (2006) calls it, quickly made its way from Petrarch's home in Italy and spread across the rest of Europe. It began with Roman texts, but Greek texts also became increasingly available as Christians captured more lands that had been lost to the Ottomans, and as more scholars migrated to intellectual centers in Italy and elsewhere in Europe. The works of Plato were especially influential. As Rabb (2006) notes, "these imitations and evocations of the ancient world had far-reaching consequences for education, literature, the arts, religion, and political thought. And they remained an unshakeable model for the literate classes throughout the ensuing three centuries and beyond" (pp. 75-76). Pagan antiquity and Christianity slowly began to have equal footing for scholars in the early modern period.

The process of being a humanist, the study of humanity, was called *studia humanitatis*, and humanists were recognized as being encapsulated by this term. One of the more recognized "definitions" of *studia humanitatis* was provided by Kristeller in 1955:

> By the first half of the fifteenth century, the *studia humanitatis* came to stand for a clearly defined cycle of scholarly disciplines, namely grammar, rhetoric, history, poetry, and moral philosophy, and the study of each of these subjects was understood to include the reading and interpretation of its standard ancient authors in Latin and, to a lesser extent, in Greek…Thus Renaissance humanism was not . . . a philosophical tendency or system, but rather a cultural and educational program which emphasized an important but limited area of studies. (1979, p. 22)

With this definition as a starting, further examination humanism's impact on the early modern period, and on higher education, will be pursued in the following section.

Humanism and the Renaissance

Figure 2. A meeting of doctors at the University of Paris. From "Chants royaux," Bibliothèque Nationale, Paris. (Unknown, 1537, p. 27v)

The term "Renaissance"[1] was first used by Jules Michelot in 1858, and became firmly established when Jacob Burkhardt used the term in his 1860 work *The Civilization of the Renaissance in Italy*. The term was resilient because of its utility for describing a perceived transition between the Middle Ages and the beginning of the modern age. Fubini argues that Burkhardt only chose the term Renaissance, as Burkhardt himself declared, "for lack of a better one," and the notion of antiquity's rebirth did not adequately capture the complex social, cultural, political and ideological characteristics of this movement away from the Middle Ages. There seems to be a tacit agreement among historians that the dividing line between these two eras is somewhere around 1500 (Rüegg, 1992, p. 442), but entry into the early modern period was different for different countries, depending upon what geographic events were occurring between the late 15th and early 16th centuries. There were also many elements of the Middle Ages that carried over to the early modern period, making the differentiation between time periods even

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[1] Note: I am using the terms "Renaissance" and "early modern" interchangeably to signify the period of time that directly breaks from and follows what is considered to be the Middle Ages. The use of this terminology is somewhat contested – for instance, Paul Grendler is one notable scholar critical of the term "early modern" (Grendler, 2006) – although for the purposes of this dissertation this interchangeability will not effect results, as the primary concern is the break between periods of time and the reasons for the recognition of this break.

more difficult to determine (Nauert, 2006, p. 3). Thus, the beginning of the early modern period is fairly fluid (P. Johnson, 2000, p. 5).

Although an examination of the Renaissance period can take one in a variety of directions, the most appropriate lens to begin examining higher education during the Renaissance is widely considered to be humanism. The term "humanism" was used by the scholastics, and is associated with a teacher of classical literature. However, the term took on additional significance as it was transferred to the Renaissance period (Dresden, 1968, p. 215). Humanism was an epistemological and existential phenomena, or approach, that appeared at the convergence of several elements. The discovery of, search for and focus on classical texts comprised one element, but there were a host of others. As Rüegg (1992) notes about the *conditions* for the emergence of humanism:

> the rise of humanism occurred during a period of severe political and economic crises, the Great Schism, the Hundred Years War in the west, the decline of the imperial house and the conflict for supremacy among the various territorial powers in the Empire itself, in Burgundy, and in Italy, and the Turkish menace in the east. All these took place against the background of a cessation of economic growth, financial crisis, famine, and, not least, the Black Death. The result was a deepened sense of existential menace. (p. 445)

This convergence yielded dividends, as "the crisis had penetrated into the understanding which individuals had of themselves and of the world" (Rüegg, 1992, p. 445).

This convergence of events, coinciding with the re-emergence of texts that focused on the primary place of the human being for understanding the physical and the

transcendental world, necessarily re-focused the scholarly lens. In the later Middle Ages, this manifested as a new approach to the human subject as "spiritual *individual*," rather than orienting an understanding of existence on a category; as a member of the category "community," for instance (Burckhardt, 2012, p. 80). "Interiority" became central for any discussion (at least scholarly discussions) of the human condition. This at first produced a "divided self," as the early humanists had to carefully navigate between what and how they thought, and what and how the church expected them to think. The church had owned the definition for the totality of the person for hundreds of years, and at this time the hold was beginning to slip (Rüegg, 1996, p. 446). As Dresden (1968) notes, "The *studia humanitatis*…led to an awareness of what man should be. By means of study, the nature of man, what man truly is, was being discovered and experienced" (p. 231).

Martin (1997), in his article "Inventing Sincerity, Refashioning Prudence: The Discovery of the Individual in Renaissance Europe," is particularly interested in the humanist focus on self-understanding during the Renaissance, and finds that there is a notable struggle for the emergence of self that is palpable in the texts produced during this time period. As the core of a person's identity moved inward in the sixteenth century, the experience of self became a divided one as the individual was "forced to erect a public façade that disguised his or her convictions, beliefs, or feelings. In the Renaissance generally and the sixteenth century in particular, we see a new emphasis on inwardness or the idea of an interior self as the core of personal identity" (p.1322). Although this was also present during the Middle Ages, Martin suggests that there was

something different about its manifestation during the Renaissance. Men and women experienced a private self separated from their public persona, differentiating between "the interior self on the one hand and the expressions of one's thoughts, feelings, or beliefs on the other" (p. 1323). However, Martin believes that it is through recognizing this division "we can both better grasp what has come to be called the Renaissance discovery of the individual along with the new sense of subjectivity (both in the sense of ownership of and agency behind one's speech, thoughts, and actions) that it entailed" (p. 1323). Tobriner (1968) highlights this notion in her introduction to Juan Luis Vives' *Introduction to Wisdom*. Tobriner argues that for Vives, who was one of the foremost educators of the early modern period, "order in the world begins with order in, and through, the self" (p. 53). Order was imperative for Vives' because of its relationship to discipline and the formation of young men through education.

Humanism, which in many ways represented, as Martin calls it, a "new sense of subjectivity," was not so much a movement as it was a process – a process of educating the whole person. The humanists believed that human beings had become alien to themselves. The *studia humanitatis* determined that the analysis of language, specifically the language of antiquity, was the appropriate educational path for re-introducing human beings to themselves. Much like Charlemagne argued half a millennia earlier, humanists believed that given appropriate instruction an individual could then educate himself in order to become a morally responsible human being. This would be possible through the study of language directed toward the objective of reading, analyzing, and finding meaning in the texts of antiquity, as these were the texts that actually contained meaning

worth studying. With the accomplishment of the mastery of language, participants in the *studia humanitatis* could uncover these models for moral education and action in the classical lives and texts of ancient authors such as Cicero, Aristotle and Augustine. Although some humanists focused on emulation of the language in classical texts, others (and Erasmus most notably) focused on the benefits of the *process* and direction of the investigations (Rüegg, 1992, p. 446-448), a process that would not only teach a refined language, but "educate them for life" (Rüegg, 1996, p. 29).

This was in direct contrast to the direction of scholastic education during the Middle Ages, which was pragmatically oriented on preparing students for professional lives or scientific studies. Scholastics focused on the preparation necessary for students to become doctors, lawyers or theologians which involved rigorous instruction in logic, natural philosophy, medicine, law and theology using universally accepted texts (Kallendorf, 2002, p. vii). This is in stark contrast to the intention of humanist educators, who oriented instruction on leadership and civic responsibility so that students would later take prominent roles in society. Rather than transmit a universally accepted curriculum that would lead to a specific professional role in society, the desire of the humanists was, as Kallendorf (2002) notes, to “create a particular type of person: men and women who would be virtuous because they had read and identified with powerful examples of classical virtue; who would be prudent because they had extended their human experience into the distant past through the study of history; and who would be eloquent, able to communicate virtue and prudence to others, because they had studied the most eloquent writers and speakers of the past” (pp. vii-viii).

It is also important to understand the tremendous impact of the humanist agenda on universities and faculty – and this agenda had both an effect and an affect. Humanists were not focused on the *vita contemplativa*, knowledge that had value in-and-of itself, but rather on the *vita activa*, or knowledge that was directly applicable to the community. Their aim was to "achieve the good of communities through 'social customs and mental culture' not social and political engineering" (Kallendorf, 2002, p. viii). The language and literature of antiquity was the perfect instrument for this purpose because of the effect it had on the individual, so much so it was called "*bonae litterae* ('good letters') or *litterae humaniores ('more human letters')*. They were letters that made you morally better and more civilized." Those who taught human letters were called *humanistae*, the word upon which "humanism" was constructed (Kallendorf, 2002, p. viii).

The orientation on the human as individual member in civic life led to a vital shift in higher education. As Rüegg (1996) argues, "what was a welcome by-product of the teaching and learning of intellectual methods in the medieval university became in the sixteenth century the main task of the university, namely the training of clergymen, priests, physicians, lawyers, judges and civil servants" (p. 30). Humanist higher education instruction was provided by faculty that perceived it as their duty to train those that would be useful to society, rather than simply transfer information from experts to students. Consequently, humanists in higher education saw *themselves* as useful to society by training those that would themselves become useful. The beginning of this training involved teaching their students to become linguistically and historically capable

of studying ancient texts in such a way that they could mine these sources for answers to contemporary problems (Rüegg, 1996, p. 30).

The humanists approach toward the texts of antiquity, regardless of the language (or languages) the texts appeared to them in, was one of detachment, with perhaps an attempt at objectivity (Mazzocco, 2006, p. 12). This detachment was necessary in order to step back from the texts and bracket the "sacredness" in which they were perceived, placing the text in its historical context, and making possible linguistic interpretations that derived the meaning of the texts as well as new understanding that made possible its contemporary validity. As Mazzocco (2006) notes, "by taking a detached view of antiquity, the humanists were able to comprehend the socio-political implications of the *studia humanitatis*. They learned, by examining the works of classical authors, especially Cicero's, that the *studia humanitatis* advocated the pursuit of the common good and that they fostered involvement in the civic life of one's community" (p. 12). Citing the work of Garin (1975), which has been very influential in examining the distinct attributes of Italian Renaissance humanism, Mazzocco emphasizes that humanism is not some sort of "monastic withdrawal," but rather (as described by Leonardo Bruni) characterized by a "Socratic devotion to his fellow-citizens" (p. 12).

There are other examples of this more practical, community oriented writing. For instance, both Leonardo Bruni (*De Militia*) and Niccoló Machiavelli (*The Art of War*) based ideas concerning the construction of a citizens militia on Roman sources, and this became highly influential throughout Europe. Justus Lipsius' dialogues on the life in Rome's civic militia (*De Militia Romana Libri Quinque*) included expositions of

organization, tactics, weapons, and techniques. His work established ideas concerning the military that were equally influential, and his political writings, which were based on Tacitus and Stoic philosophy, were even more widely read and copied (Rüegg, 1996, pp. 30–35). As Mazzocco (2006) notes, "they sought perfection by tending to public affairs" (p. 12).

The German educator and religious reformer Philipp Melanchthon was another humanist that believed a return to the sources of antiquity should lead individuals to ethically responsible and engaged lives. Melancthon believed (and taught) that the *humanae litterae* should focus on a philosophical and rhetorical humanist education that yields graduates that can handle public affairs adeptly and ethically, while simultaneously preparing them for further (theological) study. From the theological perspective, there was another benefit to the study of original texts, in that when the language is pursued, the meanings of words and the essences of the texts emerge. As a humanist, Melancthon argued that when individuals focus their attention on the sources they can fully pursue an understanding of religion (Rüegg, 1996, p. 35). Pico della Mirandola suggested several years earlier that an interesting effect of individually approaching religious texts in the language they were originally published in (Hebrew, Greek, Arabic, etc.) is that it is possible for an individual to translate them into Latin in several different ways (Dresden, 1968, p. 34). della Mirandola's observation was humanist in nature, in that it took note of the effect of and opportunity for the individual in the process, while also providing some legitimacy to those interpreting religious texts in different ways.

Humanism's analytical disposition provided a platform to loosen the hold of scholasticism on early modern intellectuals, and this new "freedom" trickled down to civic leaders and eventually to the majority of the educated populace (Grendler, 2006, p. 2). The inclination for the *vita activa* gave humanism a natural cohesive bond to all levels and facets of education. Grendler (2006), citing Kristeller's (1944) argument that humanism was both a textual revival as well as an educational movement, emphasizes that humanism was prevalent at all levels of education as teachers of grammar and rhetoric, or they served as secretaries to royalty or cities. Given humanists educational presence, the "opinion so often repeated by historians that the humanistic movement originated outside the schools and universities is a myth which cannot be supported by factual evidence" (Grendler, 2006, p. 3). Humanism then must be seen as a "cultural and educational program" and not merely as a "philosophical tendency," and the ubiquitous presence of humanists within these institutions led to their fairly rapid ascension within and outside of education (Grendler, 2006, p. 4).

As Rüegg (1996) emphatically states, "humanism conquered the universities," and did so in fairly short order (p. 38). Once the humanists gained a foothold within the universities during the Renaissance they worked relentlessly to expand their influence. The humanists created textbooks and curriculum, and later established chairs, gardens, museums, publishing conduits and libraries, all in order to "demonstrate philosophically and theologically the value of humanism for church and state and to translate it into practice" (Rüegg, 1996, p. 38). However, even though humanism flourished within the university structure, it was somewhat of an indirect process. Although humanities

instructors – those that specialized in linguistics, philology, rhetoric, grammar and poetry – began to procure faculty positions within universities (primarily Italian universities at first), they were not necessarily the agents of change. Rather, existing professors within university departments began to utilize humanist methodology, skills and critical disposition to transform their disciplines from within. The vast majority of innovators in the different disciplines had humanist training, such as Andreas Vesaluis and Giovanni da Monte at the University of Padua in medicine, Galileo Galilei in mathematics at the universities of Pisa and Padua, and Martin Luther in theology and Philipp Melanchthon in theology and science at the University of Wittenberg (Grendler, 2004, pp. 12–13).

However, in time the original humanist impetus that yielded innovation and change began to slow – instead of asserting the relevancy of the individual in the intellectual enterprise, humanists became more and more concerned with the justification of their philosophy, as Rüegg (1996) puts it, through the "application of objective results" (p. 38). By pulling texts out of context and attempting to direct them toward specific contemporary aims, or through the attempt to define a unity in knowledge generally, they were changing the meanings of texts to serve their purposes, much as the scholastics had done during the Middle Ages. As humanists and humanism became normative rather than exceptional, there was a movement to formalize humanist knowledge and a humanist education. The more established humanism and humanists became, the further the humanist ideal diverged from the creative and individual experience entailed in deriving meanings from the process of discovering, exploring and analyzing original texts (Rüegg, 1996, pp. 38–39). The energy of "rebirth" diminished as the Renaissance and

humanism became common – in essence, the Renaissance became less of a Renaissance.

Despite the seemingly inevitable humanist movement toward academic formalization, as well as stagnation due to the elements noted above, scholars such as Grendler (2006) believe that the pivotal development in Renaissance scholarship has been "the recognition that humanism was the essential element of the Italian, and later the European, Renaissance. Humanism was an intellectual movement simultaneously ethical, pedagogical, philosophical, rhetorical, and scholarly. It was always based on reading the classics of pagan and Christian antiquity. But it also had profound consequences for the contemporary world" (p. 2). By loosening scholasticism's hold on education and knowledge, humanism provided a forum for innovation that inspired public leaders as well as the majority of men and women being educated during the Renaissance.

The Scientific Revolution

Figure 3. Anatomical theatre at the University of Padua, completed 1594 (Tejerina, 2011, p. 75)

For the majority of histories of the scientific revolution written in the 20th century, at least before 1980, there was a fairly common understanding among authors that universities were not a positive influence on the advancement of what we now consider to be the sciences. This was in part due to what historians found to be a consistent view among the participants of the time period working to advance what we would now consider to be science. If the narrative of universities portrays them as having a significant role at all during the scientific revolution, it is usually as the inhibiting Goliath to the scientists' David. More recent histories of the scientific revolution are quite divided on the topic of universities when they are considered at all. The historians approach to the role of universities in the scientific revolution is often to portray the institution as oppressive and inhibitive, but also at times depicts them as having a positive and influential role.

Some qualifications need to be introduced before examining universities during the scientific revolution, which is considered to approximately be the time period between (and including) the lives Nicholas Copernicus, 1473-1543, and Isaac Newton, 1642-1727. The first is the designation "scientific revolution" itself, for which there are varying arguments concerning its validity. However, the discussion here will work within this general time frame and designation in order to examine the literature as well as the assumptions of that literature. Second, it should be noted that the terms "science" and "scientist" are also generally recognized to be problematic when used in the context of this time period. When using these terms, it should be understood that modern conventions are being imposed on a time period that does not necessarily recognize them.

"Science" may refer to natural philosophy, anatomy, medicine, astronomy, mathematics, physics or botany, and "scientists" refers to any person considered to be operating within these disciplines.

The third qualification about the terminology is closely related to the second, and is especially notable when discussing universities during this time period. As Schmidt-Biggemann (1996) notes, of the four classic faculties in the early modern university – theology, law, medicine and philosophy – each in some way was considered to be the most important science at a specific juncture in the early modern period. Prior to the Reformation, theology was far and away considered the leading science within academia. After the Reformation, law was considered to be the most important science (p. 489). At the same time, throughout the early modern period philosophy (even thought it was the lowest of the faculties) gave the faculties an internal coherence and "determined what rational knowledge was" (p. 500). None of these faculties, of course, would be considered scientific in the modern sense. Similarly, Cunningham (2000) argues that the term "science" had practically no meaning in the early modern period, and that the more accurate designation, natural philosophy, was inseparable from a religious disposition. Imposing what is now commonly understood as "science" on the scientific revolution taints any effort to compare early modern and contemporary disciplinary conceptions – however, this difficulty will be bracketed for the sake of simplicity and in order to retain the focus on interpretations of the influence of universities. With these qualifications in place, it is appropriate to now explore the critical landscape that addresses this connection between the scientific revolution and universities.

Universities as obstructionist. Ornstein's (1913) *Role of Scientific Societies in the Seventeenth Century* was perhaps the initial elocution of the more critical perceptions of universities during the scientific revolution. In this work she examines why scientific societies emerged during the seventeenth century, and she determines (among other reasons) that given the disposition of universities toward the new approaches to science emerging during this period these societies became necessary for the advancement of those sciences. For Orenstein, the firm grip of scholasticism and the prevalence of Aristotelianism greatly inhibited the propagation of mathematics and experimental research. She exhaustively sites examples from universities across Europe, illustrating how scientists needed to leave the confines of the university to pursue research, or in several cases even seek the protection of benefactors to thwart university persecution (1913, pp. 247–291). The thrust of her work is that university hostility was a major factor in driving scientists to form their own communities through scientific societies. Given her findings, she concludes that "with the exception of the medical faculties, universities contributed little to the advancement of science" (p. 298).

Westfall's (1977) position concerning universities during the scientific revolution is also foundational and influential for histories of this time period. On Westfall's account, the perception that universities in the scientific revolution were somehow centers for scientific research is an imposition of contemporary conditions on the early modern period. This perception is also caused by a "carry over" from their prominence and stature during the Middle Ages; a stature that was not actually present during the early modern period. Westfall emphatically states that universities were not the center of

scientific activity, and that the overt traditionalism of universities caused them to be "the principal centers of opposition to the new conception which modern science constructed" (p. 105). Westfall goes on to demonstrate how stalwarts of the scientific revolution such as Galileo and Newton either had to leave the university to properly continue their research, or stayed within its confines but removed themselves from its activities.

Harrison's (1998) examination of the Protestant movement includes the intersection of universities and science, with a focus on the hold that that ancient texts had on higher education. He offers the example of John Genes, who was ostracized from the Royal College after his criticisms of Galen. There were even financial penalties incurred for "infidelities to Aristotle" up until the early seventeenth century. These impositions were not well received by scientists of the age. For instance, "John Hall urged his contemporaries, in 1649, to shake off the 'implicit faith' which bound them to the second-hand knowledge of written authorities," and William Bacon pleaded with his contemporaries in medicine to shed their superstitions (p. 101). Harrison is entirely critical of the intransigence of universities concerning the relevance and prevalence of ancient texts, and this was especially evident in medicine, noting that "the seventeenth-century education of physicians was based almost entirely on the writings of ancient authors, and the recent innovations in anatomy and physiology had by this time made little impact on the university curriculum" (p. 102).

Biagioli (1993) is primarily focused on what he considers to be the stifling hierarchy at universities that prevented mathematicians from gaining a solid foothold, and uses this as a backdrop to explain the eventual departure of Galileo Galilei. For Biagioli,

the hierarchical rigidity was due to entrenched epistemological foundations that prevented the incorporation and eventual ascension of mathematics. On Biagioli's account, the work of Copernicus had faced the same difficulties when it attempted not simply a "*mathematical* computational model but also a *physical* representation of the cosmos." This hierarchy was supported by scholastic views on the disciplines, one that subordinated mathematics to philosophy and theology. This academic caste system meant that mathematics, residing on the lower rungs, was unable to defend itself against the delegitimizing efforts of the disciplines on the higher rungs (p. 5-6). Biagioli argues that there was an epistemological and hierarchical bifurcation, where "philosophy, it was held, dealt with the real causes of natural phenomena, while mathematics could only deal with their 'accidents,' that is, with their quantitative aspects" (pp. 105-106). On Biagioli's account, Galileo's move to the Medici court was motivated by a desire to escape the disciplinary, hierarchical constraints of both professional status and salary found at the universities.

Although Rudy (1984) generally agrees with the sentiments above, he also adds that it was not just the curriculum that conveyed from universities of the Middle Ages, but the methods of instruction as well. Rudy's analysis suggests that the newer texts were suspiciously absent from the universities, and experimentation was rarely used for instruction. Even though universities were certainly aware of the changes in science happening around them in the early modern period, very few actually incorporated them. On Rudy's account, only a small number of universities such as Leyden, Utrecht, Halle, Gottingen, Edinburgh and Glasgow, and to some extent, Vienna did make some

meaningful adjustments, but this was not until the eighteenth century (pp. 77-78).

Obstruction reconsidered. The perspective of a university as an obstacle to the scientific revolution in the early modern period, or more generally as an obstacle to change generally, is certainly comfortable one from the vantage point of the twenty-first century. It seems reasonable that the exodus of so many great scientific minds should point to inhospitable conditions within universities. It also seems reasonable that Aristotelians and scholastics would be hierarchical and intransigent given their long history dating back over five hundred years. The perception that the any shifts in understanding of the body, world and solar system would be resisted if not outright rejected given the prominence and disposition of the scientific faculty in residence also seems reasonable.

However, there is also a significant contingency of historians who do perceive seventeenth century higher education institutions as having a positive impact on the scientific revolution. These authors use different methods to suggest that our inclinations toward perceiving universities during this time period should be resisted. It should be noted that, as Dobbs (2000) argues, it could be that the problem of interpreting the heroes of the scientific revolution stems from the concept of the scientific revolution itself. Although the existence of the scientific revolution is not a question pursued in this dissertation, Dobbs' insights are valuable for arguing the importance of universities during this time period.

Dobbs believes that an underlying problem with interpretations of this time period is that we believe that these scientific heroes thought in the same way we do, and that is

not the case. In the context of their own time period, these scientists would understand the possible implications of their work for the existing foundations of knowledge, but not in the way that we now perceive the obvious consequences. They did not perceive dissonance between their "metaphysical and religious commitments" and their study of nature, or between those commitments and their beliefs in "astrology, alchemy, magic, the music of the spheres, divine providence, and salvation history" (Dobbs, 2000, p. 34). Although many of these natural philosophers were vehemently opposed to university culture and their adherence to Aristotle (such as Francis Bacon), there was a "rich variety of university culture, where Aristotle was still at the forefront of the prescribed curriculum but where Bacon, Descartes, Locke and Newton himself were appropriated and studied almost as soon as they published" (Dobbs, 2000, p. 33). Dobbs does not perceive the scholastic intransigence and rejection of oppositional theories that other authors have, but rather an institution that was quite capable of being the "nurturing cradles of intellectual life." Perceptions of university activity, therefore, need to be reevaluated given the major role played by the inculcation of Aristotelian thought patterns during this era (p. 34).

Porter (1996) argues that the scientific revolution was "indisputably a product of the university" in at least three respects. First, the overwhelming majority of those making contributions to the scientific revolution were products of a university education (p. 542). This is also asserted by Gasciogne (1990), who finds incongruity in the proposition that the very place where the vast number of the scholars who influenced the scientific revolution received their education should also be the place that inhibits their

research and the advancement of science. In fact, Gasciogne has determined that more than 80% of the European scientists between 1450-1650 included in the *Dictionary of Scientific Biography* were university trained, of which approximately 45% held university posts (pp. 208-209). Consider, for instance, Table 1 that includes some of the major thinkers associated with this period. Porter (1996) also notes that in later centuries, nowhere near the same number of "scientific achievers" attended universities, indicating that universities during the scientific revolution were particularly adept at turning out great thinkers (p. 543).

Table 1

Early modern scientists

"Scientist"	Lived	University(s) as Student	University(s) as Professor	Discipline(s) Known For
Nicolaus Copernicus	1473-1543	Universities of Krakow, Bologna, and Padua	none	Astronomy, mathematics
Phillip Melanchthon	1497-1560	Universities of Heidelberg, and Tubingen	University of Wittenberg	Theology, Astronomy, Mathematics
Andreas Vesalius	1514-1564	Universities of Louvain, Paris, Leuven, and Padua	Universities of Padua, Bologna, and Pisa	Anatomy
Tycho Brahe	1546-1601	Universities of Copenhagen and Rostock	none	Astronomy
Francis Bacon	1561-1626	Universities of Cambridge, and Poitiers	none	Philosopher, scientist

"Scientist"	Lived	University(s) as Student	University(s) as Professor	Discipline(s) Known For
Galileo Galilei	1564-1642	University of Pisa	Universities of Pisa and Padua	Astronomy, Physics, Mathematics
Johannes Kepler	1571-1630	University of Tübingen	none	Mathematics, Astronomy
William Harvey	1578-1657	Universities of Padua and Cambridge	none	Anatomy (circulation)
Renee Descartes	1596-1650	Universities of Poitiers and Leiden	Universities of Franeker and Utrecht	Mathematics, Philosophy
Blaise Pascal	1623-1662	none	none	Mathematics, Physics
Robert Boyle	1627-1691	none	none	Physics, Chemistry
Christiaan Huygens	1629-1695	University of Leiden, College of Orange in Breda	none	Mathematics, Astronomy, Physics
Isaac Newton	1643-1727	Cambridge University	Cambridge University	Mathematics, Physics, Astronomy
Gottfried Leibniz	1646-1716	Universities of Leipzig and Altdorf	none	Mathematics

Second, a high percentage of the great names of early modern science made their careers as professors in universities, which demonstrates that many either believed that the environment was not as oppressive as the typical criticisms suggest, or they had nowhere else to go (Porter, 1996, p. 544). Their reasons notwithstanding, employment for men of science both in and outside of universities increased rapidly during the early

modern period (Porter, 1996, p. 545). Third, universities provided the materials necessary for "scientific pursuits which might otherwise have been unavailable or beyond the pockets of individuals." Libraries, gardens, natural history collections, telescopes and observatories, laboratories and dissection facilities were made available for students to practice their craft and for professors to perform their research (Porter, 1996, p. 547). It also served as a meeting place for scholars to gather, and therefore as a conduit for scientific discussion and for the dissemination of work.

In a complementary fashion to Gasciogne, Grendler (2004) demonstrates that during the early modern period the universities of Europe would generally see a tremendous amount of growth, productivity and innovative research. About 400 years after the first universities were founded in Paris and Bologna, there were twenty-nine universities spread throughout Europe. In the 15th century, twenty-eight new ones were created, with another eighteen added between 1500 and 1625. Tripling the total number of universities in a relatively short period of time is another indicator that these institutions were both needed and wanted in this era (pp. 1-3). This tremendous growth continued until, by the end of the 18th century, there were approximately 143 universities in Europe and Eastern Europe, with the highest concentrations in the German Empire (34), Italian countries (26), France (25), and Spain (23) – close to a 500% increase over the number of universities at the end of the Middle Ages. This number does not include the numerous universities that disappeared, or institutions that merged with other universities during this time (Frijhoff, 1996, p. 75). This growth and popularity suggests that these institutions were not the aging dinosaurs in opposition to the advancements of

their age that is depicted in many histories of the scientific revolution.

Henry (2001), in a sense, takes the middle ground between the historians that perceive universities as an obstruction and those insisting on a reinterpretation of their place in the scientific revolution. Although he does agree that universities demonstrated significant inertia and were slow to change their curriculum and teaching methods, he also argues that "the latest ideas about the natural world and about scientific method were being taught" (p. 47). Henry agrees that the strict adherence to a separation between mathematics and the natural philosopher was a factor in this inertia, but ultimately the "intellectual status of mathematics increased within universities just as it did in the eyes of princely patrons" (p. 47). This was especially true in institutions such as the University of Wittenberg and throughout Germany where Melanchthon's pedagogical reforms were taking hold. In general, the demonstrable utility of mathematics led to increased opportunities for teaching it across Europe. The experiential approach indicative of newer scientific methods was already prevalent in medical faculties and institutions during the early modern period – where the revolution in astronomy was taking place outside of universities, the revolution in the life sciences was thriving in the university context (Henry, 2001, pp. 47–48).

The tremendous resources provided by universities during the early modern period – intellectual, material and financial – as well as the tensions inherent in the process of obtaining those resources should not be underestimated. The vocational aspects are perhaps the easiest to perceive at face value. As mentioned above, many of the scientists during this period were employed by universities. However, those that left

were vying for the same resources as those that remained, so as the various individual scientists, associations and universities competed for these limited resources the epistemological tensions between scientists and universities were heightened (Feingold, 1991, p. 46). There was also competition from the formation of new colleges funded by private benefactors and designed to provide free education to the public, or established by local governments to provide a knowledge hungry populace with an alternative to traditional universities (Feingold, 1991, pp. 46–50). Even when universities chose to support new scientific endeavors, they could not compete with the resources available through private benefactors (M. Baldwin, 1995). In short, it is overly simplistic to conclude that tensions between new scientific methods and university faculties were solely based on intellectual differences.

The common challenge by many contemporary and early modern scholars, that the dominance of Aristotelian and scholastic intellectual dispositions was an anathema to changes in science, also has its difficulties. In fact, this intellectual foundation could be considered a tremendous resource for the burgeoning new sciences. Huff (1993), when examining the differences between European intellectual history and similar movements in China and the Muslim world, asserts that this adoption of the Aristotelian canon and other texts emerging from antiquity were the foundation for European dominance in the natural sciences, which was in turn the foundation for the scientific revolution. These works were not "taught secretly, surreptitiously, or only in the privacy of an individual's home. Nor did they have to be taught in the guise of religious traditions derived from Scriptures," but rather were embraced with an openness that is contrary to the usual

depiction of university intransigence (p. 187). With the intellectual movements sparked by the adoption of ancient texts, "the West took a decisive (and probably irreversible) step toward the inculcation of a scientific worldview that extolled the powers of reason and painted the universe – human, animal, inanimate – as a rationally ordered system" (p. 189). It is Huff's argument that it was in this environment, which extolled reason, that the great scientists of the scientific revolution emerged.

Huff further argues that the adoption of ancient texts, which began in the Middle Ages, led to definitive and rational methods for addressing naturalistic questions. These methods were part of the critical instructional methods modeled by the university professors or masters, who included a summary of major questions, review of the original treatises, and disputation. This use of the literature from antiquity "resulted in a concerted form of skeptical probing of a large set of questions in the natural sciences – physics, astronomy, cosmology, mechanics, and so forth" (p. 151). In Huff's interpretation, these questions were not constrained or obstructed, and "it is hard to imagine a more concentrated diet of scientific questions about the natural world and how it works. . . . These inquiries set the highest standards of intellectual investigation" (pp. 151-152). The effect of the serious and concerted effort to incorporate the texts of Aristotle, as well as the methods of Aristotelian investigation into nature, led to a more "disinterested agenda of naturalistic inquiry" within higher education institutions and "thereby laid the foundation for the breakthrough to modern science" (p. 152). For Huff, the very system that is so criticized as being an obstruction to modern science actually provided its foundation, and was directly responsible for the scientific revolution that

happened in Europe; but *not* elsewhere in the world.

It should also be noted that the departure of top scientists from the universities highlighted by critics of the overall university disposition toward the new forms of scientific inquiry was not something these institutions took lightly. As Pedersen (1996) explains, many universities created new facilities (particularly for astronomy) in order to try and stem this "mutiny." However, these new facilities could not compete with the resources and investments of either private benefactors or public entities. This in turn led to a separation between teaching and research, first in astronomy and later in other disciplines, where teaching still remained in the universities but the research was conducted elsewhere (pp. 473-474).

The perception of an overarching reluctance of universities to change in the face of the new science also needs to be carefully examined. It is a fairly common conception that the academic foundations that carried over from the Middle Ages were relatively stable, as they did provide for an environment that fostered considerable institutional growth and development. There was considerable reluctance on the part of universities to relinquish the symmetry and comprehensiveness provided by the Aristotelian system, which was effective as a coherent system for understanding and interpreting the world. However, several authors suggest that university professors still utilized some autonomy, at least in the sciences, to choose epistemological foundations and methods in their classrooms (Barker, 2000; Rudy, 1984; Westman, 1975). For instance, Melanchthon and his disciples at University of Wittenberg were instrumental for integrating Copernican mathematical constructs into astronomical debate and instruction. This was neither a

story of the oppressive university excluding any external voices nor one of rapid adaptation. Rather, Melanchthon and his fellow astronomers at Wittenberg *considered* the theory and mathematics of Copernicus and adopted the parts that made sense while they transitioned the new concepts into the context of existing ones.

As noted above, as the humanists became more mainstream within higher education, the more entrenched and further removed they became from the open and individualized focus of the original humanist conception. Rüegg argues that it was actually a humanistic countercurrent in the universities that kept the "new sciences" from gaining ground in the classrooms. Feingold (1991) further suggests that criticisms of university intransigence by those advocating the new sciences in the early modern period (generally from scientific societies) may have emanated from a competition between the humanistic and scientific "world views," and was not necessarily a rejection of antiquity. It was more a clash of different conceptions of knowledge; an epistemological conflict, perhaps ultimately motivated by monetary concerns (p. 56).

The critical mindset imparted by humanism was imperative for changes in universities and scholarship, including within the sciences. For instance, Andreas Vesalius was educated in a humanist fashion before producing a translation of Galen, whose ideas he verified through his own dissections. Professors of medicine such as Niccolò Leoniceno, Thomas Linacre and William Cop were often trained by humanists and later taught from a humanist perspective as well as translated important ancient medical text. Phillip Melanchthon cited the works of Erasmus as a highly influential guide for connecting theology back to original texts, which was important for his

leadership in educational reform at Protestant universities (Rüegg, 1996, pp. 33–39). Galileo Galilei, who taught at the Universities of Pisa and Padua, also had humanist training. The humanist mindset slowly but ineluctably permeated the university, increasing the humanist presence in professorships and chairs, syllabi and textbooks so that published works would demonstrate the humanistic ideal of science and scholarship (Grendler, 2004, pp. 12–13).

The new sciences also made it into the curriculum of universities through "back channels" that did not alienate the Aristotelian sensibilities of the faculty. For instance, mathematics professors throughout Europe disseminated novel precepts by integrating the latest work in subjects such as optics and astronomy under the guise of applied mathematical subjects such as ballistics and navigation (Brockliss, 1996, p. 592). It was also often the case that topics and techniques that were not taught openly in the classrooms were instead taught by private tutors supplied by and/or funded by the universities (Brockliss, 1996, p. 618). Although the new sciences were not necessarily addressed directly in the classroom, new knowledge often found a way to make it to burgeoning scholars seeking to practice and improve their craft within universities.

Another example of the adaptability of universities was the short-lived but fairly rapid adoption of Cartesian epistemology and methodology in European universities, and the debates surrounding that adoption, which led to more mechanistic approaches to scientific problems as well as demonstrated an openness to change (Gascoigne, 1990, pp. 210–229). Although universities may have been slow to accept new sciences and methodologies as they emerged, when they did accept new ideas it helped to convey

legitimacy and respectability, and supported the scientific changes by providing a stable environment for instruction and material resources (Gascoigne, 1990, pp. 245–248).

University purpose and scientific research. Regardless of the way the tension between universities, individual scientists, and the scientific revolution itself is perceived, there was a subtle yet discernable impact on the way that university education was conceived and constructed during this time period. Since the Middle Ages the Aristotelian epistemology had provided a coherent framework not simply for knowledge (and knowledge construction), but also for the training of scholars within the higher education setting. The creation of new scientific constructs during the scientific revolution, and the epistemological challenges that were inherent in these creations, initiated the idea of both the autonomy of science and the hierarchy of the disciplines. Instead of entering higher education to simply become the "general scholar" which was required to become proficient in the entire curriculum (as was the case during the Middle Ages), there emerged a type of scholar that put science first and viewed it as a vocation in itself. The divergence between those focused on science and those still entrenched in the idea of the general scholar exacerbated existing epistemological tensions that emerged during the early modern period (Feingold, 1991, pp. 53–54).

When universities are covered in the literature on the Scientific Revolution, the focus on how they did or did not influence scientific production and research may be a bit myopic, and missing the mark. As Henry (2001) states, "it should be borne in mind that, throughout this period, the function of the university was to teach. The sites for new research were the courtly academies, the Royal Society, or the private house of a

dedicated individual" (p. 48). As noted above, instruction included a heavy initial concentration on the trivium of grammar, logic and rhetoric as a preparation for the quadrivium of astronomy, arithmetic, astronomy and music. The constant lecturing, recitation and disputation in the major areas left little time or space for universities to make major contributions to scientific research, and this was not there focus. As Henry (2001) and others note, the criticisms of universities by some of the well known scientific minds such as Bacon, Galileo, Descartes and Boyle make it clear that the university curriculum and pedagogy was a major source of dissatisfaction for these students (pp. 48-49). And yet, they were for the most part all products of a university education.

Brockliss (1996) argues that teaching was the primary function of the university when he states that,

> it is unfair to judge the university's cultural role simply in terms of its originality. The universities were primarily teaching institutions. Professors were not expected to advance knowledge but package it in a convenient form for mass consumption. The early modern university could only be dismissed as a cultural dinosaur, if it could be shown that the curriculum was moribund and that students were not kept abreast of current intellectual developments. This, however, was far from being the case. (p. 617)

Notably for Brockliss, and often overlooked, is that the affect of the execution of this function is that universities became agents of "cultural transmission, and in this guise it provided an essential service" to the aims of the scientific revolution. The major intellectual movements of the period, including the scientific revolution, "only happened

because members of the elite encountered these movements as they passed through the universities in their formative years" (p. 617). Professors functioned as the cultural conduit, fostering and forming the minds of the elite as the passed through the confines of the university as well as the intellectual and cultural communities necessary for these movements.

From the context of a university mandate oriented on instruction, there are assumptions prevalent in the histories of universities during this time frame that need to be reconsidered. First, it has been well established that Aristotelian natural philosophy continued both within and outside of universities from the Middle Ages well into the seventeenth century. However, as Grendler (2002) points out, "there were more Latin commentaries on Aristotle written between 1500 and 1650 than in the thousand years between Boethius (d. 524) and 1500" (p. 310). The fact that there were so many commentaries indicates that scholars were finding new approaches to these ancient texts, that the understanding of natural philosophy was changing – this in turn belies the criticisms of prevalent stagnation within universities. The discussion of new commentaries was an essential part of early modern higher education, and therefore students were exposed to epistemology that was in a sense fairly fluid in its practice.

There also seems an overarching assumption or disposition in histories of the scientific revolution that all universities taught natural philosophy in the same way. Just as in modern universities, the location of a student's education determined the type and quality of the education a student receives. Some of the quality issues were discipline specific – medical education, particularly in the south, tended to be more current than

other forms of science (Grendler, 2002; Ornstein, 1913; Rüegg, 1996). Quality also depended greatly on the scholars that a university had in residence at any particular time (again, much like contemporary universities). For instance, at the University of Padua Jacopo Zabarella tended to be more progressive and open to critical inquiry into Aristotle's works, while Cesare Cremonini was exceedingly literal and traditional (and consistently very popular amongst students). Girolamo Borri at the University of Pisa exhibited a more progressive approach to his teaching, while Ulisse Aldrovandi at the University of Bologna was another literalist and taught texts without commentary (Grendler, 2002, pp. 310–311).

By the end of the early modern period, the structure and orientation of higher education had changed in ways that are eminently recognizable for the modern context. Aristotle was no longer a force providing the epistemological and methodological focus for universities and a more mechanistic orientation was emerging. The hierarchical place of theological knowledge had for the most part been displaced, the humanities had become a fixture, and a new openness was beginning to take hold in the construction and dissemination of knowledge that was to become imperative for the formation of the modern state. It is difficult to determine exactly how and when movements such as the scientific revolution influenced these changes, but in order for higher education to stay relevant it did, eventually, make adjustments to stay current with the curricular needs of the students and communities they served.

The scientific revolution was a "paradigm shifter" for epistemology and culture. Although universities were not necessarily obstructionist or stagnant for research and

curriculum, there is no evidence that groundbreaking discoveries in science yielded far reaching changes in teaching methodology or practice. The focus was still on the trivium, the day was still segmented into ordinary and cursory parts, and although there were more experiences for students, the dominant form of instruction was still lecture, and the classroom environment was quite similar to what was experienced in the Middle Ages. As significant as the scientific revolution was for human development, this significance did not make it into classroom teaching practices.

The Printing Press

It is difficult to overestimate the importance of the printing press for the social, cultural and academic landscapes of the early modern period. Bacon (1900) in *Novum Organum* argues that inventions are "one of the most distinguished human actions," and of inventions the printing press has been one of the most influential:

> We should notice the force, effect, and consequences of inventions, which are nowhere more conspicuous than in those three which were unknown to the ancients; namely, printing, gunpowder, and the compass. For these three have changed the appearance and state of the whole world…and innumerable changes have been thence derived, so that no empire, sect, or star, appears to have exercised a greater power and influence on human affairs than these mechanical discoveries. (pp. 365-366)

Clapham's (1957) often quoted statement on the importance of the printing press for the spread of the written word brings further emphasis to this invention, "A man born in 1453, the year of the fall of Constantinople, could look back from his fiftieth year on a

lifetime in which about eight million books had been printed, more perhaps than all the scribes of Europe had produced since Constantine founded his city in A.D. 330" (p. 37). The ability to print texts, images, maps and diagrams identically and accurately was not simply an academic windfall but was, as Eisenstein (2005) calls it, a "communication revolution" (p. 24).

Although the printing press was the most significant change to how texts made it into the hands of the public, there were others leading up to the early modern period. In the early 12th century, the production of books for university instructional needs moved from monastic scriptoria to stationers (where it had been for centuries). The way texts were produced changed as well, as the task of copying books went from being performed by a single individual copying complete texts to a "putting-out system" where lay stationers would work on only pieces of the text in different locations. The practice of copying books for universities in monastic scriptoria experienced a resurgence between the mid-14th through the mid-15th centuries, and remained a factor well into the early days of the printing press (Eisenstein, 2005, pp. 10–11).

It can be argued that the use of the printing press, which was seeing some dramatic affect in the later 15th century, is too late to account for even part of the dramatic social and cultural shift in the early modern period, as the focus on antiquity was well under way by this time. However, as Eisenstein (2005) counters, "It is one thing to show that the Petrarchan revival was flourishing in Italy in the age of hand-copied books. It is another to show why Petrarch and his successors should be taken as agents of epochal change" (p. 124). Until the utilization of the printing press, the

humanist agenda and the works antiquity eluded "mass production" (or the early modern version of high quantity). While the copying of texts were still performed by hand, and the production of these texts accordingly limited and slow, antiquity was only accessible to very few, and usually the elite, who could afford them (Eisenstein, 2005, p. 139). It is only after the production of texts with the printing press became fairly efficient and widespread that antiquities rebirth became substantially manifest. The effect of printing ancient texts was further intensified, and became even more accessible, when copies began to be produced in vernacular translation (Eisenstein, 2005, p. 163; Füssel, 2005, p. 71). Accessibility and the spread of knowledge was also aided by the lack of any kind of copyright system, so printers felt at liberty to print texts when it was profitable for them (Füssel, 2005, p. 57).

It is understandable, given their focus on text, translation and interpretation that the humanists would quickly take advantage of this new technology. As Füssel (2005) notes, it was a tremendous opportunity to put books in the hands of students given their "belief in a universal capacity for education" (p. 61). It was the texts needed for university teaching as well as lower school Latin grammars and other school books that were always in high demand, and therefore consistently made their way into print (p. 66). On Füssel's analysis, despite reservations from the Church that it would lose an appreciable amount of control through the printing of books, an examination of "letters, introductions and the published books themselves speaks for the fact that printing clearly corresponded to the educational endeavours of the humanists" (p. 112). The humanists were quite meticulous in the task of working with printers to make sure that texts were

printed to their exacting specifications; not just editing and proofreading, but also the images, page size, type face and size, and how many words appeared on each page. Their belief was that a better printed product would yield the best educational experience (Füssel, 2005, p. 74). During the early modern period there became a somewhat symbiotic relationships between author (or translator) and publisher. The author counted on the publisher for the best texts possible, and the publishers counted on the author for advice about producing that text (Füssel, 2005, p. 105). Even with the demand for reliable and accurate texts, it took many years (into the mid-1500s) before the available supply started to approach demand.

Although Gutenberg's invention was a boon to the quantity, accuracy and overall quality of the printed word, there were dissenters to this new era in communication. Some, such as Abbot Johannes Trithemius, thought that the durability would not be as good with paper as it was with vellum, that printers were not as concerned with accuracy as scribes, and he was concerned that the arts of copying and writing would be lost. Erasmus was concerned that where in the past a mistake in a text would almost always be isolated to a single copy, now that mistake could be transferred to thousands of copies. The church, in addition to finding the possibility of inaccuracy exceedingly disturbing (and worthy of heavy fines and excommunication for the printer), expressed fear that translations of the Bible from Latin into the vernacular would allow divine writings to fall into the hands of the commoners – consequently, and perhaps more importantly, the church would lose power and influence through its control of sacred texts (Füssel, 2005, pp. 110-111).

The printing press offered a wealth of possibilities and opportunities for higher education. As Füssel (2005) notes, "the humanist recourse to the classical texts of antiquity and a new opening-up of the empirical method brought about a creative climate for fruitful research and development at university level" (p. 145). As textbooks became affordable and available for a wider population, and as humanism continued to permeate the universities, a new "civic elite" emerged with political power. The effect of printing, and the further potential of printing, was astronomical, especially for education. As Füssel further notes, "it was not these new quantities alone, but above all the quality and accuracy of publication, that vouched for the fact that education could now shed a universal light" (p. 145). Access, accuracy and similitude - that a student or faculty member in one university in Europe could potentially be using the same text from the same printer for the same subject dramatically changed the dynamic of higher education.

However, even though teaching materials were much more accessible, and the curriculum was adjusted as texts became more readily available, there is no evidence that the output of the printing press led to any changes, or any lasting changes, to general teaching practices. Although the copying of texts by students, or the writing of lines of text verbatim from the professors lecture, became less emphasized as part of classroom activity the ability to memorize and repeat texts was still important. The organization of a student's day was still the same – cursory and ordinary lectures, recitations and repetitions, disputations – all essentially carried over from the Middle Ages. An argument could also be made that even though access, consistency, and knowledge propagation increased, the printing press may have helped to concretize higher education

teaching practices. Lectures became easier to formalize as texts became available, and information was more efficient to transfer from faculty to student. As Rüegg notes above, it would also assist humanist formalization within the university by making it more efficient to propagate their precepts and preferred texts, which became something else for students to receive lectures on and memorize. What could have been a liberating element for classroom practice, as inexpensive texts available for a vastly expanded student population, instead became another means of solidifying practices already in evidence.

University Structure, Curriculum, and Professors

The College of Montaigu, as described by Erasmus through dialog in the Colloquies (Dresden, 1968, p. 110):

> Q. Where do you come from?
>
> A. The College de Montaigu.
>
> Q. Ah, then you must be bowed down with learning.
>
> A. No, with lice.

Although the living conditions were not necessarily ideal, the number of universities nevertheless rose exponentially across Europe during the early modern period, and the size and depth of their offerings also increased dramatically. Although the general university environment has already been discussed in other sections of this dissertation, this space will be devoted to providing a synthesis of what students could expect within the hallowed halls of learning, other than lice. As noted above, the university curriculum was for the most part inherited from the late-Middle Ages; rhetoric, logic, grammar,

natural philosophy, medicine and surgery, theology, mathematics, astronomy and astrology, canon and civil law, and to some extent metaphysics and moral philosophy. Instruction in the arts was reliant upon the works of Aristotle, and medical instruction used texts by Aristotle and Galen, with humanism as the catalyst for curriculum and research (Grendler, 2002, p. 197).

Renaissance universities throughout Europe shared in a fairly similar academic calendar (Grendler, 2002, p. 144):

- Approximately 135 ordinary teaching days, held on Monday, Tuesday, Wednesday, Friday, Saturday
- Approximately 45 extraordinary teaching days, held on Thursdays and holidays
- Students often extended longer holidays, which eventually significantly shortened the academic year

To supplement classroom instruction, students, faculty, and non-academics from within and outside the local community attended informal gatherings where the could discuss topics of interest, often hosted by an individual of means and stature. For instance, Reginald Pole of Padua hosted gatherings in the early 1500s on humanistic and philosophic topics, led by Niccolo Leonico Tomeo, who was a former professor (Grendler, 2002, p. 151). These gatherings were indicative of the general interest in humanist topics, but also suggest that students were craving forums for discussion that they were not finding within the universities.

To serve the different types of teaching days universities generally hired professors on four types of contracts or designations. Ordinary and holiday professors taught on their accompanying teaching days. However, extraordinary professors and student lecturers might teach on either ordinary or extraordinary days depending on local practices. Attendance for a professor's class could vary widely, from a few students to several hundred, depending upon how famous the professor was, how imperative the subject was, and how competent he was considered to be (Grendler, 2002, pp. 144–151). The professors who had the more well-attended classes could command higher salaries.

As Grendler (2002) reports, academics and students alike believed the "ideal professor should possess three qualities: an acute intellect, a good memory, and a fluent and forceful delivery." He continues:

> First and foremost, the able professor could explicate a passage or text subtly and convincingly…This ability was prized because professors lectured on texts on which many previous scholars had written. And a professor needed to surpass his concurrent lecturing on the same text. Moreover, the ideal professor explicated a text in such a way that even students of modest abilities could grasp the meaning…He was expected to be able to recite passages from memory in order to prove his points…paradoxically, a capacious memory helped create spontaneous teaching, which university culture prized. Students did not want a professor to read his lectures; someone who did was a *doctor chartaceus* (paper doctor). Third, the good professor expressed himself fluently and forcefully in good

> Latin…Good students would be offended if the professor hesitated or made mistakes, wrote one professor. (p. 159)

As early as the mid-14th century, and continuing into the early modern period, many of these ideal professors needed to sign a "contract" that was also quite stringent. A professor could not be absent without first asking for leave, and could never leave town without leaving a deposit to ensure his return. Classes were required to start and end on time, and needed to attract at least five students. The professor was not allowed to skip chapters in the texts that were the subject of his lectures. He needed to keep a good pace of coverage and do so systematically. If a professor failed in any of these regards, his salary was subject to reduction (Grendler, 2002, p. 161; Haskins, 1957, pp. 9–10). This was a time period where the student wielded some power in the structure of higher education, as professors were often entirely reliant upon the direct payment of tuition for their livelihood.

University Decline

Although European universities during the early modern period were successful by any measure, the success did not continue into the 17th century. The reasons for this decline were both external and internal. Externally, there was war, civil war, regicide, religious upheavals as well as famine and plague that all significantly disrupted university life. Internally, there was a reluctance to give up on practices from the Middle Ages even though newer methods were proven to be successful outside of the university, and a curriculum that held on to the works of Aristotle for science far beyond its usefulness (natural philosophy was taught into the late 1600s). There were also difficulties with

professors being absent, student riots, and competition from professional schools and Jesuit institutions that weakened universities (Grendler, 2004, pp. 22–24). Nevertheless, as Grendler (2004) argues, "in the century between Luther's first lectures on the Bible at the University of Wittenberg in the winter of 1513-14, and Galileo's departure from the University of Padua in 1610, universities played a role in European history that has never been equaled" (p. 28).

Synopsis: The Early Modern Period

Changes in higher education during the early modern period were related to content rather than pedagogy; more evolution than revolution. Although the Aristotelian influence was diminished somewhat as scholasticism waned and humanism gained momentum, there was nothing about it that was necessarily incommensurable with other classic texts that were re-emerging, or the focus on the discovery of the individual through language. Also, even though humanism brought the human being to the front of knowledge and thinking, it was not necessarily incommensurable with existing teaching paradigms – lecture, recitation and disputation remained the focus of teaching processes, and the content consisting of language, grammar and classic texts was still viable even though it evolved and universities were distancing themselves from the church. These methods would remain in place until after the industrial revolution and the emergence of a more pragmatic orientation for education – which did constitute an element of incommensurability that universities were required to address. As Grafton and Jardine (1986) note in their conclusion to *From Humanism to the Humanities*, educational ideologies are entrenched, elusive, and difficult to displace since the educators are

defined by the system in which they were trained (pp. 219-220). The educators of the Renaissance were trained, for the most part, with the same intentions and techniques that had been in place for 1,000 years, and the congruence of events, technologies and ideas of the Renaissance period were not enough to displace them.

Many of the voices discussed in this section are captured in more detail in Appendix C, as well as others from the early modern period.

Historical Context: 19th Century in the United States

> We will walk on our own feet; we will work with our own hands; we will speak our own minds. The study of letters shall be no longer a name for pity, for doubt, and for sensual indulgence. The dread of man and the love of man shall be a wall of defence and a wreath of joy around all. A nation of men will for the first time exist, because each believes himself inspired by the Divine Soul which also inspires all men. (Emerson, 1837, p. 116)

Emerson was highly critical of society generally, and the state of education in America specifically when transcendentalism emerged on the scene in the 1830s. For the transcendentalists, membership in society had become relegated to rote performance – a conformity with prevalent yet antiquated and accepted norms. The transcendentalist movement represented a different kind of confidence in the human mind's power and creativity, one that stemmed from Immanuel Kant's hypothesis concerning the construction of the mind through transcendental forms. However, it was also a departure from it. For Emerson (1842), Kant demonstrated that there was "a very important class of ideas or imperative forms, which did not come by experience, but through which

experience was acquired; that these were intuitions of the mind itself" (p. 340). The term "transcendentalism" was far from the technical and theoretical notions involved with Kant's synthetic, a priori and a posteriori understanding of the human experience, but rather reflected a new assured belief "in the mind's powers, and a modern, non-doctrinal spirituality" (Goodman & Zalta, 2008).

When the first American institutions of higher education were founded in the middle of the 17th century, they looked much like their counterparts and models in Europe, which in turn looked fairly similar to their historical roots in 12th century France and Italy. As Westmeyer (1997) describes it, the experience of curricula and format in higher education for a student in 1636 would be essentially the same as a student in 1836, and the roots of what the student of 1636 would experience could be traced back to the 12th century (p. 118). This classical curriculum, based on a prescribed and fairly universal course schedule that emphasized knowledge of Greek, Latin, literature and the sciences (mathematics in particular) was re-affirmed in the highly influential Yale Report of 1828 (1828), and was still a commanding presence in higher education at mid-century.

For the transcendentalists, education in all its forms had become, or perhaps always was, removed from experience. Displaced from experience, the process of being educated severely stifled the mind's ability to think creatively and in conjunction with nature. The transcendental approach to the world and to education was indicative of a combination of factors that began to assail the British and German derivatives of higher education that had been in place in America since the 17th century. A close examination of the 19th century movement in higher education reveals several disparate elements

either influencing, or coming together to form what might be called the "distinctively American" version of higher education. There were many factors that influenced the changes in 19th century American higher education; the American industrial revolution and civil war, the entrenched British influence, the German university model, the work of Darwin, the Morril Acts, and the burgeoning transcendentalist movement to name elements that will be pursued in this section.

The focus of this section is to examine, and also hypothesize given the evidence, the effect these influences had, or should have had, on higher education thinking and structure. As in other sections, it is difficult to ascertain actual classroom teaching practices solely using the evidence available. However, these practices can be extrapolated from the dialogs that do exist, as well as the perception of teaching excellence given the views espoused and captured in this section. An analysis of the dialogs of this period in the context of the objective of the dissertation will be interspersed throughout.

The State-of-Affairs, and the European Influence

Discontent with education (and society) was not exclusive to the transcendentalists by any means. A dialog of dissatisfaction concerning the educational system generally, the structure of higher education, the disposition of the student body, as well as funding and other resources existed long before the transcendentalists emerged on the scene. Nisbet, an educator previously enmeshed in the Scottish educational revival, was one of the early writers on its trials and tribulations. The very determined Benjamin Rush and the Governor of Pennsylvania, John Dickinson, recruited Nisbet to be the first

President of Dickinson College in the late 18th century. Nisbet (1793) was quite vocal about his disappointment with the disposition of American students after he arrived. As a transplant from the Scottish educational system, he was in unfamiliar territory amongst what he considered to be impatient and "lazy" students that were looking for quick degrees in this small college on the western frontier of Pennsylvania. Students were not always focused on their education, and competition for their attention varied widely:

> most of those who attend this seminary expect to do as much in one year, as it is possible for any man to do, with the best assistance, in four or five . . . Our students are generally very averse to reading or thinking, and expect to learn every thing in a short time without application, and there are quacks in sundry parts of the country, who flatter expectations of this nature, and undertake to teach young men every thing that can be taught, by way of amusement and in a short time. These quacks are the bane of learning, as they flatter the natural indolence of youth, and make no conscience of undertaking to perform impossibilities. But if ever learning shall prevail in this country, the people must be persuaded that as much time at least is necessary for acquiring it, as is required to serve an apprenticeship to any mechanical profession, which is far from being the case at present. (Nisbet, 1793)

Nisbet's circumstances were indicative of many educators on the American "frontier;" a frontier that was both geographical and educational. He was assailed from all sides in ways unfamiliar to him coming from Scottish institutions. Nisbet, who was a noted scholar of the late 18th century in many subjects, and known for his incredible memory

and excellence with languages, was also quite comfortable within the structure and discipline of the classical education. Morgan (1933), a later President of Dickinson College, describes Nisbet as clinging to values that were perhaps more applicable to the previous century:

> His estimate of educational values, however, will not stand the test of modern standards. He is on record as thinking that education was the better as it had less of the modern and more of the ancient, and while he was master of the languages and cultures of his time, he counted them as secondary and regarded his mastery of the ancient languages and the culture of which they were a part as the substantial part of his equipment. (p. 70)

Americans who ventured to Europe at this time in order to pursue advanced degrees reported a similar despondence with the American education landscape in the early 19th century. The experience in Germany seems to have provided a perspective to the American educational experience, and provided a voice for a tangible dissatisfaction. George Ticknor (1815), an earlier "venture" into German higher education, studied languages at University of Göttingen and was impressed with what he found there. In stark contrast to Nesbit's description of students in America, he found in Germany an energized rather than enervated student body, and that energy was infectious. In a ten-year correspondence with Thomas Jefferson, Ticknor frequently elaborated on both his experiences in Germany as well as putting his experiences to use back in the United States. In a letter to Jefferson in 1815, Ticknor described German students as having "an enthusiasm among them . . . an unwearied and universal diligence among their scholars –

a *general* habit of laboring from fourteen to sixteen hours a day – which will finally give their country an extent and amount of learning of which the world has before had no example" (Ticknor, 1815). Ticknor observed that this dedication and enthusiasm, engendered through a strenuous tenure in the German gymnasium and careful selection of students and faculty to the University, yielded a remarkable environment for learning:

> The first result of this enthusiasm and learning, which immediately broke through all the barriers that opposed it, was an universal toleration in all matters of opinion . . . Indeed every thing in Germany seems to me to be measured by the genius or acuteness or [of?] learning it discovers without reference to previous opinion or future consequences to an astonishing and sometimes to an alarming degree. (Ticknor, 1815)

As Ticknor continues through his correspondence from Germany in 1816, "The men of letters here bring a philosophical spirit to the labour of exposition which is wanting in the same class in all other countries" (1816). And this, of course, included the United States.

However, in his correspondence with Jefferson after returning to Harvard to teach, his reflections on his time in Germany indicates that he was influenced by his university experience primarily as it pertained to the professor as scholar, and not as it pertained to the student experience:

> I began with the French and, in about two years, finished between fifty and sixty lectures, equal in print to three good sized octavo volumes, to which I have never published a syllabus, for reasons entirely connected with the state of the library at Cambridge. Since that time, I have been employed on the Spanish, which I have

> recently completed in between thirty and forty lectures – equal in amount to two printed octavos; and to this I have just published a syllabus . . . . My purpose . . . to make a course of lectures more complete and minute than has been delivered before, and to introduce, if possible, a more detailed and thorough mode of teaching, whose object shall be to communicate genuine knowledge, rather than to exhibit the subject in rhetorical declamation. I have succeeded with the students, who have given me their willing attention, in a manner particularly pleasant to me, since I have declined from the first, any attendance on my lectures which is not voluntary; but the Professors still keep on in the beaten track, and will not probably soon be induced to change. (Ticknor, 1823)

Ticknor completed the definitive cultural history of Spain during this time – a volume that was translated into several languages, published and revised over the next thirty years. However, he was not explicit as to whether or not he was able to instill the love of learning in his own students that was exemplified during his German experience.

Cogswell (1817a) also spent time at Göttingen and reflected on his experiences there, comparing them to his experiences in American higher education. Cogswell was appointed the librarian at Harvard University later in his career, and then went on to found the Astor Library in New York City. Much in the vein of Nisbet, Cogswell rails against a student body arriving unprepared for higher education, and he argued that the source of the problem was the American primary system of education:

> It appalls me when I think of the difference between an education here (at Göttingen) and in America; the great evil with us, is in our primary schools, the

> best years for learning are trifled and whiled away, boys learn nothing because they have no instructors, because we demand of one the full [work?] of ten, and because laziness is the first lesson which one gets in all our great schools. (Cogswell, 1817a)

The inclination that he had before arriving in Germany was solidified by his experience in Göttingen with students prepared by the German gymnasium. The experience also inspired him to found a rigorous primary school in Northampton, Massachusetts called the Round Hill School.

For Cogswell, it was not just that students were unprepared for higher education, but it was also the orientation of the students, and society at large. Again in the vein of Nisbet, Cogswell notes that:

> I know very well, that we want but few closet scholars, few learned philologists and few verbal commentators, that all our systems of government and customs and life suppose a preparation for making practical men, men who move and are felt in the world, but all this could be better done without wasting every year from infancy to manhood. (Cogswell, 1817a)

His experiences in Germany led Cogswell to reconsider what a scholar could be, and the sacrifices that would be involved, or should be involved, in such a venture:

> a man as a scholar must be completely upset, to use a blacksmith's phrase; he must have learnt to give up his love of society and of social pleasures, his interest in the common occurrences of life, in the political and religious contentions of the country and in every thing not directly connected with his single aim. Is there any

> one willing to make such a sacrifice? This I cannot answer, but I do assure you it is a sacrifice made by almost every man of classical learning in Germany, tho to be sure the sacrifice of the enjoyments of friendly intercourse with mankind to letters is paying much less dear for fame here than the same thing would be in America. (Cogswell, 1817b)

The German education experience, and the comparison to American higher education, continued throughout the 19th century. For instance, Hart (1874) had a similar and lasting reaction to his experiences. He spent five years studying law in Germany and then was a long time professor of English literature at University of Cincinnati before becoming a professor of rhetoric and English philology at Cornell. He believed that to understand the superior experience in the German Universities, one must first be aware that they have far more professors than in American colleges, "Marburg, in Hesse, has at present 430 students; Princeton, my Alma Mater, has 420. The numbers, then, are almost identical. Each is located in a small country town. Yet Princeton has, all told, not more than 18 professors and tutors; Marburg has 62" (p. 256). Although Princeton may have quality faculty, those professors are forced to focus on the general development of students and the college. In Germany, the faculty are able to focus only on their "select band of disciples," and on bringing renown to themselves through research and publication as they practice as "their own master" (Hart, 1874, p. 256-257). The entire orientation of the university was focused on generating knowledge, and providing the means and environment for this:

> To the German mind the collective idea of a university implies a *Zweck*, an object of study, and two *Bedingungen*, or conditions. The object is *Wissenschaft;* the conditions are *Lehrfreiheit* and *Lernfreiheit*. By *Wissenschaft* the Germans mean knowledge in the most exalted sense of that term, namely, the ardent, methodical, independent search after truth in any and all of its forms, but wholly irrespective of utilitarian application. *Lehrfreiheit* means that one who teaches, the professor or *Privatdocent*, is free to teach what he chooses, as he chooses. *Lernfreiheit* or the freedom of learning, denotes the emancipation of the student from *Schulzwant*, compulsory drill by recitation. (Cogswell, 1817a)

Hart, who collected his thoughts on his overseas experiences in higher education for a book published in 1874, observed that that for German universities the mission is to train scholars and thinkers so that they in turn could be professors of the future (capable of the ardent, methodical and independent search for truth). For Hart, the German university "is not a place 'where any man can study anything.' Its elevated character makes it all the more modest. It contents itself with the theoretical, and leaves to other institutions the practical and the technical. . . . A German university has one and only one object: to train thinkers . . . I was made to feel that a German university, however humble, is a world in and for itself; that its aim is not to turn out clever, pushing, ambitious graduates, but to engender culture" (p. 251).

Given this orientation, the way of life at the university followed suit, with "lectures and other instruction . . . adapted to train and stimulate *Privat-docenten*, for they are the ones who are to seize and wear the mantles of the translated Elijahs" (Hart, 1874,

p. 258). The instruction was rigorous, but of a different sort than Hart experienced at Princeton:

> The student has but one desire: to assimilate his instructor's learning, and, if possible, to add to it. He must, therefore, be his own master. He must be free to accept and reject, to judge and prove all things for himself, to train himself step by step for grappling with the great problems of nature and history. Accountable only to himself for his opinions and mode of living, he shakes off spiritual bondage and becomes an independent thinker. He *must* think for himself, for there is not one set over him as spiritual adviser and guide, prescribing the work for each day and each hour, telling him what he is to believe and what to disbelieve, and marking him up or down accordingly. (p. 261)

These attributes were influential for Hart since he did not perceive them in evidence in America during his undergraduate training, and it can be reasonably assumed that he considered the German attributes to be extraordinary given his experiences as an educator in higher education.

Much like Cogswell and Ticknor, Hart found the German higher education experience superior to the American offerings on many fronts. The students were more devoted (and perhaps it should be noted that their devotion to, and doting on, their particular professors and disciplines was looked at longingly as these commentators moved on to professorships), better trained and thrived in an environment that seemed to encourage scholarship and creative, original thinking. As Hart puts it, the professor's time "is not wasted in cudgeling the wits of refractory or listless reciters. His temper is

not ruffled by the freaks or the downright insults of mutinous youths." The classroom experience was collegial rather than hierarchical, and the professor "lectures only to those who are willing and able to hear. He is sustained by the consciousness that his words are not scattered by the wayside, but that they fall upon soil prepared to receive them, and will bring forth new fruit in return. His relation with his hearers is that of one gentleman speaking to another . . ." (p. 268). The student experience, according to all three but best described by Hart, is energizing rather than enervating, where all are treated as individuals assisted along the pathway to *Wissenschaft*. As individuals on the pathway to knowledge, there is no feeling of class unity, or the problems that are inherent in the American institutions with that unity:

> They have only one thing in common: individuality of thought and freedom of action. Such a sentiment as 'class-feeling' does not exist among them. In America, where the same set of young men recite side by side in the same recitation-rooms for four years, it is perhaps only natural that the feeling of class unity should exist as it does. It is not in itself an evil, although liable to grave perversion. Three fourths of the public disorder in our colleges are due to it in one way or another. In Germany, it simply does not exist. There are no courses of study, no classes. (p. 293)

And this system produced a quality of student that was not possible in the American system, where student development was stunted by the system itself:

> . . . the future scholar of Germany is a man of whom we in America have no conception. He is a man who could not exist under our system, he would be

> choked by recitations and grades. . . . He studies to learn, to master what has been done before him, and contribute if possible to the growth of knowledge. He reads with a view to permanent results, not to examinations. (p. 303)

What would the structure of higher education, as well as good teaching practice, be comprised of with such considerations in mind? No commentator seems to make the leap to a direct correlation, although certain assumptions can be made if the most desirable aspects of the German system were to be adopted. Staying with higher education and not delving into a rebuilding of the primary system (although many, such as Hart, explored this arena), certain attributes would be desirable. Students would have their choice of classes, and even the notion of classes would seem a level of rigidity beyond the German system. A student's entire focus would be on a specific discipline, if not on a specific professor. The goals of a student's time spent at a university would be to have them become both an expert in their field and a better individual through the experience. A continuation of this reasoning would suggest that a different teaching practice would necessarily follow. The environment would need to be collegial, with the goal being knowledge, and individualistic, with a regimen seemingly tailored to each student.

It is important to recognize that not all comparisons between the German university and the American college in the 19th century were so favorable to the German ideals. Ely (1880), in an article in *Harper's New Monthly*, doubted that the German higher education mission was similar to America's and did not find it particularly desirable. Ely obtained his PhD at Heidelberg University in three years and then returned

to teach at a succession of American institutions (and was reprimanded at each for his socialists leanings). In the fervor to mimic the success of the German universities, Ely argues we have missed an essential question – do American colleges have the same objectives as their German counterparts? Ely believes that American colleges do not, nor should they. His primary argument against the adoption of the German system, contrary to the beliefs of Hart, Cogswell and Ticknor, is that it does not develop the well-rounded and engaged student that the American system already produces. "A German university is, from beginning to end, through and through, a professional school. It is a place where young men prepare to earn their 'bread and butter,' as the Germans say, in practical life. It is *not* a school which pretends or strives to develop in a general way the intellectual powers, and give its students universal culture" (p. 254). Rather, the German student is at the university for entirely practical reasons, and those reasons are evident in every decision they make, as "each one has the examination in mind which is to admin him into active life, and, as a rule, pursues only the studies required for passing it, and what is more, pursues them no farther than is likely to be demanded" (p. 254). Students only attend those classes that they absolutely must in order to graduate, and according to Ely never pursue a general knowledge or culture. Although Ely does agree that a major difficulty lies in the preparation of students for college, and thought that changes in the American system were in order, this is a far cry from the descriptions of the German experience above, and quite the contrast from the German student as scholar description made earlier Hart. It is entirely possible that Ely's experience at Heidelberg was quite

different from those described at Göttingen, as German universities were not necessarily comparable or uniform.

The Yale Report of 1828

Ely believed that a general, or perhaps cultural, knowledge was not one provided by the German system and it should not be lost in any derivation of or change in higher education in America. The most influential defense of the existing American system in the early 19th century was given in the *Reports on the Course of Instruction at Yale College*, commonly known as the Yale Report of 1828. Jeremiah Day, a former and highly conservative professor and then president of Yale, and James Kingsley, a professor of the classics and mathematics, constructed the report, which was then endorsed by a committee of Yale faculty. The preparation of students and the content and rigor of the curriculum are primary topics in the report, however there is a central tension found within that is more ideological than systematic. For the Yale faculty the question is, do they give the students what they want, or do they provide students with what they need? Although the discussion of systems and curriculum is extensive, it is this essential tension, or perhaps it could be considered a "defensiveness," that is at the forefront.

There were many good reasons for providing the education that students believed they wanted in the early 19th century. Parents had started questioning the delivery method of higher education, and were seeking a more "practical" education for their children (Westmeyer, 1997, pp. 34–35). An education that was tailored to the individual and oriented on the professional world might have attracted more students, and

consequently brought in funds that were desperately needed (Rothblatt, 1993, p. 47). The Yale faculty was also responding to definitive criticisms from both their Board of Directors and various voices in higher education that were generally calling for a change in the system at Yale and other institutions. However, the report was a resounding affirmation that detailed their belief in the long-term efficacy of a classical curriculum, as well as the prevalent teaching methods that tended to correspond with it: lectures and recitations (Westmeyer, 1997, pp. 34–35). The Yale faculty recognized the need for continued, evolutionary improvement, but declared that a wholesale disposal of a system that was a model for instilling an intellectual culture was uncalled for (Committee of the Corporation and the Academical Faculty, 1828, p. 7). The report argues that intellectual culture is most effectively maintained through the proper balance of literature and science:

> From the pure mathematics, he learns the art of demonstrative reasoning. In attending to the physical sciences, he becomes familiar with facts, with the process of induction, and the varieties of probable evidence. In ancient literature, he finds some of the most finished models of taste. By English reading, he learns the powers of the language in which he is to speak and write. By logic and mental philosophy, he is taught the art of thinking; by rhetoric and oratory, the art of speaking. By frequent exercise on written composition, he acquires copiousness and accuracy of expression. By extemporaneous discussion, he becomes prompt, and fluent, and animated. (p. 8)

The report considers this pursuit an individual one, as the "scholar must form himself, by his own exertions" (p. 8). However, it was only an individual pursuit up to a certain point, because for the most part Yale students were prescribed a curriculum and course schedule during their time at the university.

Throughout the document there is a continual reference to disciplining the mind. This discipline is to be achieved through "due proportion" between lectures and recitations. The advantage of lectures is that they, "call forth the highest efforts of the lecturer, and accelerate his advance to professional eminence; they give that light and spirit to the subject, which awaken the interest and ardor of the student. They may place before him the principles of science, in the attractive dress of living eloquence" (p. 10). However, the committee believed that lectures alone were not sufficient for instilling a "pressing and definite responsibility…This defect we endeavor to remedy, in part, by frequent examinations on subjects of the lectures…To secure his steady and earnest efforts, is the great object of the daily examinations or recitations" (p. 10). Tutors, not necessarily faculty, were the students' constant guide through the process. It is in order to ensure the "unceasing and strenuous exercise of the intellectual powers, that the responsibility of the students is made so constant and particular" (p. 11). With this objective in mind, Yale established semi-annual examinations, for which the faculty have set aside up to fourteen days of the academic calendar. In the presence of a committee of "gentlemen of education and distinction from different parts of the state," students were divided into separate rooms and spent seven-eight hours per day completing the examinations (p. 11).

The Yale Report asserts that the purpose of collegiate education "is not to *finish* his education; but to lay the foundation, and to advance as far in rearing the superstructure, as the short period of residence here will admit" (p. 14). The education provided by Yale College (and they admit the possibility it can be different and successful elsewhere) is not intended to be the end of the student's journey toward employment in the professions, but rather to "lay the foundation the foundation which is common to them all" (p. 14). This is, it seems, Yale's compact with the social contract, as the report asks, "Is a man to have no other object, than to obtain a *living* by professional pursuits? Has he not duties to perform to his family, to his fellow citizens, to his country; duties which require various and extensive intellectual furniture?" (p. 15). Those skills need to be constructed on top of the foundation provided by Yale, to be learned in the field and practiced there.

Although "men of mere practical detail are wanted, in considerable numbers, to fill the subordinate places in mechanical establishments . . . but the higher stations require enlightened and comprehensive views" (p. 17). It is the job of Yale students to apply theory and practice after graduation, and such is the "office of men of superior education." In this report, the Yale faculty echo the perspective of many in academia in the 19th century that American students are severely underprepared for higher education. Unprepared students, being sent to college by uninformed parents, may believe that they know what they want, but the faculty of Yale believed they understand what it is they *needed* (pp. 25-27). In sum, the objective of the Yale system is:

> not to give a *partial* education, consisting of a few branches only; nor, on the other hand, to give a superficial education, containing a smattering of almost every thing; nor to finish the details of either a professional or practical education; but to commence a thorough course, and to carry it as advantage, the four years immediately preceding the study of a profession, or of the operations which are peculiar to the higher mercantile, manufacturing, or agricultural establishments. (pp. 19-20)

The Yale faculty in this report specifically state their opposition to the German model, which they suggest is closed, hierarchical and solely for the privileged. Any attempt to imitate the German model would be expensive and doomed to failure. In fact, mirroring the comments of many of the scholars above, the report states that since American students are underprepared, colleges in the United States more closely resemble the German gymnasium or preparatory schools than they do the German universities.

Given the parameters of the report, the Yale faculty seems to be actively interpreting, or reinterpreting, the word "practical." That is, for most scholars in higher education at this time, and for most students, a practical education would be one oriented on a specific field of study. For the Yale faculty, the knowledge gained through an education at their college is indeed practical, "not in the narrow view of it which the objector takes, but in a sense higher and wider . . . able to judge of the pursuits of others, to estimate the value of those pursuits, to understand . . . progress . . . and to feel an interest in the occupations of a large portion of mankind" (1828, p. 33). The Yale course

of study, enmeshed in foundational skills common to American higher education such as languages, the classics and the sciences, was focused on developing the type of minds that would excel at the abstract, deductive reasoning they believed was necessary for absorbing and creating knowledge. For the Yale Report committee, a regimented diet of foundational knowledge in the classics, languages and the sciences provided through lectures, tutors, recitation and examination would provide students with what they needed to become a citizen of the highest caliber (despite what students, pundits, parents and society at large might believe).

The Yale Report and the conception of higher education it advocated had many supporters. Even late in the 19th century articles were being published lauding the benefits of the classical education. For instance, West (1884), Latin professor at Princeton University, argues for the continued strong emphasis on the Latin and Greek curriculum in "Must the Classics Go?," as they are the foundation for all Western language and art. The problem for West is not whether or not the languages should be taught (the definitely should), but whether or not they are taught well (they usually are not) (pp. 156-163).

Yale would eventually change how it defined a "practical" education. Forty years after the Yale Report of 1828 the *Third Annual Report of the Sheffield Scientific School of Yale College* offered an almost complete rebuttal with a decidedly more practical and professional orientation that encapsulated the viewpoint of the scientific school. As the Scientific School argues in the report, "there is a too current disposition now-a-days to divorce discipline from acquisition of knowledge, to condemn the useful as ignoble. This

is a natural reaction against the opposite tendency, to regard no knowledge as worth acquiring of which the utility is not immediate and obvious. Either error is equally detrimental . . ." (Hofstadter & Smith, 1961, pp. 584–585).

For Daniel Gilman and others constructing the report, the ends of an education are not to be lost sight of in the means. The ends are practical in a very utilitarian sense of the word, and the ideas of the 1828 report seem to have been relegated to a distant past:

> There was a time when to be merely a good Latin and Greek scholar was to be well educated; now, such a one is only a specialist, and may be a narrow-minded pedant, as really deficient in due discipline as if he knew nothing but mathematics, or chemistry, or zoology. The objection is often brought against classical study that those who devote to it so large a proportion of the time given to training never carry it, after all, beyond the stage of preliminary discipline, do not begin to derive fruit and enjoyment from it, and drop it abruptly when the work of life is begun, hardly if at all conscious of benefit obtained. Much more is apt to be made of this objection that it is really worth . . . All education is to this extent and liable to failure. The liability does, however, constitute a powerful and valid argument against limiting education to one unvarying pattern, since many a mind which is repelled and stagnated by one set of studies, may be incited to independent and healthy action by another. (Yale University Sheffield Scientific School, 1868, pp. 16–17)

Although this is coming from the scientific arm of the university, and there are still remnants of the Yale Report's interest in a general education, this is a decided departure

from the argument for a classical education only forty years earlier. The Sheffield Report moves the Yale University dialog from an insistence on classical foundations to a balanced approach, finding value in a general curriculum that offers a broad spectrum of practical and theoretical approaches as the new foundational student experience.

In Gilman's (1886) "Address Before the Phi Beta Kappa of Harvard University," he describes higher education in America as having four distinct phases. The first was the English college model, which lasted up to the revolutionary war. The second phase included the appearance and propagation of professional schools in medicine, law and theology after the revolution. The third phase brought the emergence of scientific schools in the mid-19th century. The last phase, occurring in 1886, was the "fulfillment of the university ideal" (p. 5). Gilman assessed the phases dominated by Latin and Greek texts as one where "the spirit of observation, experiment and research was rarely apparent; discipline by masters and tutors took precedence over the inspiration of professors" (p. 6). His argument for empirical science over transcendental knowledge, for inspiration over discipline, are again evidence for a vast leap in dispositional preference in higher education in such a short period of time.

The dissenting voices criticizing the classical education, both its content and form, were quite audible after the 1828 report from Yale. Wayland (1850), as president of Brown University, captured many of these concerns with his own report to the board of directors in 1850. In this report, he recognized the effect of the industrial revolution and the number of young men who were devoting themselves to industry. Given the need that he sees for general education, and a social context for higher education "determined"

by the industrial revolution, he finds that changes in the general curriculum structure and orientation at Brown are a necessity for its continued survival and relevance. Wayland argues that if Brown were to adapt its structure to what the community really wanted, it would institute flexible term and course length, the inclusion of electives, courses adapted to meet community needs, acceptance of students enrolled part-time enrollment, and even the issuing of certificates of proficiency (pp. 50-56). Some of his recommendations were motivated by financial considerations, as Brown was in dire need of new students and the funds they would bring to the university. However, he was also advocating for the profoundly egalitarian idea that anyone willing to pay for higher education should be able to determine what would be valuable to them, and to some extent how they want to be educated (pp. 56-57). Then again, his proposed schedule still has students spending their first two years immersed in Latin, Greek and modern languages (in addition to math and the sciences). The seventy-page report also makes no remarks on teaching practice, except to state that a professor who is not meeting the expectations of the community can be replaced.

Draper (1853) expressed similar sentiments in a speech to the alumni of New York University in 1850. He begins by questioning, in retrospect, the wisdom of adopting the English system during the colonial era, as it was not necessarily representative of the needs of the people – then applies the same criticism for the mid-19th century. He asks, in this industrial society, and especially New York City, is it the correct approach for college students to spend their days translating Latin and Greek (and doing so badly)? As Draper argues, "it is clearly an indisputable fact, to use language

which this mercantile community can understand, that we have been trying to sell goods for which there is no market" (p. 20). Draper goes on to state in this speech his pragmatic and philosophic support for the mechanical arts, and for students to be able to choose the path they want rather than have it dictated to them.

Wayland and Draper articulate at least the beginnings of a shift in the orientation of higher education. A possible structure that would avoid pre-determining the best course of study given a universal sense of what an educated person needs, while indicating the possibility that higher education could still be worthwhile, or authentic, if focused on the more "practical" or professional needs of students. In contrast to the Yale Report, Wayland suggests that students could choose their own course of study and follow their interests, and choose wisely. Wayland also notes that universities in other states are beginning to offer students the option of choosing their classes and focus, and students are following this path out of Rhode Island and away from Brown University. For Wayland (1850), switching to a different model may not just be in line with advancements in the method of education, but also a matter of survival in a rapidly changing social landscape for higher education (pp. 59-60).

Tappan (1851), the President of University of Michigan, makes direct reference to the Brown University Report of 1850 in his 1851 book, *University Education*. After several pages detailing the merits of the German system, he states that:

> As for the defects in the system of education in our country, we have largely given our assent to the Report of Brown University, in respect to the first; we believe that education has become superficial by attempting too much in the short

> period allotted . . . We inspire no general desire for high education, and fail to collect students, because we promise and do not perform . . . Hence we fall into disrepute, and young men of ability contrive to prepare themselves for active life without our aid. In connection with this the commercial spirit of our country, and the many avenues to wealth which are opened before enterprise, create a distaste for study deeply inimical to education. The manufacturer, the merchant, the gold-digger will not pause in their career to gain intellectual accomplishments. While gaining knowledge, they are losing the opportunities to gain money. The political condition of our country, too, is such, that a high education and a high order of talent do not generally form the sure guarantees of success. The tact of the demagogue triumphs over the accomplishments of the scholar and the man of genius. Put these causes together, and the phenomena we witness and lament are explained. Our colleges are complacently neglected . . . and yield no advantages in gaining wealth and political eminence. (pp. 63-64).

Although Tappan finds much to admire of the plan at Brown University, he eventually finds it too ambitious in scope, and offers more limited changes for the University of Michigan. He does agree with other changes proposed by Wayland, such as flexibility in curriculum and discarding the mandatory four years at the institution. At the heart of Tappan's (1851) proposal is his sense for the foundational responsibility of education, and especially higher education, to serve the country by producing citizens, and not necessarily producers. Toward this end of producing citizens, education can be divided into two distinct kinds, one "imposed by tutors and governors; and an education self-

imposed" (p. 82). The first is for childhood, requiring authoritative supervision, and the second embraces early manhood and "is competent, unless the first has been neglected . . . to form plans, make decisions, exercise choice, and to apply itself, as from itself, to self-culture, the formation of character, and the duties of life" (pp. 82-83). It is not then in the purview of the university to dictate a course of study for the student in the stage of life they would be appearing at the university – an education is something that university students need to form for themselves. In order to provide the environment for this to happen, Tappan argues that universities, in a sense, become storehouses of knowledge that allow for a more in-depth opportunity to study – a place for scholars to go where they can truly prepare, and be prepared. He also argued that discussions of throwing out Latin and Greek would diminish – especially as the populace would come to realize the value of these languages. Scholarship, knowledge and notions of learning pursued in universities would eventually emanate down to all "subordinate institutions."

Tappan is envisioning a higher education institution that is an invigorating, inspirational storehouse and producer of knowledge – a research institution that produces and distributes information as a public good. To this end, he argues for a complete separation of the productive arts from the scholarly, stating that the scholarly should emanate down to the productive and that they are different pursuits. Structurally, Tappan proposes instituting four faculties: Philosophy and Science, Letters and Arts, Law, and Medicine. In these four faculties, professors "would be required to give courses of lectures, on the subjects assigned to them, to the Academical Members (*students*) of the University. Faculty should also be required to give popular courses to the general public

on subjects they select. Professorships are to be endowed – that is, they will not rely on students for money. They also perform a community service of sorts, enticing the community to higher learning, but not necessarily to scholarship" (pp. 91-92). Tappan's vision for the University of Michigan was a complete departure from the university of the Yale Report, with a faculty that specialized in their field to teach those interested in that field, and a student cohort with the freedom to express both what they wanted and what they needed. It was a melding of sorts of the German model with a decidedly American practicality.

White (1905) was a student at Yale University in the mid-19th century and became the co-founder and first President of Cornell University in 1868. While considering the idea of Cornell, he reflected on his time at Yale, which he perceived as "nearer my ideal; for its professors were more distinguished, its equipment more adequate, its students more numerous, its general scope more extended. But it was still far below my dreams. Its single course in classics and mathematics, through which all students were forced alike, regardless of their tastes, powers or aims; its substitution of gerund-grinding for ancient literature; its want of all instruction in modern literature; its substitution of recitals from text-books for instruction in history – all this was far short of my ideal" (pp. 288-289). In White's reflection the changes in the higher education landscape over the fifteen years between his undergraduate attendance at Yale and his Presidency at Cornell are fairly clear. While Yale was still a prestigious university, its perception as a paradigmatic educational model had substantially diminished.

Hedge (1866) discloses a similar memory of his time at Harvard. A professor at Harvard Divinity School and Harvard College, Hedge discusses the importance of shifting Harvard to a secular school, and his admiration for what had been done at University of Michigan by Henry Tappan. However, something more than secularization is needed "to satisfy the idea of a university":

> What is a university? Dr. Newman answers this question with the ancient designation of a *Studium Generale* - a school of universal learning. "Such a university," he says, "is in its essence a place for the communication and circulation of thought by means of personal intercourse over a wide tract of country." Accepting this definition, can we say that Harvard College, as at present constituted, is a University? Must we not rather describe it as a place where boys are made to recite lessons from text-books, and to write compulsory exercises, and are marked according to their proficiency and fidelity in these performances, with a view to a somewhat protracted exhibition of themselves at the close of their college course, which, according to a pleasant academic fiction, is termed their "Commencement?" . . . The College proper is simply a more advanced school for boys, not differing essentially in principle and theory from the public schools in all our towns. In this, as in those, the principle is coercion. Hold your subject fast with one hand, and pour knowledge into him with the other. The professors are task-masters and police-officers, the President the chief of the College police. . . . I venture to suggest that the time has come when this whole system of coercion might, with safety and profit, be done away. (p. 301)

What is called for then is freedom for these young men (at least once a foundation for knowledge is in place) to select their "own studies and their own teachers from such material, and such personnel, as the place supplies. . . . An indispensable condition of intellectual growth is liberty. That liberty the present system denies" (p. 301). Hedge decried the "excessive legislation" of both morality and curriculum which he viewed as an integral part of higher education during the era.

The arguments from Tappan, White and Hedge have many things in common, but at their core is the notion that freedom is essential for student development. If this is the case, it can be implied that the freedom goes beyond system and must have a direct impact on classroom praxis. That is, the role of the professor in the classroom should change when not relegated to being a police officer invested in a system of academic incarceration (recitation, restricted curriculum, examination). Does the professor then become invested in a system concerned with the individual and freedom of choice? Unfortunately, the actual classroom teaching practices of a professor adopting this disposition were never described in this dialog, nor were there any theoretical musings about how classroom teaching practice or students might change when freed from such constraints.

The Morrill Acts

In 1857 Congressman Justin Smith Morrill, frustrated by the seeming stagnation and intransigence of higher education in the face of advancements and growth in technology, industry and agriculture, first introduced the bill that would later be known as the Morrill Act. A decade earlier he had made his frustrations clearly known when he

publicly surmised that American higher education could "lop off a portion of the studies established centuries ago as the mark of European scholarship and replace the vacancy – if it is a vacancy – by those of a less antique and more practical value" (Rudolph, 1962, p. 249). The Bill passed the House and the Senate, but did not make it past the veto power of President Buchanan, who argued that it would adversely affect state's rights (Westmeyer, 1997, p. 64).

However, a new president in Lincoln and the post-Civil War landscape proved more favorable for Morrill's proposal; it was resubmitted in 1861 and passed all three branches of government. The Morrill Act provided for "a quantity equal to thirty thousand acres for each senator and representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty," with the exception of lands that have been identified as mineral lands (Morrill, 1862, Sec. 1). The lands were to be sold and the money invested to generate income for:

> the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life. (Morrill, 1862, Sec. 4)

It is more than a simple pun to state that the Morrill Act and the "land-grant" universities it made possible changed the landscape of higher education. George Howard, a history

professor at both University of Nebraska (a land-grant institution) and at Stamford University, commented in 1891 that the central thought of these institutions was to "do something for society which existing colleges are not doing," while describing the Morrill Act as "one of the noblest monuments of American statesmanship" (Portman, 1972, p. 127). By the turn of the century, the Morrill Act had generated funds to support more than fifty colleges and universities, and more than thirty of those came into existence because of it.

John Morrill had four primary objectives for this Act. The first was to broaden the educational possibilities for those interested in industry. This also had the effect of making higher education accessible and of interest to a wider demographic of student than the private institutions had attracted; as John Morrill put it, to those students that were "willing and expecting to work their way through the world by the sweat of their brow" (Geiger, 2015, p. 282). The second, as it appeared in the Act bearing his name, was to endow at least one college in each state where the "branches of learning as are related to agriculture and the mechanic arts" are taught (Morrill, 1862, Sec. 4). The third was to teach these branches of learning alongside "scientific and classical studies," and also alongside "military tactics," in order for these interests to co-mingle and for culture to spread to a population. The fourth was to encourage "economic development through research," which Morrill believed was essential for the growth of industry and the industrial class (Geiger, 2015, pp. 282–283). The Second Morrill Act was passed in 1890 and provided for regular annual funds for land-grant institutions, with the caveat that the

schools could not deny admission on the basis of race and were required to provide "separate but equal" facilities.

Darwin's Influence

Dewey (1910) may have been one of the first to fully realize the far-reaching impact of Charles Darwin's work. He declared that the publication of *The Origin of Species* "precipitated a crisis," a crisis that could not be limited to or concealed by the dialog generated by religious affiliations. For Dewey, the heart of this crisis was in philosophy and science (p. 3). As Dewey notes, "the conceptions that had reigned in the philosophy of nature and knowledge for two thousand years, the conceptions that had become the familiar furniture of the mind, rested on the assumption of the superiority of the fixed and final" (pp. 1-2). *The Origin of Species* put this into question by changing the foundation for obtaining knowledge itself, and this had repercussions for all facets of human inquiry. Of course, the primary residence for human inquiry was higher education.

By the end of the 19th century, practices in higher education that were taken for granted just 30 years earlier were not just being challenged, but were generally being discussed in the past tense. There can be many different explanations for this shift – a country recovering from the Civil War, the impact of the Morrill Act and ensuing development of the land grant institutions, the cumulative impact of science and philosophy, or perhaps the commercial and psychological effect of a post-industrialized society with distinct economic difficulties. However, the publication of Darwin's *The Origin of Species* in 1859 was equally powerful. The reverberation into intellectual life

caused by Darwin's assertions about the process of gaining knowledge made the approach of higher education toward that endeavor entirely inauthentic. Although there is little in the literature directly attributing any shift in American higher education structure or teaching practices to Darwin's work, the attempt here is to show this possibility without the empirical evidence, leading to the conclusion that there is a strong correlation between changes in higher education and Darwin's influence throughout American intellectual life.

Before Darwin. In Dewey's (1910) history of biology, the term "species" was generated by Aristotle and originates from a Greek understanding of things coming to order and perfection. Aristotle's conception of knowing permeated most areas of science and philosophy. The notion of a fixed form and final cause "was the central principle of knowledge as well as of nature. Upon it rested the logic of science" (pp. 5-6). This pre-conception of nature had endurance, and lasted approximately 2,000 years. However, if knowing is to grasp a permanent, fixed truth, then knowledge necessarily needed to be located outside of experience given the observable flux in nature.

Although there were many different approaches to science before Darwin's *The Origin of Species*, a common element among them was a theistic, transcendent foundation (a permanent, fixed truth), or at the very least a teleological position concerning any explanation of the natural world. This rigid expectation concerning both the content and purpose of knowledge firmly established the boundaries of science. Prior to 1859, the key criteria for scientific inquiry "were order, systematic procedures, and an understood regularity in statements of information and rules" (Westmeyer, 1997, p. 40).

This derivation of science was also focused on deduction (given the belief in final cause) and not entirely empirical. Although there was a tremendous amount of empirical work being performed, the deductive orientation tempered that work. As Mayr (1991) notes, "in all the writings of the naturalists, geologists, and philosophers of the period, God played a dominant role. They saw nothing peculiar in explaining otherwise puzzling phenomena as being caused by God, and that included the question of how species originate" (pp. 12-13).

William Paley used the analogy of finding a watch in the forest as an inroad to critique how scientists craft laws to explain nature. For Paley, natural laws must be tempered by the understanding that nature is incomprehensibly complex and a manifestation of an ultimate and intelligent design. Just as we would not assume upon discovering a watch in the forest that it was just a random occurrence in nature, we should similarly believe upon discovering exceedingly complex and natural phenomena that these are also not random occurrences but rather have both a designer and a purpose. As Thompson (2005) notes, "the basic premise of the larger movement was that the glories and complexities of living nature were to be seen as prima facie evidence of the power of God's creative hand . . . the patterns, symmetries and laws of nature were simply the reflection of God's mind " (p. 6). To study nature, or to do science at all, was to examine God's intent and become closer to God. The ultimate aim of science, as an extension of this train of thought, was to understand the design as set forth by the designer.

Although natural theology approaches the most ardent support for a predetermined, purposeful universe, this foundation permeated science in some form before Darwin. For instance, Ruse (1999) notes that Jean-Baptiste Lamarck argued for a regular and inevitable progression for his evolutionary theory. Organisms moved up the "chain of being" by triggering a chemical reaction inspired by shifts in their environment. Lamarck was a teleologist in that he understood the "organic world as being end-directed, with the end in the animal world being man" (p. 8), and presented himself as a deist with God as the "creator of the world and its laws" (p. 11) .

Other scientists also leaned toward the teleological. George Cuvier, an opponent of evolution, believed that only a very limited number of organic permeations were possible, and thus given any part of an animal he could deduce the remaining parts. This conception severely limited perceptions of evolution, as only very specific permeations of organisms were possible (Ruse, 1999, p. 13). Charles Lyell, a geological uniformitarian who believed in the constant and slow moving processes (rather than catastrophic ones) in the earth, opposed Lamarck's theories on evolution and ascertained the stability of species. However, he did not transfer this slow moving process to the development of man. Although he was not an orthodox Christian, his belief in the primacy of man made complete subscription to the idea of evolution via natural selection problematic.

In America, the scientist that would eventually be most (or most famously) opposed to Darwin's conception of evolution was Louis Agassiz. One could also consider Agassiz to be a bridge between past and present methods of learning and performing science. Agassiz instituted a secularity to scientific training as the foundation

for the Lawrence Scientific School at Harvard in 1847, believing that scientific inquiry needed to be independent from religious beliefs. His training focused on observation and physical interaction with the materials and did not rely on deduction, but rather on strict induction. However, he contrasted this approach to his own research and the training of scientists by being an "outspoken deist" in his scientific practice, which was sufficient for a Unitarian institution such as Harvard (Menand, 2002, pp. 99–100). His extensive examination of the fossil record was influenced by an Aristotelian understanding of science, as he proclaimed in 1842 that "the history of the earth proclaims its Creator. It tells us that the object and the term of the creation is man. He is announced in nature from the first appearance of organized beings" (Ruse, 1999, p. 97). Agassiz and other scientists evidenced the strong hold of the teleological in science, which manifested in an attachment to inevitable purpose, universality and certainty in knowledge.

This understanding of knowledge permeated science, and was a strong presence in the higher education dialog generally. Geiger (1993) describes higher education as inhibited by a complete focus on the appropriate shaping of young minds – to instill a mental discipline, or a capacity to learn. The preferred method for obtaining this discipline had roots that could be traced back to the colleges of the late-Middle Ages. First and foremost, as advocated in the Yale Report above, this involved the learning of classical languages through memorization, carefully assessed through classroom recitation. Over time this foundation was retained as other subjects were included, although this leads to an overarching superficiality to the instruction – knowledge was considered to be memorization and breadth, not necessarily depth. The singular purpose

of higher education, to prepare young minds in a specific way, limited the possibilities of education – the same aims for every student meant the exact same curriculum, which in turn meant no advanced or specialized subjects (Geiger, 1993, pp. 236–237).

Darwin, and *The Origin of Species*. Darwin was a product of this same teleologically-oriented scientific higher education paradigm when he released a work which was a complete departure from the science of the age in 1859, *The Origin of Species* (1936). At the same time, as Ruse (1999) notes, "Darwin and the *Origin* . . . were not the natural culmination of a long line of evolutionists and their writings. Yet Darwin's work did not spring from nowhere" (p. 200). A full exposition of the elements of the work would be well beyond the objectives here, but it is essential to highlight some elements in order to argue for the correlation between Darwin and higher education. Of particular interest are Darwin's process for scientific work, his avoidance of the teleological position, and the element of chance, as these were given an authenticity by the comprehensiveness of Darwin's work and are closely related to its influence on higher education.

First, his method of inquiry was decidedly inductive and experiential rather than deductive and abstract. Darwin's work is rife with meticulous observations of a wide variety of species, and these observations serve as the foundation for his conclusions. What is so important about this form of inquiry is that his conclusions are not reliant upon absolute truths. There is the possibility of error, and there is the element of unknown within his work. *The Origin of Species* was a complete rejection of special creation through an exposition of another way of procuring knowledge without a rigid

preconception of ends (Mayr, 1991, pp. 94–95). There is an element of chance in natural selection – as Darwin's process and conclusions do not consider an ultimate end, it cannot definitively be determined or predicted. Through the struggle for existence species spontaneously evolve, and those that have attributes better suited for prevailing conditions thrive in those environments – but there is no purpose or intention at work, it merely happens.

Given the complexity and comprehensiveness of Darwin's work, American naturalists such as Asa Gray started to become increasingly uncomfortable resorting to "supernatural interventions when seeking to explain *The Origin of Species*" (Numbers, 1998, p. 47). Although Gray had received an advanced copy of *Origin* at Harvard in 1859, it did not immediately make its way into the classrooms, only appearing there in the mid-1860s when students began demanding that it be discussed. It did not appear in the curricula of many American colleges until the 1870s (Numbers, 1998, p. 32). Even so, the work was highly influential among intellectuals across America immediately after its arrival.

Shortly after *The Origin of Species*, science became closely aligned with the process of collecting accurate and quantifiable data about natural phenomena (Oleson & Voss, 1979, p. 173). The process exhibited in Darwin's work seemed to slowly yet discernibly impact higher education. In college curricula, classes in natural history and philosophy that were intended to supply knowledge of the natural world slowly gave way to disciplines we would now consider to be "science." The method of obtaining information in the sciences became oriented on the elements Darwin was focused on,

such as "identification of a problem, accumulation of information, statement of hypotheses, testing of hypotheses, replication of tests, generalization or stating of principles." And these ideas about the accumulation of knowledge worked their way into the non-sciences as well (Westmeyer, 1997, p. 41).

Mayr (1991) strongly believes that Darwin instilled an "intellectual revolution" that went far beyond biology, "causing the overthrow of some of the most basic beliefs of his age" (p. 1). Mayr holds that Darwin's work was instrumental for upsetting the Victorian notions of progress and ideal ends that had long dominated scientific discussion, as the notion of progress was destabilized by his evidence and conclusions. More generally, and perhaps more powerfully, Mayr asserts that by introducing the elements of "probability, chance, and uniqueness into scientific discourse," Darwin managed to open up the possibilities of human understanding all together (pp. 1-2). As Mayer notes,

> the philosophers from Bacon and Descartes to Locke and Kant entirely agreed with the physical scientists from Galileo and Newton to Lavoisier and Laplace that the ideal of science should be to establish mathematically formed theories that were based on universal laws. . . . No longer relying on universal laws, Darwin had no problem in accepting statistical generalizations. It was a complete rejection of Cartesian-Newtonian determinism. . . . The deterministic spirit of science at his time was in complete conflict with Darwin's findings, which showed how strong a role in evolution was played by chance. (pp. 48-49)

Given the concepts and processes Darwin introduced, individuals needed to be considered unique and their possibilities greatly expanded – this is a definitive split from the science (and world view) that came before him, and it generated shifts in intellectual inquiry that can be linked to changes in how that inquiry is structured.

Higher education after Darwin.

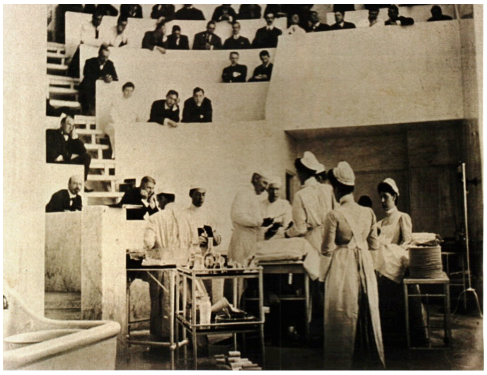


Figure 4. Surgery lesson, late 19th century, Johns Hopkins University.

Roberts (2000) makes one of the few direct links between Darwin's work and a shift in higher education when he states that, "it required little more than a nudge – albeit a theologically crucial nudge – to move . . . to the notion that no other form of description or explanation rightly deserved the name of science" other than those explained by natural laws and secondary causes. "Charles Darwin provided the nudge" (p. 29). For Roberts, Darwin's work effectively cut the tight bond between supernaturalism and science, and was instrumental in establishing a "methodological naturalism" as the new standard for scientific discourse. By the end of the 19th century, scientists no longer judged their efforts by how well their explanations encouraged people to understand the

Divine. Most colleges had also abandoned required courses in natural theology, or stopped offering them altogether (p. 32).

The shift in what was considered knowledge had a direct influence on how professors perceived their profession. Prior to 1870, the majority of colleges still primarily held fast to the education processes described in the Yale Report of 1828; transmission, memorization, and recitation. After 1870, knowledge production (for both the student and faculty) rapidly emerged as an integral part of the higher education mandate (Roberts, 2000, p. 33). Chittendem (1900), the head of Yale's Sheffield Scientific School, suggested that the "true teacher of science" needed to also be a student when describing the appropriate faculty disposition in 1900, "ever on the alert to interpret such signs as nature may make, quick to seize the opportunity to add to man's knowledge, to broaden and extend the limits of his chosen science, to keep in touch with the advances of the present and to harmonize these advances with the knowledge of the past, bearing clearly in mind that whatever is gained by scientific inquiry or research is never lost" (p. 54).

Fiske (1902) concurs with Chittendem that times have indeed changed, and "what in the eighteenth century was considered good meat for strong men we should now regard as but indifferent milk for babes," and that higher education is generally inadequate to meet the needs of this age (pp. 239-240). Although there is still a focus on Latin and Greek in the late 19th century, students were leaving college still not able to read it well enough to pick up the nuances in the literature, and not having a firm grasp on the scientific theories either. Higher education for Fiske was still clinging to a time "when

nearly all that was valuable in literature was to be found in the writings of ancient authors" (p. 249). Although he does not believe classical curriculum and teaching should be given up entirely, Fiske argued that it will be "rationalized," and that a shift to modern teaching must start with the concrete, which he contrasted with the classical tendency to focus on the abstract and immutable (pp. 253-254). However, like most commentators at this time, when Fiske refers to "teaching" he is primarily referring to content and curriculum, not classroom teaching practices. In his examination of the product of higher education, Fiske determines that a reorientation on context is needed, and advocates a focus on pursuing depth of knowledge (which indicates his preference for a turn toward specialized versus general knowledge). How this translates into teaching practice was not specified.

Dewey (1910) maintains that Darwin's work, in a sense, makes this depth possible as it frees a "new logic for application to mind and morals and life." Developments in other areas of science such as astronomy and physics had given the overarching approach to science several "shocks" in the past, but biology had always been the counter balance to these developments until the arrival of *Origin* (pp. 9-12). Dewey described the tendency in science and education to revert to explanations justified by supposed first-cause as an "intellectual ativism" for its tendency to rely upon or revert to some ancestral type (p. 14). This description was apt for higher education as well until the late 19th century.

To return again to the Yale Report of 1828, the overriding consensus in higher education at that time, a consensus that stretched back several hundred years, was that

students needed to be prepared for intellectual engagement through a very rigid process. This preparation involved the construction of a disciplined mind, obtained through the study of classical texts, mathematics and the sciences, and ability (that the acquired knowledge was "higher") was assessed primarily through recitation. This structure for higher education resembled the perceived structure of knowledge itself – knowledge was obtained through abstraction, and bore a close proximity to the Divine or True. This was the overriding premise in higher education until the middle of the nineteenth century, when authorities such as Wayland and Tappan began to loosely suggest that there may be other possibilities, but very little that was concrete ever materialized from these declarations.

However, as Roberts (2000) suggests, "development may be forecast; revolution cannot. No one in 1850 could have predicted the shapes into which academic knowledge would shift by 1900" (p. 75). A variety of courses and programs of study emerged by the turn of the century that would have been almost inconceivable to those in higher education in 1850. These areas of inquiry, and especially the humanities, took the place of the Greek and Latin curriculum that had been holding on for centuries. Greek and Latin studies themselves acquired a new name, "the classics," and became simply another area of study within the university. Over the course of just a few decades, "academic knowledge in the United States crept away from a resilient traditional ideal of knowledge cohering under a Christian worldview toward an attractive new ideal of specialized disciplinary learning" (p. 75).

Westmeyer (1997) argues for a clear connection between the rise of "true universities" in America with the growth of science. In particular, he suggests that the publication of *The Origin of Species* was the "drastic step" needed to push universities toward something closer to what we now recognize as an institution of higher education (p. 143). But how might this connection be made? If, as Darwin proposed, science is not determined, then perhaps as the concepts in *Origins* made their way into intellectual life they inspired those in higher education to realize that they could not be systematically deterministic either. If knowledge were not bound by an ultimate causality, then it would seem reasonable that an institution attempting to produce knowledge would need to make adjustments in order to meet the demands of that uncertainty. Further, if Darwin's approach to science was to be adopted, then an essentialist approach becomes problematic and perhaps entirely contradictory. To move this thought a bit further, if scientific laws can no longer be assumed to provide precise explanations of final causes, then science can no longer be thought to describe fixed entities, but only probabilities. Therefore, when the Yale Report asserted in 1828 what it was that students needed, perhaps it was instead more of a reflection of what the *faculty* needed. In fact, texts thought to be fixed and certain were instead quite plastic, and the idea of how and where students should learn, given Darwin's processes and that knowledge was no longer thought to be fixed, needed to be re-evaluated.

Transcendentalism, Charles Eliot, and Choice

The connection between freedom and education important to Tappan, White and Hedge above was an element of significant emphasis for the transcendentalist movement.

As early as 1837, Emerson was publically offering the transcendentalist perspective on human existence and its relation to education. Emerson's (1929) transcendentalist perspective holds that education is based on three primary sources: 1) nature, 2) books, and 3) action/experience. The true scholar, he offered, speaks from experience. In the 1860s he lectured widely on the topic of education, arguing that education cannot be mandated by the teacher, but must be directed by the pupil (pp. 984-985). This theme in turn began to appear in the dialog concerning higher education, as noted throughout this section.

For instance, the transcendentalist concepts were echoed in the March 1869 Atlantic Monthly article authored by Eliot, one which helped secure his position as President of Harvard, and was the basis for his inaugural address in October of that same year. In the inaugural address, Eliot brings together many of the ideas that have been discussed by the "anti-establishment," German influenced, post-Yale Report, post-colonial literature and offers a blueprint for a change in the structure or system of higher education. Given the importance of the address for establishing a new structural paradigm for higher education in the United States, the inaugural address will be cited at length. Eliot (1905) begins with his concerns about teaching and learning:

> Philosophical subjects should never be taught with authority. They are not established sciences; they are full of disputed matters, open questions, and bottomless speculations. It is not the function of the teacher to settle philosophical and political controversies for the pupil, or even to recommend to him any one set of opinions as better than another. Exposition, not imposition, of

> opinions is the professor's part. The student should be made acquainted with all sides of these controversies, with the salient points of each system; he should be shown what is still in force of institutions or philosophies mainly outgrown, and what is new in those now in vogue. The very word "education" is a standing protest against dogmatic teaching. The notion that education consists in the authoritative inculcation of what the teacher deems true may be logical and appropriate in a convent, or a seminary for priests, but it is intolerable in universities and public schools, from primary to professional. The worthy fruit of academic culture is an open mind, trained to careful thinking, instructed in the methods of philosophic investigation, acquainted in a general way with accumulated thought of past generations, and penetrated with humility. It is thus that the university in our days serves Christ and the church. (pp. 7-8)

Eliot argues that freedom of expression must be attached to a system that will produce the thinking and scholarship that is the university's promise; the elective system:

> The elective system fosters scholarship, because it gives free play to natural preferences and inborn aptitudes, makes possible enthusiasm for a chosen work, relieves the professor and the ardent discipline of the presence of a body of students who are compelled to an unwelcome task, and enlarges instruction by substituting many and various lessons given to small, lively classes, for a few lessons many times repeated to different sections of a numerous class. (p. 14)

This system requires a different classroom structure and new ideas about teaching and learning:

> There has been much discussion about the comparative merits of lectures and recitations. Both are useful . . . (however) Recitations alone readily degenerate into dusty repetitions, and lectures alone are too often a useless expenditure of force. The lecturer pumps laboriously into sieves. The water may be wholesome, but it runs through. A mind must work to grow. Just as far, however, as the student can be relied on to master and appreciate his author without the aid of frequent questioning and repetitions, so far is it possible to dispense with recitations. (pp. 14-15)

The classroom structure will in turn require the faculty to focus on their primary responsibilities and, perhaps for the first time, become truly invested in the scholarship of teaching and learning:

> The University as a place of study and instruction is, at any moment, what the Faculties make it. The professors, lecturers, and tutors of the University are the living sources of learning and enthusiasm. They personally represent the possibilities of instruction. They are united in several distinct bodies, the academic and professional Faculties, each of which practically determines its own processes and rules. The discussion of methods of instruction is the principal business of these bodies (p. 24)

In this inaugural address, Eliot describes a new disposition for American higher education. This description provided, at least in part, a vocabulary for higher education critics in the 19th century, as they moved higher education toward a new structural paradigm.

Fiske (1902) reiterates this theme in his article "University Reform" by qualifying a general education as valuable only "in so far as it is ancillary to the intelligent study of special subjects." He manufactures and advocates his own system of elective group courses, but tempers his construction with the general idea that the "skill in acquiring knowledge ought certainly to be accompanied by skill in reproducing it." He does not believe that this should be done through traditional recitation, at least as a primary focus, but rather knowledge should be *applied* by both professors and students, and questions should be encouraged (p. 304). "With the compulsory system reduced to the lowest practicable minimum, and the elective system carried out with the greatest possible completeness, the chief ends of a liberal education can most effectually be secured; and the most excellent features of the European university will thus be adopted without resigning any single point of superiority possessed by the American college" (p. 307).

Fiske, Eliot, Tappan, Wayland, and others are pointing toward a university education that moves away from rote memorization of a university curriculum and toward an education that is practical in both content and implementation. However, Tobias' (1982) description of the adverse effects of this evolution from fixed to flexible system in her work *Old Dartmouth on Trial* is insightful. Tobias, citing William Jewett Tucker, notes that the older colleges, including Dartmouth, had "organized around the idea of unity," while the colleges later in the century were "organized around the idea of intensiveness." By 1890, higher learning at Dartmouth had become, "more specialized, fragmented, and esoteric with divisions into separate disciplines with specific limits of study and select problems and methodologies. The emphasis on character shifted from

uplifting the individual character and in this way creating a Christian Zion, to demonstrable actions in insuring the quality of life through social service in large-scale formal organizations" (pp. 13-15). The faculty itself shifted from a homogeneous body of scholars to a conglomeration of experts in specific fields. "Thus, the basic unity of knowledge, the evangelical, the joining of faith and intellect, instructing he moral conscience, the uplifting of individual character gave way to a more rationalized and esoteric learning" (p. 139).

There was a tremendous amount of activity in the United States higher education landscape between the Yale Report of 1828 and the second Morrill Act. This period planted the seeds for and then began to act upon a paradigm shift in higher education structure, unsettling and then slowly replacing a system of education that had been entrenched in America for almost two hundred years. As Winterer (2004) describes it, "As the modern university rose, the classical languages were dethroned. The proliferation of new studies in the curriculum, such as modern languages, modern history, and social sciences, as well as the advent of elective study, helped to push Latin and especially Greek to the side" (p. 101). The venerable Yale College of the 1828 Report was as susceptible as any other institution to the downward trend in classical education. "At Yale the ancient languages occupied about a third of a student's time in 1886 but only a fifth in 1899. Moreover, Greek almost vanished" (p. 102). The new ideal for American higher education in this era was utility.

The higher education structure that emerged from this time period is one that has become recognized as distinctly American, and duplicated in other places. Scientific

departments and colleges in the 19th century attempted to merge the needs of the professional and academic interests circulating in the post-industrial revolution, Morrill Act influenced higher education climate. However, despite the shift in the literature concerning curriculum, teaching and learning, there is no discernable evidence of a shift in teaching practice. Although students had more choices, the focus on recitation and the forced march through the Latin and Greek curriculum slowly waned, and the establishment of laboratory and experiential learning became more commonplace, there is little evidence that a professor's basic approach in the classroom was substantially different than it had ever been. The focus remained on lecture with a familiar classroom hierarchy and structure.

This state-of-affairs is perhaps epitomized by Charles S. Peirce and his definition of a university offered in the *Century Dictionary*. Although higher education had moved away from classical education and toward more of an individual experience, it did not mean the focus of university was now on the students. In an 1891 letter, which has often been cited, written by John Jay Chapman to Mrs. Henry Whitman, Chapman conveyed Peirce's views on higher education:

> Charles Peirce wrote the definition of University in the *Century Dictionary*. He called it an institution for purposes of study. They wrote to him that their notion had been that a university was an institution for instruction. He wrote back that if they had any such notion they were grievously mistaken, that a university had not and never had had anything to do with instruction and that until we got over this idea we should not have any university in this country. (Fisch, 1986, p. 36)

The era of the modern university in America had truly begun.

Synopsis: The 19th Century

As knowledge shifted from fixity to fluidity, higher education needed to change as well. This first manifested concretely in Harvard's installation of the elective system, but this was merely the beginning of a vast systematic change. As Dewey describes this shift after Darwin, "the new logic introduces responsibility into the intellectual life." However, the old questions only go away by forgetting them, which takes time (Dewey, 1910, pp. 17–20). Once the ideas of Darwin, and especially his epistemology, permeated into intellectual life, they could not authentically co-exist with higher education as it was structured before 1860. The tremendous disciplinary explosion in higher education and the institution of free choice can be reasonably considered manifestations of, or influenced by, this new logic.

If the student is capable of being an advocate for their future, and is reasonably entitled to learn what it is that would be most practical and valuable to them to learn, then how might this conception effect not only what is taught, but how it is taught? Again, although there is some indication of a preferred teaching methodology in order to take advantage of the new higher education structures advocated and then instituted in the 19th century (experiential, individualized, learner-centered, elective), there is no indication of a general movement away from the basic teaching paradigms that had previously been in existence (hierarchy, lecture, examination).

Many of the voices discussed in this section are captured in more detail in Appendix D, as well as others from the 19th century.

Historical Context: Higher Education in 1960s America

Any effort to examine higher education teaching in the 1960s must begin with a blanket statement, noted elsewhere in this dissertation, that makes the effort itself problematic – there are very few research studies that examine teaching practice in higher education that exist from this time period. For the research that is known, however limited it may be, much of it is simply referenced in secondary sources and the original research may not be available. The effort is further complicated by the fact that pedagogical research in higher education was not a common practice in this time period; unlike the k-12 arena, where it was fairly commonplace. Part of the difficulty in performing (and finding) such studies is related to the general disposition of higher education itself. As described in the sections on early modern Europe and the 19th century United States, since its inception in the 12th century, any type of change has been slow, if not altogether elusive.

As noted above, the research of this dissertation examines 1) historical contexts for understandings of what effective teaching is, 2) the elements in social/cultural environment and teaching theory needed for changes in teaching practice to occur, and 3) an examination, given the available evidence and temporal notions of what comprises excellent teaching, whether or not teaching practices change in either a temporary or sustainable way. This part of the project is directed toward applying that lens to the socially and culturally vibrant time of 1960s America. The working hypotheses concerning higher education during this time period is that although it did not yield an

overarching pedagogical paradigm shift, it did supply the conditions to produce some "paradigm anomalies" that have survived on the higher education landscape.

This section, similarly to the previous two, begins by examining the immediate historical, social and cultural contexts that provide the foundation for paradigm anomalies to occur. It continues with a direct examination of higher education in the 1960s, and the research on teaching and learning that was going on during this time period. The section concludes with an examination of paradigm anomalies that originated in the 1960s, and brings this research together within the overarching context of this dissertation.

Social/Cultural Context: 1925 Through the Second World War

To establish the vitality of the 1960s as a space for higher education change, it is necessary to examine the period from 1925-1945 as a time of "ideological ferment" that laid the foundation for changes that occurred after World War II (Havighurst, 1978, pp. ix–x). Of particular note for higher education during this period are Alexander Meiklejohn's establishment of the Experimental College at the University of Wisconsin, the Great Books program at St. John's College in Annapolis, Robert Hutchins' general education efforts at University of Chicago, Stephens College's restructuring around a functional curriculum, and efforts toward a student-centered education at Sarah Lawrence College, Goddard College, Bennington College and Antioch College. However, as Taylor (1969) notes, these experiments did not have a widespread affect. Rather, they happened in isolation, appearing in favorable environments with primarily supportive faculty, administration and students. Ideas that could be made to fit conventional environments were appropriated by other higher education institutions, and the rest were

explained away as only fitting these small, isolated, non-traditional environments (Handlin & Handlin, 1970, pp. 78–80; Taylor, 1969, pp. 173–176).

Unlike universities in Europe, which suffered tremendous losses both to staff and infrastructure, universities in the United States were for the most part unaffected by the Second World War – with a few exceptions. There were very few challenges to academic freedom in the United States, although many faculty were re-tasked to the war effort. There was also pressure from the government to accelerate students toward graduation, to which universities for the most part acquiesced. Terms were shortened, courses compressed, and credit was given for military service (Rudy, 1991, pp. 93–98). There were some shifts during the war effort, particularly to curriculum, that did have a lasting impact. Notable were the institution of language laboratories, area studies, interdepartmental courses and general education programs (Pusey, 1978, pp. 3–4; Rudy, 1991, p. 99), which continued in higher education after the war.

The primary impact, however, was the connection formed between the government and higher education institutions that did not really exist before. Before the Second World War the United States government was, for the most part, uninvolved in universities, and their investment in research efforts was close to non-existent. However, during the war the government relied on universities to provide critical manpower and knowledge to the war effort, and that reliance led to a tremendous investment, especially in scientific research. On the recommendation of Vannevar Bush of the Carnegie Institution, President Roosevelt organized the National Defense Committee which began to contract work with non-governmental institutions, including universities. These

contractual arrangements continued after the war due to concerns for national security, especially in light of advancements in science that were having an impact both on the war effort and on society generally (Pusey, 1978, pp. 65–69).

Social/Cultural Context: Post-Second World War Foundations

After the Second World War, continuing concerns about national security, especially in light of communist fears, increased governmental investment in universities, particularly in the area of research. The race to develop nuclear weapons, to venture into space, and to keep pace with advancements in other parts of the world (later heightened by the successful Soviet launch of Sputnik and presence of the cold war) were particularly evident in the growth of graduate education. The move toward pragmatically oriented specialized knowledge was discernable and had a noticeable effect on instruction (Lehrer, 1970, pp. 11–12), and the graduate populations in universities expanded exponentially along with the research dollars. As Pusey (1978) notes, "it is difficult to exaggerate the impact made on colleges and universities by increased attention paid to science during these years." Where in the past the sciences had difficulty gaining a foothold in higher education, now "they threatened to take over these institutions" (p. 76).

The event carrying the most dramatic effect for higher education during the Second World War years was the 1944 passing in Congress of Public Law 346, the GI Bill of Rights. Of particular interest to universities was the provision that paid tuition and other allowances for the vocational training or college education of veterans, who also brought with them to higher education "an increased eagerness and seriousness" to college classrooms (Pusey, 1978, p. 12). Although initial projections concerning veteran

use of the GI Bill were conservative (8-10 percent), by the end of the first year over 80,000 veterans had taken advantage of the opportunity, and by 1946, that number ballooned to over one million. The swelling number that entered higher education required changes to admission policies, tremendous infrastructure expansion and increased staffing. Universities also needed to expand their notion of what a college student was, as all of these applicants were non-traditional, often having families and substantial experience outside of education (Thelin, 2004, pp. 262–268).

As Smith and Bender (2008) describe it, higher education in America for the 25 years after the Second World War was considered a "golden age" of unprecedented expansion and funding. However it came with several caveats – the communist scare and McCarthyism routinely challenged academic freedom, racial division, faculty positions for women were still scarce - accompanied by a "strong sense that more would be expected of higher education" (pp. 2-3). There was also a fear that science was advancing faster than the humanities were able to process, and that the moral challenges triggered by new technologies such as nuclear weapons had not yet been adequately addressed.

It was in this climate that the Harvard University Report entitled *General Education in a Free Society* emerged (Harvard University, 1945), and it had a significant influence on post-war higher education in the United States. As the title indicates, it prescribed a universal general education curriculum, emphasizing the European humanist tradition thought to contain the foundations of American values that would help sustain the country during the Cold War (Smith & Bender, 2008, p. 3). Many institutions began

constructing and advertising similar general education efforts based on the arguments contained in the Harvard Report (Pusey, 1978, pp. 160–164).

Two other documents also emerged during this time period that attempted to set the agenda for higher education. The 1947 report generated by the President's Commission on Higher Education, *Higher Education for American Democracy*, espoused universities as the space for social advancement and advocated the formation of public community colleges that would be free for anyone that might advance in life by receiving such a post-secondary education. The Commission also advocated for the establishment of federal scholarships and financial aid (President's Commission on Higher Education & Zook, 1947). Later, the 1957 report from Eisenhower's Committee on Education Beyond the High School, *Second Report to the President*, predicted large enrollment increases and recommended the removal of social barriers to higher education (Hutcheson, 2007, pp. 360–364).

The 1960s

Figure 5. Cartoon by Pat Oliphant, Denver Post, 1960s.

The 1960s initiated the second wave of higher education experimentation in the 20th century. The most visible catalyst for change in the 1960s was student activism, but it began slowly during this time period due to rampant fears of communism and the oppressive influence of the McCarthy era. There was a search for communists in academic institutions, which were considered a safe haven for that political disposition. Loyalty oaths became common, and the fears of persecution trickled down into the student population (Pusey, 1978, pp. 125–137).

Student activism was not only a change agent on the campuses where it was most apparent, but other campuses also made changes in a proactive fashion given the headlines students were making in the national news. The student unrest of the 1960s is well documented, and commentary on the phenomena runs the gambit between describing it as an inspiring change motivator to a complete dismissal of student movements. For instance, John Ohles at Kent State University deems it the "War of the Unstudent," describing the student activist as "the lost soul, once along skid row, but now with a place to sleep and an assured eating schedule" (Lehrer, 1970, p. 438). Meanwhile, Joseph Guisti at The Pennsylvania State University, although critical of the anarchy he sees on college campuses, describes the student activist as a "well-read, well-spoken, well-versed, young adult" (Lehrer, 1970, pp. 455–459).

This description was supported by a report in the April 1967 edition of *The Journal of the Association of Deans and Administrators of Student Affairs*, which asked campus deans to compare the past generation of students with the ones that were enrolled

in the 1960s – and specifically those enrolled in 1967. When making the comparison (which was compiled by the editors), they described the student of the 1960s as:

- More sophisticated, urbane, cosmopolitan, informal, experienced, affluent.
- Brighter, more knowledgeable, better prepared academically…
- More serious and conscientious in response to greater academic pressure and competition.
- More dissatisfied with the world around him and more aggressive and demonstrative in his protests, more idealistic.
- More insecure and anxious in response to societal complexities…
- Dominated by the pragmatism of getting into graduate school…
- Courteous, sensitive, honest, fair, and sincere, but relatively unwilling or unlikely to take responsibility for the behavior of his peers.
- More sensitive to…any attempt at imposition of advice.
- In search of meaningful relationship with others…
- Significantly critical and skeptical of established beliefs, customs, values and authority.
- More actively, personally, and genuinely concerned and better informed about public and world affairs and social problems. (Woodring, 1968, pp. 71–72)

The disposition toward authority and sensitivity to advice was reasonable given the level of sophistication of students, as well as the concerns of the era they matured in. Woodring (1968) observed a pronounced effect on these students of living their entire lives with the nuclear threat (of the possible annihilation of the human race), the real

possibility of being forced to engage in a (undeclared) war on the other side of the world which they neither understand nor agree with, rising crime rates, racial conflict, and a rapidly deteriorating and polluted environment in the midst of unparalleled American affluence. This environment, coupled by the prior generations reluctance to express moral judgment (and in many ways agreeing and encouraging the new one), produced "the *now* generation, steeped in popularized versions of existential philosophies, indifferent to the past, doubtful about the future, and skeptical of the wisdom of the older generation" (p. 75). The experience of local, national and international threats was also far more present in their lives than it had been for previous generations, as the images were placed before them daily through television (p. 74). For Woodring, the surprising thing was not that students were "anxious and troubled," but rather that "a great many of them still remain stable, calm and responsible" (p. 75).

Higher education conferences and symposiums, such as the Southern Regional Education Board Legislative Work Conference (1968), were assembled to consider responses to the assertive and sometimes violent student actions on college campuses. Papers delivered at this conference, such as one from Robert Shaffer at Indiana University, took into account the genuine concerns of students seeking instruction, and instructors, that were capable of making meaningful connections to what was happening in the world (p. 12). Lewis Mayhew at Stamford University and Harry Smith at University of North Carolina were motivated by student unrest to critically examine their institutions' practices in light of student concern and activism. Mayhew looked positively on calls for interdisciplinarity in order to address complex world problems

through coursework, and also questioned whether university professors are properly trained, or trained at all, to be successful college teachers (pp. 22-25). Smith believed that student concerns about the educational process itself were genuine, and that responses to complaints about the depersonalization of higher education through the creation of small residential colleges were commendable (pp. 29-31). Others, such as Harry Ransom at The University of Texas, thought that direct responses to student activism were rash, and most likely reckless, and that only long-term planning would be meaningful (pp. 6-8).

Parker (1979), a former president at Bennington College (for a brief time in the early 1960s), states that although she believes the opportunity to teach is a privilege, she is somewhat dubious that more regular faculty contact with students will foster that disposition and lead to a more active approach to teaching. In fact, she suggests that students help to foster the "Magic Mountain quality of academic life" rather than dispel it, encouraging a "debilitating sense of specialness" in faculty despite the student activism of the late 1960s and early 1970s (p. 34). As she reflects on her time at Harvard as a young professor during the 1960s, she notes that rather than find motivation to change in the midst of the rising student voice, faculty were instead outraged and proceeded to further entrench themselves in a position of superiority. Parker's observations steered her to the conclusion that "there is little evidence that as a result of the campus upheavals during the Vietnam War academics today are any more willing to acknowledge that whatever ails higher education is in large part a result of their own free choices" (p. 35). She suggests, citing examples such as Charles Eliot at Harvard

University and Robert Hutchins at University of Chicago, that institutional change generally occurs through the efforts of powerful individuals, and not through student activism or faculty interest (pp. 43-49). In any case, curriculum and faculty transformations do not come easily.

1960s Research on Teaching Practice

An inquiry into pedagogical methods and resources was performed in the late 1960s through a joint venture between the United Nations Economic, Social and Cultural Organization (Unesco) and the International Association of Universities Research Programme in Higher Education. This inquiry began as a meeting of world experts (including those from the United States) on teaching and learning, but was continued and expanded by MacKenzie, Eraut, Jones at the University of Sussex as well as the International Association of Universities (1970) to produce a work on teaching and learning methods in higher education. Although primarily oriented on an audience outside of the United States, the section on "Teaching Methods" relies on work done in the United States between 1955 and 1968.

MacKenzie et al. state that most of the work that encompasses teaching methods "has concentrated on comparing the use of lectures with the use of classes or discussion groups" (p. 132). A class or discussion group was defined by the authors as having approximately 15-32 students, where over 32 students was defined as a lecture (p. 125). Studies revealed that there were no significant differences among the two group sizes in regards to test scores, but there were measurable improvements in critical thinking, attitude change, motivation and conceptual learning in the class/discussion group as

compared to the lecture. That the designation "lecture" was determined by the number of students in the class seems problematic. The differentiation between types of classes was reliant upon the unsubstantiated assumption that classes with smaller numbers utilize different teaching practices that are ostensibly more interactive.

Other studies examined the use of independent study, which includes some contact with instructor and/or discussion group. For instance, Baskin (1966) extensively examines independent studies, specifically as they are incorporated into the regular (as opposed to advanced) curriculum, partly in response to international criticism of higher education as an extension of high school (p. 2). After examining a variety of studies on efforts at 14 colleges and universities, he determined that there are no significant differences in learning or retention between independent studies, discussion groups and lectures after two years. However, he also concludes that "students are able to learn as well with much less class time than we have been accustomed to acquire of them" when placed in an experimental program at Oberlin where one-third of the work was done outside the classroom (p. 9). What this might mean for, or how this might be effectively incorporated in higher education is not discussed.

In all, the section of MacKenzie et al.'s work specifically devoted to teaching methods examines over 45 studies, yet offers no conclusions concerning actual classroom practice. In fact, the authors assert that such conclusions are problematic given that in higher education "professionalization is associated with research skills rather than teaching skills" (p. 126). Citing a study performed by Hatch and Bennet in 1960, they also determine that the "consensus of studies since 1920 is that no one mechanical

teaching device, in and of itself, is better than another. Teaching by the lecture, recitation, discussion, tutorial, reading-study, reading-quiz, correspondence, or several different laboratory teaching methods . . . has not demonstrated to be intrinsically better than some other technique." Therefore, "the effect of research on the effectiveness of teaching should be shifted from 'tactics' of teaching to the 'logistics' of learning to methods which in contradistinction to the pedagogical, may be described as the methods of scholarship, of inquiry, of problem-solving or of critical thinking" (p. 44). Their investigation of teaching methods, in summation, resulted in the conclusion that the investigation itself is irrelevant and the focus of professors should be placed on time management and scholarship (presumably, for both the professors and their students).

An examination of a "meta-analysis" done by Hatch (1975), which incorporates the study cited in MacKenzie et al. above, reveals that both Hatch and MacKenzie et al. make use of similar assumptions when evaluating the data. The Hatch analysis examined studies (primarily performed in the 1950s and 1960s) on class size that used grades as the primary factor for determining effective teaching, with an emphasis on studies where the same teacher(s) works with classes of varying sizes and types. Both Hatch and MacKenzie seem to rely on the assumption that good grades are the product of effective teaching, which may not have been an appropriate leap to make. For MacKenzie at least, the assumption and the conclusion suggest that excellence in teaching was an element not worth pursuing.

Hatch's (1975) meta-analysis on different studies on teaching effectiveness in *Student Involvement in the University* comes to a different conclusion. For instance,

when examining studies on "problem-oriented" approaches to teaching, he does find that a focus on critical thinking, where "the student should inquire into, rather than be instructed in a subject matter," can make a difference by reducing errors in student work, and (not surprisingly) in the students' abilities to solve problems (pp. 79-80). In the conclusion Hatch argues that although class size is not a critical factor in learning, the methods of scholarship (namely problem-oriented or problem-solving methods), and the level attentiveness of the professor to the process, do have a significant positive impact on teaching effectiveness. He also finds that the involvement of teachers in research also makes a discernable difference in teaching effectiveness (pp. 91-92).

Taylor (1969), a proponent of student activism and advocate of a complete re-evaluation of higher education, makes several suggestions regarding effective teaching method and structure. He rails against the recommendations of the *Harvard Report* (Harvard University, 1945), and laments that all higher education institutions generally "emulate the educational patterns of the major university, no matter what the character and needs of its own student body" (p. 14). Rather than moving students around campus pursuing separate, disparate classes, students need prolonged time working in one area. For Taylor, higher education should be student-centered, and he supports a curriculum that embraces and incorporates experiential learning, particularly when it is focused on socially conscious activities. He advocates the abolishment of the lecture system, and criticizes it as information dissemination that is not teaching, is anti-community, and stifles student engagement (pp. 86-89). He also advocates the removal of the credit

system, grades, and requirements for graduate (pp. 76-82) – all of which yield students choosing classes for reasons other than education and self-discovery (pp. 91-107).

Paradigm Anomalies

Most of what has been discussed thus far has relied on reflections, observations, theories, and some data that entail adjustments to a traditional college structure and curriculum. That is, these are commentaries on adjustments within the paradigm that has, for the most part, been in evidence since the 13th century (with the exception of short experiments noted by Taylor and others). There have long been higher education institutions that have existed outside the mainstream – experimental colleges that emerged either as a separate entity within an existing institution, or emerged apart from an existing affiliation. These "experiments" emerged as separate entities, or were recognized as such, because it was believed that these colleges were far removed (or far enough) from paradigmatic practices. Many of these experiments

There was tremendous traction in the movement toward experimental colleges during the 1960s, with a number of institutional constructions either within existing colleges and universities or as separate entities, some of which still survive into the 21st century (Keeton, 1969). For the purposes of this dissertation, these will be designated "paradigm anomalies," structures that exist outside the higher education paradigm and are *not* a harbinger or a catalyst for higher education reform or paradigm shift. As a way of examining this movement, two colleges that still exist, Alverno College in Wisconsin and Evergreen State College in Washington, will be examined, as well as one that does not, the Experimental College at University of California-Berkeley.

Alverno College. In the late 1960s, Alverno College in Milwaukee, Wisconsin began investigating student and faculty discontent with the quality of learning, and ostensibly the quality of instruction, at the college. In order to generate discussion, the administration arranged for a series of activities entitled "September '69" to provide a town hall style forum for discussion of the issue, and the floor was opened to different types of innovation that might stimulate learning. Those discussions were the material for departmental and inter-departmental committees that formed to consider learning objectives and outcomes in 1971, and the committees generated the initial four competencies (later termed "abilities") for the college: problem solving, communication, valuing and involvement. These competencies were the foundation for the development of matrices and assessment practices introduced in the fall of 1973 (Alverno College, 1973, pp. 2–5).

In Alverno College's (1979) description of the program at the time, the faculty state that "today, most American educators would probably agree that the learner – not the teacher – is at the center of the educational universe." This perception (although that most American educators would agree with it is debatable) was motivated by student discontent in the late 1960s, as higher education students in the 1960s were demanding a place in the center of the "educational universe" (p. 4). In order to seriously undertake this consensus, and this challenge, the Alverno faculty state that educators have "undertaken the task of helping learners learn from certain processes – how to seek out, integrate and use knowledge – rather than simply passing along the body of knowledge itself" (p. 1). If education methodology is understood this way, it was Alverno's

contention that traditional testing was not capable of evaluating it. Unlike other colleges, Alverno undertook the task of creating alternative evaluation methods, one centered on the learner rather than the instructor. To avoid traditional assessments, which they believed were "one-dimensional" and did not put the learner first, Alverno constructed a "multi-dimensional" assessment that attempted to "observe and judge the individual learner in action" (p. 1).

Alverno's (1979) response to a learner-centered environment was to dispense with the standard grading system (A, B, C . . .) and institute an outcomes-based assessment practice that encompassed eight abilities: 1. effective communication ability, 2. analytic capability, 3. problem-solving ability, 4. valuing in a decision making context, 5. effective social interaction, 6. effectiveness in individual/environmental relationships, 7. Responsible involvement in the contemporary world, and 8. Aesthetic responsiveness (p. 5). These eight abilities were assessed in each class through a rubric (see Appendix B) that, on a scale of 1-4, gives higher weight to actions and integration (application of processes, performance, integration, creation) in each category than the passive (observation, identification, application of perspectives). The consistent application of the rubric, evaluating the same outcomes for each student across disciplines over an entire four-year education, yielded for both faculty and students what Alverno believed to be a more coherent and comprehensive picture of ability development (p. 10).

It is reasonable to assume that the complete overhaul of objectives and assessment necessitated changes in classroom practice. As assessment was based on outcomes, professors needed to develop a curriculum and assignments that provided an opportunity

to assess those outcomes. As higher weight was given to students' ability to do things (rather than memorize and recite), instructors needed to redesign curriculum in order to give students the opportunity to practice activities that would yield that ability. The intention was to provide feedback quickly and often so that both faculty and student could monitor ability development (Alverno College, 1979, pp. 9–10). Perhaps more importantly, Alverno (1976) noted a renewed vigor toward teaching and learning that permeated into the classroom (p. 13). However, there were no details provided in this extensive report concerning how actual teaching practices were adjusted for the new structure. It stands to reason that notions of teaching excellence would also change based on the new student-centered, ability-oriented focus, although there was no description or data for this either.

Evergreen State College. Founded in 1967 and opened in 1971, Evergreen State College was conceived and constructed to meet a projected 1970s shortfall in higher education capacity in the state of Washington. The conception was highly influenced by criticisms of higher education at that time, particularly surrounding the expectation of curriculum relevance (Chance, 1980, p. 7), as well as Meiklejohn's work at the University of Wisconsin's Experimental College in the late-1920s. The designers of the college were advised by the state Senate Higher Education Committee to examine innovative teaching methods as a way of guaranteeing the long-term viability of the college (Chance, 1980, p. 14). The structure that was implemented at Evergreen State College was a radical departure from what existed in the 1970s higher education landscape, and still exists for the most part in its original form. It is a form that is

exceedingly fluid in nature and capable of adapting to contemporary events and needs. As the Evergreen State College Bulletin (1973) for 1973-1974 states, "Evergreen does not present fragmentary 'courses of study' to be taken simultaneously, nor does it prescribe distribution or major requirements by college-wide legislation. Instead, it offers each student the opportunity to put together step-by-step a sequence of concentrated activities – each with its own set of requirements – leading to the Bachelor of Arts degree" (p. 29). Instead of being awarded grades for classes, students accumulated "academic credit for work well done, time well spent in learning, and levels of performance reached and surpassed. Only if a student performs his obligations to his Coordinated Studies program or lives up to the conditions of a Contracted Study will full credit be entered on his permanent record" (p. 30). Evaluations were narrative in nature and ongoing throughout a Coordinated Study. The final determination of credit for the Study was through portfolio examination (pp. 140-141). Students either received credit, or not, for taking each coordinated study, and 36 credits were necessary for graduation.

Identical coordinated studies did not necessarily carry over from year-to-year. Before each quarter the coordinated studies were constructed or re-constructed in order to contain or retain a high level of currency as well as relevancy to student needs and interests. The Bulletin (1973) served as a generic placeholder for course descriptions where the curriculum was reconsidered each year, as well as the "official statement about what Evergreen is and is not, why it approaches learning in the way it does, and . . . how it works" without providing a "precise shopping list of academic opportunities" (pp. 4-5). Coordinated studies were constructed as a learning community between five faculty

members and approximately 100 students to closely examine, in an interdisciplinary fashion, a particular subject over the course of a year. Topics were submitted by interested faculty and students at the beginning of the year, then selected by the Deans with faculty input based on what best served the academic community in a given year. Faculty were assigned to coordinated studies only *after* topics were chosen, and entirely new teaching teams were constructed each year (Greeley, 1974, pp. 3–5).

Experimental College at University of California-Berkeley. Even a cursory examination of Tussman's (1969) book on the Experimental College at Berkeley is telling. He begins by stating in the Preface that, "speaking of faculty, a 'scholar' is not a 'teacher'; a 'professor' is not a 'pedagogue.' A scholar is a man with something on his mind and with the skill and determination to pursue it; a teacher is a cultivator of other minds. A university hires scholars and hopes that they will do as teachers" (p. xv). The first chapter then explains the qualities of a teacher the Experimental College is looking for, the second chapter examines the qualities of a student, and it is not until the third chapter that Tussman begins to look at system or structure. Tussman's idea of an Experimental College is founded on faculty and students working together without the presence of hierarchy (or as close as possible), so the most important elements for the College are the types of faculty and students it attracts – without these, there is no College. He is not opposed to traditional higher education structures, and believes that they serve an important function for society, but it is not his ideal for the Experimental College.

Tussman (1969) notes many existing characteristics of the professor in the 1960s that is both a product and component of the modern university environment. He describes courses that are designed around the desire for faculty autonomy (clusters) rather than cooperation (chains). Cooperation is more difficult than autonomy, and most faculty avoid it. Faculty then begin to think of themselves as an insular piece of an undergraduate education, with each professor tending "his station" and "great teaching" considered to be "a great performer on stage" (p. 8). He believed that this orientation had run its course, and alternatives were in order for significant improvements to college education to occur. The more cooperative program for faculty and students attempted at the Experimental College was a way to circumvent the orientation of faculty as insular and independent and the resulting teaching product that emanated from it, even if that quality was generally good for what it was. Tussman's belief, empirically supported by the experiences of students and faculty of the College, was that "a shift from the course to the program" was capable of having a "revolutionary effect on the teaching situation" (p. 11).

In this mode of comprehensive, cooperative program disagreement was inevitable but also productive, and faculty were required to accommodate each other's instinct for independence; to embrace being challenged. The program demanded of the faculty that they put aside the other interests in pursuit of cooperative program(ming) and an effective teaching environment. Tussman (1969) believed that an emphasis on program as a way to escape a university teaching orientation that "eventually converts a college of intelligent teachers into a collection of mere scholars" (p. 24).

In his description of the student Tussman (1969) again critiques the existing paradigm of clustered courses. The student (in the 1960s) was given the "freedom," or the responsibility, for the "burden of constructing the mosaic of his own education out of the mass of discrete courses in the catalogue" (p. 28). Tussman is critical of this state-of-affairs in two ways. The first is the structure of insular courses themselves, which he examines above. He is also wary of the idea that a student, even an adult one in higher education, should be responsible for connecting or integrating this "mosaic" of courses in a way that educationally effective. For Tussman, the goal of a liberal education is freedom, which should transfer to the student by providing an environment conducive to a free mind – assembling a chaotic horde of insular courses taught by fiercely independent faculty was not conducive to a free mind (pp. 28-29).

A successful student, on the path to a free mind, needs to have, and be encouraged to have, several characteristics. The first mentioned is docility; not in the form of obedience, but rather in the sense of openness to instruction, a "spiritual relaxedness, a looseness, which comes from faith, hope, love, trust, confidence" (Tussman, 1969, p. 32). This was perhaps a reflection on the experience of higher education in the 1960s (and perhaps particularly at Berkeley), where faculty and administration have instilled or "nourished" student distrust and alienation, which has generated an "unruliness which is self-defeating" (p. 33). Tussman argues that the environment of the Experimental College is "fundamentally helpful" for encouraging an appropriate docility for learning.

The program at the Experimental College was completely both fixed and required for the two years, and it was important for Tussman that the student embarks on this

commitment of his or her own accord. Student questions or anxiety about the program were answered by the response that an understanding of the program, or answers about it, would not be understood until the program was completed. The program included a "reasonable but inexorable schedule of writing, conference, discussion and lecture" (p. 34). Dissatisfaction with program Tussman attributes to the "indocility problem"; that is, the student is too independent, lacks faith in the program, and/or did not do the work that was required (pp. 34-35). He equated this to a moral problem, in that the student undertook the program knowing the basic structure and commitment, and has decided not fulfill that promise (p. 36).

In order to encourage a free mind, in addition to a cooperatively constructed and executed program that lasts two years (instead of one quarter), the Experimental College "eliminated all examinations and tests; assignments are quantitatively light; and grades are effectively out of the picture" (Tussman, 1969, p. 39). It was thought that this environment would be conducive to reducing anxiety promoting a student's willingness to participate, even those that resisted the program at first, and for the few that continued to offer resistance their two-year commitment (Tussman, 1969, pp. 39-40). The program was designed to reveal and increase individuality and self-expression despite the required and common curriculum. Tussman (1969) believed that the commonality encouraged a heightened "awareness of individual difference," leading to better perceptions of both diversity and selfhood and better cohesion in "the learning community which is the essence of the experimental program" (pp. 41-42).

In the construction of the curriculum, which was intentionally reflective ("bookish") rather than activist, the Experimental College was concerned with avoiding disciplinary constrictions and abstractions, while at the same time not going too far astray of the professors training and expertise that he or she felt incapable of construction (Tussman, 1969, pp. 50-51). This was attempted by centering the curriculum around three historical controversial "issues" (the Greek Peloponnesian War, the Puritan Revolution in England, and the American constitutional convention), ending with one that was contemporary, which helped to maintain relevance (Tussman, 1969, pp. 54-55). The Experimental College required students to do extensive reading (almost exclusive the classics) and writing, although writing for projects was not always required. Teaching occurred through individual conference (switched to tutorials in the third year), seminars, and twice-weekly lectures (which was not a focus for instruction) with the entire cohort, as well as informal instruction and discussion in open space at the house the Experimental College was located in (Tussman, 1969, pp. 80-92).

In his 1968 analysis of the program over the first few years, Tussman (1969) noted that although explaining and gaining approval for the program was exceedingly and continuously challenging, the primary stumbling block to the continuation of the Experimental College was staffing. The staffing needs for the Experimental College were far outside how Berkeley University (and most other universities) defined faculty and department staffing, given that the orientation of the University was on disciplinary courses that led to majors; Experimental College courses were integrative, "sub-disciplinary," required faculty to teach outside their discipline (requiring a more fluid

conception of competence) and did not lead to a major (p. 121). It was thought that a small tenured faculty were needed for the program to be successful, however it was uncertain how long a faculty member could endure the rigors of the program (p. 123).

The Experimental College closed in 1969 for several reasons. The primary factor was, in a way, budgetary. After two runs of the two-year program, Tussman felt strongly that if he were to continue to organize the program he would need tenured faculty to do so effectively. That is, he felt that the program needed to move beyond pilot status and be institutionalized within the University. When the Berkeley administration offered accolades concerning the College and requested that he run the program again, he made a request for at least four and possibly six tenured faculty. The administration balked at the request/demand; tenured positions in the disciplines were a valued commodity for all departments in the university, and there was significant resistance to allotting tenured positions to the faculty for the Experimental College who would be without disciplinary affiliation, and for the most part not teaching a discipline at all. After much deliberation, Tussman's request was denied, and the experiment of the Experimental College ended. However, when reflecting on the sequence of events 30 years later, Tussman admitted that his fatigue from the demands of running and teaching in the program was also a factor in deciding to shut down the experiment. He had a strong desire "to live the life of a normal Berkeley Professor… the intellectual tension, the pervasive wit, the intellectual privacy, the leisurely autonomy, the cool arms-length, controlled, well-mannered involvement, on one's own terms, with others. I missed it, and I shrank from the thought of giving it up for the unremitting intensity of life in the Program" (Tussman, 1997).

Tussman was not prepared to give up on scholarship and become the full-time teacher that the program demanded (and he realized it was unlikely he would find others who were prepared to either). He also admitted that the incessant faculty squabbling, continuously fighting the faculty instincts toward autonomy, and the egotistical nature that was prevalent in the best teachers made "cooperative teaching almost impossible" (1997). In his reflection, Tussman concludes that it was not simply a lack of student or administration interest that led to the demise of the Experimental College, but rather the needs and entrenched ideals of the faculty, including his own, that seemed insurmountable.

Endnote on experimental colleges. As the "fervor" for new forms of undergraduate education reached a heightened state in the early 1960s, Florida State University hosted a colloquium that included faculty and administrators from ten different innovative programs or colleges in America. The purpose of the colloquium was to investigate the feasibility of an experimental college at Florida State. The colloquium generated a collection of conversations, which the committee organized into separate reports about each institution along with a synthesis that provided the foundational constructs for the new college. They were inspired by what they believed was an inadequate educational experience for undergraduates, and in agreement with a Hazen Foundation Report of a few years earlier, which stated that:

> If liberal education is to meet the requirements of a new kind of world it must undergo one of those fundamental overhauls that have kept it alive for centuries. There is need for more than adding courses here and there, more than repackaging

> old courses. There must be a reformulation of purpose. The great humanistic philosophy in liberal learning must be translated into 20th century terms. (Stickler, 1964, p. 158)

The synthesis constructed for a report to the President of the University advocated components that bore some similarity to the Experimental College at Berkeley that would appear a few years later. After examining the commonalities between the institutions represented at the colloquium, the committee recommended that the new college at Florida State have: 1) a small administration to dissuade hierarchical orientations, 2) a teaching-oriented faculty in a collaborative environment with students and each other, 3) conversation/dialectic as the principle teaching technique, 4) no grades, 5) a fluid curriculum and schedule, 6) no required courses, and 7) a focus on independent study (Stickler, 1964, pp. 160–170). There was also a thought that a new library with extensive collections in the humanities, including art and other media, would be a focal point for the new construction.

The committee emphatically declared that it was almost a moral imperative for universities to change they way they educated students, and that the "experimental college has an opportunity and indeed an obligation to influence and take leadership in the mainstream of American higher education" (Stickler, 1964, p. 181). However, they also recognized that if experimental colleges remained separate from mainstream higher education institutions, their impact would be minimal. It was also important for them that the new college indeed be new – that, as the Hazen Foundation Report notes above, adding courses to existing institutions would not be enough. The felt that it was "not the

old which creates the new. That which creates the new is beyond the old and beyond the new" (Stickler, 1964, p. 185).

Despite the committee's belief in the findings of the Hazen Foundation Report, and their own excitement and drive toward creating a new college, there is no evidence that their efforts ever made it beyond the proposal stage. What remains of those efforts is a synopsis edited by Stickler (1964) which has been cited here, as well as a reference in the Florida State University Archives to a box containing "papers concerning an investigation into the feasibility of an Experimental College," dated between 1962 and 1964; it is perhaps telling that the "papers are in no discernable order." Although there have been pockets of resilience with experimental programs and colleges, they have not made it into the mainstream, and as the committee suspected there has been no discernable widespread adoption of their practices. And, contrary to the assertion of the Hazen Foundation Report, higher education has seemed to thrive without a "reformulation of purpose," although whether or not it has met the demands of the 20th or 21st century is still a topic of much debate.

Synopsis: The 1960s

The social, cultural, political and ideological shifts during the 1960s, enhanced the anxiety created by technological advancements (such as nuclear weapons, and television), inspired student activism and an institutional awareness that motivated changes in higher education. The most obvious examples are the "paradigm anomalies," such as Evergreen State College, Alverno College, and the Experimental College at University of California, Berkeley which were (and for Evergreen and Alverno, still are) contrasting structures to

other colleges and universities in the country. As in the other time periods covered in this dissertation, the elements of change were in place for a shift in conceptions of teaching practice – student unrest and activism, government subsidies which transformed the student demographic, tremendous higher education expansion which yielded much greater capacity, and a population highly influenced by both the Second World War as well as the Vietnam War.

However, lasting changes to teaching practice, or even differing conceptions of teaching excellence, are difficult to clearly ascertain. Smith and Bender (2008) argue that "the early campus controversies in the troubled 1960s were about academic values," and that campus activism was motivated by the idea that a college or university could be "something better and more serious than an exchange of objective tests and letter grades" (p. 345). This activism did open, or force, dialogs and ideas that had not been publicly vocalized on campuses in the past, such as a discussion on appropriate venues (government, commercial, etc.) for colleges and universities to engage with. However, many of the dialogs had been heard on campuses before. The insistence on a student voice in campus affairs, freedom of choice and the content of curriculum were all dialogs that have appeared in higher education since before the early modern period. Ironically, even with the dialogs focused on student voice, and the concessions to student demands, there is no evidence of dramatic or lasting changes to teaching practices.

Although not completely applicable to comparisons of classroom instruction, an example of the resiliency of conceptions of teaching practices can be viewed through the professional ethics statement of the American Association of University Professors

(AAUP). Below is the text from the AAUP Statement on Professional Ethics, item number 2, on professors as teachers (the item that has first priority is professors as scholars). The first statement of professional ethics, written during a time of chaotic campuses and student activism, was written more than forty years before the most recent revision. The second statement, from the 2009 revision and the most current version of the professional ethics statement was procured from their website in May of 2015.

Table 2

Comparison of professional ethics statements, 1966/2009

1966	**2009**
As a teacher, the professor encourages the free pursuit of learning in his students. He holds before them the best scholarly standards of his discipline. He demonstrates respect for the student as an individual, and adheres to his proper role as intellectual guide and counselor. He makes every reasonable effort to foster honest academic conduct and to assure that his evaluation of students reflects their true merit. He respects the confidential nature of the relationship between professor and student. He avoids any exploitation of students for his private advantage and acknowledges significant assistance from them. He protects their academic freedom. (Ross, 1976, p. 102)	As teachers, professors encourage the free pursuit of learning in their students. They hold before them the best scholarly and ethical standards of their discipline. Professors demonstrate respect for students as individuals and adhere to their proper roles as intellectual guides and counselors. Professors make every reasonable effort to foster honest academic conduct and to ensure that their evaluations of students reflect each student's true merit. They respect the confidential nature of the relationship between professor and student. They avoid any exploitation, harassment, or discriminatory treatment of students. They acknowledge significant academic or scholarly assistance from them. They protect their academic freedom. (American Association of University Professors, 2009)

AAUP notes on their web site that the 1987 revision paid close attention to issues of gender neutrality. However, are there no other ways that the conception of the classroom practices and student interactions of an ethically responsible higher education professor have changed in almost fifty years?

Better instruction was one of the definitive mandates for students in the 1960s (see Appendix E for examples of others). Woodring (1968) echoes this mandate, and agrees with it, when he argues that students in the 1960s who are demanding better instruction have a good point. From his perspective, however, they were not likely to accomplish their aims by violent protest or verbally lambasting administrators, especially given that decisions about faculty hiring, promotion and firing at most universities were made in faculty committees. Also, given that higher education was "rigged against good teaching" with promotion based on things professors do outside of the classroom, their chances were not good to begin with (p. 85).

By the beginning of the 1970s, the student revolts had for the most part disappeared. There was no one impetus for the disappearance, although a 1970 study by the Carnegie Commission did indicate that most students were satisfied with their education. A contributing factor may have also been the lowering of the age of government-recognized adulthood to 18, which eliminated the need for colleges and universities to act *in loco parentis* (at least in the minds of the students). Another factor was most likely that a large organization, as the student movement was, has difficulty staying intact, especially without new and more interesting elements to galvanize the constituents (Ross, 1976, pp. 131–134). Nevertheless, without too much fanfare and

without substantial changes being made to higher education teaching practices, the student movement dissipated. And so, historically, has it always been with student movements on the higher education landscape.

As noted above, any of the voices discussed in this section are captured in more detail in Appendix E, as well as others from the 1960s.

Chapter Five

This research process began with an assumption; that historically, higher education was a fairly flexible institution of learning where teaching practices must change to fit shifts in the social/cultural climate. The interest in this topic was initially inspired by a desire to develop my understanding of teaching method and apply it to my own practices, but later evolved into a pursuit of how teaching excellence is defined, and how those definitions manifest in teaching practice. My thought was that teaching excellence was a social, cultural or perhaps ideological construct necessarily tied to events in the social world, and that the clearest observations of changes in the conceptions and practices of teaching excellence would occur by examining time periods when a radical, or paradigmatic social/cultural shift occurs.

As noted in the first chapter, this assumption was proven almost immediately false, and based on borderline romantic notions of life-long learning and the need or desire to constantly improve in my chosen field. The first model, which was based on initial assumptions about teaching theory and practice in higher education, was one based on the assumption of pedagogical progress – where teaching would change and become better, especially for the constituents in a time period that had seen a social/cultural paradigm shift. That is, as society changed, the faculty at universities would change as well in order to adapt to the different popular mindset. As a researcher, and a teacher

interested in teaching excellence, I was determined to identify a catalyst for shifts in higher education teaching practices, with a focus on exposing the possibilities for contemporary application. I identify this as "Model 1: Pedagogical Progress," described as follows:

> A social/cultural shift occurs. Because of the shift, new teaching theories are developed that better align with the understandings that emerge. Teaching practice eventually aligns with the theory, becomes better suited for the post-social/cultural shift era, and therefore yields more effective teaching practices. Conceptions of teaching excellence, and practice of excellent teaching, shift in tandem with the changing landscape. Eventually a status quo returns, especially after the energy surrounding the paradigm shift subsides, although the new status quo incorporates the changes in teaching practice and new conceptions of teaching excellence. At some point in the future a new social/cultural shift occurs, which begins the process again. The task of the dissertation research is then to identify conceptions of teaching theory and practice before and after a social/cultural paradigm shift in order to determine what elements triggered changes in higher education teaching theory and practice. Next steps after the research process would be to determine a catalyst for change that could be created based on effective historical precedents that could be initiated at any time, regardless of social/cultural shift. In the context of critical theory, this catalyst could be used to instigate change in classrooms where hierarchical, authoritative,

and often oppressive teaching practices occur that are not in line with social and cultural advancements in other areas of society.

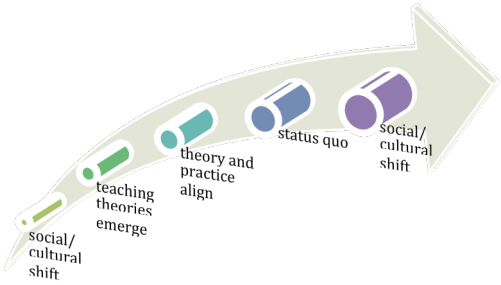


Figure 6. Model 1, Pedagogical Progress

The initial research found significant evidence of the existence of paradigms in higher education. As Behar-Horenstein (2000) notes above, the higher education paradigm, which include elements of teaching, research, and structure, have epistemological and ontological foundations that are tightly held (p. 8). The consistency within the themes derived from the findings also suggest that Margolis' (1993) assessment that a paradigmatic worldview can become so entrenched that responses to one's environment "occur without conscious attention, and that even if noticed are hard to change" (p. 7). Habits of mind instilled by the paradigm yield predictable patterns of intuition and decision-making, so that the ideas generated within the paradigm tend to be similar. How this manifests in teaching practice was observed in the Report on Higher Education when it stated that higher education faculty "assume that their students will learn best the way they themselves learned best – by sitting in class, listening to

professors, and reading books" (Smith & Bender, 2008, p. 40). However, as insinuated by the comment concerning the consistency of themes, there was no evidence of a shift in higher education teaching practices that matched a corresponding paradigm shift in the society of which the institutions were an integral part. This meant that, at least for higher education teaching practices, Kuhn's (1970) argument of the process of paradigm shift, and in particular that shift occurs when incommensurability becomes unavoidable, was not proving valid in this context.

Given the results of the initial research, which exposed a long history and resilience for teaching practices, a second model was constructed that then served as the basis for the dissertation research, with research questions based on the model. "Model 2: Perpetual Return" was based on more complete research of teaching theory and practice across multiple time periods:

> After a social/cultural paradigm shift there is an initial alteration to teaching theory, reflected in the dialog on teaching, which is identifiable as a natural extension of the social/cultural shift. Teaching practice, however, only takes short departures from historical practices, which remain in a constant dialog with the new developments. Given the resiliency of teaching practices, and the passage of time which dilutes the initial energy created by the social/cultural paradigm shift, teaching theories which reflected social/cultural changes dissipate over time or merge together, and teaching practices return to historical constants.

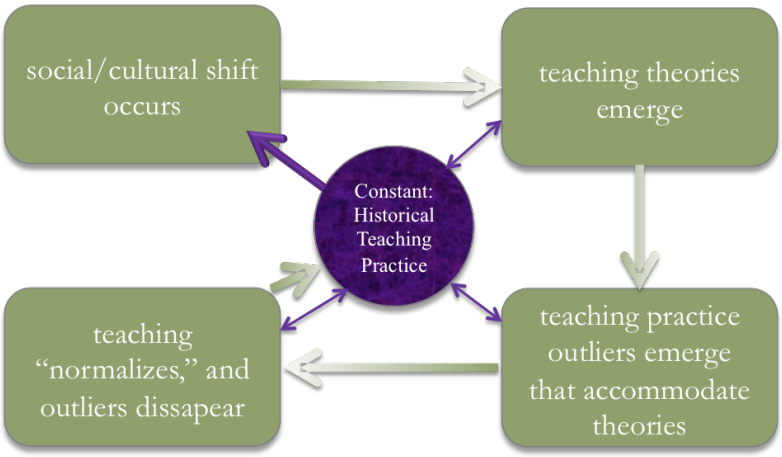


Figure 7. Model 2, Perpetual Return

The research questions that this model generated, which are discussed in Chapter One, are as follows:

1. Within the time periods chosen under investigation, how do conceptions or theories of teaching excellence in higher education change historically, and why?
2. If conceptions or theories change, how does teaching practice change in order to accommodate this shift, and why?

These research questions were reliant upon the synopsis definition of teaching excellence that was developed in Chapter Two, that *excellent teaching elicits student learning beyond what is considered average or satisfactory.* The questions were also written with the intentions of the critical theory methodology in mind. That is, if changes in the conceptions of teaching excellence in higher education did not change historically, as the initial research indicated, then the findings of my research could still serve to

unsettle what was considered or assumed to be normal by "reflecting" the deep and resilient historical context. As Rogers et al. (2005) note above, "one of the most powerful forms of oppression is internalized hegemony" (p. 368), and the conceptions of teaching theory and practice were internalized in such a way to be oppressive to both students, who could be learning in ostensibly better ways that better reflect new research on teaching within the context of contemporary social and cultural norms, and faculty entrenched within a resilient structural and instructional paradigm that inhibits instructional exploration and innovation. As Kincheloe and McLarren (2005) argue, oppression is effectively reproduced when the victims "accept their social status as natural, necessary, or inevitable" (p. 304), and this argument is applied in this dissertation to both perceptions of teaching excellence and experiences of teaching practices.

The first research question above was addressed through the exposition of historical context and the dialog captured in the findings. When examining the shift from the late-Middle Ages to the early modern period, a dialog on teaching excellence appeared which created the core aspects of the humanist movement. The intention of the humanists was to move education away from the scholastic orientation, producing students with skills and attributes that would be immediately applicable to a professional environment, and move toward a variety of elements founded on the literature of antiquity that would lead to moral and intellectual development.

The humanist educational objectives at first depended upon an excellent grasp of Latin, a few of the works on Aristotle, and one or two texts from Roman antiquity (especially in the field of law). The humanist movement worked diligently on the

expansion of texts, which soon included the newly emerging Greek literature from antiquity, as well as conveying the importance of reading and embracing texts in their original language. Their agenda also entailed an awareness of civic responsibility and a rediscovery not just of texts, but also of the human being. As Vergerio put it, "the outcome of these studies is to enable anyone to speak well and to inspire him to act as well as possible" (Kallendorf, 2002, p. 49).

In either the teaching dialog of the Middle Ages or early modern period, the practice of excellent teachers was to transfer the knowledge from the preferred texts to the student while holding the highest standards for Latin language. This was primarily conveyed through very structured lectures, and the student was to essentially memorize the information through constant repetition, recitation and disputation. As the humanist voices emerged, there were calls for a more "individual-centered" or "human-centered" approach to teaching. For instance, Petrarch asserted that the "bold and futile diligence of those who repeat the words of all other historians…only shroud the text of their history in hazy clouds of inextricable tangles" (Fubini, 2006, p. 129). He is highly critical of an education that merely mimics, as well as those that are identified experts because they excel at it; an argument against the efficacy of recitation and repetition (at least with the sources preferred by the scholastics).

Humanist authors that followed Petrarch were equally assertive as advocates of the humanist perspective. Vergerio frequently argued for the importance of disputation in order to sharpen the mind through critical thinking, and also as a way to bring the individual into the scholarly dialog. Bruni argued for a departure from the abstract when

he stated that he defines learning as “a legitimate and liberal kind which joins literary skill with factual knowledge” and to bring to any reading a “keen critical sense” (Kallendorf, 2002, pp. 95-97). Erasmus (1878) warned his students to look deeper and question texts, to “candidly interpret other Mens Works, and not esteem our own as Oracles” (p. 374). This was echoed by Vives (1971), who urged his students “who seek the truth, make your stand wherever you think that she is” (p. 9).

However, none of these educators were prepared to depart from the scholastic methods carried over from the Middle Ages. A good example of how teaching practice did not change was provided by Odofredus at the University of Bologna, who succinctly laid out a class plan that was emblematic of the late Middle Ages and the early modern period that left little to (or for) the imagination (Rashdall, 1964, pp. 219–220). The few images of higher education remaining from the late-Middle Ages and early moder period, such as the painting by de Votolia of a lecture being performed by Henry of Germany, indicate that classroom structure was hierarchical, with the professor usually standing at a raised podium and students sitting either at rows of pews, tables, chairs, or on the floor. Throughout both time periods the focus remained on the trivium-centered education and the unlocking of ancient knowledge. Although the theories concerning may have changed somewhat, the practices were quite similar to those in the previous era, and the shifting of paradigm given the re-birth texts and ideas, as well as world-altering technologies, had no discernible effect. As Haskins’ (1957) research revealed of the faculty’s daily efforts, “he was not allowed to skip a chapter in his commentary, or

postpone a difficulty to the end of the hour, and he was obliged to cover ground systematically" (pp. 9-10).

Up to the middle of the 19th century in America, one could primarily use the same descriptors for teaching excellence and practice that were used in the European Middle Ages and early modern period – the "classical education" had remained, for the most part, intact. Although there had been those that argued for the need for changes in curriculum and teaching practices, most colleges kept teaching in a form very similar to the early modern European counterparts. The Yale Report of 1828 outlines a preferred format for the students classically based education, with the majority of time spent on Latin and Greek language and literature, interspersed with mathematics and natural science. Cogswell (1817b) description of the ideal student fits the structured, methodical and exhaustive approach of the classical education when he asserts that "a man as a scholar…must have learnt to give up his love of society and of social pleasures, his interest in the common occurrences of life, in the political and religious contentions of the country and in every thing not directly connected with his single aim." The forms of instruction and assessment, with the heavy use of lecture, repetition, recitation and disputation, fit this ideal exceedingly well.

A Post-Civil War America enmeshed in the industrial revolution began a decidedly different approach, and reinvented the structure of higher education. Draper's (1875) speech at New York University in 1853 brought the changing disposition into the context of higher education when, while lamenting the lack of desire in the American student to pursue the "fountains of knowledge" in favor of practicality, he observed that

professors had “put forth exertions in a direction in which no result could be reached,” and he would “beseech those who are friends of American Colleges, to abandon the existing system” (p. 25). The disappearance of Latin and Greek languages in the professions was evidence for him that the tide had already turned. At the same time, Emerson (1929) was arguing for the importance of knowledge engaged with experience, and with nature. The Sheffield Scientific School (1868) had dispelled the Yale Report of forty years earlier, while professors such as Hedge (1866) used a satirical voice to chastise the continuing presence of the older teaching methods.

Inspired by scientific and professional schools, students’ demands and faculty frustrations, the elective system began to appear, with Eliot’s (1905) inaugural address at Harvard in 1869 acting as a stimulus for change. As he states, “the notion that education consists in the authoritative inculcation of what the teacher deems true may be logical and appropriate in a convent, or a seminary for priests, but it is intolerable in universities and public schools” (p. 7-8). He uses this position to criticize existing structures, which can be useful, but “recitations alone readily degenerate into dusty repetitions, and lectures are too often useless expenditures of force” (p. 15). Other elements, such as the voice of the transcendentalist movement and the influence of Darwin’s work in the scientific community (which then spread into other areas of higher education), also played a factor. The elective system, along with funding for agricultural and technical schools through the Morrill Act of 1862, encouraged students to specialize in areas that were more practical and directly related to the professions. However, even though the structure of higher education changed dramatically, and some of the teaching focus and practices of the

classical education disappeared, the classroom experience of a professor transferring information through lecture remained relatively static. The comments of Fiske (1902), who thought schools and colleges "often waste a great deal of time and energy teaching the rules of prosody" (p. 253), and White (1905), who reflected that his time at Yale fell far short of his ideals, attest to the fact that at the beginning of the 20th century the old practices were still present in the dialog on teaching and being commented on.

The 1960s in America saw a higher education student population within the midst of the war in Vietnam, the civil rights movement, the communist scare, the nuclear threat, and an advanced and complex awareness of the world around them that became visceral with the propagation of television. Students on college and university campuses perceived themselves as independent adults struggling under the higher education mandate of *in loco parentis* with no voice in their education, while at the same time they were seeing, as Harvard University student Kenneth Glazier put it, an "unjust war…being fought by people your own age" (Levine & Naisbitt, 1970, p. 124). The mid-1960s student activism rose quickly on campuses that had become quite diverse (in no small part because of the G.I. Bill) to protest a variety of these injustices, and were granted some concessions. Student groups were formed, such as the one at State University of New York at Buffalo (Levine & Naisbeitt, 1970, p. 58), to present lists of demands that primarily advocated the end of the hierarchical structure of universities with students at the bottom, and for more control in the decision making process. This sentiment was often echoed by faculty such as Jeremy Larner at Harvard University, who described the university as "an institution run by professional managers who have other interests, like

conducting war research for the government" (Levine & Naisbitt, 1970, p. 64). Other students, such as Robert Jackson at Cornell University, were asking "what relevance does Shakespeare have for me? I've read Shakespeare, but I wish I had spent that time reading Baldwin, Ellison and Wright" (Levine & Naisbitt, 1970, p. 36). This sentiment also found support with faculty such as Woodring (1968), who thought that students "who demanded better instruction and more attention to undergraduates also have a good cause" (p. 85).

The student movements dissipated by 1970, and disappeared shortly after (although attempts at higher education reform continued). Despite the volatile activity and substantive dialogs on college and university campuses, there was again very little change in the way professors taught in the classroom. The primary teaching practices, although far removed from the classical education of the 19th century, were still centered around lecture with assessment through examination. Taylor (1969) in *Students Without Teachers* felt that this was indicative of the fact that all higher education institutions "emulate the educational patterns of the major university, no matter what the character and needs of its own student body" (p. 138). The fact that higher education had changed little despite the social and cultural activity of the 1960s was highlighted in the Frank Newman chaired tasked force that produced the 1971 *Report on Higher Education*. For this report, Newman and his colleagues went to many campuses in America to observe higher education classrooms, and concluded that faculty "assume that their students will learn best the way they themselves did – by sitting in class, listening to professors, and reading books. All too infrequently is an undergraduate course organized or taught on

the assumption that students might learn best through subjective or practical experiences" (Smith & Bender, 2008, p. 40). This idea of involvement in learning is also echoed in Hatch's 1975 *Student Involvement and the University*, where he concludes that "the important thing is that in his learning, and in the teaching that accompanies it, the student should inquire into, rather than be instructed in a subject matter" (p. 79). That these were still the conclusions and observations being made suggests that at least some of the student demands from the previous decade had not been met.

The second research question has been substantially problematic to address given the opaque connection between teaching excellence theory and actual teaching practice. The research from each time period indicates that teaching theory, the commentary concerning good or excellent teaching practices, is entrenched behind one of two mandates. The first is a defense of the current or old system where its merits are lauded, its efficacy clarified, and its deficiencies negated or diminished based on the "obvious" positive results for the students. The second is a dialog that introduces or affirms a relatively new teaching modality founded on current events or trends, disparages elements of the current but now old system of education by highlighting its deficiencies (especially in relation to the new teaching modality), identifies the connections between the new teaching modality and the "modern" era, and argues for the new construction's continued existence or expansion given either intended or observed results.

However, neither of the dialogs integrates actual data on teaching practices. Observations or ruminations about teaching practices are often the central sounding board for the dialog, and inferences to teaching practices can be made through the content of the

commentary, but the dialog is bereft of actual data before the 20th century. Even the 20th century dialog requires substantial inference from theory to practice, or connecting the data on practice to the theory. There is, for the most part, no theory on teaching excellence connecting the reasoning behind conceptions of excellence to data that suggests that teaching practices inspired by the conception, when used in the classroom, produce better results (which is defined in some manner) than another teaching practice.

For example, it is the argument of the Yale Report of 1828 that the classical education (Latin, Greek, literature, mathematics, natural science) taught (or perhaps enforced) in the classical manner through repetition, recitation and disputation, is far better than newer teaching modalities because of its ability to instill the foundations for knowledge and discipline that are the key for building moral and successful citizens. However, nowhere in the report does it provide evidence for this type of education working better than any other, nor does it examine different teaching practices in a way that would allow for comparison. The only conclusion that can be drawn with certainty is that Yale College believes a classical education is better because a classical education is better, which is circular although not uncommon reasoning.

Later, with Eliot at Harvard University, the same issue could be pointed to. For Eliot and others, the elective system was better because needs and disposition have changed, and therefore choice is an appropriate element to introduce to higher education. However, there is no evidence that an elective system produces better results from or for students. In fact, Tussman argues that the converse is true for undergraduates in his construction of the Experimental College at Berkeley, and that a fixed course structure

relieves anxiety and frees a student's mind for the work at hand (with only anecdotal evidence to suggest he was correct). Historically it seems that a new system is asserted as better, at least at first, because it would make sense that it would be better given the circumstances, and/or students are demanding it. Meanwhile, teaching practices remain unexamined.

This uniform disconnection between teaching theory and practice across time periods – or better terminology might be "dissonance" or "tension" – exemplifies two aspects of this research. The first is the historically evident difficulty of putting teaching theory into practice; or at least into teaching practice that has some longevity. The second is the resiliency of older teaching practices despite the applicability, possibility, or utility of newer ones.

Findings

The findings collected through extensive historical research and analysis have been collected in Appendices C, D, and E. The significance of each element collected in the findings for this dissertation on teaching excellence are noted, and an attempt was made to find themes within these dialogs. After a careful examination and analysis of the findings, the following themes emerged.

Table 3

Emergent themes

Paradigm	Teaching Excellence (teachers *should* exhibit)	Teaching Practice (teachers *do* exhibit)
Early Modern	• Hierarchy • Structure	• Hierarchical • Self-practice (teach

Paradigm	Teaching Excellence (teachers *should* exhibit)	Teaching Practice (teachers *do* exhibit)
	• Primacy of text • Language focus • Communication ability • Memorization • Repetition • Recitation • Disputation (student teaching) • Discipline • Abstract over relevance • Moral training • Integration • Critical thinking • Independent thought	yourself) • Lecture • Primacy of text • Language focus • Communication ability • Memorization • Repetition • Recitation • Disputation (student teaching) • Discipline • Abstract over relevance • Moral training
19th Century America	• Classical education (until mid-century) • Hierarchy • Discipline (until late-century, then mixed) • Structure (classical through mid-century) • System (classical through mid-century, then mixed classical and elective) • Communication ability • Language focus (until late-century) • Lecture (until at least mid-century) • Abstract over relevance (until mid-century) • Relevance/practical over abstract (after mid-century) • Student choice (after mid-century) • Examinations • Memorization (until mid-century)	• Classical education (until mid-century or longer) • Hierarchical • Discipline • Structure (classical through mid-century, then mixed classical and elective) • System (classical through mid-century, then mixed classical and practical) • Communication ability • Language focus (mixed after mid-century) • Lecture • Self-practice (teach yourself) • Abstract over relevance (until late-century, then mixed) • Memorization • Repetition (until late-century or longer) • Recitation (until late-century or longer) • Examinations

Paradigm	Teaching Excellence (teachers *should* exhibit)	Teaching Practice (teachers *do* exhibit)
	• Repetition (until mid-century) • Recitation (until at least late-century) • Disputation • Critical thinking • Independent and/or practical learning	• Disputation • Expects attentive and receptive students
1960s America	• Hierarchy (or) • student-centered • Flexible (accommodates students) • Independent and/or practical learning • Relevance over abstract • Socially conscious • Teaching effectiveness = student inquiry/scholarship • Professor characteristic: independent • Professor characteristic: directed learning	• Hierarchical (generally) • Intransigent • Discipline • Abstract over relevance • Abstract over practical • Socially unaware (the administration, but also the faculty) • Lecture

The findings indicate that many themes repeat in each time period, although the themes that fall under teaching excellence (the more abstract, theoretical notions of teaching) are sometimes different than those that fall under teaching practice (what is actually done in the classroom). Also of note is that many of the voices on teaching excellence captured for the 1960s section were from students, more oriented on their rights and the administration than on teaching per se. Some generous extrapolation was needed for these voices in order to correlate them to teaching themes. These were primarily generated by comparing the student voices to what was still being critiqued at

the end of the 1960s and into the 1970s. As stated above, although there are themes that emerge that are particular to the context of the time period, there are definitive commonalities between them. This suggests that these themes (whether abstract or practical) show a strong resilience over time in higher education, and are not affected by changes in the social or cultural environment. These themes in the abstract are reflections on types of structure and hierarchy, independent thought, morals, and texts. The themes in practice are lecture, self-practice, and discipline.

Given these findings, which emerged at the end of this current phase of research, a third and, for the moment, final model emerged. Model 3: Vicious Circularity was constructed to reflect how the same themes from the dialog of higher education teaching continuously appeared during the time periods under investigation. These themes also appeared in dialogs concerning system or structural changes to higher education during these time periods. Model 3 illustrates that while some teaching practices dissipate over time based on social and cultural shifts, especially in the areas of curriculum and assessment, both teaching theory and "core" practices are always in relation to core historical norms. If the new theories and practices did remain, they became formalized in such a way as to eventually produce the same types of experiences as students from the pre-paradigm shift era faced. Model 3: Vicious Circulating occurs in the following manner:

> A social/cultural paradigm shift instigates changes in both teaching theory and practice. These changes are a reflection (they are caused by) the key elements of the social/cultural shift. However, as the elements of the social/cultural shift

begin to normalize, new teaching theory and practice creations formalize. Outliers in teaching practices, always influenced by historical methods, slowly realign with them although they might take slightly different forms. The task of further research then is to determine what would be needed in order to overcome inertia and maintain the emergent elements of teaching theory and practice that are natural offshoots of a social/cultural shift – the objective for those wanting to develop and execute new teaching practices is to break the cycle. Note: the level of immersion within historical teaching practices is visualized by how much of the area is within the perimeter of the circle.

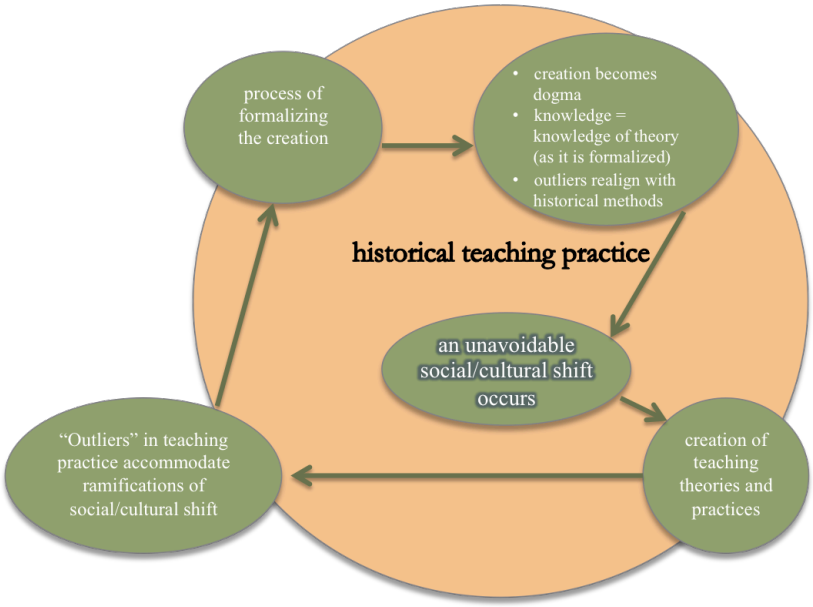


Figure 8. Model 3, Vicious Circularity

Observations

In all time periods considered here, and especially in the early modern period and the 19th century, there is a substantial focus on the students' responsibility to perform work outside of the classroom experience. This is a not-so-subtle emphasis on independent work making the excellent student, the student that becomes the scholar. This emphasis, while highlighting individuality (which is an important element in all three time periods), puts the majority of the responsibility for learning on the shoulders of the student. Ostensibly, or perhaps superficially, this is not problematic or detrimental for the student experience. However, the more emphasis is placed on independence, individualism and student responsibility, the less responsibility resides in the hands of the professor. Failure, if it occurs, inevitably becomes the responsibility of the student. From the professor's viewpoint, responsibility for student success then lies within the purview of the student, outside of social and cultural events, or their own teaching practices; which most likely worked well for them. This contributes to enabling professors to continue using the same general teaching practices, methodologies or modalities that were in place when they were students (and worked for them), or even 800 years ago, while blaming lack of success on student desire, devotion or capacity. Success, on the other hand, is often assessed as an indicator of good teaching practices (for instance, as it was described in MacKenzie et al.'s correlation between grades and effectiveness), and not student's ability to practice outside of the classroom.

Even as studies on teaching effectiveness begin to appear, a model of vicious circularity would suggest that findings may initially be incorporated into teaching

practices, and a new or adjusted sense of excellence will emerge, but at some point in the future someone else will feel compelled to perform a similar study motivated by similar reasons; that is, the questioning of teaching effectiveness due to the presence of similar practices. That is, the new teaching practices, regardless of effectiveness, never become institutionalized in such a way that the practices spread beyond the insular borders of the "paradigm anomaly" with resilience. Although historically higher education evidences changes to curriculum, system and theory, and elements surrounding teaching practice are introduced such as experiential learning, professional orientation, and the number/type of disciplines, changes to teaching practice are not sustained (if they happen at all). There is always a vicious circularity that returns teaching practice back to historical norms. Although there are some examples of different types of education that still exist as long ago as the 19th century, if the history revealed in this dissertation is at all predictive it seems likely that they too will eventually disappear. Therefore, historically, across the history of higher education, the highest level of teaching excellence in practice, if one were going to make a generalization, has been the organized, well-informed lecturer capable of conveying high-level knowledge in a discipline or field.

Three Conclusions and a Hypothesis

The first conclusion is that teaching excellence when placed in practice, historically, despite shifts in theory and the adoption of new teaching practices at different time, equates to the good lecture. Each time period examined in this dissertation revealed important voices invested in higher education reflecting on problematic practices that were very similar to important voices that came before. For instance, there

were consistent dialogs on the oppressive disposition of faculty, hierarchy, student freedoms, student individuality, and the determination of best practices given social and cultural understanding. The common element of these reflections across all time periods is the lecture – there are reflections that advocate a change in practice, advocate a return to old norms, advocate better disciplinary expertise, lament the presence of lectures all together (although sometimes declaring it a necessary evil), and decry the quantity or reliance upon lectures, but the lecture is always present as a central feature of commentary, and has a commanding presence in the classroom in each time period. The dialog on teaching suggests many other elements, some of which were examined in practice in a variety of studies, but in no dialog (except for perhaps Emerson's…as captured by his lecture on the topic) was it suggested that the lecture be abandoned.

The second conclusion is that each time period exhibits a dissonance or tension between teaching theory and practice. This dissonance in some way attempts resolution (through curriculum change, the addition of laboratory time and other experiences, giving students more choice, and others), but it never completely dissipates as the dialogs expressing the dissonance always eventually return. I would argue for the possibility, and believe it an avenue for fruitful research in the future, that it is the disconnection between theory and practice that ultimately yields the vicious circularity. The key to breaking the cycle of vicious circularity is, in a sense, obvious – to more closely align theory and practice – although historically only a distinct minority of institutions has achieved it. The first step to this alignment is awareness of the historical and contemporary dissonance between them, which has the potential to "hold the mirror up"

to contemporary practices and clearly exhibit the long-term resilience of teaching paradigms in higher education.

The hypothesis I would offer based on this research, and as another possible venue for research in the future, is that lasting change of any sort only happens when students demand it. In all historical instances examined in this dissertation, it was student action or reaction, expression of their needs, and ultimately, their tuition dollars that instigate any form of paradigm shift in higher education:

- During the early modern period, students dictated (often in the form of a contract signed by the instructor) the essential performance characteristics of their faculty. Qualities such as the capacity for good lectures, perfect Latin, punctuality, presence, and pace were so important to students that they were known to riot, confiscate wages, and/or literally chase a faculty member out of town if they were too often disappointed.
- In the 19th century, in an environment heavily influenced by the industrial revolution, students wanted a more practical approach to their education. They wanted the ability to focus on a particular field, gain some level of expertise, and translate that expertise into gainful employment. As Wayland of Brown University observed, change was needed in part because students were speaking with their tuition dollars, taking their money to states and universities that would supply what it was they demanded.
- Student demands during the 1960s also centered on voice and freedom, although it took a different form (putting the active back in activism, so to speak). The

results of their efforts were the addition of departments and classes, more voice in the higher education process, and inspiring the creation of experimental colleges.

The third conclusion combines the previous two with the hypothesis, as well as incorporating the initial interest in determining methods to institute changes in teaching practice and conceptions of teaching excellence. The historical context researched in this dissertation suggests that changes in higher education practices have not been effective when initiated from the top down, although the presence of strong leadership is essential for the process. Rather, if there is any shift in teaching practice and conceptions of teaching excellence, as well as the more systematic changes such as curriculum and structure, they are only effective and have endurance when advocated from the bottom up. That is, without student actions and demands, and tuition dollars, no changes in higher education practice endure. This is possible, if not evident, from several angles:

- The resilience of core teaching practices, systems, and classroom structures despite changes in theories of teaching excellence.
- The continuing dialog, with similar elements, criticizing similar aspects of teaching practices across time periods.
- That education reform for higher education at an institutional level has only occurred in insular, stand-alone colleges, and that programs within institutions have not permeated existing systems and practices.

To take this conclusion a step closer toward conjecture, with a desire (in the future) to move this research toward contemporary relevance, the formation and presence of Centers for Teaching Excellence or similar entities may have no long-term influence on

the culture of teaching. Historically, the vast majority of professors have always (in a viciously circular fashion) come back to teaching as they were taught, and for the vast majority of that vast majority, the method was the lecture. What is needed, given the historical consistency revealed in this research, is a way to institute grass roots efforts on campuses to inform students about the possibilities with different teaching practices/modalities, and then motivate students enough so that they demand it, however improbably this might be in the current state of higher education. There have always been a number of popular voices during any time period illuminating and protesting the more oppressive aspects of higher education teaching, arguing for more student choice, more student freedom, respect for the individual, the institution of different practices given knowledge of their potential and evidence of their success…but inevitably, at least historically, the central component of teaching practice always comes back to lecture, and excellent teaching is most closely identified with the temporal version of the excellent lecture. As Tussman (1997) admits, even his passion for a new teaching paradigm was eventually stalled through his overwhelming desire to do what professors do, which is scholarship in their own discipline, with some teaching, usually in ways that are comfortable for them – and for most, that includes a preponderance of lecture.

Haskins (1957) argues that:

> the fact remains that the university of the twentieth century is the lineal descendant of medieval Paris and Bologna. . . . The fundamental organization is the same, the historic continuity is unbroken. They created the university tradition of the modern world, that common tradition which belongs to all our

> institutions of higher learning, the newest as well as the oldest, and which all college and university men should know and cherish. (pp. 2-3)

It is possible that the lecture *is* the central component for excellent, efficient, and transformative higher education teaching; a transformative experience for the students entering colleges and universities from secondary schools across the world, making them into scholars, life-long learners, and professionals. However, is there anything else that humanity was engaging in 800 years ago that has the same core elements today, and has consistently had those elements over that time span? Is it really the case that after 800 years of social, cultural and technological change (some might say "advancement") that the good lecture, evidenced by its commanding presence, is still considered to be the best form of teaching practice? Given the hierarchical, authoritative, and often oppressive nature of the learning experience within the confines of the lecture format (for both student and teacher), and the availability of a host of other forms of teaching known to be effective in "paradigm anomalies," it would be difficult to reasonably assume that there are no better alternatives.

Future studies will continue the exploration of historical precedents and carefully compare them to contemporary 21st century dialogs in order to determine if the same general criticism of practices exists – to see if the vicious circularity continues. The critical theory orientation of this dissertation forces some recognition of common teaching practices by placing the mirror in front of higher education and forcing the recognition of higher education teaching stagnation and resistance. This may produce the possibility in the (perhaps distant) future where teaching theories, theories of teaching

excellence, and the construction of new teaching practices that have merit can be the catalyst for initiating different teaching and assessment modalities which encourage more fertile environments for the educational experience beyond the hierarchical and almost intentionally oppressive practice of the lecture – even when it is an excellent one. If not, it seems probable, given the higher education history examined here, that professors will continue to teach, for the most part, as their predecessors did in the 12th century.

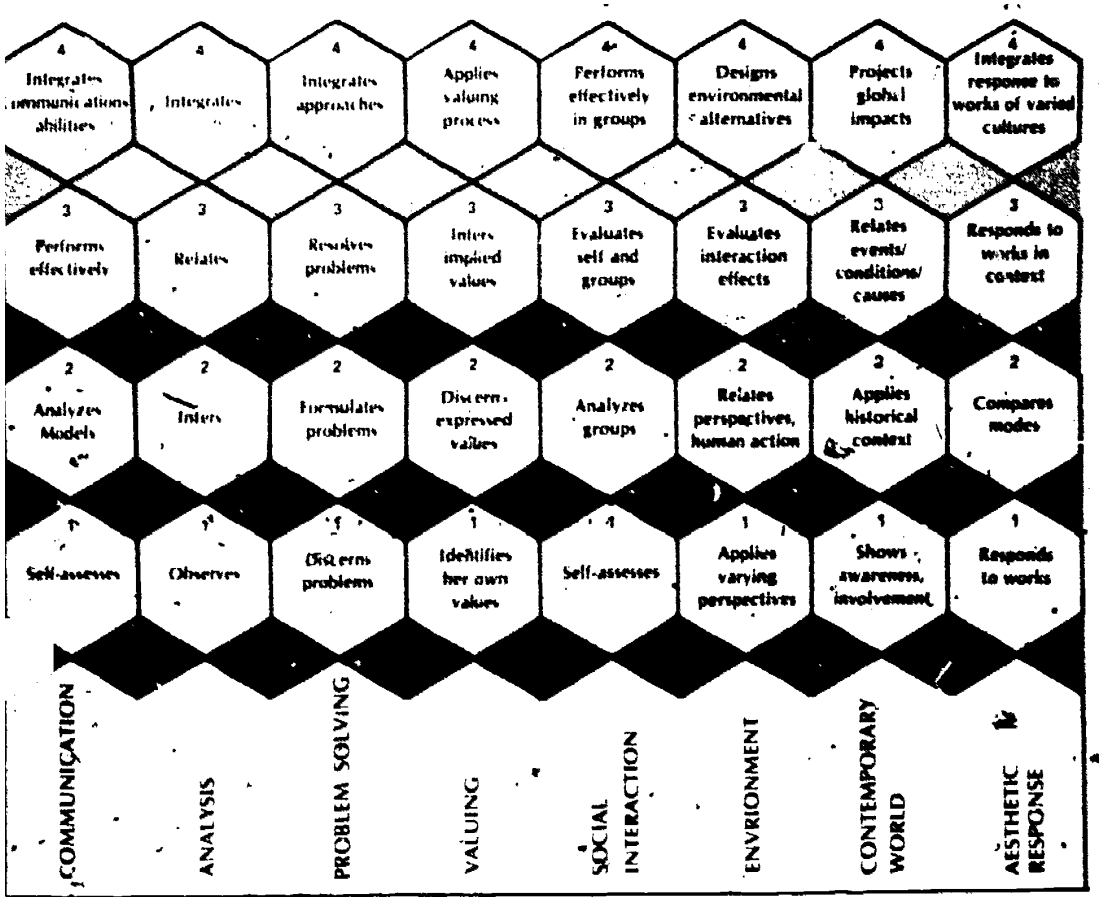
Appendix A

Characteristics of excellent teachers as described by colleges and universities

	Carnegie Mellon	Penn State	Toronto	Bristol	Dublin City	Griffith	Brighton	Wisconsin - Eau Claire	Indiana University
Knowledgeable	Having the relevant knowledge	Subject matter expertise (beyond textbooks)					well-informed researcher, knowledge producer and/or subject matter expert.	Instructor is knowledgeable and up to date in field of expertise. Able to provide breadth and depth. Concepts presented are based on informed, justifiable choices.	Professor is qualified, current, competent, flexible, reflective, practical and credible.
Assessment	Aligning learning objectives with assessments and activities.	Systematic assessor: uses appropriate outcome assessments; employs a systematic (yet fresh) approach; advocates learning over testing	Active engagement with students' learning progress.		Use of creative formative assessment in order to gauge learning - adjustment of teaching based on results.	Effective, engaging assessment.			
Articulate expectations	articulating explicit expectations	excellent communicator: demonstrates and teaches effective communication and listening skills; bridges language/culture gaps	promotion of academic integrity and adherence to grading standards. Supervisory conditions conducive to students' intellectual growth and progress.				Excellent quality of teaching is characterised as skilled and professional delivery of courses and appropriate academic and pastoral support. Good practice includes contributing positively to the learning environment by maintaining teaching professional standards and teaching/delivery to a high standard.		
Objectives	refining/limiting objectives								
Good communicator	scaffold/explain	excellent communicator: simplifies and clarifies complexities	strong communication skills. Success in building student mastery of subject matter.		Empathy, respect and support of students and their diversity. Confidence and enthusiasm in delivery of subject matter. Understand students and their needs.	Encourage the spirit of critical inquiry and creative innovation.	Efficient and effective planner, coordinator, communicator and deliverer. Makes students feel motivated, valued, engaged. Injects humor. Demonstrates listening skills.	Instructor creates a dialogic, welcoming and interactive environment focussed on learning.	Professor is clear, understandable, constructive, attentive, thorough. Professor pays attention to non-verbal communication: speaks directly to students and pays attention, uses body movement to emphasize points, moves around the room, and smiles. Professor is responsive: available, perceptive, accommodating.
Good Pedagogical Choices	assume appropriate instructional disposition/method for the objective	pedagogical expertise: positive attitude; communicates expectations; evaluates fairly/promptly; encourages independence	Success in stimulating and challenging students. Encourages sense of inquiry. Superlative teaching skills. Successful innovations in teaching (processes, materials, assessment). Creative educational leadership. Contribution to pedagogical changes in the discipline.	Excellent performance as evidenced by peer and student evaluations. Choices =effective student learning. Practices considered excellent in that discipline.	Methods that help student develop as independent, critical thinkers. Approaches that stimulate creativity.	Create an engaging, motivating, and intellectually stimulating learning experience. Effective, engaging pedagogy. Emphasize importance of integrating theory and knowledge with professional practice to develop solutions to real world issues.	excellent facilitator of student learning. Engages with new pedagogic developments. Interactive sessions.	Instructor has working knowledge of recognized instructional practices, which are employed to elicit student learning. Instructor designs course curricula, materials, lessons and assignments that elicit student learning. Course design appropriate for	
Reflection/Solicit and Act On Feedback	progressively refine course based on reflection and feedback			Practices are creative and adaptive (to feedback, to national/international changes). Significant professional development has occurred and continues.	Reflective approach to teaching and learning. Use of contemporary theory and practices relevant to discipline. Adjust teaching given student feedback.	Continuously improve teaching practice through professional development, reflection and evaluation.		Instructor is reflective concerning courses, design and objectives to better elicit student learning. Instructor reflects on his/her instructional effectiveness and practices in order to continue his/her professional development.	
Ed Leadership		student-centered mentor: makes learning the highest priority; develops self knowledge and life-long learning	Creative educational leadership. Contribution to pedagogical changes in the discipline.	Leadership in Pedagogy in subject area	Research activities that enhance the teaching and learning experiences of students and colleagues.				
Technology			contribution to technological enrichment		Effective use of technology to enhance learning.		engages with new technologies and keeps up to date.		
Publication			publication of innovative textbooks and/or teaching guides	Practices informed by scholarly activity.					
Develop Courses			development of significant new courses		Innovation in planning and design of courses.	Effective, engaging curriculum design.			
Involve Students in Research			Involve students in research opportunities. development in promoting students involvement in research.						
Attitude							proactive and dedicated enabler with a "can do" and "go the extra mile attitude." lasting impact on learners' later life. Confidence-builder who instills self-belief. Accessible advisor. Caring mentor.		Professor is respectful, compassionate, open-minded, reasonable, consistent, helpful, humble, sincere, realistic, concerned and understanding. Professor is approachable: positive, friendly, personable, happy and accessible. Professor is engaging: interesting, charismatic, passionate, enthusiastic and motivating. Professor is professional: punctual, confident, dependable, dedicated, efficacious, hygienic.
Organization & Planning							Good practice in this area includes good management and coordination, well planned and organised lectures, placement, assessment and course arrangements, effective and timely communication that also includes listening attentively to students' concerns and suggestions and responding appropriately to feedback.		Professor is efficient, focussed and prepared.
Life-long learning and contact							Good practice includes maintaining contact with alumni and others in the field and/or industry, promoting personal and professional development, raising awareness of the connections between academic practice and the world of work.		
Note:			Defines both competence and excellence - excellence in red		President's Award for Excellence in Teaching	Has further explanations for each point	Centre for Teaching and Learning		Based on student research at Memorial University of Newfoundland

Appendix B

Assessment Rubric from Alverno's Assessment at Alverno College (1979, p. 5).



Appendix C

Early Modern Voices

Note: the first part of this data was collected from the dialog of the Middle Ages, but is carried over to the dialog in the early modern period. Primary sources have the year noted in the left column, secondary sources do not.

Year	Person/Object	Text	Themes
Late-12th century	Siger de Brabant, Univ. of Paris	"One should not try to investigate by reason those things which are above reason or to refute arguments for the contrary position."	Primacy of text
mid-13th century	Odofredus, Univ. of Bologna	"First, I shall give you summaries of each title before I proceed to the text; secondly, I shall give you as clear and explicit statement as I can of the purport of each Law (included in the title); thirdly, I shall read the text with a view to correcting it; fourthly, I shall briefly repeat the contents of the Law; fifthly, I shall solve apparent contradictions, adding any general principles of Law (to be extracted from the passage), commonly called "Brocardica," and any distinctions of subtle and useful problems (questions) arising out of the Law with their solutions, as far as Divine Providence shall enable me. And if any Law shall seem deserving, by reason of its celebrity or difficulty, of a Repetition, I shall reserve it for an evening Repetition."	Hierarchy Structure Lecture – transmission Memorization Repetition
≈1350	Painting by de Votolia of a lecture by Henry of Germany	Painting which depicts a lecture by Henry of Germany. Students sit and listen with rapt attention.	Hierarchy Lecture – transmission
1365	Francesco Petrarca *Letter to Giovanni Boccaccio*, (Quillen, 1992, p. 179).	"Doctors did nothing nor could they have, except what a chattering dialectician can do, one abounding in tedium powerless to cure."	Primacy of text Criticism: abstract over relevance
≈1370	Francesco Petrarca (Fubini, 2006, p. 129).	"the bold and futile diligence of those who repeat the words of all other historians in order to appear to have omitted anything and, in so doing, facing contradictory sources, they only shroud the text of their history in hazy clouds of inextricable tangles."	Criticism: memorization Criticism: hierarchy Primacy of text
≈1410	Pier Paolo Vergerio *The character and studies befitting a free-born youth* (Kallendorf, 2002, p. 49)	"The outcome of these studies is to enable anyone to speak well and to inspire him to act as well as possible; this is the mark of the greatest men and the absolutely finest characters."	Language Humanist characteristic: communication ability Primacy of text

Year	Person/Object	Text	Themes
≈1410	Pier Paolo Vergerio *The character and studies befitting a free-born youth* (Kallendorf, 2002, p. 51)	" . . . literature . . .is particularly beneficial to the studious for forming habits (of virtue) and strengthening the memory of times past as well as for the acquisition of learning. From the beginning, therefore, if we want some profit from our studies, we must practice appropriate patterns of speech, and take care that we are not found making embarrassing small slips while pursuing great effects. Next, we must take up the practice of disputation, through which, by supple argument, we seek what is true or false in each and every subject."	Primacy of text Language Humanist characteristic: communication ability Disputation (argument) Self-practice
≈1410	Pier Paolo Vergerio *The character and studies befitting a free-born youth* (Kallendorf, 2002, p. 60-61)	"For what has been sown in young minds puts down deep roots and there is no force that can afterwards pull it up again. Hence, if they become accustomed to the best [teachers and authors] from the beginning, they will use and possess them always as their paramount authorities and guides. But if they imbibe any errors, twice as much time will be needed: to shake out errors, and then to inculcate true precepts."	Hierarchy Memorization Primacy of text Professor characteristic: learned
≈1410	Pier Paolo Vergerio *The character and studies befitting a free-born youth* (Kallendorf, 2002, p. 65)	"It will moreover be profitable to confer often with our classmates about our common studies, for disputation sharpens the mind, educates the tongue, and strengthens the memory, and not only do we learn numerous things through disputation, but we also understand better, express more aptly, and remember more firmly the things we learn this way. But also, by teaching others what we learn, we will be of no small help to ourselves; teaching what you have learned is the best way to improve."	Disputation Humanist characteristic: communication ability Memorization
≈1410	Pier Paolo Vergerio *On noble customs (*Woodward, 1962, p. 102)	"For I may affirm with fullest conviction that we shall not have attained wisdom in our later years unless in our earliest we have sincerely entered on its search." "Our youth to-day, it is to be feared, is backward to learn; studies are accounted irksome."	Self-practice Discipline
≈1410	Pier Paolo Vergerio *On noble customs (*Woodward, 1962, p. 107)	"the importance of grammar and of the rules of composition must be recognized at the outset, as the foundation on which the whole study of Literature must rest: and closely associated with these rudiments, the art of Disputation or Logical argument. The function of this is to enable us to determine fallacy from truth in discussion. Logic, indeed, as setting forth the true method of learning, is the guide to the acquisition of knowledge in whatever subject. Rhetoric comes next, and is strictly speaking the formal study by which we attain the art of eloquence; which…takes the third place amongst the studies specially important in public life."	Language Humanist characteristic: communication ability Primacy of text Disputation (argument)
≈1410	Pier Paolo Vergerio *On noble customs (*Woodward, 1962, pp. 110-111)	"Two faults, in particular, whether in the school master or in the student, seem to call for stringent correction. The first is the habit of attempting too much at once….The remedy for this is to limit the number of subjects in hand at one time so that the memory may fully overtake each of them, and daily revision make our acquisition secure. The second fault is that of hastily passing from one subject to another, which is destructive of all steady progress….we shall do well to put our heart into one subject at a time, and to repress a superficial curiosity.	Primacy of text Structure Repetition
≈1410	Pier Paolo Vergerio *On noble customs (*Woodward, 1962, p. 111)	"a habit of discussing our subject with a fellow student will aid us alike in understanding, in expressing, and in remembering, what we have gained. This indeed is the valuable effect of disputation as an educational instrument. Once more, the practice of teaching what we have learnt is a certain way of securing our own knowledge of the subject. Moreover, any exercise by which we may learn to distrust our attainments, and so increase our diligence and our modesty is to be prized."	Disputation Communication ability Hierarchy Humanist characteristic: modesty
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, pp. 95-97)	"By learning, however, I do not mean that confused and vulgar sort such as is possessed by those who nowadays profess theology, but a legitimate and liberal kind which joins literary skill with factual knowledge"	Integration

Year	Person/Object	Text	Themes
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, pp. 95-97)	"The person aiming at the kind of excellence to which I am calling you needs first, I think, to acquire no slender or common, but a wide and exact, even recherché familiarity with literature. Without this basis, no one can build himself any high or splendid thing"	Primacy of text Memorization
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, pp. 95-97)	"To attain this knowledge, elementary instruction has its place, but much more important is our own effort and study"	Self-practice
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, pp. 95-97)	"There is another more robust kind of elementary instruction, useful more to adults than children: the instruction, I mean, of those who are called grammarians, those who have thoroughly investigated every detail in our books, and in so doing have created a kind of literary discipline."	Language Primacy of text
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, p. 96)	"The most important rule of study is to see to it that we study only those works that are written by the best and most approved authors, and avoid the crude and ignorant writings which only ruin and degrade our natural abilities….Study is, so to speak, the pabulum of the mind by which the intellect is trained and nourished."	Primacy of text Self-practice
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, p. 96)	"bring to this reading a keen critical sense. The reader must study the reasons why the words are placed as they are, and the meaning and force of each element of the sentence, the smaller as well as the larger; he must thoroughly understand the force of the several particles whose idiom and usage he will copy from the authors he reads."	Critical thinking Primacy of text Language
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, p. 123)	"In sum, then, the excellence of which I speak comes only from a wide and various knowledge. It is necessary to read and comprehend a great deal, and to bestow great pains on the philosophers, the poets, the orators and historians and all the other writers. For thus comes that full and sufficient knowledge we need to appear eloquent, well-rounded, refined, and widely cultivated. Needed to is a well-developed and respectable literary skill of our own. For the two together reinforce each other and are mutually beneficial. Literary skill without knowledge is useless and sterile; and knowledge, however extensive, fades into the shadows without the glorious lamp of literature."	Primacy of text Memorization Language Humanist characteristic: cultured
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, p. 123)	"literary skill and factual knowledge are in a manner of speaking wedded to each other. It was the two joined together that advanced the glory and fame of those ancients whose memory we venerate"	Language Memorization Primacy of text
1424	Leonardo Bruni *On the Study of Literature* (Kallendorf, 2002, pp. 124-125)	"It is religion and moral philosophy that ought to be our particular studies, I think, and the rest studied in relation to them as their handmaids, in proportion as they aid or illustrate their meaning; and it is with this in mind that we must fix upon the poets, orators, and other writers. In literary study care should be taken to employ noble precepts and long and perceptive observation, and never to read any but the best and most approved books."	Humanist characteristic: moral Primacy of text Language
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 135)	"I should wish teachers either to be learned (the better situation) or to know that they are not learned. For nothing is worse than those who, having gone a little beyond their first elements, to use the words of Quintilian, 'clothe themselves with the false conviction of their own learning.'"	Professor characteristic: learned Primacy of text Memorization

Year	Person/Object	Text	Themes
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 137)	"The lives of teachers should be faultless and their moral irreproachable: this the best proof that they neither have nor tolerate vices. Let them be neither stern and austere nor free and easy; they should be the sort of person you can neither hate nor blame with justice, who speaks often of what is honorable, so that you do not learn from them vices which afterwards must be unlearned."	Professor characteristic: moral Professor characteristic: disciplined
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 157)	"Nothing is more excellent than intellect and reason. . . . although all other goods are diminished by time, knowledge and reason increase with age." "…(only) the firm possession of virtue is alone unchangeable for the living and the dead…"	Critical thinking Humanist characteristic: virtue
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 179)	"But since the ability to speak – to name words and thoughts simultaneously – cannot exist without the help of memory, there is need for a boy to exercise his memory."	Communication ability Memorization Language
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 181)	"But how can you learn and receive instruction unless you receive the beginning and foundation of all learning, which is grammar?" "*Grammatica*, as Quintilian says, means 'literature' when translated into Latin, and has three parts: the science of correct speech, the explanation of the poets and other authors, and composition."	Language Communication ability
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 197)	"If anyone wishes to avoid faults in all these instances, it will be necessary for him to know the four principles which grammatical speech recognizes: reason (or logic), antiquity, authority, and custom."	Primacy of text Hierarchy Critical thinking Ethics Discipline
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 207)	"The disciplines are interconnected, and a person cannot master one unless he seeks light from another. Indeed, no one possesses the art of correct speaking who has not looked at the poets and read the historians and orators."	Communication ability Primacy of text Integration
1450	Aeneas Sylvius Piccolomini *The Education of Boys* (Kallendorf, 2002, p. 219)	"You will accept just so much as has been usefully written, and you will decline whatever might be harmful among the rest."	Primacy of text Hierarchy
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, pp. 261-262)	"I have brought together the methods most conducive to teaching and learning, following not only my own judgment, which can hardly be of great weight given my youth, but also that of the most learned men, especially my esteemed father, who, as you know, has been a practicing teacher for a very long time."	Structure
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 277)	"indeed, I shall proclaim it loudly: no one can get completely to the bottom and into the marrow, so to speak, of prosody without knowledge of Greek."	Language
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 285)	"once they have control of basic Greek grammar, let them continue on and study Priscian and other [Latin] grammarians, where they will receive a more detailed treatment of matters they learned in brief form at the beginning. . . . At the same time, they should compose declamations based on the letters of Cicero, which will give them a style that is both elegant and fluent, purity of diction and weight of learning; if they commit these letters to memory, they will alter reap wonderful rewards with respect to ease of writing."	Language Primacy of text Communication ability Memorization

Year	Person/Object	Text	Themes
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 291)	"By now, I think, it is perfectly clear that anyone trained in the aforesaid studies is ready to pass on to the discipline of rhetoric. Once he has acquired the art of speaking, not only will he understand the speeches of Cicero, but, as a result of the variety of things he has learned already, he will now also possess a rich vocabulary and a highly wrought, artistic style."	Communication ability Primacy of text Language
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, pp. 293-295)	"someone who believes that he will have to teach what he has learned will leave nothing untouched or undiscussed; he will imagine all possible questions coming up as though conducting a dialogue with himself and will try to elicit the truth in disputation. Also, if students have someone to whom, for the sake of practice, they may relate what they have heard, nothing will be more useful"	Disputation Critical thinking Recitation
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 295)	"Let them not be satisfied with listening to the teacher only, but let them study for themselves the commentators on the authors and mark 'down to the roots'...Writing glosses in books is also extremely profitable...Writing of this kind wonderfully sharpens the wit, polishes the tongue, produces fluency in writing, leads to precise factual knowledge, strengthens the memory, and, finally, affords the students a storeroom, as it were, of commentary and memory aids."	Lecture Self-practice Memorization Critical thinking Communication ability
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 297)	"In Greek they will make rapid progress so long as they do not always expect a teacher to be their guide (after they have acquired the basics). They should study on their own, using, in place of a teacher, books that have translated into Latin." "Reading out loud is of no small benefit to the understanding, since of course what sounds like a voice from outside makes our ears spur the mind sharply to attention."	Language Self-teach Primacy of text Repetition
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 301)	"Above all one must apply order to the process of study. Students should not engage in indiscriminate reading of miscellaneous books. They should establish fixed hours for particular readings."	Structure Hierarchy Self-discipline
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 30)	"…students should allow no time to slip from them empty of study; let this be their business, their work, and their rest; let them devote their waking hours, even their sleep, to their studies."	Self-discipline Self-practice
1459	Battista Guarino *A Program of Teaching and Learning* (Kallendorf, 2002, p. 30)	"If, then, with your whole heart (as they say) you apply yourself to following these precepts, you will yield so much fruit from thence that you will be able not only to sustain and preserve, but even to surpass the hope for you that your natural ability promises and that the estimation of your talent has aroused."	Self-discipline Self-practice
1518-1529	Desiderius Erasmus *Colloquies* (1878, p. 134)	"But if Man is a rational Animal, how contrary is it to Reason, that in the Conveniences, rather than the real Goods of the Body, and in external Things, which Fortune gives and takes away at her Pleasure; we had rather the Thing itself than the Name; and in the real Goods of the Mind, we put more Value upon the Name, than the Thing itself."	Critical thinking

Year	Person/Object	Text	Themes
1518-1529	Desiderius Erasmus *Colloquies* (1878, p. 351)	"As to the Number of your followers, I grant it; and if they have learnt any Thing right in Schools before, they must be forc'd to unlearn it again: And then, as to those Dispensations (of which you have reckon'd up a great many) they are not so much instructed, as confounded by them, till at last they know nothing at all: You improve them till they don't know so much as themselves. Their Horns grow on their Foreheads, and then they seem very cunning Fellows, and are more fit to rule than be ruled. And at last you send them away in a Condition to live merrily, and die blessedly."	Criticizing: Discipline Lecture Primacy of text Memorization Hierarchy Advocating: Critical thinking Independent thought
1518-1529	Desiderius Erasmus *Colloquies* (1878, p. 374)	"consider with me what Sort of Persons sometimes they are, who by their Notions bring Men to the Stake. There is nothing more base than to find fault with that thou dost not understand. But that Vice of vilifying every Thing, what does it produce but Bitterness and Discord? Therefore let us rather candidly interpret other Mens Works, and not esteem our own as Oracles, nor look upon the judgments of those Men as Oracles, who don't understand what they read."	Critical thinking Primacy of text
1518-1529	Desiderius Erasmus *Colloquies* (1878, p. 375)	"Let it be your first Care to chuse you a Master, who is a Man of Learning; for it cannot be, that one that is unlearned himself can render another learned. As soon as you have gotten such an one, endeavour all you can to engage him to treat you with the Affection of a Father, and yourself to act towards him with the Affection of a Son…"	Hierarchy
1518-1529	Desiderius Erasmus Colloquies (1878, pp. 376–377)	"At the first it is no great Matter how much you Learn; but how well you learn it. Divide the Day into Tasks…In the first Part of it, which is the chief Thing of all, hear the Master interpret, not only attentively, but with a Sort of Greediness, not being content to follow him in his Dissertations with a slow of Pace, but striving to out-strip him a little. Fix all his Sayings in your Memory, and commit the most material of them to Writing, the faithful Keeper of Words"	Self-practice Self-discipline Structure Hierarchy Memorization
1518-1529	Desiderius Erasmus *Colloquies* (1878, p. 377)	"By no Means have your Study furnish'd with learned Books, and be unlearned yourself. Don't suffer what you hear to slip out of your Memory, but recite it either with yourself, or to other Persons. Nor let this suffice you, but set apart some certain Time for Meditation"	Memorization Recitation Primacy of text
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 101)*	"he who searches out the greatness of God's majesty will be struck down and overwhelmed by this glory."	Primacy of text Hierarchy
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 102)*	"Learning is unsullied and fruitful only if directed to its proper end, virtue (which is to do good)."	Humanist characteristic: virtue
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 103-104)*	"Intelligence is refined and made subtle with practice." "Memory is enlarged by exercise." "Delicate handling enervates them both; good health confirms them in strength; idleness and daily slackening put them to flight; exercise sets them to hand and keeps them in readiness."	Self-practice Memorization Self-discipline
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 104)*	"Whether you read, or whether you listen, do it with attention. Do not let your mind wander, but constrain it to be present and do that thing which is here, and no other." "If it swerves aside, call it back again, as it were, with a little word. Defer until another time all considerations which may distract you from the studies at hand." "You should realize that you lose both time and labor if you are not attentive to what you read and hear."	Self-discipline Self-practice
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 104)*	"Always follow your tutor, rather than run before him. Believe him: do not resist him." "Love him, and take him as your father, attributing whatever he says to be true and certain."	Hierarchy

Year	Person/Object	Text	Themes
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 108)*	"If you have acted honestly, moderately, prudently, wisely, decorously, and deservingly, you should rejoice; acknowledge this as a gift of God, and resolve to continue acting in the same way." "On the other hand, if you have done anything base, immodest, outrageous, childish, foolish, or worthy of rebuke, recognize it as your own wickedness. Repent of it and resolve never to err again."	Self-discipline
1524	Jean Louis Vives *Introduction to Wisdom (1968, p. 109)*	"All arrogance must be excluded from his studies. Let him realize that even the most learned man alive is very little in comparison with the innumerable things of which he is ignorant…Furthermore, arrogance greatly encumbers the development of studies, for many might have come to wisdom if they had not considered themselves already arrived."	Primacy of text Hierarchy Self-discipline
1531	Jean Louis Vives, *On the Disciplines* (1971, pp. 8–9)	". . . it is very seldom that we can affirm anything as absolutely true. It has not as yet been taken possession of. Much of truth had been left for further generations to discover. I do not profess myself the equal of the ancients, but I bring my views into comparison with theirs….You, who seek the truth, make your stand wherever you think that she is."	Advocating: Critical thinking Criticism: Primacy of text
1537	Painting by unknown artist	Depiction of a meeting of doctors at the University of Paris	Lecture Hierarchy
1607	Tommaso Campanella, *Letter to Monsignor Antonio Querengo* (Garin, 2008, p. 577)	"I learn more from the anatomy of an ant or a blade of grass, not to mention the most marvelous anatomy of the world, than from all the books which have been written since the beginning of time."	Empirical knowledge Self-teach
late 16th century	Structure of beginning canon law class at University of Vienna (Rait, 2010, pp. 140–141)	Discussion of Decretum Gratiani in the following manner: 1) statement of the case; 2) reading of the text; 3) restatement of the case; 4) remark on important elements; 5) discuss questions; and 6) address the glosses	Lecture Student as receptor Hierarchy Rigid structure Primacy of text
1742	George Turnbull, *Observation Upon Liberal Education, in all its Branches (2003, p. 240)*	"The great error in modern education is, that it consumes all the best years of youth for learning useful, real knowledge, in teaching them nothing but words—What progress may be made very early in useful sciences, without neglecting the learned languages."	Criticism: Structure System
1742	George Turnbull, *Observation Upon Liberal Education, in all its Branches (2003, p. 246)*	"There is time enough to teach all the learned or useful languages, without neglecting the more substantial parts of education."	Criticism: Structure System
1742	George Turnbull, *Observation Upon Liberal Education, in all its Branches (2003, p. 240)*	"First the didactic stile, how masters ought to study clearness and perspicuity, and how youth will learn this stile from masters who excel in it, while they are taught by it - But youth ought to be employed in teaching what they know to others...How the rules of oratory ought to be taught—They are all founded in human nature, and teaching them aright, is developing human nature, because it is shewing how and by what the passions of men are affected"	Criticism: Structure System Advocating: Disputation Recitation Individual interpretation
	Charles Homer Haskins, *The Rise of Universities* (1957, pp. 9-10)	"He was not allowed to skip a chapter in his commentary, or postpone a difficulty to the end of the hour, and he was obliged to cover ground systematically, so much in each specific term of the year."	System Primacy of text

Year	Person/Object	Text	Themes
	Samuel Dresden, *Humanism in the Renaissance* (1968, p. 208)	Regarding Michel de Montaigne (1533-1592) on true education. "Like Erasmus, he scorns the traditional scholars and their aping of other people's words, their comments on commentaries and their search for causes rather than realities: 'Ills laissent les choses pour les causes.' What is really required is that a young man should learn to form his own judgment so that he can converse intelligently on matters about which he should have some knowledge. For it is through reading, travel and civilized conversation that we can obtain a clear picture of what matters in the world and can learn how to understand it. No seclusion, no bookish learning, no so-called scientific jargon will ever achieve this. The only real authority is one's own sound judgment."	Criticism: Primacy of text Hierarchy Advocating: Critical thinking Empirical knowledge Self-teach
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 153-154)	"Learning in the Renaissance university took place in a verbal arena. The ability to argue strongly and well, always in Latin, was a highly prized skill. Although lecture and degree examination were also oral performances, the disputation best expressed the verbal character of the Renaissance university. The disputation was a formal debate in the presence of an audience...Two or more disputants argued according to Aristotelian principles of argumentation for and against various propositions in order to arrive at the truth and convince the audience. Victory, rather than consensus, was the goal. The skills needed to win a disputation – drawing distinctions according to logical principles, stating one's views forcefully, pointing out errors in the statements of opponents, and quoting authoritative texts from memory – were considered useful in all areas of professional life."	Student characteristic: language Student characteristic: communication ability Disputation Critical thinking
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 159)	"First and foremost, the able professor could explicate a passage or text subtly and convincingly…This ability was prized because professors lectured on texts on which many previous scholars and written. And a professor needed to surpass his concurrent lecturing on the same text. Moreover, the ideal professor explicated a text in such a way that even students of modest abilities could grasp the meaning…He was expected to be able to recite passages from memory in order to prove his points…paradoxically, a capacious memory helped create spontaneous teaching, which university culture prized. Students did not want a professor to read his lectures; someone who did was a *doctor chartaceus* (paper doctor). Third, the good professor expressed himself fluently and forcefully in good Latin…Good students would be offended if the professor hesitated or made mistakes, wrote one professor."	Professor characteristic: memory (of text) Professor characteristic: language Professor characteristic: explication
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 236)	"In 1552 a student describing the University of Padua noted that the humanist was free to lecture on the text that pleased him most (Source: letter of Giovanni Francesco Trincavello, printed in Gallo, 1963, 90). He meant that, in contrast with other subjects, the statutes imposed no required curricular texts for the humanities. Moreover, the humanists' outlook disposed them to independence in teaching and research, possibly because they spent little time as university students."	Humanist professors (as opposed to others) enjoyed: Independence Choice
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 241)	"Although few humanist university lectures have survived, their content sometimes did in other forms. A course of lectures typically began with the introductory lecture, or prolusion (praelectio), which offered a general description of the course with the theoretical and methodological principles to be followed."	Structure Lecture Hierarchy
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 241)	"What does survive confirms that university humanists employed the paraphrase-commentary format as the basic teaching approach. The professor might begin by reading through the section of the text to be discussed that day, followed by a brief general explanation of the meaning. He would then launch into a word-by-word analysis of the text, explaining grammatical, rhetorical, historical, and interpretive points."	Lecture Primacy of text

Year	Person/Object	Text	Themes
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 243)	"Three kinds of humanities teaching and research can be discerned. The first might be called teaching the classics for elegance, wisdom, and knowledge. The professor explained the grammatical, rhetorical, historical, civic, and moral meaning of a text. He identified unfamiliar persons, places, and customs. He gave the derivations of words. And he interpreted the passage, perhaps placing it in a broader philosophical or civic context by means of allegoresis."	Language Primacy of text Lecture Hierarchy
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 244)	"The student learned by following the professor through the resolution of a problem. After solving a number of limited problems in one text or a series of issues in several texts, the humanist published a volume of these problems and solutions. . . . The ultimate end of research-oriented teaching was a monographic study to be read by other scholars."	Lecture Primacy of text Professor characteristic: scholarship
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 244)	"A second form of instruction might be called researching the classics. The professor approached the ancient text as an object of detailed research; it was an artifact of the past to be studied carefully for its own sake. The professor asked and resolved such questions as, What exactly did the ancient poet mean in a particular passage? What were the Greek sources behind the words of a Latin satirical poet? What is the meaning of an obscure name or word?"	Professor characteristic: text knowledge Professor characteristic: critical thinking Professor characteristic: language
	Paul Grendler, *The Universities of the Italian Renaissance* (2002, p. 244)	"The third and most memorable form of teaching and research might be called conquering new fields. The humanist used his unique skills, critical awareness, and iconoclastic outlook to venture into new areas of learning…Here the humanist's freedom from statutory curricular demands and his wide-ranging critical faculties became most apparent. The humanist's presumption that most medieval learning was wrong-headed also spurred him to innovate."	Professor characteristic: interpretation Professor characteristic: critical thinking Humanist professors enjoyed: Choice
	Anthony Grafton and Lisa Jardine, *From Humanism to the Humanities*, (1986, p. 219)	"As far as Cicero was concerned, the form of the curriculum was fixed as received from Greece, and this once again is characteristic of pedagogic practice in all periods. The curriculum is resistant to change; it depends upon educational assumptions no longer articulated, state requirements and cultural attitudes long discarded, but survives because it is set up in continuously operating institutions. Teachers give up only with reluctance the programme in which they were themselves trained, and when they do make changes they tend to do so piecemeal. The programme of the seven liberal arts which Cicero takes for granted staked the boundaries of western education for more than two thousand years, and educational reform was bound to take place within its contours."	Structure Hierarchy Resistance (to change) Resilience (of methods)
	Anthony Grafton and Lisa Jardine, *From Humanism to the Humanities*, (1986, p. 220)	"From fifteenth-century Italy to late-sixteenth century England, wherever humanist educators set about providing further education for a minority of the population, the goals of the education were set as Cicero had defined them…Behind Renaissance western culture and the societies it enhanced and supported stands ever-present the legacy and the example of an idealised Rome, and Cicero, perfect orator."	Resistance (to change) Resilience (of curriculum) Primacy of text
	Walter Rüegg (1996, p. 29)	"In his Ciceronianus published in 1528, Erasmus censured with biting contempt the ape-like imitations of the Ciceronian style. So what is worthy of imitation, he said, is not an ancient linguistic model but rather the concrete outlook which is expressed in it."	Humanist characteristic: critical thinking
	Walter Rüegg (1996, p. 30)	Pursuit of the "vita activa" vs. "vita contemplativa:" "what was a welcome by-product of the teaching and learning of intellectual methods in the medieval university became in the sixteenth century the main task of the university, namely the training of clergymen, priests, physicians, lawyers, judges and civil servants."	Civic responsibility Vocational orientation

Year	Person/Object	Text	Themes
	Angelo Mazzocco (2006, p. 12)	"by taking a detached view of antiquity, the humanists were able to comprehend the socio-political implications of the *studia humanitatis*."	Humanist characteristic: critical thinking Humanist characteristic: independent
	Elizabeth Eisenstein (2005, p. 78)	"The mere preparation of differently graded textbooks for teaching varied disciplines encouraged a reassessment of inherited procedures and rearrangement of approaches in diverse fields"	Structure (humanists questioned it)
	Elizabeth Eisenstein (2005, p. 218)	"In my view...insofar as memory training and 'slavish copying' became less necessary, while inconsistencies and anomalies became more apparent after printed materials began to be produced, a distrust of received opinion and a fresh look at evidence recommended itself to all manner of curious men."	Humanist characteristic: critical thinking Humanist characteristic: independent
	Rolf Schönberger (1997, p. 22)	the magister('s) task was to transmit "the heritage of truths he had received."	Lecture Primacy of text Resistance (to change) Resilience (of curriculum)
	Riccardo Fubini (2006, p. 130)	"Medieval culture was principally a public matter in that it was a patrimony of sanctioned truths that had been handed down by tradition through an authoritative witness, the exegesis of doctrine, and the transmission of teaching; hence the identification of doctrine with teaching."	Primacy of text Resistance (to change) Resilience (of curriculum)
	Frank Graves (1919, p. 445)	"training…consisted in (1) the acquisition of subject-matter through lectures, and in (2) debates. The lectures included reading and explaining the text book under consideration by the teacher. There was no investigation, but simply a slavish following of the text and lecture."	Primacy of text Memorization Disputation Lecture
	Frank Graves (1919, pp. 445-446)	"debate compelled the students to impress upon their minds and make application of the knowledge they had acquired in the lectures, as the arguments were always founded upon a reference to authorities...debates consisted in formal disputations, in which one student, or group of students, was pitted against another.	Disputation Primacy of text

Appendix D

19th Century Voices

Note: Primary sources have the year noted in the left column, secondary sources do not.

Year	Person/Object	Text	Themes
1793	Charles Nisbet, *Letter to Joshua M. Wallace*	"Our students are generally very averse to reading or thinking, and expect to learn every thing in a short time without application...if ever learning shall prevail in this country, the people must be persuaded that as much time at least is necessary for acquiring it, as is required to serve an apprenticeship to any mechanical profession, which is far from being the case at present."	Criticizing American students' lack of: Self-practice Self-discipline
1815	George Ticknor, *Letter to Thomas Jefferson*	Ticknor described German students as having "an enthusiasm among them . . . an unwearied and universal diligence among their scholars – a general habit of laboring from fourteen to sixteen hours a day" (as opposed to American students) ". . . . Indeed every thing in Germany seems to me to be measured by the genius or acuteness or [of?] learning it discovers without reference to previous opinion or future consequences to an astonishing and sometimes to an alarming degree."	Criticizing American students' lack of: Self-practice Self-discipline Advocating: Independence (in learning)
1823	George Ticknor, *Letter to Thomas Jefferson*	"My purpose . . . to make a course of lectures more complete and minute than has been delivered before, and to introduce, if possible, a more detailed and thorough mode of teaching, whose object shall be to communicate genuine knowledge, rather than to exhibit the subject in rhetorical declamation. I have succeeded with the students, who have given me their willing attention, in a manner particularly pleasant to me, since I have declined from the first, any attendance on my lectures which is not voluntary; but the Professors still keep on in the beaten track, and will not probably soon be induced to change."	Structure System Lecture Criticizing: Resistance (to change) Resilience (of curriculum)
1817	Joseph Cogswell, *Letter from Göttingen*	"a man as a scholar must be completely upset, to use a blacksmith's phrase; he must have learnt to give up his love of society and of social pleasures, his interest in the common occurrences of life, in the political and religious contentions of the country and in every thing not directly connected with his single aim."	Self-practice Self-discipline
1828	Yale University, Yale Report of 1828 (p. 8)	"From the pure mathematics, he learns the art of demonstrative reasoning. In attending to the physical sciences, he becomes familiar with facts, with the process of induction, and the varieties of probable evidence. In ancient literature, he finds some of the most finished models of taste. By English reading, he learns the powers of the language in which he is to speak and write. By logic and mental philosophy, he is taught the art of thinking; by rhetoric and oratory, the art of speaking. By frequent exercise on written composition, he acquires copiousness and accuracy of expression. By extemporaneous discussion, he becomes prompt, and fluent, and animated "	Resistance (to change) Resilience (of curriculum) Language Critical thinking Communication ability Recitation Disputation

Year	Person/Object	Text	Themes
1828	Yale University, Yale Report of 1828 (p. 10)	On the "means which are employed to effect" an education at Yale College: "In giving the course of instruction, it is intended that a due proportion be observed between lectures, and the exercises which are familiarly termed recitations; that is, examinations in a text book. The great advantage of lectures is, that while they call forth the highest efforts of the lecturer, and accelerate his advance to professional eminence; they give that light and spirit of the subject, which awaken the interest and ardor of the student....But we are far from believing, that all the purposes of instruction can be best answered by lectures alone. They do not always bring upon the student a pressing and definite responsibility. He may repose upon his seat, and yield a passive hearing to the lecturer, without ever calling into exercise the active powers of his own mind. This defect we endeavor to remedy, in part, by frequent examinations on the subjects of the lectures....To secure his steady and earnest efforts, is the great object of the daily examinations or recitations."	Lecture Recitation Examinations Classical Education
1828	Yale University, Yale Report of 1828 (p. 14-16)	"The course of instruction which is given to the undergraduates in the college, is not designed to include professional studies. Our object is not to teach that which is peculiar to any one of the professions; but to lay the foundation which is common to all...there is no science which does not contribute its aid to professional skill....we have, on our premises, no experimental farm or retail shop; no cotton or iron manufactory; no hatter's, or silver-smith's or coach-maker's establishment. For what purpose, then, it will be asked, are young men who are destined to these occupations, ever sent to a college? They should not be sent, as we think, with an expectation of finishing their education at the college; but with a view of laying a thorough foundation in the principles of science, preparatory to the study of the practical arts....Practical skill would then be grounded upon scientific information."	Lecture Recitation Examinations Classical Education Abstract over practical
1828	Yale University, Yale Report of 1828 (p. 17)	"men of mere practical detail are wanted, in considerable numbers, to fill the subordinate places in mechanical establishments . . . the higher stations require enlightened and comprehensive views."	Abstract over practical
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 19)	"Public opinion force the University into a wrong course, and gave it, as its inception, a wrong shape. Deriving its view of what a University should be from English ecclesiastical institutions, it transplanted here their spirit, and even their mechanism. No allowance was made for the difference of countries or of times. It would have answered well, if an American college had immense Church patronage to bestow. The self-supporting quality of such institutions depends on two things. The right kind of instruction must be given, and the pupil must have his means of living furnished when his education is complete."	Critical of: Classical education Advocate of: Practical/professional elements
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 20)	"In the twenty years now finished, the Academical Department has graduated four hundred and fifty-five persons. This represents the work it has done in a community of now more than half a million people. Then it is clearly an indisputable fact, to use language which this mercantile community can understand, that we have been trying to sell goods for which there is no market....Well, what are the wares we have been offering? Chiefly the classics and literature."	Critical of: Classical education

Year	Person/Object	Text	Themes
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 21)	"Within the last fifty years, the times have wholly changed. Physicians have dispensed with Latin and Greek; lawyers have done the same: even politicians and popular orators have ceased to decorate their eloquence with classical display…Here, then, is the error we have committed. We put forth our exertions in a direction in which no result could be reached. We relied on the weakest part of the machine, instead of the strongest. In this practical community of men, hastening to be rich, we found no sympathy."	Critical of: Classical education Relevance over abstract
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 22)	"under the system our Colleges pursue, the time is not devoted to the philosophy, literature, history, of those ancient people - it is wasted in practising the mechanical art of translating; and of our Professors, how few there are who have taken the pains, or been at the expense, of visiting the countries they are called upon to illustrate. In other branches we should detect such incongruities at once. What should we think of a chemist, who had never been in a laboratory; or of a physician, who had never seen an hospital?"	Critical of: Classical education Relevance over abstract
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 23)	"while I thus assert the dignity and value of a study of these languages, I consider that in our college system, the public expects from them results which they cannot possibly yield. It is but few American youth who care to saunter to the fountains of knowledge through the pleasant windings of their flowery path; the majority prefer the less-enchanting but more practical way."	Critical of: Classical education Relevance over abstract Practical over abstract
1853	John William Draper, "The Indebtedness of the City of New York to its University" (1854, p. 25)	"And, therefore, for reasons as these, I would beseech those who are friends of American Colleges, to abandon the existing system. With an equal hand dispense your honors equally in every branch. Make no attempt at inciting the student to take an old-fashioned and profitless course, by holding forth fictitious rewards, and working on his desire for distinction; that course of study is out of keeping with our state of society, and worse than useless to the Church....Let each department go on its own merit, and have its own rewards. Cease from this system of bounties. Free-Trade will answer as well in a College as in Commerce. Let the native bent, the native talent, the native instinct of our young men, find its means of development unshackled, and you will have what you have not now, --men in the pulpit who can check the tendency of the age of materialism.	Critical of: Classical education System Advocate of: Student independence
1860s	Ralph Waldo Emerson, "Education" (1875, p. 988)	"I call our system a system of despair, and I find all the correction, all the revolution that is needed and that the best spirits of this age promise, in one word, Hope."	Critical of: Classical education System
1860s	Ralph Waldo Emerson, "Education" (1875, p. 990)	"I believe that our own experience instructs us that the secret of Education lies in respecting the pupil. It is not for you to choose what he shall know, what he shall do. It is chosen and foreordained, and he only holds the key to his own secret. By your tampering and thwarting and too much governing he may be hindered from his end and kept out of his own.	Advocate of: Independence Critical thinking Critical of: Structure System
1860s	Ralph Waldo Emerson, "Education" (1875, p. 992)	"But this function of opening and feeding the human mind is not to be fulfilled by any mechanical or military method; is not to be trusted to any skill less large than Nature itself. You must not neglect the form, but you must secure the essentials. It is curious how perverse and intermeddling we are, and what vast pains and cost we incur to do wrong. Whilst we all know in our own experience and apply natural methods in our own business,--in education our common sense fails us, and we are continually trying costly machinery against nature, in patent schools and academies and in great colleges and universities."	Relevance over abstract Nature over abstract

Year	Person/Object	Text	Themes
1860s	Ralph Waldo Emerson, “Education” (1875, p. 992)	"Happy the natural college thus self-instituted around every natural teacher; the young men of Athens around Socrates; of Alexander around Plotinus; of Paris around Abelard; of Germany around Fichte, or Niebuhr, or Goethe: in short the natural sphere of every leading mind. But the moment this is organized, difficulties begin. The college was to be the nurse and home of genius; but, though every young man is born with some determination in his nature, and is a potential genius; is at last to be one; it is, in the most, obstructed and delayed, and, whatever they may hereafter be, their senses are now opened in advance of their minds...Appetite and indolence they have, but no enthusiasm. These come in numbers to the college: few geniuses: and the teaching comes to be arranged for these many, and not for those few. Hence, the instruction seems to require skillful tutors, of accurate and systematic mind, rather than ardent and inventive masters. Besides, the youth of genius are eccentric, won't drill, are irritable, uncertain, explosive, solitary, not men of the world, not good for every-day association. You have to work for large classes instead of individuals; you must lower your flag and reef your sails to wait for the dull sailors; you grow departmental, routinary, military almost with your discipline and college police."	Critical of: Structured Teaching oriented on the unprepared Structure Lecture Stringent discipline Advocate of: Natural over abstract
1860s	Ralph Waldo Emerson, “Education” (1875, p. 994)	"I confess myself utterly at a loss in suggesting particular reforms in our ways of teaching. No discretion that can be lodged with a school-committee, with the overseers or visitors of an academy, of a college, can at all avail to reach these difficulties and perplexities, but they solve themselves when we leave institutions and address individuals....I advise teachers to cherish mother-wit. I assume that you will keep the grammar, reading, writing and arithmetic in order; 't is easy and of course you will."	Individual Independence Critical of: Classical education
1866	Frederick Henry Hedge, "University Reform, an Address to the Alumni of Harvard, at their Triennia Festival" (1866, p. 301)	"What is a university? Dr. Newman answers this question with the ancient designation of a Studium Generale - a school of universal learning. ‘Such a university,’ he says, ‘is in its essence a place for the communication and circulation of thought by means of personal intercourse over a wide tract of country.’ Accepting this definition, can we say that Harvard College, as at present constituted, is a University? Must we not rather describe it as a place where boys are made to recite lessons from text-books, and to write compulsory exercises...The College proper is simply a more advanced school for boys, not differing essentially in principle and theory from the public schools in all our towns. In this, as in those, the principle is coercion. Hold your subject fast with one hand, and pour knowledge into him with the other."	Critical of: Classical education Recitation Repetition Hierarchy
1866	John Fiske, *University Reform* (1902, pp. 304-305)	"The advantages of solving problems, constructing an ancient author, or rehearsing the results of one's reading in the presence of classmates and subject to professorial criticism are indeed sufficiently obvious. Skill in acquiring knowledge ought certainly to be accompanied by skill in reproducing it; nor would the student be likely to do credit to himself if in the examination, who should fail previously to test his powers of answering questions on the spur of the moment. But the business of recitation should not be confined to going over in public what has already been gone over in private. The instructor's superior knowledge and more extensive sources of information should be applied to the elucidation of the subject at hand. Questions should be freely asked, and discussion, wherever relevant, should be encouraged. Thus conducted, the recitation would fulfill its appropriate function of making good the short-comings inherent in a system of merely private study, of supplying illustrations which cannot be found in text-books, and of smoothing the difficulties which from time to time beset the student in his progress."	Memorization Primacy of text Lecture Recitation

Year	Person/Object	Text	Themes
1868	*Third Annual Report of the Yale University Sheffield Scientific School* (1868, pp. 16-17)	"The objection is often brought against classical study that those who devote to it so large a proportion of the time given to training never carry it, after all, beyond the stage of preliminary discipline, do not begin to derive fruit and enjoyment from it, and drop it abruptly when the work of life is begun, hardly if at all conscious of benefit obtained. Much more is apt to be made of this objection than it is really worth . . . All education is to this extent and liable to failure. The liability does, however, constitute a powerful and valid argument against limiting education to one unvarying pattern, since many a mind which is repelled and stagnated by one set of studies, may be incited to independent and healthy action by another."	Critical of: Classical education Structure System
1869	Charles Eliot, "Inaugural Address" (1905, pp. 7-8)	"It is not the function of the teacher to settle philosophical and political controversies for the pupil, or even to recommend to him any one set of opinions as better than another. Exposition, not imposition, of opinions is the professor's part. The student should be made acquainted with all sides of these controversies, with the salient points of each system; he should be shown what is still in force of institutions or philosophies mainly outgrown, and what is new in those now in vogue. The very word 'education' is a standing protest against dogmatic teaching. The notion that education consists in the authoritative inculcation of what the teacher deems true may be logical and appropriate in a convent, or a seminary for priests, but it is intolerable in universities and public schools, from primary to professional. The worthy fruit of academic culture is an open mind, trained to careful thinking, instructed in the methods of philosophic investigation, acquainted in a general way with accumulated thought of past generations, and penetrated with humility."	Critical of: Hierarchy Primacy of text Structure System Lecture Advocate of: Critical thinking Independence Student characteristic: humility
1869	Charles Eliot, "Inaugural Address" (1905, pp. 14-15)	"There has been much discussion about the comparative merits of lectures and recitations. Both are useful . . . (however) Recitations alone readily degenerate into dusty repetitions, and lectures alone are too often a useless expenditure of force. The lecturer pumps laboriously into sieves. The water may be wholesome, but it runs through. A mind must work to grow. Just as far, however, as the student can be relied on to master and appreciate his author without the aid of frequent questioning and repetitions, so far is it possible to dispense with recitations."	Critical of: Recitations Repetitions Lecture Advocate of: Critical thinking Self-practice
1869	Charles Eliot, "Inaugural Address" (1905, p. 24)	"The professors, lecturers, and tutors of the University are the living sources of learning and enthusiasm. They personally represent the possibilities of instruction. They are united in several distinct bodies, the academic and professional Faculties, each of which practically determines its own processes and rules. The discussion of methods of instruction is the principal business of these bodies."	Critical of: Structure Professor characteristic: rigid
1874	James Hart, *German Universities* (1874, p. 257)	"I was made to feel that a German university, however humble, is a world in and for itself; that its aim is not to turn out clever, pushing, ambitious graduates, but to engender culture."	Student characteristic: clever Student characteristic: cultured Student characteristic: ambitious
1874	James Hart, *German Universities* (1874, p. 261)	"The student has but one desire: to assimilate his instructor's learning, and, if possible, to add to it...He must think for himself, for there is not one set over him as spiritual adviser and guide, prescribing the work for each day and each hour, telling him what he is to believe and what to disbelieve, and marking him up or down accordingly.	Lecture Critical thinking Self-discipline Self-practice
1874	James Hart, *German Universities* (1874, p. 268)	A professor's time "is not wasted in cudgeling the wits of refractory or listless reciters. His temper is not ruffled by the freaks or the downright insults of mutinous youths." He "lectures only to those who are willing and able to hear. He is sustained by the consciousness that his words are not scattered by the wayside, but that they fall upon soil prepared to receive them, and will bring forth new fruit in return. His relation with his hearers is that of one gentleman speaking to another . . ."	Lecture Student characteristic: receptive Student characteristic: attentive Self-discipline Professor characteristic: collegial

Year	Person/Object	Text	Themes
1874	James Hart, *German Universities* (1874, pp. 268-269)	When describing the German experience, as opposed to the American. "To make the method of instruction more evident, we have only to picture to ourselves a man like George Curtius, of Leipsic, 'reading' on the Odyssey. He begins probably with a general introduction to the Homeric question, spending perhaps a fortnight in setting forth his views and refuting the views of others. He then gives a detailed description of all the manuscripts of the poem, their comparative merits and deficiencies, and also the best modern critical editions. Then following some generally received text, he translates, either carefully, line by line, or else rapidly, according as the passage may be difficult or easy. As he goes, he makes historical, aesthetical, linguistic excursions. By the end of the semester he has probably only finished a few books. But his hearers, who have listened attentively and with minds prepared by their gymnasial training, have caught the essence of the poem and its relations, and can henceforth study it for themselves."	Lecture Self-practice Student characteristic: attentive Student characteristic: independent
1874	James Hart, *German Universities* (1874, p. 293)	At German universities, students "have only one thing in common: individuality of thought and freedom of action. Such a sentiment as 'class-feeling' does not exist among them. In America, where the same set of young men recite side by side in the same recitation-rooms for four years, it is perhaps only natural that the feeling of class unity should exist as it does."	Critical of: Recitation Class unity
1880	Richard Ely, "American Colleges and German Universities" (1880, p. 254)	When contrasting the German experience to the American. "A German university is, from beginning to end, through and through, a professional school. It is a place where young men prepare to earn their 'bread and butter,' as the Germans say, in practical life. It is not a school which pretends or strives to develop in a general way the intellectual powers, and give its students universal culture"	Critical of: Classical education Abstract over relevance Abstract over practical Advocate of: Professional education
1902	John Fiske, *Darwinism and Other Essays* (1902, pp. 253-254)	"our schools and colleges…often waste a great deal of time and energy in teaching the rules of prosody, as well as by the cumbrous and inefficient method in which they conduct classical instruction in general…We learn French and German with ease, because we begin with concrete examples. In studying Latin and Greek, on the other hand, we begin with abstract rules, and are not seldom compelled to memorize what we cannot understand. Hence the difficulties under which we labour are so great that, by the time they are conquered, we have too often neither leisure nor interest left for other studies. By this process the mind is in many cases stupefied rather than quickened; and the system, far from producing liberally educated men, fails even to produce good classical scholars."	Critical of: Classical education Abstract over relevance Structure System
1905	Andrew White, *Autobiography of Andrew Dickson White* (1905, pp. 288-289)	"Its single course in classics and mathematics, through which all students were forced alike, regardless of their tastes, powers or aims; its substitution of gerund-grinding for ancient literature; its want of all instruction in modern literature; its substitution of recitals from text-books for instruction in history – all this was far short of my ideal."	Critical of: Yale University Classical education Structure System

Appendix E

1960s Voices

Note: Primary sources have the year noted in the left column, secondary sources do not.

Year	Person/Object	Text	Themes
1960s	Gail Thain Parker, *The Writing on the Wall* (1979, p. 34)	"Although I believe that the opportunity to teach should, in any reformed system of higher education, be regarded as a rare privilege, a reward for unusual intellectual or creative achievement, I am not one of those who imagine that regular contact with even the more inquiring young minds guarantees that faculty members will reexamine their own assumptions continuously. In truth, students, so far from helping to dispel the Magic Mountain quality of academic life, may actually encourage a debilitating sense of specialness in their teachers. The more highly selective the student body, the more likely faculty members are to think of themselves as the chosen who deal with the chosen."	Critical of: Professor characteristic: intransigent Professor characteristic: hierarchical Student characteristic: overly attentive
1960s	Robert Jackson, student at Cornell University From: Maryl Levine, *Right on!* (1970, p. 36)	"What relevance does Shakespeare have for me? I've read Shakespeare, but I wish I had spent that time reading Baldwin, Ellison and Wright."	Critical of: Primacy of text Advocate of: Relevance
1960s	Committee to Transform SUNYAB, From: Maryl Levine, *Right on!* (1970, p. 58)	The Committee presented a list of demands to President Martin Meyerson of State University of New York at Buffalo, including: • Student control of 50% of the voting power and membership on all departmental and university decision-making bodies, especially on matters concerning curriculum, degree regulation, and the hiring and firing of teachers • "Symbolic sanctuary" for Martin Sostre's Afro-Asian Book Store in Exile be established (in perpetuity) • The firing of Police Commissioner Frank Felicetta • An end to all contracting of defense research on the campus and an end to any work on present projects • The university cooperate in no way with local, state and federal narcotics and intelligence agents and if they have knowledge of such activities, that they be made public • The creation of a bicameral legislature, giving the student and faculty house each the power to veto actions of the other	Advocate of: Student voice, input, control, vote Critical of: Hierarchy University projects/contracts University administration Law enforcement (on campus)
1960s	Jeremy Larner, Professor, Harvard University From: Maryl Levine, *Right on!* (1970, p. 64)	"The events we're seeing are happening because this university is not a community of students and teachers as it should be. Instead it's an institution run by professional managers who have other interests, like conducting war research for the government. It's understandable that the students become furious when (John S.) Toll tells them that no war research is going on and then refuses to show them his files….As for the administration, it should be in the employ of students and faculty, not the other way around. The administration should be employed to make teaching easier, not to go out and get defense contracts. The students have rebelled against the administration because it identifies with all the outside forces that the students oppose.	Critical of: University projects/contracts University administration Hierarchy

Year	Person/Object	Text	Themes
1960s	Summons from Charles D. O'Connell, Dean of Students, University of Chicago From: Maryl Levine, *Right on!* (1970, p. 76)	"Because of your continued participation in a disruptive demonstration, your name is being given to a University Disciplinary Committee. You are required to appear to Eckhart Lounge (second floor, Room 209) within one hour of receiving this summons to be assigned to a hearing before that Committee. Failure to appear will in itself be additional grounds for disciplinary action."	Hierarchy Discipline Critical of: Student characteristic: activism
1960s	Eric Hoffer, Philosopher From: Maryl Levine, *Right on!* (1970, p. 88)	Comments at a Senate hearing: "Am I wrong, Senators, when I say that a university is not supposed to be a democratic institution? For heaven's sake, a university is a place where the young people are supposed to acquire, to master the craft of learning and of thinking. This is the place for that, you see. A university is not a place to reform society. A university must not even be relevant, what they teach does not have to be relevant to the society out there. They teach you to learn by yourself, to educate yourself, how to educate yourself. They teach you how to think and then you go out and you solve problems outside."	Advocate of: Hierarchy Student characteristic: attentive Self-discipline Self-practice Critical of: Student characteristic: activism Relevance over abstract
1960's	Herbert Deane, Dean, Columbia University From: Maryl Levine, *Right on!* (1970, pp. 98-99)	"A university is definitely not a democratic institution. When decisions begin to be made democratically around here, I will not be here any longer. Whether students vote 'yes' or 'no' on an issue is like telling me they like strawberries."	Advocate of: Hierarchy Critical of: Student characteristic: activism Student voice, input, control, vote
1960's	Laurence A. Kimpton, Former Chancellor of the University of Chicago From: Maryl Levine, *Right on!* (1970, p. 117)	"A student has no ability whatsoever to advise on matters of curriculum or choice of faculty. Students don't have academic freedom. It's a very special, limited kind of thing which allows a professor to do research and teach as he sees fit."	Advocate of: Hierarchy Critical of: Student voice, input, control, vote
1960's	Kenneth Glazier, Student, Harvard University From: Maryl Levine, *Right on!* (1970, p. 124)	"Q. Why are students so concerned with life and problems outside the university? A. You can't be a student in the cities and not see the poverty and degradation around you. You can't be a student and not realize that an unjust war is being fought by people your own age. You can't get away from it, and hence you can't help but be concerned – and be concerned about the university's relationship to these problems. Perhaps a few decades ago you could say, 'Well, we're isolated on a campus. We can just follow our studies and not really worry about what's happening outside the ivory tower.' But the outside world affects us too much today, and the need for change in American society is too overwhelming for such an attitude to prevail."	Advocate of: Student characteristic: awareness Student characteristic: activism
1960's	Robert Ross, New University Conference From: Maryl Levine, *Right on!* (1970, p. 146)	"Those opposed to disruptive tactics argue that reasoned discourse is the better way. But when the reasonable discourse is over, the university's decision makers still decide on their own to tear down black people's homes, continue R.O.T.C and use their institutions to service corporate America. So students and faculty turn to tactics of dramatization and coercion."	Student voice and input Student characteristic: activism Faculty characteristic: activism General characteristic: awareness
1960's	Michael Rossman, Leader, Free Speech Movement at University of California Berkely From: Maryl Levine, *Right on!* (1970, p. 149)	"The trouble with the bloody university professors is that they don't understand the difference between an idea and its translation into social reality. The have no idea how to translate their ideas into social realities, and so they sit on their fannies, thinking nice ideas, putting them down in books, reading them to kids later on. It seems to me that the universities are not changing. You can see that we're heading straight for the culture breaking up and smashing up because it does not know how to change."	Critical of: Abstract over relevance Faculty characteristic: abstract Resistance (to change) Resilience (of methods)

Year	Person/Object	Text	Themes
≈1965	Jack Weinberg, former teaching assistant, University of California (Lipset & Wolin, 1965, p. 222)	"The students at Cal have united. To discover the basic issues underlying their protest one must first listen to the speeches made by their leaders. Two of the most basic themes that began to emerge in the very first speeches of the protest and that have remained central throughout have been a condemnation of the university in its role as a knowledge factory and a demand that the voices of the students must be heard."	Advocate of: Student voice Critical of: University projects/contracts University administration Hierarchy
1965	Mario Savio, leader of the first student revolt at Berkeley (Savio, Walker, & Dunayevskaya, 1965)	"Now the bosses build schools for the children of their workers…Accordingly, the schools have become training camps -- and proving grounds -- rather than places where people acquire education. They become factories to produce technicians rather than places to live student lives. And this perversion develops great resentment on the part of the students. Resentment against being subjected to standard production techniques of speedup and regimentation; against a tendency to quantify education…Education is measured in units, in numbers of lectures attended, in numbers of pages devoted to papers, number of pages read. This mirrors the gross and vulgar quantification in the society at large -- the real world -- where everything must be reduced to a lowest common denominator, the dollar bill. In our campus play-world we use play money, course units. It is understandable that resentment should develop among the students. However, it was not always so easy for the students to understand the causes of their own resentment. It is not as easy to see what is oppressing the subject as to see what is oppressing the others. Nevertheless, we students did become more and more aware of the factory education which we were being provided."	Hierarchy Resistance (to change) Resilience (of methods) Structure System Student characteristic: awareness
	Paul Woodring, *The Higher Learning in America* (1968, p. 85)	"Those who demand better instruction and more attention to undergraduates also have a good cause. It is true that the status symbols of academia are rigged against good teaching – the highest rewards go to professors who give their time to other things. Every university has some professors who are contemptuous of undergraduates and do not want to teach them. Students are right in calling attention to these facts and demanding a change. I hope they get it. But they are not likely to accomplish this by blasting the administrators; because in most of the better institutions, decisions about promotions are made by faculty committees. Administrators merely give formal approval to decisions already made."	Critical of: Resistance (to change) Resilience (of methods) Student voice Faculty characteristic: intransigent Hierarchy Student activism (direction of)
1969	Joseph Tussman, *Experiment at Berkeley* (1969, p. xv)	"speaking of faculty, a 'scholar' is not a 'teacher'; a 'professor' is not a 'pedagogue.' A scholar is a man with something on his mind and with the skill and determination to pursue it; a teacher is a cultivator of other minds. A university hires scholars and hopes that they will do as teachers"	Abstract over relevance Resilience (of methods) Resistance (to change)
	Howard Taylor, *Students Without Teachers* (1969, p. 138)	(all higher education institutions) "emulate the educational patterns of the major university, no matter what the character and needs of its own student body"	Resistance (to change) Resilience (of methods) Abstract over relevance University similitude
	Norman MacKenzie, *Teaching and Learning* (1970, p. 44).	"the consensus of studies since 1920 is that no one mechanical teaching device, in and of itself, is better than another. Teaching by the lecture, recitation, discussion, tutorial, reading-study, reading-quiz, correspondence, or several different laboratory teaching methods . . . has not demonstrated to be intrinsically better than some other technique. (Therefore) the effect of research on the effectiveness of teaching should be shifted from 'tactics' of teaching to the 'logistics' of learning to methods which in contradistinction to the pedagogical, may be described as the methods of scholarship, of inquiry, of problem-solving or of critical thinking."	Critical thinking Problem solving Teaching effectiveness (similar despite method)
	Norman MacKenzie, *Teaching and Learning* (1970, p. 126).	(Faculty) "professionalization is associated with research skills rather than teaching skills"	Professor characteristic: professional = research focus

Year	Person/Object	Text	Themes
1971	Frank Newman et al., *Report on Higher Education* (Smith & Bender, 2008, p. 40)	"The professionalization of academic faculties has shaped the character of higher education in many ways. Increasingly, being a teacher has become part of a broader role centering around one's professional colleagues – attending professional conferences, writing and reviewing articles, sponsoring and recruiting apprentices into the discipline. Faculty at universities and the more prestigious colleges have come to view themselves as independent professionals responsible to their guilds rather than to the institutions which pay their salaries. They have established at their institution a system of tenure and promotion designed to preserve their professional objectives. Those who slight the academic obligations of specialization, research and publication are themselves slighted in promotion, esteem, and influence."	Professor characteristic: professional = research focus Professor characteristic: disciplinary focus Professor characteristic: independent (of institutions) Professor characteristic: specialization Professor characteristic: resistance (to change)
	Winslow Hatch, *Student Involvement and the University* (1975, p. 74)	"If the research...is representative of our present state of knowledge we should abandon the hope--and the research nourished by this hope--that a miracle can be worked by discovering and employing some one 'general method' of instruction. We would be better advised to direct our energies in more profitable directions."	Resistance (to change) Resilience (of method) General education (critical of)
	Winslow Hatch, *Student Involvement and the University* (1975, pp. 79-80)	"The research…supplies the first positive evidence of how teaching effectiveness can be increased by employing the methods of scholarship or of student inquiry. Whether these methods are aptly described as 'problem-oriented,' 'problem-solving,' or case study, or simply involve 'critical' thinking, is not important; at least it is no more important than any one of these phrases might be in describing the research done by a faculty. The important thing is that in his learning, and in the teaching that accompanies it, the student should inquire into, rather than be instructed in a subject matter." "The need for 'reinforcement' has also been identified as one of the problems in this kind of teaching. To realize their full potentialities, problem-oriented approaches have to be made in course after course, and, ideally, in an entire program of study. The relationship between inquiry and 'creativity' has not been established in any precise way, but the first would seemingly enhance the second."	Student characteristic: inquiry (rather than instruction/professorial transference) Advocate of: Reinforcement (across curriculum)
	Winslow Hatch, *Student Involvement and the University* (1975, p. 88)	Citing the results of the Corman and Krumbotz research done in 1958 indicative of their meta-analysis: "(In) the development of concepts, and in the related task of guidance of students in problem-solving, the teacher must present clues…for the purpose of directing the students to the successful discovery and application of essential discriminations and relationships. While, in the past, there has been some dispute as to the desirability of teacher-direction as contrasted with student self-direction, recent studies indicate...that both in acquisition and transfer of concepts (and in) problem solving...teacher-direction is the most effective procedure."	Professor characteristic: provide direction Student characteristic: critical (thinking, discerning, comparing)
1975	Winslow Hatch, *Student Involvement and the University* (1975, p. 91)	"As regards the critical factors in teaching effectiveness, namely, the quality of the teaching and learning, the most promising working hypothesis is: That the methods of scholarship ('problem-oriented' or 'problem-solving' methods) increase the effectiveness of teaching, particularly when the teacher accepts a teacher's responsibility for directing learning, providing every opportunity and inducement for the student to accept a larger responsibility for his own education, and holding out always as his and their goal the maximum achievement of which the are both capable, be their ability (his and theirs) great or small, effectively engaged, or only latent."	Teaching effectiveness = student inquiry/scholarship Professor characteristic: teacher-directed learning Student responsibility (for learning)

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Biography

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