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学位論文内容の要旨

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学位論文題名

The Expansion of Knowledge Transmission and Social Institutions in Western Modernity
-The State, Literacy, and Formal Education from Medieval to Modern Times-
（近代西欧における知識伝達と社会制度の拡大
—中世から近代までの国家、リテラシーとフォーマル教育—）

This study began with asking a question about the modern day, namely, how can the world's developing nations achieve universal literacy within their societies. This study has been developing the argument that to better answer this question, we need to apply lessons from history to understand how universal literacy has been achieved in developed societies. To this point, an evolutionary analysis has provided the basis for literacy as an evolutionarily secondary type of learning that was not present in historic small-scale societies.

This thesis argues that over the course of human history, changes in the formal education of a society have followed in the wake of changes in the formal institutions of a society. The evidence gathered to build this thesis began with an examination of the very foundations of human society, and from an evolutionary perspective, "what is a definition of education that agrees with human beings' evolutionary history?" The definitions used in this dissertation are important to how significant changes in education was eventually measured.

The evidence from evolutionary studies provided explanations for two important aspects to the argument advanced in this paper: The first is that far back in the prehistory of human societies, human beings lived in small band societies, and had no literacy, numeracy, scientific concepts, or by extension, no formal education or schooling.

The second important aspect of the evolutionary analysis pertained to the individual learner, such as: in what situations are human beings motivated to learn? Why is it that every normal child will effortlessly absorb the language of his or her environment but does not learn to read or write that language without years of effort and instruction? To summarize the evidence cited, literacy constitutes an evolutionarily novel set of skills and knowledge and is therefore not intuitively grasped by people. However, as the evidenced cited also explained, human learning has the flexibility for concept shift, or with great effort to learn things that do not intuitively match our folk psychology, physics, or biology.

With the advent of city-states and state societies, with their need for complex forms of institutional structures, bureaucracies and administrations required complex skills to function and operate. This led to the world's first schools and the transmission of formal education. However, it was not until around 500 years before present that literacy was something sought after by larger segments of a population. From 500 years before present until the 20th century, the world

transformed into one where it was a widely acknowledged goal that every child in the world ought to become literate.

The next part of the study examined why literacy is central to understanding the growth and development of formal education, or schooling, and then why institutional variables are an interesting and overlooked way of understanding how schooling and literacy rose in past centuries from being non-existent, to being a requirement for every child.

The unparalleled rise of mass literacy and mass schooling over the past two centuries is a phenomenon that needs to be better understood in order to better achieve the same results in the developing world. The argument of this study has important consequences for the way we understand the future of educational development in the world. Understanding the progression of growth and change in education over historic time will empower policy makers to correct the large gaps in educational performance in the present, because we better understand why they existed in the past. If we can better understand the process of the growth and spread of formal education, more specifically literacy, over historic time, then policymakers have a better opportunity to achieve the United Nations Sustainable Development Goals.

The first two sections developing the argument of this study presented research on the importance of evolutionary frameworks for understanding education; why evolutionary frameworks are an under-utilized framework in educational research, even more so in historic education research; they introduced the historiography of literacy research and the drawbacks to this literature; and finally introduced institutional variables as a means to compare the gaps in educational development in past societies, i.e., the comparison of historical literacy rates and why differences occurred.

The importance of an evolutionary framework demonstrated how education, in general, is part of our shared human nature, and thus, any and every child, born to any culture, will be naturally motivated to engage in certain learning behaviors, the most important of which is to learn to speak the language of one's family and peers. However, as the analysis demonstrated, a gap exists between the learning that comes naturally to all children, and what was defined as evolutionarily novel, or secondary learning. This kind of learning does not match with human beings' intuitive cognitive processes and as a result is much more difficult to learn. The most salient examples of evolutionarily secondary knowledge are literacy, numeracy, scientific concepts, and other forms of standardization. Thus, when attempting to understand a phenomenon such as formal education, or more specifically literacy, in a society several centuries in the past, this knowledge helps us better understand what constituted formal education, and how, when, and why it changed, expanded, or declined.

The last section demonstrated why, during the twentieth century, evolutionary analysis was underutilized as a methodological tool to research education. At the end of the nineteenth century, and the beginning of the twentieth century, evolutionary analysis was often erroneously used to advance pseudo-scientific theories of racial superiority, of which there existed no scientific evidence. Many social scientific schools of thought, notably the cultural anthropological schools in Europe and America, stood in stark contrast to the so-called Social Darwinists, and advanced many useful studies. However, in focusing too much on the socio-cultural, those academics that neglected evolutionary analysis overlooked a valuable methodological vehicle for understanding the social, cultural, economic, and political development of mass schooling over the past three centuries.

This section of the dissertation positioned "literacy" as central to the educational experience throughout the history of formal education. Furthermore, this section explained the United Nations Sustainable Development Goal of achieving quality education for all in the world by the year 2030.

Literacy is one of the major components to achieving this goal. This study proposed that to better achieve this goal, it will be useful to examine the historic development of literacy to understand why some societies of the past were able to increase their literacy rates, while others did not. If this comparison can shed light on why one society was more successful than another, this knowledge can be applied to the modern day to identify key policy components to achieving mass literacy. In this section, I examined past studies on historic literacy, to review some of the methods in the historiography, and to show why using institutional variables in historic analysis will be a fresh, innovative, and important approach to understanding the rise of literacy in past societies.

A culture of literacy has its roots in the formal institutions that bind a state together: the development of a centralized state, a legal system, and religious or spiritual beliefs. In many instances, the literate culture that develops may be completely different from the vernacular(s) spoken in the region. So why is it that the development of institutions has a positive effect on the spread of formal education?

State-building requires a monopoly on the use of force and a system of law to adjudicate disputes. A state monopoly on force requires the members of society not resort to violence, or revenge justice, to solve the problems of cooperation and competition. Institutions shape how we live in our societies, and they also shape how we educate our children to compete and cooperate in that society. In Medieval Europe, the many books of etiquette from The Book of Hours to On Civility in Children were written as guides to the cultivation of good manners and conduct in a civilized society. Much like how the etiquette of a gentleman and lady began as courtly manners and slowly spread to the middle class and lower classes of society throughout the course of modernization, so too did literacy spread in analogous fashion.

Literacy began in state, legal, and religious institutions, and later spread throughout the middle-classes of European society as they emerged and prospered. The degree to which literacy spread in early-modern society depended on the institutional traditions present. The best answer as to why England and the Netherlands developed literate populations at a faster rate than other European states, prior to the Industrial Revolution, was due to their precocious development of modern political institutions. This is the only satisfactory conclusion that explains all the factual evidence. It is the development of modern political institutions that is the key variable to why formal education spreads throughout a society and this is why every society in the 21st Century, that has yet to development modern political institutions, has also yet to see universal access to literacy and formal education. The same thing was the case in early-modern Europe.

The Ancien Regime was a great example of how a lack of cultural and linguistic integration combined with an incapable state, resulted in poor growth in formal education throughout Enlightenment France. After the French Revolution and the institutional reforms that gradually created a more capable, liberal French Republic over the course of the nineteenth century, French education developed into one of the best systems in the world by the twentieth century. Though England or the Netherlands may have experienced a higher rate of growth in the education of their society, prior to the Industrial Revolution, by the nineteenth century education was a major focus of most European societies and the gap between France and England documented in this chapter, quickly closed during the nineteenth century. But the reasons highlighted in these two previous chapters, in the examples of the Netherlands and England, still remained significant in the expansion of literacy and formal education in Germany and France, and later Spain. These insights are challenging to disentangle from the numerous variables that lead up to the Industrial Revolution,

in Early-Modern Western Europe.

The Enlightenment and its Scientific Revolution led to new revolutionary ways to capture and use energy. The Industrial Revolution that began in England around 1780 saw a major expansion in economic growth, urbanization, social mobility, and fresh ideas about liberty amid these unprecedented levels of growth and change. The confluence of these dynamic processes led several societies to make vital changes in their institutional candidate selection criteria, which led to the adoption of careers open to talent, and the desire to provide formal education to every child.

Once the dynamic developments of the Industrial Revolution began to change Europe, North American, and Japanese society, with economic growth, transportation, social mobility, and the requirement for widespread specialization in knowledge economies, this led to the development of modern education that we see today. One of the biggest issues in the world is the fact that not all societies have developed along this trajectory of modernization. Though today, in the twenty-first century, it is common for governments to be supporters and funders of education, the lessons from this history demonstrate that in order to achieve "quality education for all," having inclusive formal institutions is a necessary component to this accomplishment.

Through the examination of evolutionary history, it was established that learning is something common to much of the diverse life on earth, while education is strictly a human phenomenon. This evolutionary theory provides good explanations for human beings' long-life spans, extended childhoods, monogamous pair-bonding, and relying on learning institutional knowledge for survival. Through this evolutionary paradigm, education, in this study, has been defined as "the skills and knowledge acquisition that human beings learn to become competent members of their society."

The definition of formal education in this study has been "the learning of evolutionarily novel skills," in other words, knowledge that provides good explanations for some ontological reality, but is not cognitively intuitive to human's intuitive learning biases. Formal education is the learning of knowledge that human beings are capable of learning, but not genetically prepared to learn. This key insight from evolutionary theory plays a major role in analyzing education at the social and historical level.

The evolutionary origins of education and the institutional development of formal education has formed the theoretical paradigm to which this study has analyzed the growth of education throughout human history. And thus, it can be stated that throughout human history, formal education has developed in three stages:

(1) The first stage of formal education development was the transition from a tribal society to a state society with formal institutions.

(2) The second stage of formal education development occurred when societies began developing centralized capable states, and other institutions that incentivized commerce, trade, and business. These nascent capitalist market institutions created need for more formally educated people in their society, and thus incentivized more families to seek literacy and numeracy schooling for their children. This essay demonstrated how this occurred, for the first time in human history, in England and the Netherlands, throughout the early modern age in European history.

(3) The final stage of formal education development was the creation of new state institutions that provided formal education to every person in a society. This was only possible in societies where the state was centralized, and powerful and capable

enough to provide public services to their citizens.

In the twenty-first century, it is conceivable that within our lifetimes, every human being on earth will become literate and numerate, an unprecedented achievement in human history. Through the evidence and lens of this study, this achievement makes far better sense, and the road to achieving this goal is better enlightened with the evidence from this essay.

This historic evidence also suggests that, in the beginning of the twenty-first century, we are more than likely living within the fourth stage of educational development, from the effects of digitization and the slowly transforming reliance on new energy sources. History suggests that the digitization of formal institutions, and a change in the primary energy source of civilization, should bring with it significant changes to the education of human beings.

It would be next to impossible to provide the definitive history of human education. This study has sought to tell *a* story of human education, which attempted to analyze important stages in educational growth throughout the history of education in human societies. In the twenty-first century, with the global institutional goals desiring to see quality education for every human being on earth so that they may each better seek after their own potential, these lessons of institutional development can work as an applied history to help those seeking to build better education systems in their societies.