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THE DAWN OF IDIOCY
ABNORMALITY AS THE NORM OF HUMAN INTELLIGENCE

BY

DAVID JEFFREY ROOF

DISSERTATION

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Doctoral Committee:

Associate Professor Christopher Span, Chair
Professor James Anderson
Professor James Hay
Professor Cameron McCarthy

ABSTRACT

This work examines how science used the abnormal to reconfigure the basis of human intelligence and linked thought to identity. This includes the belief that we inherit intellectual traits the same as physical characteristics. The heredity link between the abnormal and family lineage marked abandonment of cure in favor of social control intensified by the individual who appears normal. This figure justifies screening and classification. Social biology concerned with the welfare of society found a biological threat, which progressively led to sterilization, euthanasia, and genocide. This shift included the power to distribute individuals within a field as though it was real; revealing differences of ability; the realities of his abilities and the contents of the knowledge he is capable of acquiring. This work traces these ideas embedded in the formation of compulsory schooling, the school as social filter, a hyper-normative education system, and pedagogic-treatment for adherence to developmental and behavioral norms.

To Stella

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INTRODUCTION

Referring to the mind and neurology of learning disabled students, I distinctly recall a professor from my undergraduate education saying, “it’s just like the wires in the mind are all messed-up.” She seemingly had best intentions and I felt like the only person shocked by the level of scientific ambiguity for a medical disorder millions of school children were classified as possessing. As my education and experiences progressed my personal discomfort with this ambiguity grew. My time as a special education teacher confirmed did not relieve this discomfort. I certainly experienced challenges working with students with various skills and struggles. I never found, however, that the terminology revealed methods for teaching or understanding the students. In contrast, the stigma far outweighed even the legally allocated provisions, such as an alternative curriculum. The challenge was that discussion of these issues, or examining the situation was restricted to the existing discourse; the words, terminology, and framework predetermined any debate with serious implication. The main implication was situating the ‘problem’ solely in the context of the individual. The inability to rethink the situation was rooted in the format and function of the historical narrative. My obsession became a historical interrogation of what I believe is the most influential belief system structuring our education system.

This study began with the question of the extent or manner in which the position of intelligence developed and evolved as a conception or paradigm of the human sciences

from the nineteenth –to- early twentieth century. Historical accounts generally suggest that the conception of intellectual abnormality derived from an understanding of intelligence. My research, however, indicates the opposite historical trajectory, and that the scientific basis and formalization of intelligence developed through the production of a discourse rooted in the conception of the abnormal. These discourses did not remain autonomous and unique unto themselves. The history and development of intelligence indicates that norms of thought were conditioned through a series of dialectical antitheses. Specifically, the idiot became a primary psycho-social-typecast in the nineteenth century, which provided the human sciences a representation upon which the epistemological network of intelligence was configured. The history of intelligence, therefore, can be traced back to the early nineteenth century, and to the transcendence of idiocy from an informal reference, to a formal scientific classification.

The history of intellect and abnormality is generally conveyed through positivist notions of a linear style progression derived from humanist ideology and imbued with modernist rhetoric. Take, for example, a quote from Margret Winzer’s book *The History of Special Education* written in 1993, “...the broad intellectual movement known as the Enlightenment stimulated rational modes of thought and enhanced novel perceptions of handicapped individuals.”¹ She goes on to say, “The phenomenal growth of special education in the latter half of the eighteenth century was part of the wider movement that involved the abolition of social classes, the establishment of a just society, and the accession to full human rights for all members of society.”² The first part of the book is

¹ Margret A. Winzer, *The History of Special Education: From Isolation to Integration* (Washington, DC: Gallaudet University Press, 1993), 4-5.

² *Ibid.*, 4.

called ‘lessons from a dark past’, and the second part is called ‘into the light of a more modern world’.³ Although, one of the only comprehensive books written exclusively on the history of special education, this book mirrors the type of historical view and sentiment presented in most college level psychology and special education textbooks.

Winzer and the positivist history of special education discount consideration of political/social manifestations of scientific paradigms. John Langdon Down (associated eponym: Down’s syndrome) in 1866 wrote an essay that used ethnic phenotypes to describe forms of idiocy.⁴ For example, he used the terms “mongoloid” and “mongolism” as classification for what he called a congenital form of idiocy.⁵ Winzer asserts that while Down’s terminology was unfortunate and his etiology incorrect, that his “comprehensive description... illuminated a specific type of mental retardation.”⁶ This assessment fails to take into account the interaction of policy, science, politics, and society. Down, while his terminology may have been new, was operating within an existing scientific structure. The terminology both functioned within this structure and transcended to specific political realms.

There were, however, challenges to the concept of intelligence throughout the twentieth century. William Bagley and Walter Lippmann are two of the most well-known figures to challenge the use of intelligence testing in social policy.⁷ Walter Lippmann

³ Ibid., 5.

⁴ John Langdon Down, "Observations on an Ethnic Classification of Idiots," *Journal of Mental Science* 13, no. (1867).

⁵ Ibid., 121-123.

⁶ Winzer, 161

⁷ See Marquis W. Childs, Walter Lippmann, and James Reston, *Walter Lippmann and His Times*, Essay Index Reprint Series (Freeport, NY: Books for Libraries Press, 1968); Walter Lippmann and Clarence Little, *Speeches of Walter Lippmann and Clarence C. Little, Fiftieth Reunion Dinner, June 15, 1960* (Cambridge, Mass: 1960); Barry D. Riccio, *Walter Lippmann: Odyssey of a Liberal* (New Brunswick, NJ: Transaction, 1994). And William C. Bagley, *Determinism in Education* (Baltimore, MD: Warwick and

wrote a number of articles published in popular magazines commenting on the widespread influence of intelligence testing. Regarding the measurement of intellect Lippmann states, “is not an abstraction like length and weight; it is an exceedingly complicated notion which nobody has as yet succeeded in defining.”⁸ Contemporary scientists noted this bias and developed a critique of the science involved in the construction of intelligence.⁹ In *The Abuse Of The Tests* Lippmann wrote,

They claim not only that they are really measuring intelligence, but that intelligence is innate, hereditary, and predetermined. They believe that they are measuring the capacity of a human being for all time and that this capacity is fatally fixed by the child's heredity. Intelligence testing in the hands of men who hold this dogma could not but lead to an intellectual caste system in which the task of education had given way to the doctrine of predestination and infant damnation....¹⁰

Unlike many, Lippmann also warned of the social prejudice infused in intelligence testing. He was a lone voice in journalism and education, also had limited critical work on the influence of intelligence testing.

In 1925, Bagley published *Determinism in Education* a collection of his essays.¹¹ Bagley used the term ‘educational determinism’ to characterize the role of intelligence in educational policy. The aim of his book was to counteract negative influence and inaccuracy of a scientism, which he viewed as designed to promote a social agenda.¹²

York, Inc., 1925); J. Wesley Null, *A Disciplined Progressive Educator: The Life and Career of William Chandler Bagley* (New York, NY: Peter Lang, 2003).

⁸ Walter Lippmann quoted in, Ned J. Block and Gerald Dworkin, *The Iq Controversy: Critical Readings* ed. Ned J. Block & Gerald Dworkin (New York, NY: Pantheon Books, 1976), 129.

⁹ See Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1996). Ashley Montagu, *Race and Iq* (New York: Oxford University Press, 1999). Mark Snyderman and Stanley Rothman, *The Iq Controversy: The Media and Public Policy* (New Brunswick, NJ: Transaction Books, 1988).

¹⁰ Block and Dworkin.

¹¹ Bagley.

¹² Ibid.

The early critiques of scientific racism are limited and complex. Bagley's publication of *Determinism in Education* demonstrates this.¹³ Bagley's aim was to counteract the negative influence IQ testing, and his chapter *Pro-Nordic Propaganda* criticizes ethnic bias in testing. He accepts, however, the values and rhetoric of eugenics. Like many, Bagley was, caught-up in the rhetoric of the period suggesting restricted immigration from 'backward countries'. Bagley saw ethnic bias in the test, but characterized himself as a 'rational equalitarian' accepting racial distribution of intelligence:

I may be permitted to project the constructive programme of the rational egalitarian. Because it is rational this programme does not quarrel with facts ... It recognizes a fair degree of probability that the Negro race will never produce so large a proportion of highly gifted persons as will the white races.¹⁴

Bagley adds a footnote, however, suggesting the assertion of 'racial differences in innate intelligence' as questionable according to a study he notes as recently conducted in the Philippines.¹⁵ Leading some to claim that Bagley remained committed to the ideas of racial harmony and equality of opportunity.¹⁶ These statements within the broader context of his work speak to the interconnected of social science and public education. His work provides an opportunity to examine the impact of science and philosophy in the development of contemporary schooling. This argument in opposition to intelligence reveals a great deal about the ideological basis upon which the public education system was structured.

¹³ Ibid.

¹⁴ Ibid., 129.

¹⁵ Ibid.

¹⁶ Null., 264.

Bagley's philosophical orientation is a Kantian universalism that forms the basis of his concept of knowledge and morality. *Determinism in Education* reveals the difficulty of accepting this doctrine.¹⁷ Bagley was not as fully engaged in the overtly racist objectives of his colleagues, but his work incorporates a socially-conditioned basis of both intelligence and race.¹⁸ Examining the questions and connections between Bagley's ideas and the US education system create contradictions that cannot be reduced under the banner of theoretical objectivity. Bagley's research connects with contested social issues relevant to contemporary education such as the relationship of public schools to industrialization and connection between education and social stratification.¹⁹ This perspective or critique is significantly different from contemporary works that delineate pure objective science from socially contaminated perspectives.²⁰

Stephan Gould is one of the most well known contemporary scientists to write on this topic.²¹ His book, *The Mismeasure of Man* is one of the best-known critiques on the history of intelligence testing but centers the study on a distinct line of racist evolutionary science.²² He notes the bias in intelligence testing and present a complex critique of the science involved modern notions of intelligence.²³ Gould also disputes hereditarianism and specifically the racial distribution of intelligence. The book is regarded as the definitive response to *The Bell Curve*, though it was originally written as a response to the work of Arthur Jensen and a line of thinkers who formulated the notion of hereditary

¹⁷ Bagley.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Gould.

²¹ Block and Dworkin; Gould.

²² Gould.

²³ Montagu.

racial intelligence, for example, the work of Terman, Goddard, Burt, and others.²⁴ His work centers on what he sees as a flawed science he terms ‘biological determinism’.²⁵ Like Bagley, he focuses on the social implications of what is now referred to as ‘scientific racism’ and views racism as central to flawed measurement. In addition, to the scientific critique of intelligence Gould draws on historical and sociological evidence.²⁶ Gould critiques Yerkes’ *Army Mental Test*, and Cyril Burt’s ‘twin tests’ which he scrutinizes for faulty methodology and intentionally falsified results.²⁷ Gould’s analysis examines the approach to measuring intelligence between naturalistic inquiry and social norms.²⁸ His primary criticism is aimed at factor analysis and its application in which scientists would correlate everything from brain size, ear shape, and so forth with intelligence and normalcy.²⁹ The fallacy of factor analysis according to Gould lies in reducing the abstract notion of intelligence to a single measurable entity. He traces this approach to measuring intellect through history as seen in craniometry, criminal anthropology, and modern intelligence testing. For example, Italian criminologist Cesare Lombroso who “convinced a generation of social analysts that there existed a criminal

²⁴ See Richard J. Herrnstein and Charles A. Murray, *The Bell Curve: Intelligence and Class Structure in American Life*, 1st ed. (New York, NY: Simon & Schuster, 1996). Cyril L. Burt, *Mental and Scholastic Tests: Report by the Education Officer Submitting Three Memoranda*, London County Council (London, UK: PS King and Son Limited, 1921); Cyril L. Burt, *Intelligence and Fertility: The Effect of the Differential Birthrate on Inborn Mental Characteristics*, Occasional Papers on Eugenics (London, UK: Eugenics Society, 1948); Cyril L. Burt, *The Subnormal Mind*, 3rd. ed. (London, UK: Oxford University Press, 1955). Lewis M. Terman, *The Intelligence of School Children: How Children Differ in Ability: The Use of Mental Tests in School Grading and the Proper Education of Exceptional Children* (Boston: Mifflin & Company, 1919); Lewis M. Terman, *Condensed Guide for the Stanford Revision of the Binet-Simon Intelligence Tests* (Boston: Houghton Mifflin, 1920); Lewis M. Terman, *Intelligence Tests and School Reorganization*, National Education Association of the United States. Commission on Revision of Elementary Education (Hudson, NY: World Book Company, 1922).

²⁵ Gould.

²⁶ Ibid.

²⁷ See Burt, *Intelligence and Fertility: The Effect of the Differential Birthrate on Inborn Mental Characteristics*.

²⁸ Gould.

²⁹ Ibid. and see Karl R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge*, 3rd ed. (London, UK: Routledge 1969).

‘type’ defined by ‘physical characteristics’.³⁰ Gould highlights the various methods Lombroso had essentially measured skulls, brains, and virtually every human feature imaginable to validate his perspective.

The theoretical structure of Gould’s book is based on philosopher Carl Popper’s notion of the falsificationist account of rationality or individuals saw what they wanted in the data and produced fallacious value-laden science.³¹ Gould maintains that racism and sexism was rampant and perverted the science of the era. This conception divides ‘objective science’ from ‘flawed science’. Subsequently, Gould validates the work of figures like Charles Darwin and Alfred Binet.³² Though Gould validates figures like Binet he highlights the absurdity of criminal anthropology and sociobiology over the late nineteenth and twentieth century. This work makes it clear that these distinctions are anachronistic.

Ned Block regards factor analysis as faulty because complex entities cannot be quantified in the manner suggested by intelligence testing.³³ The study of intelligence is complex from the standpoint that intelligence is regarded as static and consistent and yet evolving and changing. The evolving aspect relates to the continual re-standardization or ‘norming’ of the test. Block suggests that intelligence relates in a reciprocal manner to notions of development, language, and educational opportunity.³⁴

³⁰ Lombroso-Ferrero and Cesar Lombroso, *Criminal Man* (New York G. P. Putnam's Sons, 1911), 71; *ibid.*

³¹ Karl R. Popper, *The Logic of Scientific Discovery* (New York, NY: Basic Books, 1959).

³² Charles Darwin, *The Origin of Species by Means of Natural Selection: The Preservation of Favored Races in the Struggle for Life and the Descent of Man and Selection in Relation to Sex* (New York: The Modern Library, 1936). And, Alfred Binet and Théodore Simon, *A Method of Measuring the Development of the Intelligence of Young Children*, trans., Clara Harrison Town (Lincoln, IL: Courier, 1912).; *ibid.*

³³ Block and Dworkin.

³⁴ *Ibid.*

Like many contemporary scientists, Ned Block believes the hereditary view of intelligence conflates characteristics developed through complex modes of cognitive and cultural interaction biological phenotypes or genotypes.³⁵ Block suggests that operationism and fictionalism are the two most significant philosophical doctrines used when conflating these characteristics.³⁶ He uses the concept operationism to explain how psychologists conflate ordinary terminology with operational definitions. He proposes that the operational definition of intelligence is ambiguous and the practice in psychology is simply to define intelligence as that which intelligence tests measure.³⁷

There are many examples of the vague definition throughout the most well-known, influential, and controversial work on this topic.³⁸ The authors of *The Bell Curve*, for example, define intelligence with the following sentence, “That the word intelligence describes something real and that it varies from person to person is as universal and ancient as any understanding about the state of being human.”³⁹ Arthur Jensen who promoted a conception of racially distributed inherited intelligence also relies on a vague socially contingent notion of intelligence.⁴⁰ Jensen states, “...what we ‘mean’ by intelligence is something like the probability of acceptable performance (given the

³⁵ Ned J. Block, "Fictionalism, Functionalism and Factor Analysis," *Proceedings of the Biennial Meeting of the Philosophy of Science Association* 1974, no. (1974); Block and Dworkin, *The Iq Controversy: Critical Readings*

³⁶ Block and Dworkin, *The Iq Controversy: Critical Readings* .

³⁷ Ibid.

³⁸ See Arthur R. Jensen, *Genetics and Education* (London, UK: Methuen, 1972); Arthur R. Jensen, *Educability and Group Differences* (London, UK: Methuen, 1973); Arthur R. Jensen, *The G Factor: The Science of Mental Ability*, Human Evolution, Behavior, and Intelligence (Westport, Conn.: Praeger, 1998).

³⁹ Herrnstein and Murray, 1.

⁴⁰ See Martin Deutsch, Irwin Katz, and Arthur R. Jensen, *Social Class, Race, and Psychological Development* (New York, NY: Rinehart Holt, 1968). Jensen, *Genetics and Education*; Jensen, *Educability and Group Differences*.

opportunity) in occupations varying in social status.”⁴¹ This factor, however, does not foster clarification. Jensen also maintains the following conception,

The term “intelligence” should be reserved for the rather specific meaning I have assigned it, namely the general factor common to standard tests of intelligence. Any one verbal definition of this factor is really inadequate, but, if we must define it in so many words it is probably best thought of as a capacity for abstract reasoning and problem solving. Intelligence fully meets the usual scientific criteria for being regarded as an aspect of *objective reality*, just as much as do atoms, genes, and electromagnetic fields. Intelligence has indeed been singled out as especially important by the educational and occupational demands prevailing in all industrial societies, but it is nonetheless a *biological reality and not just a figment of social convention*.⁴²

In addition to the inability to clarify a unified conception or definition of intelligence Jensen and other psychiatrists have ignored the evidence for the nonexistence of racial categories advanced by contemporary genetic research.⁴³

Block suggests that fictionalism is the mode by which scientists neglect the question of whether intelligence represents one-thing or many.⁴⁴ One aspect of these more general features is that scientists can mediate generalizations without reference to an overarching structure.⁴⁵ Operationism detaches the instruments and techniques of measurement from theory and obscures the mechanisms that connect quantitative data to theory. The consistency of a physical law the confirmation of a standard deviation of intelligence works as an expression or confirmation of the paradigm rather than an

⁴¹ Block and Dworkin, *The Iq Controversy: Critical Readings*, 355.

⁴¹ N. J. Block. “Fictionalism, Functionalism, and Factor Analysis”

⁴² Quoted in: *ibid.* 139.

⁴³ Alexander Alland, *Race in Mind: Race, Iq, and Other Racisms*, 1st ed. (New York, NY: Palgrave, 2002), 102-103.

⁴⁴ Block and Dworkin, *The Iq Controversy: Critical Readings*

⁴⁵ Peter Galison, *How Experiments End* (Chicago: University of Chicago Press, 1987), 131; Peter Galison, Michael D. Gordin, and David Kaiser, *Science and Society: The History of Modern Physical Science in the Twentieth Century*, 4 vols. (New York: Routledge, 2001).

explanation. This is why intelligence is defined as nothing more than that which intelligence tests measure.⁴⁶

As mentioned with Gould and Block traditional ethnic racism and genetic concepts developed in the science were discarded along with the underlying assumptions, central concepts, and their organization, which have all remained obscure even in the primary historical and scientific critiques.⁴⁷ Many critiques of the ideology delineate the concepts without a clear description of how the concepts themselves were shaped within different forms.

The implications of this omission are related. Primary studies for the resurgence of eugenic concepts remain limited to a critique of statistical methodology or factor analysis distinct from social critique of racism and sexism. Second, there are present-day theories such as evolution, intelligence, and sexuality, conditioned by the science of intelligence. Unlike other works, the research presented here notes that during this era there is a discourse of war waged not simply against specific external threats such as different races, deviances, or ideological threats; rather protection from hereditary vulnerability posed by the inferiority others. The concept was a belief system that replaced theological explanations for social hierarchies, social status, and the human condition in the natural world. Many advocated the position of scientists where science is inherently value laden because she believes these values guide and are projected onto science.⁴⁸ She notes, “casual tendencies in social life that leave traces of gender projects

⁴⁶ Block, "Fictionalism, Functionalism and Factor Analysis."; Block and Dworkin, *The Iq Controversy: Critical Readings*

⁴⁷ Gould.

⁴⁸ Sandra Harding, *Science and Social Inequality: Feminist and Postcolonial Issues*, Race and Gender in Science Studies (Urbana, IL: University of Illinois Press, 2006).

on all aspects of the scientific enterprise.”⁴⁹ Harding suggests it’s limiting to dismiss some science as tainted, bad, or value laden. In contrast we should seek to make sense of people’s behavior, beliefs, and actions. She states, “In these inquiry traditions it is legitimate –indeed, often obligatory---to reflect on the social origins of conceptual systems and patterns of behavior, and to include in this subject matter the conceptual systems and behaviors shaping the inquirer’s own assumptions and activities.”⁵⁰ Harding makes a connection between the mode of inquiry in physics and empirical research underlying physical meta-theoretical or universal laws. In other words, the social-scientific paradigms often operate at a presumptive meta-theoretical level seen in physics.⁵¹ Examining the function of metatheory in psychology Jerry Fodor notes,

The better known accounts of psychological explanation have thus failed to reflect the most important movement in current philosophy of science: the attempt to determine the consequences of rejecting key features of the empiricist program. Verificationism as an account of meaning; conventionalism as an account of theoretical constructs; sharp distinction between the observational and inferential language of theories; uncritical reliance upon the analytic-synthetic distinction---all these have recently come into question among philosophers of science who have realized that these doctrines are by no means indispensable to characterizations of scientific explanation and confirmation and that philosophical accounts that exploit them may in fact seriously distort the realities of scientific practice.⁵²

This quote reflects the difficulty unraveling the matrix of beliefs where social interests inform theory construction mediating theory and reality. Nancy Cartwright suggests,

Although the doctrines about the relation of models to theory changed from the 1960s to the 1990s, the dominant view of what theories do has

⁴⁹ Sandra Harding, *The "Racial" Economy of Science: Toward a Democratic Future*, Race, Gender, and Science (Bloomington, IN: Indiana University Press, 1993).

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Jerry Fodor quoted in Block and Dworkin, *The Iq Controversy: Critical Readings* 411.

not changed: theories represent what happens in the world. For the semantic view this means that the models represent what happens.⁵³

In other words, the law or theory accounts for the data and the data accounts for the theory. The operational definition of intelligence in psychometric testing does not mean empirical questions can be ignored.⁵⁴ This empirical ambiguity means intelligence can be measured according to weight, height, head size, and so forth; which—as well noted—was all tried.⁵⁵ It's the definition and conception of intelligence and not empirical data that allows traits and capacities to be quantified.⁵⁶ Subsequently, this work examines the complexity of human intellect cannot be accounted for under a general concept of mental ability; and quantifying traits and capacities within this context restrains experimental inquiry and more viable models of cognition.⁵⁷

The issues related to positivism, factor analysis, and operationalism are relevant for understanding ability grouping, tracking, and other practices used in contemporary schooling. They provide a better understanding of popular perceptions involved in higher education as well as the professionalization and the disciplinary formation of modern psychology. By the twentieth century scientific notions of intelligence permeated public schools, immigration policy, and eugenic ideology, and existed within the fertile ground

⁵³ Nancy Cartwright, *The Dappled World: A Study of the Boundaries of Science* (Cambridge, UK New York, NY: Cambridge University Press, 1999), 179.

⁵⁴ Block, "Fictionalism, Functionalism and Factor Analysis."

⁵⁵ See Arthur MacDonal, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes*, 58th Congress 3rd Session (Washington, DC: Govt. Printing Office, 1905); "Proceedings and Addresses of the Annual Session of the American Association for the Study of the Feeble-Minded," in *Journal of Psycho-Asthenics: Devoted to the Care, Training, and Treatment of the Feeble-Minded and Epileptic* (New York, NY: American Association for the Study of the Feeble-Minded, 1918).

⁵⁶ Block and Dworkin, *The Iq Controversy: Critical Readings*

⁵⁷ Ibid.

of racism as spanning from colonization to the Nuremberg Laws. This led to engaging work on the institutional aspects of this topic.

A significant attempt to account for the scope of intelligence in public education is seen in the work of Clarence Karier. In *Testing for Order and Control in the Corporate Liberal State* Karier suggests the stress on scientific management, expertise and industrial models led to the implementation of a differentiated curriculum and a shift from the moral focus of the common schools to an economic focus based on a complex, hierarchical labor market.⁵⁸ These factors helped introduce policies that made education a necessity for social and economic success and testing to establish a so-called scientific and unbiased basis for differential placement. Karier states,

Although the testing movement is often viewed as getting under way with the mass testing of 1.7 million men for classification in the armed forces in World War I, the roots of the American testing movement lie deeply imbedded in the American progressive temper which combined its belief in progress, its racial attitudes, and its faith in the scientific expert working through the state authority to ameliorate and control the evolutionary progress of the race. While America has had a long history of eugenics advocacy, some of the key figures of the testing movement were the strongest advocates for eugenic control.⁵⁹

According to this study change was shaped by industrialization, discipline of factories, and laws of supply-and-demand labor. The differentiation of students relates to a political and economic concern as opposed to any scientific or pedagogic revelation.⁶⁰ It was on the ideological basis that particular groups of individuals possess a limited intellectual potential or a disposition toward labor as opposed to academic work, schools began

⁵⁸ Clarence Karier in *ibid.*

“Testing for Order and Control in the Corporate Liberal State”

⁵⁹ *Ibid.*, 344.

⁶⁰ Clarence J.; Violas Karier, Paul C.; & Spring, Joel H., *Roots of Crisis: American Education in the Twentieth Century* (Chicago: Rand McNally, 1972).

widespread tacking into industrial based education programs. Scientists provided justification for testing and tracking. Schools were developed with a schedule and structure that mirrored industrial work.⁶¹ The emphasis was placed routine, assembly, and following sequential directions. Trade schools, vocational and industrial arts programs were prevalent during this era.⁶² Accordingly, some conclude the school system functions to legitimize existing social order.⁶³ In scientific writing there is the question of what can be extracted from the individual for the betterment of society. This also ties into the basis for compulsory education, which according to Clarence Karier was mediated through a notion of social crisis, a degeneration of the social body through the lack of proper habit, and mental development.⁶⁴ The basis for compulsory education was mediated through a notion of social crisis, a degeneration of the social body through the lack of proper habit, and mental development. The function of protecting society through classification and control of deviants system of education is compulsory.⁶⁵ Michael Katz notes, the proliferation of schools, mental hospitals, prisons, and almshouses preceded the public school system.⁶⁶

The concept of intelligence is a network upon which scientists explain social hierarchies. Between the critique of statistical methodology, factor analysis, and justification for social hierarchies are the institutions shaped by our conception of intelligence. One of the most significant institutions affected by the preceding areas of

⁶¹ Clarence J. Karier, *Shaping the American Educational State: 1900 to the Present* (New York: Free Press, 1975).

⁶² Karier, *Roots of Crisis: American Education in the Twentieth Century*.

⁶³ Michael B. Katz, "The Origins of Public Education: A Reassessment," *History of Education Quarterly* 16, no. 4 (1976): 401. According to Katz the idea of meritocracy has led the idea among historians and other that failure reflects individual responsibility as opposed to the system itself.

⁶⁴ See Karier, *Roots of Crisis: American Education in the Twentieth Century*.

⁶⁵ Michel Foucault, "Abnormal: Lectures at the College De France 1974-1975", Picador.

⁶⁶ Katz: 385.

examination is the public education system. The arrangement has persisted in contemporary schooling. In the 1960's the nature of industry changed, and in the school system emphasis shifted from manual dexterity to a focus on standard forms of perception.⁶⁷ In this context 'ability' equates self-worth to forms of measurement and naturalized social norms. Following the work in the social foundations of education a few researchers evaluate the modern function of abnormality in education.

James Carrier uses a sociology of knowledge and structural sociology of education to investigate disability. Working from a 'Marxist-oriented social structural sociology of education' Carrier investigates aspects of disability in education.⁶⁸ From Pierre Bourdieu's concept of misrecognition and masking Carrier sees intellectual disability theory emerging from a socially constructed norm.⁶⁹ In his own words:

Thus from the beginning researchers interacted with the phenomenon of childhood behavior, translating it into an object of knowledge: anomalous behavior. To be anomalous it must violate expectations derived from the dominant strains of educational psychology, a discipline resonating with educational practices and presenting educational abnormality primarily in nonsocial terms. In seeing things through the paradigm of educational psychology, researchers were predisposed to produce an explanation supporting that paradigm and thus tending to maintain the social forces on which it rested.⁷⁰

⁶⁷ Clarence H. Karier, "The Quest for Orderly Change: Some Reflections," *History of Education Quarterly* 19, no. 2 (1979); Clarence J. Karier, *Man, Society, and Education: A History of American Educational Ideas* ([Glenview, Ill.]: Scott, 1967); Clarence J. Karier, "Liberalism and the Quest for Orderly Change," *History of Education Quarterly* 12, no. 1 (1972); Karier, *Shaping the American Educational State: 1900 to the Present*; Clarence J. Karier, *Scientists of the Mind: Intellectual Founders of Modern Psychology* (Urbana: University of Illinois Press, 1986).

⁶⁸ James G. Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*, Contributions to the Study of Education (New York: Greenwood Press, 1986).

⁶⁹ James G. Carrier, "Explaining Educability: An Investigation of Political Support for the Children with Learning Disabilities Act of 1969," *British Journal of Sociology of Education* 4, no. 2 (1983); James G. Carrier, "Masking the Social in Educational Knowledge: The Case of Learning Disability Theory," *The American Journal of Sociology* 88, no. 5 (1983); Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*; James G. Carrier, "Sociology and Special Education: Differentiation and Allocation in Mass Education," *American Journal of Education* 94, no. 3 (1986).

⁷⁰ Carrier, "Masking the Social in Educational Knowledge: The Case of Learning Disability Theory," 953.

An example of the translating of behavior phenomenon to an object can be explored in the interpretation of a child having trouble distinguishing between a (*b*) and a (*d*). Here the ‘object of knowledge’ (the child reversing *bs* and *ds*) is translated into the abstract category *spatial orientation*.⁷¹ The child’s behavior is then understood only within the model and subsequent rules of ‘spatial orientation’ and is therefore interpreted as resulting from a neural disorder.⁷² According to Carrier, this view and the development of learning disability theory masks the influence of social practices and hierarchy.⁷³ Accordingly, Carrier views learning disability theory operating as an indirect form of social control legitimating the power and position of dominate groups by perpetuating a conception of achievement as inherent to the individual.⁷⁴

Carrier’s book *Learning Disability: Social Class and the Construction of Inequality in American Education*, traces the origin of modern intellectual disability to the studies by Alfred Strauss and psychologist Heinz Werner conducted at the Wayne County Training School in the 1930s and 1940s.⁷⁵ According to Carrier, Strauss and Werner undertook several studies during this period in which they compared the cognitive and perceptual processes of mentally defective children at the school.⁷⁶ Based on the differing performance of these two groups of children, Strauss and Werner attributed the pattern of distractibility, hyperactivity, and learning problems. Carrier argues the differences between these groups of mentally defective children that Strauss

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid., 951-953.

⁷⁴ Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*.

⁷⁵ Ibid.

⁷⁶ Ibid

and Werner uncovered were trivial and did not support their brain injury hypothesis.⁷⁷ He suggests the groups of children simply “said and did different things.”⁷⁸ Carrier’s suggests disability relates to science, as meaning, and as politics.⁷⁹ He traces the history of contemporary disability research and cultural deprivation theory, which he views as ‘colonized’ by intellectual disability theory.⁸⁰ The second chapter apprehends the meaning of intellectual disability as having significant consequences because the theory defines reality and explains what goes on in the world and forms the bases of our judgments of the world.”⁸¹

A specific consequence is that disability "naturalizes mentality, and it identifies the abstract attitude as naturally correct and forms, “a whole universe of meaning that explains what it is to be fully human and how humans relate to the world around them.”⁸² Individuals who don’t fit the norm they are written off as dysfunctional, primitive, or underdeveloped. This attitude values the concrete over the abstract, and Carrier notes that over the next twenty a number of educators carried on this line of research claiming to have identified neurologically based learning and behavior problems in intellectually normal children. Carrier argues, the children Samuel Kirk is was these students was referring to in 1962 he coined the term disabled.⁸³ Carrier claims that despite the inadequacy of Strauss and Werner's research, a belief that the learning and behavior

⁷⁷ Ibid

⁷⁸ Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*.27-32.

⁷⁹ Ibid

⁸⁰ Ibid

⁸¹ Ibid, .56.

⁸² Ibid, 58-59.

⁸³ Ibid, 140.

problems of intellectually normal children are the result of a neurological dysfunction appeal to many in contemporary American society.⁸⁴

Carrier notes that Heinz Werner depicted the thinking processes of brain-injured children, which he characterized as being rigid and erratic, as analogous to the mental functioning of primitive and savage people.⁸⁵ He notes the idea of cultural deprivation implies a similar view of the lifestyle and behavior of lower-class, ethnic minorities, and suggests that proponents of this theory would embrace the idea of disability on this basis.⁸⁶ Werner drew his analogy between brain-injured children and primitive people in an article he wrote in 1948 while on the faculty of Clark University.⁸⁷ Carrier is not the only one to see special education and its theories as form of social manipulation.⁸⁸ Gerald Coles states,

The variety of problems afflicting minority groups and the poor were said to affect the emotions and intellect of children in ways that explained their difficulties in school. An applicable but *different* explanation was needed for children who had grown up in the suburbs, with the advantages of middle-class life, and who, despite their academic problems, often appeared to be good learners outside of school. The learning-disabilities explanation — that the problem was caused not by retardation or other exclusionary factors, but by a minor neurological “glitch” — made sense to many. The explanation also offered different advantages to different interests: it was less pejorative than other special-education categories and it did not consider or criticize any role schools, families, or other social influences might have had in creating the learning disabilities.⁸⁹

⁸⁴ Gerald Coles, *The Learning Mystique: A Critical Look at "Learning Disabilities"* (New York: Pantheon Books, 1987).

⁸⁵ *Ibid*

⁸⁶ *Ibid*, 25-27, 46-54

⁸⁷ *Ibid*

⁸⁸ Julianne Ford, Denis Mongon, and Maurice Whelan, *Special Education and Social Control: Invisible Disasters* (London: Routledge 1982).

⁸⁹ Coles, xiii.

Coles goes on to state,

an unswerving postulation that the source of the individual's problem lies within the individual's neurology; a proclivity for "finding" biological causes; a disregard for experimental explanations; illogical reasoning about the relationship between behavior and the brain ;a misinterpretation of symptoms; and a readiness to apply a medical label to superficially diagnosed and insufficiently understood academic problems.⁹⁰

The book *Special Education and Social Control: Invisible Disasters* focuses more on special education as it discerns and mediates behavioral abnormality as opposed to knowledge constructs.⁹¹ The authors contend the processes of identifying, defining, explaining, and responding to deviant or abnormal behavior is the point of reference upon which normality itself is defined. This book, however, focuses more on special education as it discerns and mediates behavioral abnormality as opposed to intellect.⁹² Authors contend that the processes of identifying, defining, explaining, and responding to deviant or abnormal behavior are the point of reference upon which normality itself is defined. While Carrier and other theories of social control raise some important issues and questions this work is different. For example, while it covers the disciplines that produced disability theory and related social practices, it does not reduce knowledge to social processes and conditions.

The juxtaposition in capitalist society where schools and education is seen as fundamental to social mobility and an institution that maintains social inequality and dominant social hierarchies is not unique to education or disability. For example, while historians saw urban schools as an instrument of social control for dominant elites, others have pointed to widespread support and participation of the working class in education

⁹⁰ Ibid., 14-15.

⁹¹ Ford, Mongon, and Whelan; *ibid.*

⁹² *Ibid.*

development and reform.⁹³ There is similar type of polarity examining the rhetoric social control. This has led historians to examine these belief systems from a broader perspective.

John Carson's recent book *In The Measure of Merit* Carson examines the role of merit and its impact on the organization of schooling, development of higher education, and social stratification.⁹⁴ Examining France and the US from 1750-1940 Carson explores the manner in which earlier notions of merit and social equality achieved scientific status, subverted longstanding questions central to the philosophy of mind, and become an integral aspect of contemporary society.⁹⁵ *The Measure of Merit* adds to earlier critiques of intelligence testing by providing more historical context to the examination of intelligence, eugenics, meritocracy, and other related issues. He examines craniometry, physiognomy, anthropology, and the development of intelligence testing avoiding simplistic dichotomies between the absurdities of discredited science and the role of more valorized science.

Carson avoids assertions of causation, integrating science and the social factors facilitating the application of intelligence without reducing it to any single aim or event. As previously mentioned Gould suggested that value-laden science was produced by individuals who saw what they wanted to see in the data. Carson, however, aptly points out that intelligence testing was both accepted and yet the related highly contested. He suggests that the French and US public largely rejected the idea that intelligence testing

⁹³ Sol Cohen, *Challenging Orthodoxies: Toward a New Cultural History of Education* (New York: Peter Lang, 1999), 36-59.

⁹⁴ John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940* (Princeton, NJ: Princeton University Press, 2007).

⁹⁵ Ibid.

accurately presented a unified portrait of ability.⁹⁶ The concept of intelligence was largely accepted among both proponents and critics. Carson's notes the extent to which individuals and even the proponents of intelligence testing could question the validity of intelligence testing and accept its application.⁹⁷ However, there was still a divide.

The divide was between those who saw intelligence as natural, teleological, and not significantly altered by education, and those who saw intelligence as a vast array of traits directly impacted by environmental factors and opportunity.⁹⁸ This can be seen with figures such as John Dewey who favored a *mind-in-action* view of intelligence versus those such as Terman who promoted a *mind-in-content* view of mental processes.⁹⁹ Carson avoids the debate and focuses instead on the connection between the belief in a verifiable mental ability and the formation of public schools, meritocracy, and changes in higher education.¹⁰⁰ Carson's chapter on *Mental Abilities and Republican Cultures* centers on the notion of merit and modern formation of democracies.¹⁰¹ This indicates that before formal applications of intelligence were established in notions of mental ability were inherently linked to political debates.¹⁰² This work demonstrates that while it's difficult to assess the extent to which intelligence and merit was linked to education, immigration, industrialization and so forth, we can reasonably assume public perception, institutional utility, urbanization, and industrialization all played a role. He indicates that

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ See John Dewey, *The School and Society* (Chicago, Ill: The University of Chicago Press, 1915); John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education*, Series in Education (New York: The Macmillan Company, 1916); Terman, *The Intelligence of School Children: How Children Differ in Ability: The Use of Mental Tests in School Grading and the Proper Education of Exceptional Children*; Terman, *Intelligence Tests and School Reorganization*.

¹⁰⁰ Carson.

¹⁰¹ Ibid.

¹⁰² Ibid.

the utilization of intelligence as a biologically based determinant of ability shifted; but this shift linked to social and cultural factors more than any single scientific revelation or development.¹⁰³

Carson draws many interesting connections, yet the scope of intelligence is difficult to account for.¹⁰⁴ There is limited historical work critiquing the scientific lineage of intelligence mediated through abnormality. Carson's presents a significant work on bureaucracy, society, and ideology influenced by the concept of intelligence similar to the extensive research on eugenics. The notion of disability has also drawn the interest of social scientists.¹⁰⁵ However, the legacy of intelligence indicates that social interests infused qualitative factors and theoretical models shaping predictions such that understanding these factors are far more significant than our current historical insight.

The traditional model of intelligence is bound belief in instruments and measurement as opposed to theoretical insight. The material culture of science must be understood in relation to the theoretical assumptions and experimental practices making cultural and intellectual history central to understanding the science.¹⁰⁶

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ Examples include: Lois A. Cuddy and Claire M. Roche, *Evolution and Eugenics in American Literature and Culture 1880-1940: Essays on Ideological Conflict and Complicity* (Lewisburg, PA Bucknell University Press 2003); Barrett Shaw, *The Ragged Edge: The Disability Experience from the Pages of the First Fifteen Years of the Disability Rag* (Louisville, KY: Advocado Press, 1994). Jeremy H. Baron, *The Anglo-American Biomedical Antecedents of Nazi Crimes: An Historical Analysis of Racism, Nationalism, Eugenics, and Genocide* (Lewiston, NY: Edwin Mellen Press, 2007); Edwin Black, *War against the Weak: Eugenics and America's Campaign to Create a Master Race* (New York: Four Walls Eight Windows, 2003); Pierre Bourdieu and Jean Claude Passeron, *Reproduction in Education, Society, and Culture* (London; Beverly Hills: Sage Publications, 1977); David M. Turner, *Social Histories of Disability and Deformity*, ed. David M. Turner and Kevin Stagg, *Routledge Studies in the Social History of Medicine* (New York: Routledge, 2006); J. A. Witkowski and J. R. Inglis, *Davenport's Dream: 21st Century Reflections on Heredity and Eugenics*, ed. John R. Inglis Jan A. Witkowski (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press, 2008).

¹⁰⁶ Galison, *How Experiments End*, 252.

My study, in contrast, to other work seeks to understand how contemporary theoretical assumptions and experimental practices were formed and function. This work examines practices by which the subject is defined and transformed and the types of knowledge organized around norms that are more or less scientific and constitute one as an object of knowledge. Unlike other works this is not a history of the science in general, but a scientific knowledge of the subject through the discursive, the institutional, and the social practices from which this knowledge arose. This project seeks to discover the point at which these practices became coherent reflective techniques with definite goals, the point at which a particular techniques and came to be seen as valid.

This work examines human intelligence as a scientific concept that developed over the nineteenth and twentieth century. It accounts for a major epistemological shift at the turn of the century. This shift did not bring coherence but allowed the concept to account for a vast range of experience and belief. Subsequently, this study centers on the historical development, scientific percepts, and significance of intelligence over time. This study contrasts previous historical accounts, which suggest concepts of abnormality evolved from an understanding of intelligence. In contrast, this work indicates that intelligence was conditioned by a science rooted in the abnormal. The beliefs comprising this matrix were shaped through representations and psychosocial typecasting.

This study examines how the notion of intelligence was linked to the essence of being or identity. Many critiques of intelligence delineate the science without a clear description of how the concepts shaped various forms of representation.¹⁰⁷ The implications of this are twofold. Primary studies remain limited to a critique of statistical

¹⁰⁷ The following examples: Gould; Joseph L. Graves, *The Emperor's New Clothes: Biological Theories of Race at the Millennium* (New Brunswick, N.J.: Rutgers University Press, 2001).

methodology or factor analysis without the historical analysis of the concepts.¹⁰⁸ There are contemporary theories and practices conditioned by the science in intelligence. As a response to this complexity, this work maps out transformations in which the concepts were mediated.

To explain a scientific enterprise established-in and elevated-above the domains of knowledge and life, one is obliged to explain how the presuppositions are organized and how this organization operates. Before one can understand this uniformity, however, they must deal with the planes of reference mediating the concepts and functions that composition of scientific knowledge. There are significant scientific functions that remain popular society and sciences, for example, the use of intelligence to explain social hierarchies and poverty as well as configuring social interests into scientific discourse.

Study Outline

This first section has a few central aims. One is describing the pre-psychiatric figure of the idiot as a representation of pre-modern epistemology. Modern thought in contrast is characterized as a *phenomenology of mind* subordinate to *logic of phenomena*. This means that in contrast to antiquity, the primacy of mathematical knowledge confirmed through action and the systemization of conscious thought. Another theme is the different aspects of human activity as they relate to thought and judgment; and how science realigned thought and judgment with human activity.¹⁰⁹

¹⁰⁸ Ned Block wrote several excellent papers critiquing the type of science seen in *The Bell Curve*, yet a more in-depth understanding of the underlying conceptual basis is needed. See Block, "Fictionalism, Functionalism and Factor Analysis."; Block and Dworkin, *The Iq Controversy: Critical Readings*

¹⁰⁹ Hannah Arendt, *The Human Condition*, 2nd ed. (Chicago: University of Chicago Press, 1998), 283. She states, "What men now have in common is not the world, but the structure of their minds, and this they

The second section centers on the influence of modern psychology on our conception of the ‘nature of man’ -a common phrase used after Darwin and a theme developed by Galton (Darwin’s cousin). It centers on the abandonment of cure and the formation of hereditary causality or the shift that located the source of abnormality in family lineage. Related themes are a hyper-normative system of education, the school as social filter, and idiocy as an organic disability linked to the constitution of an individual. This section moves to the role of pedagogic treatment. This chapter considers the development of the education system as it corresponds to the science of the individual. It examines specific institutional models used to situate and correct what is abnormal or deviant.¹¹⁰ This study also incorporates a theoretical examination of the spatial manifestations associated with intellectual abnormality. For example, the asylums, schools, and hospitals that arranged human beings spatial according to perceived domains of human intellect. This includes how the social arrangement of the asylums and the related justification transcended into the domain of public education.

Method

There are various themes directly relevant to this work. Dividing practices relate to screening, classification, and labeling.¹¹¹ My work focuses on practices such as the division made between idiots and the insane and placement in asylums or schools. These are located these in a social sense, such as the division made between the undifferentiated

cannot have in common, strictly speaking; their faculty of reasoning can only happen to be the same in everybody.”

¹¹⁰ Ibid., 198.

¹¹¹ Hubert Dreyfus and Paul Rabinow, *Michel Foucault: Beyond Structuralism and Hermeneutics*, 2nd ed. (Chicago, IL: University of Chicago Press, 1983).

student and the disabled. Another main theme is the external authority involved in this process of self-understanding and self-formation.¹¹² This study is committed to the question of how intelligence is known, and the purposes this knowledge served. The concept of intellectual abnormality maintains a conception of disorder simultaneously with the presence of continuity, resemblance, and natural occurrence. The aim of this project is not to uncover any origin, nor to make any universal declaration regarding the nature of intellect or abnormality. Rather, this work seeks to locate and analyze the prevailing formations of abnormality. This analysis is better suited to demarcation as opposed to periodization (division of historical time), and a sequence of potential determinations as opposed to the development of an organized historical narrative.¹¹³

The transcripts and inscription of this work range in location from the asylum to our public schools, from congressional documents to textbooks, and from immigration to education policy. The threads of discourse employed in the development of a body of knowledge used to divide, classify, and arrange socially and spatially individuals in realms of perceived intellectual function and the formations that operated in the scientific establishment. A comprehensive analysis of intellectual abnormality discourse is a functional medium to explore constructs for knowing and thinking. Intelligence organizes and naturalizes various moral standards around the investment in education, the discourse on race and poverty, the dangerous child, deviations that threaten the body politic, the overwhelming force of environment and sensibilities of the home.

¹¹² Michel Foucault, *The Foucault Reader*, ed. Paul Rabinow, trans., Paul Rabinow, 1st ed. (New York, NY: Pantheon Books, 1984).

¹¹³ Hayden White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (Baltimore, MD: Johns Hopkins University Press, 1973).

I acquired a vast amount of source material through the Library of Congress. I draw on a large collection from the *Journal of Psycho-Asthenics*.¹¹⁴ This journal was a useful source filled with logistical asylum reports, statistics, case studies, and medical reports on pathology. I located a lot of information in the congressional indexes, such as, amendments to immigration law (regarding those deemed mentally deficient), reports of the census board, testimony by eugenicist.¹¹⁵ I obtained read many of the books written on idiocy.¹¹⁶ Newspapers and literature have provided additional commentary for this study. My realm of inquiry includes a vast range of primary source material. This study draws on a vast range of primary and secondary sources including asylum reports, statistics, case studies, medical reports, books, journals, and archival sources.¹¹⁷ I draw a lot of information in congressional indexes, such as amendments to immigration law, reports of the census board, testimony by individuals seeking funding for laboratories to study the defective classes.

Thesis

Intelligence was not discovered or established in a logical system with unitary mathematical properties. The concept developed as a matrix of beliefs with a coherence

¹¹⁴ See "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons," in *Devoted to the Care, Training, and Treatment of the Feeble-Minded and Epileptic* (Faribault, Minn.: Association of American Institutions for Feeble-Minded, 1896); "Proceedings and Addresses of the Annual Session of the American Association for the Study of the Feeble-Minded."

¹¹⁵ Morton Arnold Aldrich and others, *Eugenics* (New York, NY: Dodd Mead and company, 1914).

¹¹⁶ Martin Halliwell, *Images of Idiocy: The Idiot Figure in Modern Fiction and Film* (Burlington, VT: Ashgate, 2004); Samuel G. Howe, *On the Causes of Idiocy*, *Medicine & Society in America: A Report by S.G. Howe and the Other Commissioners Appointed by the Governor of Massachusetts to Inquire into the Condition of the Idiots of the Commonwealth* (New York, NY: Arno Press, 1848); Steven Noll and James W. Trent, "Mental Retardation in America: A Historical Reader", New York University Press; Edward Seguin, *Idiocy: And Its Treatment by the Physiological Method* (New York: A.M. Kelley, 1971).

¹¹⁷ See "Incest and Idiocy," *Medical News* 47, no. 5 (1885); Marie Pierre, "Reports of Clinics," *Medical and Surgical Reporter* 58, no. 13 (1888); Charles E. Sajous, "Annual of the Universal Medical Sciences and Analytical Index," (Philadelphia, PA: Davis Company, 1896).

formalized in representation, function, and metaphor.¹¹⁸ The concept is regarded as deeper than the structure of consciousness. The qualitative factors, experimental traditions and theoretical models shaped the paradigm and quantitative predictions were shaped by the continual attempt to quantify, formalize, and legitimize the concept.¹¹⁹ The nature of thought was now linked to constitution of the individual subject as though human thought reveals a nature but a nature linked to an external validation conditioned through historical, social, and cultural factors. This work considers the historical and medical conditions, and the relationship to transformations in society. Historical accounts commonly suggest our conception of intellectual abnormality were mediated through an understanding of intelligence.¹²⁰ It was, however, the opposite historical trajectory; or the scientific basis of intelligence derived from a discourse rooted in the abnormal. This process linked the individual to nature; though a nature contingent upon external validation.

In response this work examines human intelligence as a scientific concept. It accounts for a major epistemological shift at the *fin de siècle*, in which this concept framed intelligence as deeper than the structure of consciousness. This theoretical shift used in the science of the mind and human thought did not bring coherence to the concept of intelligence, as much as allowed the concept to account for a vast range of experience

¹¹⁸ See Galison, *How Experiments End*. And Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago, IL: University of Chicago Press, 1996).

¹¹⁹ Galison, *How Experiments End*, 252.

¹²⁰ See Harry Daniels and Philip Garner, *Inclusive Education*, ed. Crispin Jones, World Yearbook of Education: (London Kogan Page: Sterling, VA, 1999); Kas Mazurek and M. A. Winzer, *Comparative Studies in Special Education* (Washington, DC: Gallaudet University Press, 1994); Margret Winzer, *Special Education in Early Childhood: An Inclusive Approach* (Scarborough, Ont.: Prentice Hall Allyn 1997); Winzer, *The History of Special Education: From Isolation to Integration*; Margret A. Winzer, *Special Education in the 21st Century: Issues of Inclusion and Reform*, ed. Margret A. Winzer and Kas Mazurek (Washington, DC: Gallaudet University Press, 2000).

and beliefs. Subsequently, this study centers on the historical development, scientific percepts, and significance of intelligence over time. This study contrasts previous historical accounts, which tend to suggest that concepts of abnormality derived from an understanding of intelligence. In contrast, intelligence conditioned by interplay rooted in the abnormal; the beliefs comprising this matrix shaped through the shift from a metaphoric to metonymic construction seen directly in representations.

Contribution

The process of dividing and classifying individuals remains a basic aspect of our school system and social structure. The fluctuations in the number of disabled minds are not contagious by nature.¹²¹ Still, the number of individuals placed in the context of handicapping conditions in the US increased by 16 percent from 1976 to 1982. Since then the number classified intellectually disabled increased by 119 percent.¹²² In eight years, the number of students with academic problems classified as disabled in schools more than doubled—from less than 800,000 to more than 1.8 million.¹²³

The words have changed as idiot transcended from a scientific term to a vague reference, but the techniques, discipline, and science of intelligence retain a lineage extending from the abnormal. Examining these dimensions and development of human intelligence in relation to schools is paramount to considering aspects beyond claims of neutrality, humanity, and best intentions. This work offers a vital new perspective by focusing-on and tracing the formation of intellectual abnormality. It contributes to the

¹²¹ Coles.

¹²² Ibid.

¹²³ Ibid.

area of educational research that must operate within and use the current formations to be recognized and considered legitimate.

History is essential to understanding the formation of existing structures and generating new perspectives. The history of the science of intelligence might be most accurately characterized as a continual play upon the question of how the concept itself was and came to be known. The concept of intelligence prescribes a mode of interpretation, in domains of human knowledge that only be given to empirical knowledge. Though many psychiatrists maintain the idea that examination of one's intelligence does not involve history, the idea that intelligence can be examined or quantified can only be historical, and never simply one's thought. Intelligence must be located historically as discovery, and never purely as thought. How else could we come to know intelligence, if not through thought, and the inscription within its various mechanisms? The notion of intelligence enjoyed categorical privilege as the scientific fixation upon intellect and the possibilities of mental measurement produced a menagerie of arrangements, a progression of discovery where the methods, apparatuses, and technology of science would continually reveal or uncover its true nature or essence. However, there is no basis in the scientific body of knowledge or medical conditions of intelligence suitable to analyze the developmental or foundational logic outside history. As theoretical construct intelligence must be understood as a constituted object. There is only a historical configuration, and this historical configuration has unique aspects through which the rationale of the concept is explored.

CHAPTER 1

THE PSYCHOSOCIAL TYPECAST

“Once you label me you negate me.” ~Soren Kierkegaard

The mind is a constituted object of science and the individual’s relation to science is part of a historically identifiable system of thought at an intersection of nature and ontology.¹ This chapter addresses how scientists subverted longstanding questions central to the philosophy of mind and attached thought to identity. This chapter also examines the notion of the disabled mind requires the reduction of knowledge to meaning or a transcendental signifier. This meaning cannot be reduced solely to the mind or thought, rather it’s contained by representational figure, termed here as a psychosocial typecast. Specifically, the figure of the idiot stabilized the meaning of thought within nature’s edifice.

Human thought is a concept is derived-from and incorporated-in several philosophical problems and relates to several constituent concepts that operate on both similar and diverging planes.² Its intelligibility depends upon these constituent components and other concepts. There are a few aspects of this configuration key for understanding the mind’s relation to knowledge and meaning. Perhaps, most importantly, the various attempts to understand the mind’s

¹ Michel Foucault, *The Archaeology of Knowledge*, trans., A. M. Sheridan Smith, 1st ed. (New York: Pantheon Books, 1972).

² See Gilles Deleuze and Fâelix Guattari, *What Is Philosophy?*, trans., Hugh Tomlinson and Graham Burchell, European Perspectives (New York, NY: Columbia University Press, 1994). Chapter-1 ‘What is a Concept’

relationship to knowledge are themselves inscribed in systems of thought, which positions the mind as both subject and object.³

The Idiot of Antiquity

The term idiot derived from the Greek, or *idios* as private thinker.⁴ In Athens, an idiot was a person who declined to take part in public life, such as democratic city government. The teacher referred to taught concepts whereas the idiot as private thinker. The Cartesian idiot forms a concept with innate forces that everyone possesses on their own account; by right-of, 'I think'.⁵ *Idios*, in contrast had signified isolation

The idiot who says "I" sets up the cogito, who wants to think, and who thinks for himself, by the natural light.⁶ Where the idiot of antiquity wanted truth, the new idiot wants to turn the absurd into the highest power of thought – in other words, to create.⁷ Sense is pushed to its limits, which involves a constant search for the outside, the move toward creation. The Cartesian idiot governed by epistemological concerns, whereas the Cartesian idiot is an ethical figure driven to uncertainty and the outside of pre-existing sense.⁸ The Cartesian idiot mediated the concept between presupposition and thought.⁹

Descartes,

³ Michel Foucault, *The Hermeneutics of the Subject*: , ed. François Ewald Frédéric Gros, and Alessandro Fontana, trans., Graham Burchell, 1st ed., Lectures at the College De France, 1981-1982 (New York: Palgrave, 2005).

⁴ See Deleuze and Guattari. and; Friedrich Wilhelm Nietzsche, *The Complete Works of Friedrich Nietzsche*, trans., Oscar Levy and Robert Guppy, 18 vols. (New York: Gordon Press, 1974). Friedrich Wilhelm Nietzsche, *The Antichrist*, trans., H. L. Mencken, The Free Lance Books (New York: A. A. Knopf, 1920); Friedrich Wilhelm Nietzsche, *Ecce Homo: How One Becomes What One Is and the Antichrist: A Curse on Christianity*, trans., Thomas Wayne, Classics Series (New York: Algora 2004).

⁵ Deleuze and Guattari, 62.

⁶ Ibid.

⁷ Ibid., 62.

⁸ Ibid.

⁹ Ibid.

For it is highly deserving of remark, that there are no men so dull and stupid, not even idiots, as to be incapable of joining together different words, and thereby constructing a declaration by which to make their thoughts understood; and that on the other hand, there is no other animal, however perfect or happily circumstanced, which can do the like. Nor does this inability arise from want of organs: for we observe that magpies and parrots can utter words like ourselves, and are yet unable to speak as we do, that is, so as to show that they understand what they say; in place of which men born deaf and dumb, and thus not less, but rather more than the brutes, destitute of the organs which others use in speaking, are in the habit of spontaneously inventing certain signs by which they discover their thoughts to those who, being usually in their company, have leisure to learn their language.¹⁰

This conception of the idiot preceded the influence of materialism and naturalism, where naturalism emphasizes the role of nature, and examination of human conditions in relation to nature. Nietzsche's commentary on Spencer's naturalism,

Living---is that not precisely wanting to be other than this nature? Is not living---estimating, preferring, being unjust, being limited, wanting to be different? And supposing your imperative 'live according to nature' meant at bottom as much as 'live according to life'---how could you not do that? Why make a principle of what you yourselves are and must be? In truth, the matter is altogether different: while you pretend rapturously to read the canon of your law in nature, you want something opposite... Your pride wants to impose your morality, your ideal, on nature---even on nature and incorporate them in her; you demand that she should be nature.¹¹

Here are differences between nature and life, between symptoms and genealogy. This will shift with psychiatry.

The emergence of the idiot in literature indicated a certain role; namely symptoms of a concept –what writers believed a good thinker to be, what a thinker should be. The idiot often represented a private thinker without professional knowledge.¹² From the writing of Nicholas *de*

¹⁰ René Descartes, *Discourse on the Method; and, Meditations on First Philosophy*, ed. David Weissman, trans., Elizabeth S. Haldane, Rethinking the Western Tradition (New Haven: Yale University Press, 1996).

¹¹ Friedrich Wilhelm Nietzsche, *Beyond Good and Evil: Prelude to a Philosophy of the Future*, trans., Walter Kaufmann (New York: Vintage Books, 1989), 15.

¹² Halliwell, 7.

Cusa, Descartes, Locke, Dostoevsky, and others, the idiot appears in a literary configuration in relation to epistemology. In his *Brief of a Psychologist* Nietzsche wrote,

If I am ahead of all other psychologists in anything, it is in this fact that my eyes are more keen for tracing those most difficult and most captious of all deductions, in which the largest number of mistakes have been made, the deduction which makes one infer something concerning the author from his work, something concerning the doer from his deed, something concerning the idealist from the need which produced this ideal, and something concerning the imperious craving which stands at the back of all thinking and valuing.¹³

The term genealogy made its entry in the *Enciclopedia* drawn from the Greek *genos* and *logos* it was a register of systematic knowledge (logic of the origin). Perhaps Nietzsche is the most well-known philosopher to use the concept in evaluation of social concepts. He distinguished the function of the concept of genesis and origin from the human organization of good/evil, nature/culture, noble/plebe, and so forth.¹⁴ In the same era that Nietzsche proclaimed the death of God the organizational principles for these were restructured. Religion and science utilize notions of origin and descent. The features of concepts have a relationship within the historical milieu they appear, so that the psychosocial type particular to a context makes accessible the form and function of the scientific thinking through analogy or metaphor.¹⁵

The use of psychosocial types, their pathological symptoms, their existential modes, their legal status, all become susceptible to a determination of thought that wrests them from both the historical state and lived experience.¹⁶ Concepts and types refer to each other and

¹³ Nietzsche, *The Complete Works of Friedrich Nietzsche*. From the section: Nietzsche Contra Wagner: Documents of a Psychologist.

¹⁴ Foucault examines this in Nietzsche, Genealogy, History: Michel Foucault, *The Essential Works of Foucault, 1954-1984*, ed. Paul Rabinow and James D. Faubion, trans., Robert Hurley, 3 vols. (New York: New Press, 1997). Vol. II.

¹⁵ Deleuze and Guattari.

¹⁶ Ibid.

combine without ever merging.¹⁷ The concept is indeed a solution, but a solution that corresponds to conditions of inconsistency.¹⁸

The Cartesian Idiot

The aim of this section is to consider the impact of natural science on thought and the removal of the individual from the central emphasis of thinking. The scientific method inverted the relation situating man within the context of observation. This interplay between knowledge and experience involved a framework conceptualized through modes of representation. In the Cartesian system the subject is endowed with access to knowledge and truth primarily through consciousness and reason. This conception is based on an interpretation of mental structure, where human knowledge and truth is subordinate to a belief in the mind's pre-reflexive *cogito*.¹⁹ With Descartes the systemization of conscious thought over a domain of objects is emphasized over self-evidence and intuition.²⁰ With the collapse of a religious based metaphysical-world humankind focused on creating scientific explanations of human nature.

Cartesian dualism is dissolved with the modern conception of human intelligence.²¹ In the Cartesian system the intellectual foundations of certainty dissolve sensory foundations prior to meaning formation.²² However, the general scientific inquiry onto intelligence attempts to demonstrate a naturalistic basis for intellectual phenomena within a formal system of knowledge. Empirical observation rests on the scientific practice of reasoning from effect to cause, or a mode

¹⁷ Ibid., 70.

¹⁸ Ibid., 80-81.

¹⁹ See: Foucault, *The Hermeneutics of the Subject*: , 25-28, 190, 294, and 309.

²⁰ See: Jacques Derrida, *Of Grammatology*, trans., Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1998).

²¹ See: Deleuze and Guattari.

²² See: "Cogito and the History of Madness" in Jacques Derrida, *Writing and Difference*, trans., Alan Bass (Chicago: University of Chicago Press, 1978), 31-63.

of scientific inference made possible through modes of representation and the organization of various standards and representations formed symbolically. There is no pure science of the mind devoid of axiological and normative principles. The individual's relation to science is part of a historically identifiable system of thought at an intersection of discourse, schemas of human nature, and ontological beliefs that lay outside the confines of science.²³

One of the primary aims of science is imposing conformity.²⁴ Intelligence did not create understanding, but rather a belief. This means the elimination of variables that interfere in science.²⁵ Thoughts struggle against opinion and its degeneration into opinion.²⁶ Descartes wrote,

Finally, in the Sixth, the act of the understanding (*intellectio*) is distinguished from that of the imagination (*imaginatio*); the marks of this distinction are described; the human mind is shown to be really distinct from the body, and, nevertheless, to be so closely conjoined therewith, as together to form, as it were, a unity. The whole of the errors which arise from the senses are brought under review...²⁷

Is the intellect really so distinct from imagination? How is the unity Descartes speaks of configured? From the formation of the natural science humankind has focused on creating scientific explanations of human nature. The conception of intelligence assumes the role of simultaneously describing some level of reality, and yet maintains the very conditions under which reality can be signified or in a constant state of a description being described, or described by its own description. As Julien Offray de La Mettrie wrote in *Machine Man* in 1747,

Break the chains of your prejudices and take up the torch of experience, and you will honour nature in the way she deserves, instead of drawing derogatory conclusions from the ignorance in which she has left you. Simply open your eyes and ignore what you cannot understand, and you will see that a labourer whose mind and knowledge extend no further than the edges of his furrow is no different

²³ Foucault, *The Archaeology of Knowledge*.

²⁴ Deleuze and Guattari, 202.

²⁵ Ibid.

²⁶ Ibid., 207.

²⁷ Descartes.

essentially from the greatest genius, as would have been proved by dissecting the brains of Descartes and Newton; you will be convinced that the imbecile or the idiot are animals in human form, in the same way as the clever ape is a little man in another form; and that, since everything depends absolutely on differences in organization, a well-constructed animal who has learnt astronomy can predict an eclipse, as he can predict recovery or death when his genius and good eyesight have benefited from some time at the school of Hippocrates and at patients' bedsides.²⁸

Psychiatry has a history of varying epistemological orientation.²⁹ The field developed as a rationalist based branch of metaphysics in the sixteenth and seventeenth centuries. A distinction developed between empirical and rational psychology in the early eighteenth century. The primary analysis of thought during this time was philosophical or epistemological in nature.

Cartesian rationality presented an obstacle in that a duality exists between the cerebral and material. The essence of mental substance is to think. The notion of Cartesian dualism holds that minds are unextended substances, and thus are distinct from any physical substance.³⁰ The human sciences needed to bridge this dualism, to make the brain the origin of the mind creating a measurable explanatory model for thought. The momentum and popularity of the human sciences, however, changed this. One dramatic example is the subordination of modern philosophy to theories of cognition and psychology.³¹

If general theories of mental processes suggest a constitute relation between one's-self and knowledge, we must evaluate the presuppositions imbedded in the idea that we can transmit information, representation, and meaning, where thought is a constituent aspect of knowledge,

²⁸ Julien Offray de La Mettrie, *Machine Man* trans., Ann Thomson, Cambridge Texts in the History of Philosophy (New York, NY: Cambridge University Press, 1996), 38.

²⁹ Michel Foucault, *Psychiatric Power*, ed. Jacques Lagrange, trans., Graham Burchell, Lectures at the Collège De France 1973-1974 (New York: Palgrave 2006); Michel Foucault, *History of Madness*, ed. Jean Khalifa, trans., Jonathan Murphy and Jean Khal, 1st. ed. (New York: Routledge, 2009).

³⁰ René Descartes, *Discourse on the Method of Rightly Conducting the Reason and Seeking Truth in the Sciences*, trans., John Veitch, 4th ed. (Edinburgh, London: W. Blackwood and Sons, 1870).

³¹ Arendt, 293. Arendt states, "In this aspect, most of modern philosophy is indeed theories of cognition and psychology."

but external to its formation. In other words, how can thought be simultaneously distinct (i.e. natural, universal, determinant) and situated or located solely in the development of the human subject? Reality, representation, and intuition, however, as domains of thought are neither distinct nor independent, in other words, thought, experience, and perception are imbedded in information and representation.

Contemporary models of human thought, stemming from the influence of the human sciences are not thought-conscious-of-itself (a modern *cogito*), as much as formal systems of knowledge that precede thought. This conception of human thought incorporated in a series of belief systems or theories, in which the object of knowledge --the theoretical proposition itself-- regarded as deeper than the structure of consciousness. This is a similar to psychoanalytic theory, but more central to contemporary beliefs about the mind and knowledge in general. Both psychoanalysis and the scientific conception of intelligence position the mind's relation to knowledge in system of knowledge that is simultaneously propositional and interpretive.³² In other words, these theories interpret thought in a propositional framework. This formation cannot be understood independent of language, representation, and concepts.

The Modern Idiot

The foundational typecast for human intelligence was transformation of the idiot of antiquity and literature or the idiot as private thinker-- to the pathological idiot with whom science configured modern intellect. Science configured a pathological idiot over the early nineteenth century, which provided an epistemological network upon which intelligence was

³² Foucault, *Psychiatric Power*.

configured.³³ The idiot was the primary archetype in the new economy of thought. It was through this process abnormality became the norm of human intelligence.

Following the work of the *alienists* by the nineteenth century, the idiot became an empirical subject. The price paid for the scientific revolution in the physical sciences was the isolation of mind from nature and of the study of purposive behavior from the advance of the scientific method. The fragmentation of the world into primary and secondary qualities, outer and inner, body and mind, and the exclusion of final causes from science have plagued the study of mind and behavior since Descartes. Cartesian dualism supplied an ontological basis for the separation of mind and body, while the theory of representative perception separated the knowing mind from its external object for knowledge. Pre-nineteenth century psychologists were preoccupied with the problem of how the mind interacts with the body.³⁴ This metaphysical problem effectively precluded empirical investigation of the relations of mind and brain, the laws governing psychological and behavioral phenomena, and the relation of mental functions to the environment.³⁵ Nineteenth-century biology, however, related the mind to the brain through the conception of cerebral localization, and attempted to specify the functions of the brain in the relations between organisms and their environments.³⁶ In the nineteenth century, Alexander Bain, free psychology from its philosophic context and make it a natural science in its own right. The consequence of knowledge dependent solely upon action laid the foundation for an emphasis on behavior, which by the turn of the century came to dominate psychology.³⁷

³³ L. P. Brockett and Edward Seguin, *Idiots and the Efforts for Their Improvement* (Hartford, CT: Case, Tiffany, & Co., 1856); Isaac Newton Kerlin, Knight, George H. , *Provision for Idiotic and Feeble-Minded Children* Report of the Committee on Provision for Idiotic and Feeble-Minded Persons (St. Paul, Minn: 1886).

³⁴ Robert M. Young, "The Functions of the Brain: Gall to Ferrier 1808-1886," *Isis* 59, no. 3 (1968).

³⁵ Robert M. Young, *Darwin's Metaphor: Nature's Place in Victorian Culture* (Cambridge: Cambridge University Press, 1985).

³⁶ Young, "The Functions of the Brain: Gall to Ferrier 1808-1886."

³⁷ *Ibid.*

One can trace the integration of psychology with physiology.³⁸ Bain enriched psychology with experimental neurophysiology, whereas Herbert Spencer helped give it a new foundation in evolutionary biology.³⁹ A detailed analysis of Spencer's intellectual development helps show the emergence of the assumptions of modern psychology from elements of phrenology and the theory of evolution. Spencer's psychological work, like that of Bain, grew out of an early interest in phrenology.⁴⁰ However, where Bain had turned away from the biological approach of the phrenologists, Spencer drew heavily to stress the relations of mental phenomena, and the needs of the organism, to the environment. Learning became the continuous adjustment or adaptation of internal relations to external relations.⁴¹ From this point neurology linked anatomical localization and pathology.⁴² Broca's localization of lesions as the cause of loss of speech (aphasia) provided the first notion of cerebral localization, and aphasia became a primary mode to link science and learning.⁴³ James Ross noted in 1870,

In the cases of aphasia with autopsies collected by Broca and the earlier observers, the lesion was occasionally observed to be situated in the temporal lobe and the posterior part of the parietal lobe; but these cases were regarded as exceptions to the general rule of localization in the third frontal convolution, up to

³⁸ Alexander Bain, "The Emotions and the Will," (London: J. W. Parker and Son, 1859); Alexander Bain, *On the Study of Character: Including an Estimate of Phrenology* (London: Parker, Son, and Bourn, 1861); Alexander Bain, *Mental and Moral Science* (London: Longmans, Green, and Co., 1868); Alexander Bain, *Mental Science: A Compendium of Psychology, and the History of Philosophy* (New York: D. Appleton and Company, 1870); Alexander Bain, *Correlation of Nervous and Mental Forces*, 7 ed., The International Scientific Series (New York, NY: Appleton and Company, 1900); Alexander Bain, *The Senses and the Intellect*, 3 ed. (London: Longmans, Green, 1868); James Mill and others, *Analysis of the Phenomena of the Human Mind*, 2 vols. (London: Longmans, Green, Reader, 1869); William Paley and Alexander Bain, *The Moral Philosophy of Paley: With Additional Dissertations and Notes* (Edinburgh,: W. & R. Chambers, 1852).

³⁹ Herbert Spencer, *The Principles of Sociology*, 3d ed., 5 vols., A System of Synthetic Philosophy, vol. 3 (New York: D. Appleton, 1895); Herbert Spencer, *The Principles of Biology*, 3 vols., vol. 2 (New York: Appleton and Company, 1898).

⁴⁰ Herbert Spencer, *Illustrations of Universal Progress: A Series of Discussions* (New York: Appleton and company, 1880). Section titled: 'Bain on the Emotions and the Will'

⁴¹ Young, "The Functions of the Brain: Gall to Ferrier 1808-1886."

⁴² Foucault, *Psychiatric Power.*, 297.

⁴³ Auguste Broca and Samuel J. Pozzi, *Mémoires D'anthropologie De Paul Broca*, vol. 5 (Paris, France: Reinwald 1871); Paul Broca and Charles Blake, *On the Phenomena of Hybridity in the Genus Homo* (London: The Anthropological Society: Longman, Green, & Roberts, 1864).

the time when Wernicke reported a case of that disorder of speech, which Kussmaul ' subsequently named word-deafness.⁴⁴

Scientists suggested the role of the cortex in muscular motions and demonstrated experimentally the electrical excitability of the cerebral hemispheres by applying electrical current to the brains of dogs and wounded soldiers and noting involuntary contractions.⁴⁵ Centers of co-ordination for complex sensations and motions were localized in place of Gall's faculties.⁴⁶ Complex mental phenomena were thus reduced to aggregates of sensations and motions paralleled by sets of fibers and cells.⁴⁷ This set the stage for contemplation that remains in medical research today. As Goleman writes,

Scientists are tuning into the internal dialogue carried on between the right and left hemispheres of the brain, and their findings are offering clues about the underlying causes of mental deficits such as dyslexia and mental gifts such as mathematical genius.⁴⁸

The mind's relation to knowledge has remained central to philosophy, epistemology, and science. The dynamics of this relation are complex, and often situated in various ways. There are many ways to consider the personal, introspective, shared, institutional, or social aspects of this relation. Over the last several decades, logical positivism framed new considerations central to the methodology, validity, and theory formation in the science of the mind. However, the underlying relation between observer and reality in theory formation, knowledge construction,

⁴⁴ James Ross, *On Aphasia: Being a Contribution to the Subject of the Dissolution of Speech from Cerebral Disease* (London: J. & A. Churchill, 1887).

⁴⁵ G. Fritsch and Hitzig E., *Electric Excitability of the Cerebrum* (1870).

⁴⁶ Franz Joseph Gall and Winslow Lewis, *On the Functions of the Brain and of Each of Its Parts: With Observations on the Possibility of Determining the Instincts, Propensities, and Talents, or the Moral and Intellectual Dispositions of Men and Animals by the Configuration of the Brain and Head*, The Phrenological Library (Boston: Marsh, Capen, & Lyon, 1835).

⁴⁷ Herbert Spencer, *The Principles of Psychology*, 2nd ed., vol. 2 (London Williams and Norgate, 1870), 606-611.

⁴⁸ Daniel Goleman, "Left Vs. Right: Brain Function Tied to Hormone in the Womb," *New York Times* 1985.

interpretation, and explanation has been called into question.⁴⁹ These various domains are not independent; and in contrast, rethinking the epistemological basis for knowledge and meaning reveals how interwoven the domains of science and systems of knowledge are for both the individual subject and our culture at large. The central question incorporated in this epistemological framework is how to analyze meaning and significance when given solely to a domain of thought. These forms of representation function as a discourse allowing one to mediate between the scientific, and political phase of knowledge production. These forms of representation also obscure the lines between the theoretical and social function of knowledge. The imagery conceals gaps in scientific knowledge as well as contains both a symbolic and material practice.⁵⁰ The function visibility and display in the production of knowledge explicitly draw from the function of power.⁵¹

⁴⁹ One of Freud's first works was a critical study of Aphasia, see Sigmund Freud, *On Aphasia: A Critical Study*, trans., E. Stengel (New York, NY: International Universities Press, 1953).

⁵⁰ See: John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (Minneapolis, Minn.: University of Minnesota Press, 1993).

⁵¹ Tony Bennett, *The Birth of the Museum: History, Theory, Politics, Culture, Policies, and Politics* (New York, NY: Routledge, 1995).

CHAPTER 2

NATURE OF INTELLECT

This chapter examines how we came to believe intellectual traits were acquired the same as physical characteristics. It examines the development of idiocy and how this typecast allowed intelligence to be configured metaphorically, and the relation to civilization and education. This includes how science used idiocy to link our intellect to instinct, the will, and morality.

French Psychiatry

From this perfect primitive man all of us were supposed to be descended. We were in fact faithful copies of him; only we had to cast off some few things in order to recognize ourselves once more as this primitive man, on the strength of a voluntary reunification of superfluous learnedness, of superabundant culture.
--Friedrich Nietzsche¹

Idiocy became a scientific classification around the mid-nineteenth century. The birth of a science idiocy located in myths made famous in the history of psychiatry, myths that convey the notion of scientific enlightenment.² The events occurred at a time when psychiatry and psychology was vying for legitimacy and scientific status. These events neither mark the discovery nor development of either idiocy or intelligence, but mark the initial point of reference by which a reconfiguration occurred.

¹ Friedrich Wilhelm Nietzsche, *The Birth of Tragedy*, trans., Douglas Smith (New York: Oxford University Press, 2000).

² White.

These events celebrated as a great liberation, a monumental moment in the history of the human sciences. Psychiatric history refers to this shift in the account of Philippe Pinel the Physician in Chief to the Insane at Bicetre when he liberated the Houses of Confinement.³ The mythologizing of the event is noteworthy relating to divisions made between idiots and the insane. It is emblematic of widespread social change at the end of the eighteenth century.⁴

The work of Itard and the *Sauvage de l'Aveyron* or *The Wild Boy of Aveyron* is the primary myth by which the beginning of a scientific of idiocy is marked.⁵ Most contemporary recollections connect the work of Itard and *Sauvage de l'Aveyron* as the first scientific assessment or treatment of idiocy.⁶ The child was captured by a group of hunters and later escaped. Eventually he was recaptured and briefly put on display; and for a short time he drew large crowd and public fascination in France. People of France had flocked to see Victor. It was an opportunity to see theory made famous by Rousseau.⁷ The people of Paris thought they had an opportunity to see a child who had grown up according to Rousseau's ideals. Itard wrote,

visited promptly by those who have long desired to raise a child cut off from all of society and all intellectual communication, a child to whom no one had ever spoken and who would be scrutinized down to the slightest movements he might make to express his first sensations, his first ideas, his first thoughts.⁸

³ Philippe Pinel, *Nosographie Philosophique: La Méthode De L'analyse Appliquée À La Médecine*, 2e éd., considérablement augm., dans laquelle se trouvent les caractères spécifique des maladies. ed., 3 vols. (Paris: Chez J.A. Brosson, 1802); Philippe Pinel, *La Médecine Clinique Rendue Plus Précise Et Plus Exacte Par L'application De L'analyse, Ou, Recueil Et Résultat D'observations Sur Les Maladies Aiguës, Fait À La Salpêtrière*, 2e éd., rev., corr. et augm. ed. (Paris: Chez J.A. Brosson, 1804); Philippe Pinel, *A Treatise on Insanity*, trans., Paul F. Cranefield, History of Medicine Series (New York, NY: New York Academy of Medicine, 1962).

⁴ Lucien Malson and Jean M. Itard, *Wolf Children and the Problem of Human Nature*, trans., Peter Ayrton Edmund Fawcett, and Joan White (New York, NY: Monthly Review Press, 1972).

⁵ Jean M. Gaspard Itard, *The Wild Boy of Aveyron*, The Century Psychology Series (New York: Appleton, 1962).

⁶ Ibid.

⁷ Itard, J. M. G, *The Wild Boy of Aveyron (Rapports et memoires Sur le Sauvage de l'Aveyron)*, translated by George & Muriel Humphrey, (New York: Century, 1932), cited in Douglas K. Candland, *Feral Children and Clever Animals: Reflections on Human Nature* (New York: Oxford University Press, 1993). 18.

⁸ Itard quoted in Harlan L. Lane, *The Wild Boy of Aveyron* (Cambridge, Mass: Harvard University Press, 1976). 18.

According to most early accounts including Itard's report and newspaper accounts he was regarded as a child who had been raised in the wild, completely out of contact with civilization. Itard and other scholars were eager to bring *Sauvage de l'Aveyron* to Paris. In the preface to his famous case study, Itard notes the importance of feral children to the study and understanding of the human mind.⁹ Itard wrote,

I ought not, at this stage of my investigation, to be precipitate in judging and in drawing conclusions. I am deeply impressed with the persuasion, that until they are matured by time, and confirmed by farther observations, that we ought to refrain from publishing, or even entertaining speculations, which may have a tendency to destroy prejudices in themselves perhaps respectable, and which, beyond all doubt, constitute the most amiable, as well as the most consoling illusions of social life.¹⁰

Itard and other scholars were eager to bring *Sauvage de l'Aveyron* to Paris. Séguin notes eleven recorded cases of savages or children believed to be raised in the wild by animals. If *savages* or those whom they believed had faculties laid dormant under the cover of animal instinct and habit could be educated this phenomenon could furnish new notions on the nature of the human mind and the development of primitive faculties. To solve this metaphysical problem Itard undertook the project of educating *Sauvage de l'Aveyron*.¹¹ Education of the savage, "would evidence the natural springs of the human mind."¹² For this education, Itard attempted to utilize Condillac and Locke's empirically based notion of the human mind as *tabula rasa*, or the *idea* that individuals accumulate knowledge through experience and that human beings accumulate knowledge to makes sense of an external world. Itard believed, "Here is a subnormal boy who has lacked

⁹ Itard.

¹⁰ Ibid., 53.

¹¹ Ibid.

¹² Ibid., viii.

civilizing experience. If I give him this experience he will become normal.”¹³ Itard attempted to utilize the idea that individuals accumulate knowledge through experience and the idea that human beings accumulate knowledge to makes sense of an external world.¹⁴ This view presents intellect in a structured process-oriented paradigm where data from the world is collected and localized. Séguin wrote,

The celebrated Itard undertook to teach him, and it was expected that he would prove that all our ideas are derived from the senses and that our mental faculties are only sensations transformed.¹⁵

Itard had claimed some success in normalizing *Sauvage de l’Aveyron*, all the time maintaining Victor was a feral-child, and that the mind owes its modalities directly to a process of civilization and education.¹⁶ Itard, however, later turned his case files over to Séguin in frustration.¹⁷ Séguin wrote,

Itard, not believing idiocy curable, contrary to the misgivings of Bonaterre, and to the all but convincing demonstrations of Pinel, undertook this education. In devoting himself to this case, his object was not to improve or cure an idiot; it was "to solve the metaphysical problem of determining what might be the degree of intelligence and the nature of the ideas in a lad, who, deprived from birth of all education, should have lived entirely separated from the individuals of his kind." I did not partake this unfavorable opinion; and, despite the truthfulness of the tableau, and the closeness of resemblance, I dared to conceive some hopes. I founded them on the double consideration of the cause and the curability of that apparent idiotism.¹⁸

The various reports of this event are disconnected. Early newspaper reports retain the notion that Victor was a feral child while later accounts suggest the child was idiotic.¹⁹ When Itard was less

¹³ Ibid. viii.

¹⁴ Ibid.

¹⁵ Edward Seguin, *Idiocy and Its Treatment by the Physiological Method* (New York: W. Wood & Co, 1866). , 367.

¹⁶ Itard., 52-53.

¹⁷ Brian Burrell, *Postcards from the Brain Museum: The Improbable Search for Meaning in the Matter of Famous Minds*, 1st ed. (New York: Broadway Books, 2004)., 150.

¹⁸ Seguin, *Idiocy: And Its Treatment by the Physiological Method*.

¹⁹ Ibid.

than successful in normalizing *Sauvage de l'Aveyron* he was declared idiotic.²⁰ Through this distance from civilization; a point at which Itard could not capture in language the [true] nature of *Sauvage de l'Aveyron* Séguin declared Pinel's earlier suspicion that *Sauvage de l'Aveyron* was idiotic.²¹

From the outset, the alienist's notion of the mind is linked to regulation of the body. Itard's description of Victor's sexuality is a connection between sexual drives or instinct and intelligence. Itard's basis of human nature is outside civilization. Life situated in the context of the senses and development is nurture over the later interpretations everything gets linked nature. From this point, intelligence linked to social organization and political philosophy.

Itard was appointed *National Institution for the Deaf and Dumb*.²² Like Rousseau he believed that, "that moral superiority which has been said to be natural to man, is merely the result of civilization."²³ Referring to pre-modern era Itard wrote, "in those remote times the defective march of studies, the mania of explanation, the uncertainty of hypothesis, the exclusiveness of abstract thinking, that observation was set at naught, and these precious facts were lost for the natural history of man."²⁴

The science of idiocy was promoted by Séguin who immigrated to the US in 1848. It was during the time working with Itard and Esquirol he formed many of his ideas.²⁵ Séguin followed from Esquirol the idea that, "idiocy is not a disease, but a condition in which the intellectual

²⁰ Ibid.

²¹ Séguin, *Idiocy: And Its Treatment by the Physiological Method*, 1-36.

²² Foucault, *Psychiatric Power*, 227.

²³ Itard, 144.

²⁴ Séguin, *Idiocy and Its Treatment by the Physiological Method*; Séguin, *Idiocy: And Its Treatment by the Physiological Method*.

²⁵ Séguin, *Idiocy: And Its Treatment by the Physiological Method*, 32.

faculties are never manifested, or have never been sufficiently developed....”²⁶ It was therefore a disability and not disease. Séguin added the concept of instinct and will. He wrote,

It [idiocy] incapacitates mostly the functions which give rise to the reflex, instinctive, and conscious phenomena of life; consequently, the idiot moves, feels, understands, wills, but imperfectly.²⁷

Beginning with Séguin diagnosis is organized around narrative, a site of pedagogic intervention.²⁸ It was not only the idiot, but his education, how he is taught, how is interpreted, and what this reveals. Séguin mediates the notion of cure, the potential for education. The enduring link here is between the intellect and nature, for example, sexual drives or instinct is natural; and nature is normative where the mind regulates the body.²⁹ Séguin notes this legacy of sense perception as the basis of thought stemmed from the influence of schools for deaf mutes.³⁰

The alienists constructed intelligence metaphorically locating its truth in similarity whereas an inversion occurs with the human sciences formed through modes of representation, which made the organization of intelligence, by various standards possible. This allowed the practice of reasoning from effect to cause and a classification of intelligence within a continuum.³¹ This shift is the basis by which intelligence inscribed in axiological frameworks and intelligibilities. This did not bring coherence as much as allowed the concept to account for a vast range of experience and belief. This shift of intellect coincides with the shift from classical reason with man at the locus of representation to ‘man’ as a source of representation. Bentham

²⁶ Foucault, *Psychiatric Power*, 205.

²⁷ Seguin, *Idiocy: And Its Treatment by the Physiological Method*, 2.

²⁸ See: Edward Seguin, *New Facts and Remarks Concerning Idiocy* (New York: W. Wood & Co, 1870); Seguin, *Idiocy: And Its Treatment by the Physiological Method*; Edward Seguin, *Report on Education 1875: A Facsimile Reproduction*, History of Psychology Series (Delmar, NY: Scholars' Facsimiles & Reprints, 1976).

²⁹ Foucault, *Psychiatric Power*, 4.

³⁰ Noted in Seguin, *Idiocy and Its Treatment by the Physiological Method*.

³¹ Examples include anthropometrics: measurement of physical features as indication mental or personality traits (notably criminality & intelligence), and physiognomy appearance or features as indications of character.

thought the panoptic apparatus could be used to conduct metaphysical experiments on children.³² He imagined taking children right from birth and putting them in a panoptic system. We could follow “the genealogy of each observable idea.”³³ The panoptic mode of surveillance was a central aspect of Itard’s education, and he was convinced like Helvetius “anyone can be taught anything.”³⁴

Locke’s unified conception of empirical investigations situates human nature within a cohesive epistemological portrait.³⁵ This view presents intellect in a structured process-oriented paradigm where data from the world is collected and localized. Locke’s idiot is different from Descartes. Locke states,

there are degrees of madness, as of folly; the disorderly jumbling ideas together is in some more, and in some less. In short, herein lies the difference between idiots and madmen: that madmen put wrong ideas together, and so make wrong propositions but argue and reason right from them; but idiots make very few or no propositions, and reason scarce at all.³⁶(Locke and Winkler 1996)

This orientation and positioning of the mind in relation to knowledge and meaning mark a point when human beings began to possess access to knowledge and truth primarily through consciousness and reason. The mind became inserted into science with the status of an ontological-condition; one that can both vary from person to person yet is static enough to measure in consistency. This paradigm subsumes man within a framework of all-encompassing rationality and universal understanding about the state of being human. Yet simultaneously this

³² Foucault, *Psychiatric Power*, 78.

³³ Itard, 78.

³⁴ Foucault, *Psychiatric Power*, 78-79.

³⁵ John Locke and Kenneth Winkler, *An Essay Concerning Human Understanding: Abridged and Edited with an Introduction and Notes* (Indianapolis, IN: Hackett Publishing Co., 1996).

³⁶ Ibid.

framework focuses on development of human characteristics through a process while it negates the place for history, and philosophy in informing scientific perception of truth and knowledge.³⁷

Rousseau believed in reforming society through the education of children.³⁸ In *Émile* he posits natural development, which must be protected from the influences of society so that the child can grow as nature intended.³⁹ Rousseau believed this natural development on which we can rely and which will inevitably take place, provided we can keep in check the unnatural social influences.⁴⁰ Rousseau wrote,

The passions, in their turn, owe their origin to our wants, and their increase to our progress in science; for we cannot desire or fear anything, but in consequence of the ideas we have of it, or of the simple impulses of nature; and savage man, destitute of every species of knowledge, experiences no passions but those of this last kind; his desires never extend beyond his physical wants; he knows no goods but food, a female, and rest; he fears no evil but pain, and hunger; I say pain, and not death; for no animal, merely as such, will ever know what it is to die, and the knowledge of death, and of its terrors, is one of the first acquisitions made by man, in consequence of his deviating from the animal state.⁴¹

Pierre-Joseph Bonnaterre believing the moral and physical go hand in hand, and what strengthens one strengthens the others in 1800 wrote,

Victor's case is a final resolution of questions regarding man's original state: Man is inferior to a great number of animals in a pure state of nature, a state of vacuity and barbarism, although it has been unjustly painted in colors the most attractive, a state in which the individual, deprived of the characteristic faculties of his species, drags on miserably equally without intelligence and without affection, a life that is every moment subject to danger, and confined to the bare functions of animal nature.⁴²

For Rousseau the function education is organized as the substitution for the destiny of nature's edifice, and pedagogy shaped around the problematic and inherent evil in the function of

³⁷ Derrida, *Of Grammatology*.

³⁸ Candland.

³⁹ Jean Rousseau, *Emile: On Education*, trans., Allan Bloom (New York, NY: Basic Books, 1979).

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Malson and Itard., 138.

supplementation or substitution of a transcendent essence.⁴³ Rousseau suggests the human being can only develop, in relation to other persons. Rousseau wrote, “For want of communication with his fellow man... all knowledge ... seems to be altogether beyond the reach of Savage man”⁴⁴ The notion that communication with others is both necessary and formative of distinctly human faculties.⁴⁵ Rousseau,

Savage man, left by Nature to bare instinct alone ... will then begin with purely animal functions.... His desires do not exceed his physical needs; the only goods he knows in the Universe are food, a female, and rest.⁴⁶

The move to associate the transformation and development of idiocy with its relation to intelligence, from the tropes savage or wildness presents a significant consideration. Since biblical times this trope retained unique character through various epochs including colonial discourses.⁴⁷ Until the end of the eighteenth century, wildness had endured a significant history and conceptual position.⁴⁸ Idiocy’s development with the claim to civilization was framed as a consciousness or a mental space through which science lay claim to and established the boundaries of thought.⁴⁹

⁴³ Derrida, *Of Grammatology*.

⁴⁴ Jean-Jacques Rousseau, *A Discourse Upon the Origin and Foundation of the Inequality among Mankind* (New York, NY: B. Franklin, 1971), 144.

⁴⁵ Descartes, *Discourse on the Method of Rightly Conducting the Reason and Seeking Truth in the Sciences*.

⁴⁶ Rousseau, *A Discourse Upon the Origin and Foundation of the Inequality among Mankind*, 142.

⁴⁷ Hayden V. White, *Tropics of Discourse: Essays in Cultural Criticism* (Baltimore: Johns Hopkins University Press, 1978).

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*, 151. White wrote, “The notion of ‘Wildness’ (or in its Latinate form, “savagery”) belongs to a set of culturally self-authenticating devices which includes, among many others, the ideas of “madness” and “heresy” as well. These terms are used not merely to designate a specific condition or state of being but also to confirm the value of their dialectical antitheses “civilization”, “sanity”, and “orthodoxy”, respectively. Thus, they do not so much refer to a specific thing, place, or condition as dictate a particular attitude governing a relationship between a lived reality and some area of problematical existence that cannot be accommodated easily to conventional conceptions of the normal or familiar”.

The classification and treatment of idiocy produced prevailing ideological conceptions of the nature of humankind and the interplay of language, experience, and normality.⁵⁰ This is seen most clearly with Victor's sexual awakening which according to Itard, "seems to exist here only to prove that if there exists in man a relationship between the needs of the senses and the emotions of the heart, then the sympathetic harmony is, like most great and noble passions, the fortunate fruit of man's education."⁵¹ Drawing on Rousseau's beliefs regarding natural man Itard wrote, "Every day I waited for a breath of that universal emotion which stirs and stimulates all creatures," hoping it might "move Victor in his turn and enlarge his moral existence."⁵² Though according referring Victor's sexuality Itard wrote, "Instead of that burst of enthusiasm which urges one sex towards the other, he has shown only a sort of blind instinct."⁵³

The concept of *wildness* no longer functions in the manner it did in the eighteenth century.⁵⁴ Idiocy and intelligence replaced *wildness* as a conception; a *state of being* to a potentiality "lurking in the heart of every individual, whether primitive or civilized, as his possible incapacity to come to terms with his socially provided world."⁵⁵ Education took responsibility for this domestication or inversion of animal instinct. Beyond the promise of education, humankind fluctuated in relation to a natural state as science distanced the animal

⁵⁰ Ibid., 152. "...societies feel the need to fill areas of consciousness not yet colonized by scientific knowledge with conceptual designators affirmative of their own existentially contrived values and norms. No cultural endowment is totally adequate to the solution of all the problems with which it might be faced; yet the vitality of any culture hinges upon its power to convince the majority of its devotees that it is the sole possible way to satisfy their needs and to realize their aspirations. A given culture is only as strong as its power to convince its least dedicated member that its fictions are truths."

⁵¹ Itard.

⁵² Ibid; ibid; Jean Marc Gaspard Itard, *Rapport Fait À Son Excellence Le Ministre De L'intérieur Sur Les Nouveaux Développemens Et L'état Actuel Du Sauvage De L'aveyron* (Paris: Imprimerie Impériale, 1807)., 155-156.

⁵³ Itard, *The Wild Boy of Aveyron*. Quoted in: Nancy Yousef, *Savage or Solitary? The Wild Child and Rousseau's Man of Nature*, Journal of the History of Ideas vol. 62 (Conference Publication 2001)., 247.

⁵⁴ Hayden White (1985), 153.

⁵⁵ Ibid., 179.

world and reconfigured the natural.⁵⁶ It was only a few years between when Itard attempted to reunite this *Wild Man (homo ferus)* as a distinct human species with civilization that science redistributed him.⁵⁷ Itard wrote,

Victor's case is a final resolution of questions regarding man's original state: Man is inferior to a great number of animals in a pure state of nature, a state of vacuity and barbarism, although it has been unjustly painted in colors the most attractive, a state in which the individual, deprived of the characteristic faculties of his species, drags on miserably equally without intelligence and without affection, a life that is every moment subject to danger, and confined to the bare functions of animal nature.⁵⁸

Man's Place in Nature

Frank says you ought to keep a idiot, a deaf mute, a monkey, and a baby in your house. --Letter to Charles Darwin⁵⁹

The notion of Man's place in nature became theme of science in late nineteenth century.⁶⁰ When science attempted to assume responsibility for the teleology removed from God, intelligence and mental measurement in the context of naturalist empirical science conformed to this void.⁶¹ In other words, it offered a rationale and network for the operation of origin and descent. In *The Descent of Man* Darwin wrote, "The strong tendency in our nearest allies, the monkeys, in

⁵⁶ White suggests that, "The unmasking of such myths as the *Wild Man* has not always been followed by the banishment of their component concepts, but rather by their interiorization.", 153.

⁵⁷ Itard, *The Wild Boy of Aveyron*.

⁵⁸ Malson and Itard, 138.

⁵⁹ Charles Darwin, *More Letters of Charles Darwin: A Record of His Work in a Series of Hitherto Unpublished Letters*, ed. Francis Darwin and AC Seward (London: J. Murray, 1903). Letter 417: To G.J. Romanes. [Barlaston], August 20th, 1878.

⁶⁰ Thomas Henry Huxley, *Evidence as to Man's Place in Nature* (New York: D. Appleton and Company, 1871); Thomas Henry Huxley, *Man's Place in Nature: And Other Anthropological Essays*, His Collected Essays (New York: Appleton, 1894).

⁶¹ See Alfred Binet and Théodore Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, trans., Elizabeth S. Kite, Publications of the Training School at Vineland, New Jersey, Department of Research, vol. 11 (Baltimore, MD: Williams & Wilkins Company, 1916); Henry Herbert Goddard, *Feeble-Mindedness: Its Causes and Consequences*, New Jersey Training School for Feeble-Minded Girls and Boys at Vineland (New York, NY: The Macmillan Company, 1914).

microcephalous idiots, and in the barbarous races of mankind, to imitate whatever they hear deserves notice, as bearing on the subject of imitation.”⁶² He goes on to say,

Idiots also resemble the lower animals in some respects; thus several cases are recorded of their carefully smelling every mouthful of food before eating it. One idiot is described as often using his mouth in aid of his hands, whilst hunting for lice. They are often filthy in their habits, and have no sense of decency; and several cases have been published of their bodies being remarkably hairy.⁶³

Darwin regarded the development of the west, the structure of the family, and social hierarchies related to evolutionary factors.⁶⁴ Francis Galton and other scientists, however, began to fashion the justification for social hierarchies from divine right to a basis aligned with the concept of intelligence. Anthropologist like Lombroso already fused the concept of instinct and criminality in the nineteenth century, but unlike this anthropology, twentieth century scientists hinged instinct and criminality directly to the stabilizing concept of intelligence.⁶⁵ Galton takes the idiot from the context of humankind’s evolution to the relationship between gender, race, class, and social utility.⁶⁶ He utilizes case history to organize a scientific depiction of a society subordinate to a natural law dictating social status.⁶⁷ The development of family schematics and concept of hereditary intellectual traits can be marked with this era. The work of this period contains depictions of family lineage, but without the sophistication and implied justification seen in the

⁶² Charles Darwin, *The Descent of Man: And Selection in Relation to Sex* (New York: Appleton and Company, 1871), 463.

⁶³ Ibid.

⁶⁴ Darwin, *The Origin of Species by Means of Natural Selection: The Preservation of Favored Races in the Struggle for Life and the Descent of Man and Selection in Relation to Sex*.

⁶⁵ Lombroso-Ferrero and Lombroso; Cesare Lombroso and Henry P. Horton, *Crime: Its Causes and Remedies* (Boston: Little, Brown, and Company, 1911).

⁶⁶ "Galton Laboratory for National Eugenics and the Eugenics Society ", (London Cambridge University Press 1924).

⁶⁷ Lombroso-Ferrero and Lombroso; Cesare Lombroso, *The Man of Genius* (New York: Scott C. Scribner's Sons, 1891); Cesare Lombroso and Guglielmo Ferrero, *Criminal Woman: The Prostitute and the Normal Woman*, ed. Nicole Hah and Gibson Rafter, May (Durham: Duke University Press, 2004); Lombroso and Horton, *Crime: Its Causes and Remedies*.

later works of Goddard and others.⁶⁸ This transition facilitated by a complete set of psychosocial archetypes that reconfigured the idiot. The transformations occurred within and alongside materialism and naturalism. These conceptions allowed the mind to become a field of knowledge.⁶⁹

Intelligence was forged as a conception where humankind linked to the natural or animal-world, and yet allowed for a rationalist discourse derived from the configuration of empirical data. The concept of intelligence provided the perfect epistemological network upon which biopolitical-power could fuse knowledge and life to a level consistent with pre-Darwinian theological explanations for social hierarchies, status, and the human state within the natural world.⁷⁰ Robert Yerkes wrote, “social behavior: the chimpanzee fails to understand the advantages of friendly and sympathetic intercourse with creatures standing on a lower biological level than himself.”⁷¹ Following the alienists the idiot became an empirical subject seen early in the writing of naturalist with whom Darwin is corresponding, such as Galton, Voigt, and so forth.⁷² It wasn’t until the twentieth century that intelligence was configured in a cognitive domain. The various attempts to quantify human intellect gained traction with the formation of the modern nation-state, development of public education, and various forms of testing.

In the introduction to *The Descent of Man*, Darwin lays out the purpose of his text: “The sole object of this work is to consider, firstly, whether man, like every other species, is descended from some pre-existing form; secondly, the manner of his development; and thirdly,

⁶⁸ Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (Cleveland, OH: Meridian Books, 1962), 74, 147, 301.

⁶⁹ Darwin, *The Descent of Man: And Selection in Relation to Sex*; Charles Darwin, *The Origin of Species* (New York Street and Smith, 1902); E. Ray Sir Lankester, *Degeneration: A Chapter in Darwinism and Parthenogenesis* (New York: Humboldt Pub. Co., 1800).

⁷⁰ Darwin, *More Letters of Charles Darwin: A Record of His Work in a Series of Hitherto Unpublished Letters*; Huxley, *Evidence as to Man's Place in Nature*; Huxley, *Man's Place in Nature: And Other Anthropological Essays*.

⁷¹ Robert M. Yerkes, "Infant Ape and Human Child," *Science* 83, no. 2159 (1936).

⁷² Darwin, *The Origin of Species*

the value of the differences between the so-called races of man.”⁷³ Darwin's approach to arguing for the evolution of human beings is to outline how similar human beings are to other animals. He begins by using anatomical similarities, focusing on body structures, which are presumably useful in one of man's pre-existing forms. He then moves on to arguing for the similarity of mental characteristics.⁷⁴

Based on the work of his cousin Galton, Darwin asserted that mental characteristics are inherited the same as physical characteristics, and argues against the mind/body distinction for the purposes of evolutionary theory. Darwin then provides evidence for similar mental powers and characteristics in certain animals, focusing especially on apes, monkeys, and dogs for his analogies for love, cleverness, religion, kindness, and altruism. He concludes on this point that, "Nevertheless the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind."⁷⁵ He argued that civilizations evolved out of savagery.⁷⁶

During this era naturalism underpinned justification of class difference with human intellect. Regarding class variation in the initial industrial era Herbert Spencer states, “this law of organic progress is the law of all progress.”⁷⁷ Spencer coined the phrase ‘survival of the fittest’.⁷⁸ His model of intelligence relied on lines of representation from which the very act of interpretation can proceed. The early critiques of *Social Darwinism* reject this mechanistic

⁷³ Darwin, *The Descent of Man: And Selection in Relation to Sex*.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Spencer is considered Lamarckian because much of his work predates Darwin's. For more information see: Herbert Spencer, *First Principles* (New York: A.L. Burt, 1880).; or: Spencer, *The Principles of Biology*.; Herbert Spencer, *First Principles of a New System of Philosophy* (New York: Appleton and Company, 1879); Herbert Spencer, *Herbert Spencer: Selections* (New York, NY: Appleton and Company, 1902). Nietzsche critiqued his notion in *The Genealogy*, stating, “...Spencer has defined life itself as an ever more purposeful inner adaptation to external circumstances. But such a view misjudges the very essence of life; it overlooks the intrinsic superiority of the spontaneous, aggressive, overarching reinterpreting, and re-establishing forces, on whose action adaptation gradually supervenes.” Friedrich Wilhelm Nietzsche, *The Birth of Tragedy: And, the Genealogy of Morals*, trans., Francis Golfing, 1st ed. (New York: Anchor Books, 1990)., 211.

⁷⁸ Spencer, *The Principles of Biology*.

justification of class distinction, imperial conquest, and so forth. Still these critiques often accept the role of intelligence in shaping public education, immigration policy, scientific racism, and eugenics.⁷⁹ Most prominent figures of this era supported the idea of an inherited human intellect.

One of the most prominent figures to promote the scientific study of idiots in the US was Samuel Howe who worked with Seguin. Like Itard, Howe kept a 7-year old deaf mute from which he shaped his beliefs.⁸⁰ Dr. Howe in *The Causes of Idiocy*,

Idiots of this class, however, preserve the human appearance. Disfigured and even distorted as they are, they still seem human; they are like men, and not animals, in their looks. The lower or animal region of the brain predominating in size, not only renders the person more active in his animal nature, but gives him a peculiarly animal look. May not the organic peculiarities, the instincts, habits, and appearance of idiots, -true idiots-, give us some clue to the process of development of the race of mankind?⁸¹

He goes on,

The chief objects aimed at have been –...to check inordinate animal appetites; to correct unseemly habits, to accustom them to temperance, cleanliness, and order; and to strengthen their powers of self-control, so that they may be at least less unsightly or disagreeable to others ...Poverty is an inward principle, enrooted deeply within the man.⁸²

These modes of empirical observation, however, were not quantified and the link between idiocy and intelligence was loosely framed until Alfred Binet was commissioned by French government to separate children into vocational vs. academic schooling. He expanded on the forms of measurement used by Galton associating the concept of mental age with intelligence.⁸³ Working from a foundation formed in idiocy he sought to establish the boundaries of normality in an

⁷⁹ Richard Hofstadter, *Social Darwinism in American Thought 1860-1915*, American Historical Association Albert J. Beveridge Memorial Fund (Philadelphia, PA: University of Pennsylvania Press, 1944).

⁸⁰ Burrell, 152.

⁸¹ Howe, 61.

⁸² *Ibid.*, 71-73.

⁸³ Binet and Simon, *A Method of Measuring the Development of the Intelligence of Young Children*; Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*.

objective system of measurement. In outlining the development of the *Binet-Simon Scale* the authors state they hold, "...firmly in mind the idea that the physical disorders of idiocy have no value except as signs which reveal the intelligence."⁸⁴ Abnormality remained at the core of intelligence with social and political leverage and idiocy linked to organic defects of the constitution which equals disability. The transition was to link the natural to the clinical, or observations taken from life grounded in a system of classification.

Developmental Norms

In *The Development of Intelligence in Children*, Binet starts with idiocy and difficulty classifying idiocy.⁸⁵ His solution was to ground the measurement in development. Pain was a primary mode scientists used in the attempt to quantify intelligence. Lombroso was an early figure to experiment with the use of pain and quantifying sensitivity as a measure of intelligence.⁸⁶ Binet also took this approach. He recounts,

Let us conclude with Albert, the most intelligent of our imbeciles. Raising his sleeve, without giving him any warning we pinch him sharply or prick him with a pin in a way to produce what would be a real pain to a normal person. We ask him:

Q. What was done to you?

A, You pricked me.

Q. Tell us when it pains you. (Fresh pricking — very pronounced)

A. (In a quiet voice) Ah, I feel that.

Q, But does it pain you?

A, Yes.

Albert is so little annoyed that he holds out his arm for us to continue. Other prickings which bleed do not even call out a cry. We make him plunge his index finger in water so hot as to be intolerable; he does not even wink, he holds his finger plunged a full minute in boiling water. For fear of serious results, we are

⁸⁴Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, 23.

⁸⁵ Ibid.

⁸⁶ Lombroso, *The Man of Genius*.

obliged to intervene, drawing out his finger which is a vivid red. His countenance is unmoved — the smile is still there upon his thick lips.⁸⁷

Q. Is it hot?

A. I felt nothing.

Begged to try again, he does so without hesitation, plunging his finger once more into the water. Again we are obliged to draw it out.⁸⁸

Binet eventually abandoned pain for the significance of development,

We must first trace the boundary line which separates children of five years from those of seven. It is furnished by the series of reasoned comparisons. Because of its importance, let us devote some space to it.⁸⁹

Science adopted standards or the norms of intelligence by universalizing it in the notion of childhood. However, a shift occurred with Binet from childhood to the adult, or from an abnormality rooted in the concept of arrested development (or childhood) to belief in norms associated with chronology. This represents a shift. Esquirol had wrote, “The insane man is deprived of possessions which he formerly enjoyed; he is a rich man become poor; the idiot has always been in misery and want. The state of the insane may vary, that of the idiot remains always the same.”⁹⁰ According to Binet, Esquirol set a bad example and everyone has followed him.⁹¹ Binet was convinced that, “Quantitative differences, such as we have noted, are of no value unless they are measured, even if measured but crudely.”⁹² For Binet the only true method a priori nature the idea of nature is observation taken from life.⁹³ He began measuring attention, after rejecting Séguin’s reference to will and diagnosis in personal habit.⁹⁴ Binet states,

⁸⁷ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, 64.

⁸⁸ *Ibid.*, 64.

⁸⁹ *Ibid.*, 99.

⁹⁰ *Ibid.*, 17.

⁹¹ *Ibid.*, 24.

⁹² *Ibid.*, 24.

⁹³ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*.

⁹⁴ *Ibid.*, 28-29.

Nevertheless it would seem that it already existed in Séguin's book. In that singular work, so remarkable as a practitioner's, so weak as a theorist's, we find the extraordinary idea that idiocy depends on a weakness of the will. The idiot would not be an idiot, if he did not wish to be one. It is useless to stop to discuss this absurd statement, to which several authors those at least who have had the patience to read the work of Séguin have given due justice.⁹⁵

Binet presents his method as follows,

We shall therefore be able to know, after studying two individuals, if one rises above the other and to how many degrees, if one rises above the average level of other individuals considered as normal, or if he remains below. Understanding the normal progress of intellectual development among normals, we shall be able to determine how many years such an individual is advanced or retarded. In a word we shall be able to determine to what degrees of the scale idiocy, imbecility, and moronity correspond.⁹⁶

Diagnosis is not about the uncovering of origins but around the establishment of a narrative and establishment of a pedagogic treatment. One is benefited in development through the use of intelligence, but the lack of intelligence developmental. Development is responsible for intelligence and intelligence is responsible for the ability to develop. One must also develop their intelligence that their intelligence is at the very pieces of their ability to develop once intelligence is at the very heart of development. The developmental norm gains more attraction and influence through the notion of chronological development. We have in the notion of pain, the neurological body or the nervous system in relation to the mind and will. Muscular ability is noted in relation to disorder.⁹⁷

Idiocy is seen as an arrested development; the idiotic child develops a more slowly than others intimately is accumulated an insurmountable difference. The child's intellect has a temporal dimension and therefore not a static faculty quality. Unlike other maladies idiocy

⁹⁵ Ibid., 24. Binet referring to Séguin, 1846, 170.

⁹⁶ Ibid., 41.

⁹⁷ Brockett and Seguin; Seguin, *Idiocy and Its Treatment by the Physiological Method*; Edward Seguin, "Idiocy as the Effect of Social Evils, and as the Creative Cause of Physiological Education," *The Journal of Psychological Medicine and Diseases of the Nervous System* 4, no. 1 (1870); Seguin, *New Facts and Remarks Concerning Idiocy*.

threatens the intellect and appears from the outset. Therefore all individuals can be measured in order to determine the degree to which they possess this level of idiocy. Early psychologist had fashioned was a diagnostic tool for intelligence in which all individuals could be measured according to the developmental norms. Binet advocates the division of intellect according to age.⁹⁸ The developmental norm is not linked to symptoms or universal criteria, but commands and compliance,

Imitation of simple gestures is accomplished by fixing his attention by repeating several times, "Look at me carefully," and when his attention is gained, by saying "Do as I do." The examiner then claps his hands together, puts them in the air, on the shoulders, behind the back; he turns the thumbs one about the other, raises the foot, etc. All this mimicry must be conducted gaily with the air of play. It is sufficient if a single well marked imitation is provoked; the rest is unnecessary. Do not confound the inaptitude for imitation, with bad humor, ill-will, or timidity.⁹⁹

Like those scientists who came before him, Binet shaped his notion of intelligence around the abnormal. He states,

This article will deal only with the intelligence of imbeciles, or rather, taking in our title the species for the genus, we shall set forth what is peculiar to the intelligence of all types of defectives. There is in particular, as everyone knows, a lack of development; and apropos of this we shall present a new method of psychology, which may be called psychogenetics.¹⁰⁰

Binet's term 'psychogenetics' means the genetics of behavior. In a section titled "*The Rebellious and the Docile*" Binet states,

A question very little studied, vague and difficult to state, is that of the relation which exists between character and intellectual development. This relation has been the subject of some thought and has been examined from various points of view. Thus, it has been asked if character changes with age, or if on the contrary the adult is not altogether in the child. It is very possible that the instinctive part

⁹⁸ Ibid., 38.

⁹⁹ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, 48-49.

¹⁰⁰ Ibid., 10.

of the child is conserved in the adult, but better directed by reason, and especially better suppressed in the presence of others.¹⁰¹

Here idiocy provides a link between to the exterior or external observable behavior as the sign of intelligence.¹⁰² There is a shift from the earlier period spawned by Esquirol who claimed, “idiocy is not a malady, it’s a state” which he claims “faculties never manifested ...to acquire knowledge.”¹⁰³ The link to development with adult instincts is deviation characterized as,

A sexual development beyond their age, or sexual impulses which render them dangerous. Their intellectual faculties may be absolutely intact; intellectual defect is only a secondary characteristic.¹⁰⁴

When psychology transitioned from the universalized reference to childhood to development, it could effectively link to the elements of social utility (vice and deviation), but this detachment-required appeal to norms that were less standard, more general, and more arbitrary.

Subsequently, scientists grafted the concept of capacities and traits to evolutionary discourse in the same manner that medicine is aligned to illness.¹⁰⁵ In other words, the treatment of symptoms was aligned hereditary or family lineage, which in-turn led to an emphasis on control.

The Superintendent, for the *Massachusetts School for the Feeble-minded* Walter E. Fernald wrote,

It is now generally understood that the feeble-minded and the progeny of the feeble-minded constitute one of the great social and economic burdens of our modern civilization. We have much accurate knowledge as to the prevalence, causation, social significance, prevention and treatment of feeble-mindedness, its influence as a source of unhappiness to the defective himself and to his family, and its bearing as a causative factor in the production of crime, prostitution,

¹⁰¹ Ibid., 13.

¹⁰² Ibid., 16.

¹⁰³ Ibid., 16.

¹⁰⁴ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale.*, 21

¹⁰⁵ Foucault, "Abnormal: Lectures at the College De France 1974-1975", 309

pauperism and other complex social diseases. The literature on the subject has developed to enormous proportions.¹⁰⁶

One is benefited in development through their use of intelligence, but also seen that lack of intelligence is due to development. Development is responsible for intelligence and intelligence is responsible for the ability to develop. The logic of development is linked to intellect. The idiot does not develop or develops more slowly than his peers. The parsing out of idiocy across the spectrum means that intellectual faculties are prone to the type of developmental link. Idiocy is seen as an arrested development the retarded child develops a more slowly than others intimately is accumulated an insurmountable difference.

The developmental norm gained more attraction and influence through the notion of chronology. Chronological distinction meant that unlike other maladies idiocy threatens the intellect and appears from the outset from the child. Therefore, all individuals can be measured in order to determine the degree to which they possess degrees of intellect or idiocy. What science fashioned from chronological distinctions were diagnostic tools for intelligence in which all individuals are measured according to norms. No meaning if sustained except by reference to another meaning. The object of intelligence is only found at the conceptual level and in the psychosocial typecast. The search for the meaning of intelligence by quantifying it is meaningless, because mathematical formulas are themselves meaningless. Scientists need to continually give these formulas portions and numbers meaning.

The feeble-minded had the burden and threat of apparent normalcy. They were not as easily detected and controlled through the asylum. This threat gave psychiatry the legal function of screening and classification. By 1933 scientists believed that feeble-mindedness was inherited

¹⁰⁶ Walter E. Fernald, *Report of the Commission to Investigate the Question of the Increase of Criminals, Mental Defectives, Epileptics and Degenerates* (Boston: Wright & Potter printing co. State Printers, 1911).

as a recessive trait and increasing at a dangerous rate. The *New England Journal of Medicine* reported,

The burden on society resulting from this increase in feeble-mindedness is tremendous. For one thing, persons with subnormal intelligence are always potential criminals.... The financial loss to the country is appalling. Including both the direct cost of supporting these sufferers from mental disease and the loss of productive capacity due to their incompetence... the annual total cost of mental disease for the United States [is] around three-quarters of a billion dollars.¹⁰⁷

Chronological distinction meant that unlike other maladies idiocy threatens the intellect from the outset. Therefore all individuals should be measured in order to determine the degree to which they possess intelligence. All individuals can be measured according to developmental norms.

The notion of chronological development fused childhood with adult instincts operated by conditioning the knowledge of a human essence within the confines of a discourse on life. This was not a natural or inevitable outgrowth in the scientific understanding of heredity. It was a fusion between heredity and the formation of modern intelligence. The sexual use of one's own body linked to a series of social disorders fused to the individuals very being. Degeneration was an initial concept for this configuration, but the shift to development circulated throughout the social body.¹⁰⁸ Terman and his Stanford colleagues revised Binet's test again and introduced the term intelligence quotient which was deduced from by dividing a supposed mental age by chronological age.¹⁰⁹ The Deviation Quotient is an intelligence computed by considering an individual's mental ability in comparison with the average individual of his or her own age. This

¹⁰⁷ André N. Sofair and Lauris C. Kaldjian, "Eugenic Sterilization and a Qualified Nazi Analogy: The United States and Germany, 1930-1945," *Annals of Internal Medicine: Yale University, New Haven, Connecticut* 132, no. 4 (2000): 316.

¹⁰⁸ Lankester; Daniel Pick, *Faces of Degeneration: A European Disorder 1848-1918*, Ideas in Context (Cambridge: Cambridge University Press, 1989).

¹⁰⁹ Terman, *The Intelligence of School Children: How Children Differ in Ability: The Use of Mental Tests in School Grading and the Proper Education of Exceptional Children*.

formula was promoted by David Wechsler's scale of intelligence.¹¹⁰ Working from Spearman's theory of general intelligence Wechsler sought to determine a more 'accurate representation' of intelligence which could apply across a wider spectrum of development. This measurement distributes individuals across a norm in which individuals differ to those of a similar age. Spearman conceived general intelligence as *amount of mental energy*. The deviation quotient is generated because traits and capacities are unified under a general notion of mental ability.¹¹¹

In the twentieth century, pragmatists thought the science of intelligence could break the hold of Social Darwinism as an explanatory paradigm for class distinction.¹¹² However, the concept had long-since been fashioned in the character of the abnormal and incorporated into normative discourse.¹¹³ This was most prevalent institutional role was in public education. The editors of *Applied Eugenics* wrote,

Now if education is tending toward race suicide, then the writers believe there is something wrong with modern educational methods. And certainly all statistics available point to the fact that girls who have been in such an atmosphere as that of some colleges for four years, are, from a eugenic point of view, of diminished value to the race. This is not an argument against higher education for women, but it is a potent argument for a different kind of higher education than many of the colleges of America are now giving them.¹¹⁴

During this era the human species was fragmented in a biological struggle. The state gained legal control over sexuality, breeding, and so forth. Institutions of education were linked to surveillance. This reorganization had a significant impact on our political system and marks a shift continues to shape policy. The learning disabled child was the culmination of the slow

¹¹⁰ David Wechsler, *The Measurement of Adult Intelligence* (Baltimore, MD: The Williams & Wilkins Company, 1939); David Wechsler, *Wisc-Iii: Wechsler Intelligence Scale for Children: Manual*, 3rd ed., Psychological Corporation (San Antonio: Psychological Corp., 1991); David Wechsler and Allen Jack Edwards, *Selected Papers of David Wechsler* (New York: Academic Press, 1974).

¹¹¹ Wechsler, *The Measurement of Adult Intelligence*.

¹¹² Hofstadter.

¹¹³ See Eric Foner, *Who Owns History? Rethinking the Past in a Changing World*, 1st ed. (New York: Hill and Wang, 2002); Hofstadter.

¹¹⁴ Paul B. Popenoe and Roswell H. Johnson, *Applied Eugenics* (New York: Macmillan 1918), 268.

learner, the child study movement, and the brain damaged. The *Fund for Perceptually Handicap Children* formed in 1957 later manifested into *The Association for Children with Learning Disabilities*.¹¹⁵ The term learning disabled was explicitly chose for it generality and in the DSM-III was listed under developmental disorders.¹¹⁶

Intelligence still works in self-referential fashion with the abnormal; a potential to capture in measurement a deviation, and this deviation is the basis and measure of normality.

¹¹⁵ J. Lee Wiederholt, *Historical Perspectives on the Education of the Learning Disabled*, Dcld Bonus Publication. (Philadelphia: JSE Press, 1974), 142.

¹¹⁶ See Samuel A. Kirk and Wesley Becker, *Conference on Children with Minimal Brain Impairment*, National Society for Crippled Children and Adults: Easter Seal Research Foundation. (Chicago: National Society for Crippled Children and Adults, 1963).

CHAPTER 3

FROM CURE TO CRISIS

This chapter seeks to open a series of questions, related to the manner in which the scientific concepts of intelligence, the relation of natural life to the political, and how life itself or natural life is politicized from the nineteenth to the early twentieth century. For example, in a modern liberal democracy -under what basis- can a power over sexuality and gender be exercised? Under what logic is the relation between natural life and the political body structured; how is life politicized? These questions stem from an investigation of the shift between early-nineteenth and early-twentieth century conceptions of sexuality, gender-norms, framed by a scientific concept of intelligence that drew its basis from notions of abnormality. This concept of intelligence and its representation in scientific literature helps to expose the connections between scientific practices, theoretical structures, underlying assumptions and contemporary beliefs about sexuality, gender, and therefore a mode to unravel the matrix of beliefs comprising the interplay between theory construction and social interests.¹

Cure and Social Control

In 1810 *The Philadelphia Medical Museum* detailed the death of a teenage male, attributing the death specifically to a habit of masturbation, a section of the report states,

¹ This section looks at how the model of intelligence mediates between the theory and the external world, or reality. As Nancy Cartwright suggests, “Although the doctrines about the relation of models to theory changed from the 1960s to the 1990s, the dominant view of what theories do has not changed: theories represent what happens in the world. For the semantic view this means that the models represent what happens.” Cartwright, 179.

he complained of a pain in the head, dullness, vomiting, want of sleep, frightful dreams, &c. of which he afterwards died. It is certain that 'every part of the body clubs its portion of semen; of course by the loss of semen every part of the body suffers---the brain as it is one of the delicacies of the human structure, was certainly in this case debilitated and out of order...'²

Fifteen years later, a *case-study* in *The American Medical Review* details a connection, linked not to semen, but simply attached to the act of masturbation itself,

At the age of fifteen years, the wretched creature was still living, in a complete state of mental imbecility; and it now became necessary to confine her arms in bed, to prevent her from committing incessant masturbation. As her intellectual faculties had for a short time appeared somewhat improved, it became a matter of considerable importance to put an effectual stop to the vice, which would so certainly have been the cause of her remaining in a state of mental hebetude. After many fruitless efforts to effect this purpose by other means, the extrapolation of the clitoris was had recourse to, in the month of June. The patient was watched, and her libidinous propensities gradually decreased. From this time her mental powers slowly improved. She learnt to write letters, and was capable of receiving other instructions.³

The conclusions drawn from this case were that 'idiotism is curable', and that excessive masturbation 'will confirm a state of idiotism', though the author reports the cause of idiocy as 'hard to determine'.⁴

Throughout the eighteenth and nineteenth century onanism or masturbation was linked to degeneracy and mental defects.⁵ These beliefs retained a position at the center of beliefs on degeneracy as the crusade against masturbation continued into the late nineteenth century. Masturbation was linked to various forms of degeneracy, and during this period,

² Jeanne Lehman, "History of a Case of Death from Onanism," *The Philadelphia Medical Museum* 1, no. 3 (1810).

³ "Extripation of the Clitoris," *The American Medical Review and Journal of Original and Selected Papers in Medicine and Surgery* 2, no. 1 (1825): 188-189.

⁴ *Ibid.*, 189.

⁵ See Edward Baker, "A Few Cases Illustrative of the Effects of Onanism," *Medical Examiner and Record of Medical Science* 9, no. 19 (1846); Léopold Deslandes, "Bodily Purity Vs. Solitary Vice," *The Graham Journal of Health and Longevity. Devoted to the Practical Illustration of the Science of Human Life, as Taught by Sylvester Graham and Others* 3, no. 7 (1839); Léopold Deslandes, *A Treatise on the Diseases Produced by Onanism, Masturbation, Self-Pollution, and Other Excesses*, 3rd ed. (Boston: Otis, Broaders, and Company, 1841); Lehman; Wilhelm Stekel, *Auto-Erotism: A Psychiatric Study of Onanism and Neurosis*, trans., James S. Van Teslaar (New York, NY: Liveright Publishing Corp., 1950).

idiocy was medicalized and organized around the attributes of illness. According to this paradigm sexual deviance gives way to degeneracy of the mind, and subsequently degeneracy subsides in the absence of the specific deviant behavior. As configured in the individual afflicted with the idiocy, this conception of intelligence is not static, fixed, nor determined. During this era, psychiatry promoted its legitimacy and organized its function around treatment and cure.⁶ The continuum of mental ability was not conceived to be the sole determinant of an individual's position in life.⁷ Furthermore, the monitoring and control over sexuality was directed primarily at the bourgeois, who could compromise their station in life.⁸ In other words, the child of bourgeois society must be monitored to protect their existing superiority. The possibility of curing validated and made the monitoring, control, and power exercised over the body. Masturbation in the early nineteenth century jeopardized the intellectual capacity of the child in family domain until hereditary causation. In the industrial era science grafted social-vice and physical ability as acquired mental capacity upon the entire social body. In the early twentieth-century another significant shift occurs.

In the early twentieth century idiocy was characterized from medical symptoms to pathology. Masturbation lost its place at the center of beliefs on degeneracy the refined figure

⁶ Michel Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976", Picador. Foucault, "as soon as Psychiatry becomes a technology of the abnormal, of abnormal conditions fixed by heredity through the individual's genealogy, it is easy to see that the project of curing has no meaning" And further more: "Another moral, rather than epistemological, advantage of this heredity causality is that when the analysis of childhood and its abnormalities clearly shows that the sexual instinct is not naturally tied to the function of reproduction, heredity allows responsibility for aberrations appearing in descendants to be shifted back to previous mechanisms of reproduction in the ancestors. In other words, the theory of heredity allows psychiatry of the abnormal to be not just a technique of pleasure or the sexual instinct at all, but rather a technology of the healthy or unhealthy, useful or dangerous, profitable or harmful marriage."

⁷ Baker; Deslandes, "Bodily Purity Vs. Solitary Vice."; Deslandes, *A Treatise on the Diseases Produced by Onanism, Masturbation, Self-Pollution, and Other Excesses*; Lehman; Stekel.

⁸ Laura Ann Stoler, *Race and the Education of Desire: Foucault's History of Sexuality and the Colonial Order of Things* (Durham, NC: Duke University Press, 1995).

of the abnormal emerged.⁹ Following this shift there is no longer the individual afflicted with idiocy, but *the idiot* and constituent figure of the *abnormal child*.¹⁰ Subsequently sexuality became the focal point of a bio-power promoted -not in the cure of individual, but the protection of life and defense of society.¹¹ This transition to hereditary causation shifts a medical notion of cure to a conception of abnormality situated in the individual's ancestry determined by evolutionary factors. The danger no longer existed purely in the sexual act itself but at the very potential of sexuality preceding the level of desire. When this shift occurred the notion of cure is abandoned, and a discourse of social control emerged. There was a transition from sexual acts or behaviors to figures of social/sexual deviance.

The conception of intelligence -rooted in the abnormal- quickly became the basis for social control. When heredity causality and intelligence converged, this knowledge required modes of representation to promote its utility in the apparatuses of social control. One of the most popular concepts was feeble-mindedness, which maintained a foremost position due to its perceived relation to instinct and the potential for the afflicted to function in society and breed. This figure and the problem of 'appearing normal' became the primary mode for social control.

It was the concept of intelligence that fused in the economy of pleasure with the concept of instinct.¹² Beyond general social norms, psychiatry had a legal function as the ideology provided a justification for a legal apparatus. The basis of power drawn from the scientific study of intelligence and abnormality represents the paradox that in political

⁹ See Foucault, "Abnormal: Lectures at the College De France 1974-1975".

¹⁰ Deleuze and Guattari.

¹¹ Susan Currell and Christina Cogdell, *Popular Eugenics: National Efficiency and American Mass Culture in the 1930s* (Athens, OH: Ohio University Press, 2006); Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976"; Stephen Morton and Stephen Bygrave, *Foucault in an Age of Terror: Essays on Biopolitics and the Defence of Society* (New York: Palgrave 2008).

¹² Foucault, "Abnormal: Lectures at the College De France 1974-1975" ., 305

context of the juridical-constitutional grounds, which takes the legal form of what cannot have legal form.¹³ This was not a distinct function of medical power, but the interplay between representations, scientific functions, and knowledge of life.¹⁴ One finds the promotion of life through the notion of decline and crises, and the potential of science in the development of life.¹⁵ From this point, the significant impact of the human sciences shifted from the political notion of one constructed variation of humanity over another –to the defense- of social purity from the abnormal. The scientific conception of intelligence here is unique for a few reasons. It was a primary framework to link social norms and political significance to notions of ability and merit.

To explain a scientific enterprise established-in and elevated-above the domains of knowledge and life, one must understand how the presuppositions and propositions are organized and how this organization operates in the service of social interests. The science of intelligence in the twentieth century offers a means to investigate the function of evolutionary theory in the arrangement of the social body.

Intelligence played a formative role in configuring social interests into scientific discourse. There are significant scientific functions that remain in popular in society and the human sciences.¹⁶ The constitution of these ‘types’ allowed for distinct concepts to be inscribed within various axiological frameworks and intelligibilities. In this discourse, the concept of scientific intelligence raised the opinions on sexuality, race, and gender to the

¹³ Giorgio Agamben, *State of Exception* (Chicago, IL: University of Chicago Press, 2005), 1.

¹⁴ Foucault, "Abnormal: Lectures at the College De France 1974-1975"., 309.

¹⁵ Henry H. Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness* (New York, NY: Macmillan 1912); Noll and Trent; John David Smith, *Minds Made Feeble: The Myth and Legacy of the Kallikaks* (Rockville, MD: Aspen Systems Corp., 1985).

¹⁶ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York, NY: Vintage Books, 1973); Foucault, "Abnormal: Lectures at the College De France 1974-1975".

level of a paradigmatic knowledge. The representations organized the productive elements and stabilizing concepts.

The body of instinct fused opposition between the productive body and the body of pleasure. The sexual use of one's own body linked to a series of social disorders connected to the individuals very being. Degeneration was an initial concept for this configuration, but this shift circulated throughout the social body upon the development of a hereditary notion of intelligence.¹⁷ This notion of development fused childhood with adult instincts. The apparatus used to fuse these practices with the scientific propositions and disciplinary validity was the concept of intelligence, which operated by conditioning the knowledge of human essence within the confines of a discourse on life. In this era the family and the home became a site of the sacred and the profane. Control over sexuality and the family's role in observing and monitoring sexual impulse and a location for the protection of virtue. The home transferred to a location in which the private sphere and family went from the locus of control to the very existence of potential danger and threat to the entire body-politic.¹⁸

The identification of the feeble-minded, and state control over families had an economic basis. It is the nature and expression of their defect that the dual connection of the psychiatrists' power to identify and define what at the same time it controls. Walter Fernald wrote,

I am tempted to emphasize the fact that those who have had trouble and conquered have often been the most helpful and effective pioneers and the most thoughtful agent of constructive reform. We need persons willing to struggle and able to struggle. We must strive to avoid wanton disaster; but we must also trust

¹⁷ Pick.

¹⁸ Seguin, *Idiocy and Its Treatment by the Physiological Method*; Seguin, "Idiocy as the Effect of Social Evils, and as the Creative Cause of Physiological Education."; Seguin, *New Facts and Remarks Concerning Idiocy*; Edward Seguin, *Report on Education*, 2nd ed. (Milwaukee, WI: Doerflinger Co., 1880); Edward Constant Seguin, *Importance of the Early Recognition of Epilepsy* (New York: Trow's Printing and Bookbinding Co, 1881).

our ability to save good traits and to provide, against any possible mishap, such improvements of our marriage standards that the undesirable traits may be bred out as often as they used to be bred in. Somehow, I cannot be a fatalist. I am, therefore, very cautious about the advice to suppress nature's promptings for progeny unless I consider the mating doubly charged and the parents unfit to create a home. What might a helpful civilization do toward preventing such disaster as is represented by the school children mentioned earlier? The first help is protection of the foolish against playing with the holiest of all sacraments — with marriage.¹⁹

Eventually the state gained legal control over sexuality. This reorganization had a significant impact on our political system and linked institutions of education to surveillance. One can also see practices of confession and self-examination refined in the production of scientific and institutional literature.²⁰

The human sciences gaze has since remained fixated in the body, and within the realms of mental space. This space, where language and the body intersect is not neutral or uncontested. The approach to deconstructing these formations is difficult because the science does not remain fixed or static and does not function solely in the 'objects' it constructs.²¹

With the formation of evolutionism and Darwinian materialism the interaction had eclipsed the domains of knowledge and life. The vast domain of scientific knowledge assembled over the nineteenth and twentieth century is a boundary formation. In the context of social defense the family was mediated with the configuration of individuals at its margins. The natural order had remained rooted in the precepts of religious order, and then found its manner of articulation in hereditary causality. The birth of evolutionism in the late nineteenth century, and

¹⁹ Walter E. Fernald, *Report of the Special Commission Relative to the Control, Custody, and Treatment of Defectives, Criminals, and Misdemeanants*, Massachusetts Special Commission on the Control Custody and Treatment of Defectives Criminals and Misdemeanants (Boston: Wright & Potter Printing Co. , 1919), 148-149.

²⁰ Foucault, *The Essential Works of Foucault, 1954-1984*, 177.

²¹ Foucault suggests, "...the problem arises of knowledge whether the unity of a discourse is based not so much on the permanence and uniqueness of an object as on the space in which various objects emerge and are continually transformed." Foucault, *The Archaeology of Knowledge*, 32.

the development and converging of biology with psychiatry over the nineteenth century facilitated this shift, elevating psychiatry interpretations of the human condition.

Intelligence testing expanded at the outset of World War-I when Robert Yerkes used large-scale group administration of ability tests for service induction into the Army.²² Yerkes then head of the American Psychological Association developed two tests of human abilities Army Alpha, which required reading ability, and the Army Beta which did not require reading ability.²³ The popularity of intelligence testing the US expanded between World War I and the 1930s. During this period one of Yerke's colleagues Carl Brigham helped create many aspects of the testing culture which exist today including the foundations of the SAT, the scale, the rating system, the practice of burying new test questions in actual tests, equating tests from one year to another, and the internally justified item-analysis method.²⁴

In 1916 Terman and his Stanford colleagues revised Binet's test again and introduced the term intelligence quotient which was deduced from by dividing a supposed mental age by chronological age.²⁵ The Deviation Quotient is an intelligence computed by considering an individual's mental ability in comparison with the average individual of his or her own age. This formula was promoted by David Wechsler's scale of intelligence.²⁶ Working from Spearman's theory of general intelligence Wechsler sought to determine a more 'accurate representation' of intelligence which could apply across a wider spectrum of development. This measurement

²² Clarence Yoakum and Robert Yerkes, *Army Mental Tests* (New York, NY: H. Holt and Company, 1920).

²³ Gould; Yoakum and Yerkes.

²⁴ Carl Brigham, "Variable Factors in the Binet Tests" (Thesis, Princeton University Press 1917); Carl Brigham, *A Study of American Intelligence* (Princeton: Princeton University Press 1923); David; Doerr Owen, Marilyn, *None of the Above: The Truth Behind the Sat*, Rev. and updated. ed., Culture and Education Series (Lanham, MD: Rowman & Littlefield Publishers, 1999).

²⁵ Terman, *The Intelligence of School Children: How Children Differ in Ability: The Use of Mental Tests in School Grading and the Proper Education of Exceptional Children*.

²⁶ Wechsler, *The Measurement of Adult Intelligence*; Wechsler, *Wisc-Iii: Wechsler Intelligence Scale for Children: Manual*; Wechsler and Edwards, *Selected Papers of David Wechsler*.

distributes individuals across a norm in which individuals differ to those of a similar age.

Spearman conceived general intelligence as *amount of mental energy*. The deviation quotient is generated because traits and capacities are unified under a general notion of mental ability.²⁷

In the twentieth century, pragmatists thought the science of intelligence broke the hold of Social Darwinism as an explanatory paradigm for class distinction.²⁸ Although this revelation following WWII and the Holocaust damaged the popularity of intelligence in social policy there was a resurgence of intelligence of scientific racism throughout the twentieth century.²⁹ It's most prevalent institutional role was in public education. The institutional annexation of idiocy by psychiatric power and moral treatment of idiots as well as the process of confinement and the stigmatization of the dangerousness of idiots which was based on recourse to the notion of degeneration.

As noted intelligence is an organizing principle used to guide the conceptual basis stabilizing binaries for conceptions of gender, sexuality, race, the family, and so forth.³⁰ This occurs after naturalizing the concepts in scientific discourse. The human sciences gained control over life by concerning itself with the promotion of life. One of the primary factors ignored in the consideration of eugenics is the positive humanistic rhetoric. For example, marriage consultation and counseling was popularized by eugenic ideology.³¹ Psychologists

²⁷ Wechsler, *The Measurement of Adult Intelligence*.

²⁸ Hofstadter.

²⁹ Russell Jacoby, Naomi Glauberman, and Richard J. Herrnstein, *The Bell Curve Debate: History, Documents, Opinions*, 1st ed. (New York, NY: Times Books, 1995).

³⁰ See Donna Jeanne Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York, NY: Routledge, 1991), 177.

³¹ Robert Flynn and Kathleen Nitsch, *Normalization, Social Integration, and Community Services* (Baltimore, MD: University Park Press, 1980); Robert Lowe, *Marriage Breakdown and Children* (Guildford, England: College of Law, 1975); Robert Lowe, *Marriage, Divorce, and Cohabitation*, Crash Course Lecture - College of Law (Guildford: The College of Law, 1978); Paul Popenoe, "Race Welfare," *New York Times* Sept 26 1926; Ruth Schuler, "Eugenic Marriage Legislation in the United States, Part II: Mental Incapacity," *Social Service Review* 14, no. (1940); Thomas W. Shannon and W. J. Truitt, *Nature's Secrets Revealed: Scientific Knowledge of the Laws of Sex*

linked elements of social utility and vice to intellectual deviation.³² This detachment, however, required appeal to norms that were less standard, more general, and more arbitrary. Subsequently, intelligence was used to graft capacities and traits to evolutionary discourse in the same manner that medicine was aligned to illness.³³ In other words, the treatment of symptoms became aligned with notions of hereditary causality and therefore an emphasis on control over the belief in cure. The formation and promotion of this ideology and the shift to a hereditary causality for crime and social vice coincided with the development of a discourse of social control. While abnormality jeopardized the intellectual capacity of the child in the family domain, hereditary causation would lead science to graft social vice and the compromising of physical ability upon intellect.³⁴ With the move from illness to idiots conceived of as children the treatment of idiots became education or the ability to impose education on them. The sexual use of one's own body became linked to a series of social disorders fused to the individuals very being.³⁵

In the context of degeneration or the idea that human evolution was threatened by genetic inferiority, science never fixed itself to a cohesive axiom or theory but rather concerned itself with a variety of concerns.³⁶ Degeneration was an initial concept for this configuration but this shift would circulate throughout the social body upon the development of a hereditary notion of intelligence. This notion of development fused childhood with adult instincts.³⁷ The apparatus used to fuse these practices with the scientific propositions and disciplinary validity was the

Life and Heredity; or, Eugenics: Vital Information for the Married and Marriageable of All Ages (Marietta, Ohio: The SA Mullikin Company, 1920).

³² Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

³³ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

³⁴ Ibid.

³⁵ Michel Foucault, *The History of Sexuality*, trans., Robert Hurley, 1st ed. (New York, NY: Pantheon Books, 1978).

³⁶ Pick, 15.

³⁷ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

concept of intelligence, which operated by conditioning the knowledge of a 'human essence' within the confines of a discourse on life. This was not an inevitable outgrowth in the scientific understanding of heredity, intellect, or social vitality.³⁸

Scientists assumed control over sexuality and the family's role in observing and monitoring sexual impulse. The protection of virtue would transfer to a location in which the private sphere and family went from the locus of control to the very existence of potential danger and threat to the entire society.³⁹ During this era one can see the transformation in which the human species was fragmented in biological struggle.⁴⁰ State power is seen in juridical control and control over sexuality, breeding, and the domain of life. This reorganization had a significant impact on our education system and marks a shift that has continued to shape policy.⁴¹

Intelligence is a guiding concept in this formation and this formation linked education to surveillance.

The studies initiated by Arthur MacDonal are perhaps the most telling justification for surveillance in schools.⁴² MacDonal was influenced by Lombroso, who'd wrote on education, crime, and criminality,

Where education is widely diffused the list of educated criminals increases, but the list of illiterate criminals increases still more, which shows that the criminality of the class with a moderate amount of education is decreasing.⁴³

Like MacDonal, Lombroso believed the conduct of pupils determined by hereditary factors,

To sum up: the organic type is constantly being fixed by heredity. The children themselves have a large part in the manifestation of heredity, by the fact that they can assimilate more or less actively the hereditary characteristics. Hereditary influences are not all manifested at any given moment, or once for all. They are

³⁸ Ibid.

³⁹ Foucault, *Psychiatric Power*. And Foucault, "Abnormal: Lectures at the College De France 1974-1975".

⁴⁰ Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

⁴¹ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

⁴² Arthur MacDonal, *Criminology* (New York, NY: Funk & Wagnalls, 1893).

⁴³ Lombroso and Horton, *Crime: Its Causes and Remedies*, 50.

latent in the organism and manifest themselves gradually throughout the whole period of development.⁴⁴

This educational movement, studies of school children, and his statistical work on abnormality and its causes were similar to the child-study work inspired by G. Stanley Hall.⁴⁵ The implications are captured in the idea, "Education is the process of the adoption of the social order in place of one's mere animal caprice."⁴⁶ Every institution of society left its special mark and each contributed to shaping the moral and intellectual character.

The long-term impact is the idea that school structure is fixed, and something to which people should adapt. The idea that concepts like competence and performance are variables, quantifiable, uncontested, and universal upon which individuals can be ranked judged. Since the inception of public schools there were classes of segregated students on the basis perceived intellectual function and/or behavior. In the nineteenth century they were known as ungraded and special classes.⁴⁷ Children in these classes labeled as unruly, backward, or dull.⁴⁸ Compulsory education, attendance laws, and work permits directly affected the population of these classes. For example, during the depression when the states stopped issuing work permits, which excused children from school, the population of ungraded classrooms rose to record numbers.

⁴⁴ Ibid., 174.

⁴⁵ James B. Gilbert, "Anthropometrics in the U. S. Bureau of Education: The Case of Arthur Macdonald's "Laboratory"," *History of Education Quarterly* 17, no. 2 (1977).

⁴⁶ William T. Harris, *Psychologic Foundations of Education: An Attempt to Show the Genesis of the Higher Faculties of the Mind*, International Education Series, vol. 37 (New York: D. Appleton and Company, 1898), 282.

⁴⁷ *Coordinated Program of Vocational Rehabilitation and Special Education Services for the Mentally Retarded Project Rd-1640-D; Final Report, July 1, 1964 - May 31, 1967*, West Virginia. Division of Vocational Rehabilitation: Cabell Co. Wv Board of Education (Charleston, NC: 1967); E. Gardner, *Town and Country School Buildings: A Collection of Plans and Designs for Schools of Various Sizes, Graded and Ungraded; with Descriptions of Construction, of Sanitary Arrangements, Light, Heat, and Ventilation* (New York, NY: Kellogg Co., 1888); Daniel Shea, *Course of Study for the Ungraded Schools of Winnesheik County, Iowa* (Decorah, Iowa: JA Leonard, 1884).

⁴⁸ Henry H. Goddard, *Report of the Private Institution for the Education of Idiots, Imbeciles, Backward, and Eccentric Children*, ed. Henry Goddard, Institution for the Education of Idiots Imbeciles and Children of Retarded Development of Mind, vol. YA Pamphlet Collection (Barre, Mass: 1855). Barry M. Franklin, *From "Backwardness" to "at-Risk": Childhood Learning Difficulties and the Contradictions of School Reform*, Series, Youth Social Services, Schooling, and Public Policy (Albany, NY: State University of New York Press, 1994).

These classes were directly connected to industry and modes of production. During the early nineteenth century scientists, educators, and policy makers sought to provide a scientific basis for the segregation of students. For example, congressional testimony, and bills presented to the US Senate and printed as a collection in 1905.⁴⁹ Some of the conclusions reached in one of the studies on school children states: “as circumference of the head increases mental ability increases;” and that, “children of the non-laboring classes have a larger circumference of head than children of the laboring classes.”⁵⁰ The significance of this study and the conclusions reached pertain to the development of a unique scientific knowledge. Mental ability was now a discernable attribute existing on a continuum both individually and socially. On the basis that particular groups of individuals possess a limited intellectual potential or a disposition toward labor as opposed to academic work, schools began widespread tacking into industrial based education programs. Schools also favored a schedule and structure that mirrored industrial work.⁵¹ Emphasis was placed routine, assembly, and following sequential directions. This emphasis evolved to focus heavily on standard forms of perception and interpretation of semiotic structures. These changes were set forth through distinct notions of crisis and a threat.

⁴⁹ MacDonald, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes.*

⁵⁰ Ibid.

⁵¹ *Coordinated Program of Vocational Rehabilitation and Special Education Services for the Mentally Retarded Project Rd-1640-D; Final Report, July 1, 1964 - May 31, 1967*; Flynn and Nitsch; Marvin Lazerson and W. Norton Grubb, *American Education and Vocationalism: A Documentary History 1870-1970*, Classics in Education (New York: Teachers College Press, 1974); Ralph W. Tyler and McMurrin Sterling M., *Functional Education for Disadvantaged Youth*, Supplementary Paper no. 32 ed., Committee for Economic Development (New York, NY: Committee for Economic Development, 1971).

The Biological Threat

Heredity causality functioned prolifically in science and biology throughout the twentieth century.⁵² This concept of inherited intelligence was a natural ally of racism. The social operation of the intelligence required component utilized in the contemporary function of institutional power. With the establishment of hereditary causation, where the emphasis becomes not cure or treatment but rather social control, and where psychiatry becomes aligned-with, and legally sanctioned with the function of protecting society through classification, monitoring, and control of deviants, and the era in which the normative system of education is made compulsory.⁵³ Sterilization is often associated with the formation of psychiatry's normative function, but the more resilient ideologies or ideas such as *loco parentis*, the justification for compulsory attendance, reform schools, and the various models of segregation can be thought of in the context of social control mediated within the concept of social defense. In this manner, and initially in this era schools were regarded methodologically to extend the scope of a state apparatus into areas of the social body previously inaccessible.

The conception of intelligence fashioned in the abnormal provided psychiatry legitimacy and the function of defending society from the abnormal. This function gave birth to a new disciplinary power. The control over sexuality from the family's role in observation and monitoring sexual impulse and a location for the protection of virtue transferred to a location in which the private sphere and family become the very existence of potential danger and threat. With this context the normative system of education intervenes in the class and race struggle of the nineteenth and twentieth century. This role of public education is seen in the publication *Applied Eugenics*,

⁵² See Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

⁵³ Foucault, "Abnormal: Lectures at the College De France 1974-1975". 316.

Now if education is tending toward race suicide, then the writers believe there is something wrong with modern educational methods. And certainly all statistics available point to the fact that girls who have been in such an atmosphere as that of some colleges for four years, are, from a eugenic point of view, of diminished value to the race. This is not an argument against higher education for women, but it is a potent argument for a different kind of higher education than many of the colleges of America are now giving them.⁵⁴

External authority and disciplinary power mediate the function and understanding of the social body but concepts such as intelligence situate the body in a perceived natural arrangement. This arrangement, however, is not inherent but rather an experience built around power, hierarchy, custom, and social order. Within the scientific writing there is a question of what can be extracted from the individual for the betterment of society, and the individual as social verse family commodity.⁵⁵ Social defense is linked to state power and the institution of schooling to affirm ability through normative technologies. The normative system of evaluation and screening occurs through a process of externally mediated identity formation.

There were both explicit forms and the more opaque and dispersed forms of power. *The Journal of Psycho-Asthenics*, which was shaped around the psychiatric care of the feeble-minded, contained the following depiction of students in institutions, “The boys are segregated into classes for larger industrial work at the age of thirteen and a half, and the girls into vocational classes especially fitted to meet their needs between thirteen and sixteen years.”⁵⁶ This explicit form, however, was infused in the assumptions of a broad disciplinary apparatus.

⁵⁴ Popenoe and Johnson, *Applied Eugenics*, 120.

⁵⁵ Robert C. Lowe, *Digest of State and Territorial Laws Granting Aid to Dependent Children in Their Own Homes as of March 1, 1936*, United States Work Projects Administration (Washington, DC: United States Work Projects Administration, 1936); Robert C. Lowe and John L. Holcombe, *Legislative Trends in State and Local Responsibility for Public Assistance, 1934 to 1936*, United States Work Projects Administration (Washington, DC: United States Work Projects Administration, 1936).

⁵⁶ "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons," 22. Vol. XVII Sept. 1912 No. 1., 22.

Scientists also made sure to note that sterilization was, “accomplished through a surgical operation that does not unsex the individual.”⁵⁷

Classrooms are the manifestation or institutional analogy of the private sphere shaped conditioned through the political sphere. The disciplines of psychology, sociology, and psychiatry had a legal and judicial power connected to the socialization and treatment of individuals. This formation inherently connected the family or private sphere to the values and norms of the public/political sphere. Technologies of regulation and technologies of discipline cover the whole surface between biology (population) and the organic (the body). With the shift from the biological threat as population concern to the economic threat one finds the promotion of life through the notion of decline and crises, and the potential of science in the development of life. However, this gave birth to notion of a biological struggle between races. The biological struggle between races fostered through the science of the abnormal.

The theory of evolution incorporates a variety of components, which in the intelligence helped assemble, configuring unrelated concepts and opinions into a cohesive axiological framework and social intelligibility. When a claim is made to the basis of science, this can mean the claim is a proposition layered upon structured propositions felt to be more natural or real, as seen in the following quote from, *Man and Abnormal Man*, a collection of studies, congressional testimony, and bills presented to the US Senate and printed as a collection in 1905,

While the girls excel the boys in ability in most branches, they at the same time show higher percentages of average ability, and therefore less variability.... From this special point of view, boys might be considered superior to the girls, for, from an evolutionary point of view, the superior species varies the most, and therefore may adapt itself better to circumstances.⁵⁸

⁵⁷ Paul Popenoe, "A Debate on Sterilization," *Forum and Century* 14, no. 1 (1935).

⁵⁸ This study provides a detailed account of measurement of school children referred to in documents as ‘Anthropometrics’. Researchers conducted additional studies to determine links between unruly school behavior and

Intelligence is not only a theoretical edifice, or reflection, but a functional requirement for state control over what is understood as aberrant and deviant behaviors; ones that exist not merely as syndromes of abnormalities, but rather as abnormal syndromes.”⁵⁹ This formation allowed for surveillance and the organization of information. These ascetics also implicated not just the individual, but all of society. It was through law that sterilization was manifested and carried out, yet the appeal was always to a law not bounded by religion, ethics, sovereignty, or discipline. It was in accordance to a natural law, which scientific thought and society justified social control. The moralization imposed by scientific explanations derived from various paradigms, and within various forms of institutional episteme.

The conception of human development as related to human evolution becomes socially conditioned within the paradigm of science, but this paradigm is centered and stabilized through the operation of the concept of idiocy & intelligence. From this point interpretation becomes circular, meaning it returns to the basis of its foundation.⁶⁰ This era saw the concept of intelligence used to shape public perception of vice, morality, and crime. Very few reports, for example, connected the issue of prostitution to any other than morality or questioned the link between feeble-mindedness and prostitution. A notable exception, for example, is seen in a report from the *Virginia State Board of Charities and Corrections*, which states,

The chief objection raised to the foregoing studies is that, with the exception of Massachusetts Investigation, most of the women tested were in custody, which might seem to indicate that as mental weakness was responsible for their failure to make a living in legitimate callings, so also it had lessened their chances of keeping clear of the law, and this might suggest that the vast majority of those who escaped must of necessity be keener intellectually, and, therefore, groups

criminality. See MacDonald, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes*, 68.

⁵⁹ Ibid, 310.

⁶⁰ Foucault, *The Essential Works of Foucault, 1954-1984.*, 278.

examined in custody would not be typical of the army of prostitutes plying their trade at large.⁶¹

These notions of morality associated with instinct and intellect were not cohesive. It was only the more general forms of social vice that were latched upon the concept of instinct and therefore intelligence. This level of disciplinary control could not be waged over the individual and the family or private sphere without a broad socio-political rationale. The development of evolutionary theory in the late nineteenth century and the converging of biology with psychiatry would facilitate a shift in the human sciences. The emphasis on cure was abandoned when abnormality became linked directly to heredity and approached through the family genealogy as opposed to a medical knowledge.⁶²

According to the science of intelligence, each person embodies an identifiable intellectual potential and social valuation as a distinct and inherent feature. Human beings thus become inherently connected and yet completely disconnected. Therefore, intelligence must maintain the notion of abnormality in standards of chronology, normality, and development. Intelligence testing used to identify a potential, yet maintain abnormality to sustain the continuum of intellectual ability. The test seeks to uncover or confirm a continuum between abnormality and ability, that its' basis or rationale presupposes. As the basis of thought became the object of scientific discourse the disciplines like psychiatry and psychology, called on individuals to view various behaviors through paradigms of intelligence --in relation to abnormality-- internal and inherent to one's self.

⁶¹ *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded*, ed. Virginia State Board of Charities and Corrections (Richmond, VA: D. Bottom, 1915), 65.

⁶² Foucault, "Abnormal: Lectures at the College De France 1974-1975"; Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

During the early twentieth century much of the research is oriented toward eastern Europeans.⁶³ Goddard considered the father of intelligence testing in the US believed the majority of eastern Europeans were feebleminded.⁶⁴ He lobbied congress on the basis of this information to reject immigration of these groups. Many scientists devoted their research on heredity to the distribution of intelligence among immigrants.⁶⁵ Alan Ryan notes in *Race and IQ* Brigham generated similar data suggesting 39% of Russian born, 42% of Italian, and 46% of Polish individuals were feeble-minded.⁶⁶ Brigham explained the differences in terms of racial superiority ignoring any evidence to the contrary.⁶⁷

Scientists embraced the idea that intelligence varied according to race without a general consensus for the belief in a general hereditary intelligence especially for learning and development.⁶⁸ In 1866, John Langdon Down wrote an essay using ethnic phenotypes to describe forms of idiocy.⁶⁹ He used terms such as *mongoloid* and *mongolism* as classification for what he called a congenital form of idiocy.⁷⁰ Down states,

The number of idiots who arrange themselves around the Mongolian type is so great, and they present such a close resemblance to one another in mental power, that I shall describe an idiot member of this racial division, selected from the large number that have fallen under my observation....⁷¹

⁶³ James Barr, *The Aim and Scope of Eugenics* (Edinburgh: Printed by Neill & Co. Ltd., 1911).

⁶⁴ Goddard determined at one point that 83% of all Jews, 80% of Hungarians, 79% of Italians, and 87% of Russians were feeble-minded. See Henry H. Goddard, *Mental Deficiency from the Standpoint of Heredity* (Boston: Massachusetts Society for Mental Hygiene, 1916); Henry Herbert Goddard, *Human Efficiency and Levels of Intelligence: Lectures Delivered at Princeton University April 7-to-11, 1919* (Princeton, NJ: Princeton University Press, 1920); Smith; Leila Zenderland, *Measuring Minds: Henry Herbert Goddard and the Origins of American Intelligence Testing*, Cambridge Studies in the History of Psychology (Cambridge, UK: Cambridge University Press, 1998).

⁶⁵ Goddard, *Feeble-Mindedness: Its Causes and Consequences.*; Down.

⁶⁶ Montagu, 393-394.

⁶⁷ Owen.

⁶⁸ Carson.

⁶⁹ Associated eponym: Down 's Syndrome

⁷⁰ See Down: 121-123.

⁷¹ Ibid., 122-123.

He goes on to state,

Apart from the practical bearing of this attempt at an ethnic classification, considerable philosophical interest attaches to it. The tendency in the present day is to reject the opinion that the various races are merely varieties of the human family having a common origin, and to insist that climatic, or other influences are insufficient to account for the different types of man. Here, however, we have examples of retrogression, or at all events, of departure from one type and the assumption of the characteristics of another. If these great racial divisions are fixed and definite, how comes it that disease is able to break down the barrier, and to simulate so closely the features of the members of another division. I cannot but think that the observations, which I have recorded, are indications that the differences in the races are not specific but variable.⁷²

This is a point at which the abnormal is imbued with both a medical and congenital etiology.

Nonetheless, the preceding quote seems to note the ambiguity and flaws in this logic, yet the ideology persisted. This notion organized traditional western ethnic racism with a new scientific justification. These scientists naturalized these notions in biology and the organic.⁷³

Responding to Germany's compulsory sterilization law in 1934 the editors of the New England Journal of Medicine wrote that "Germany is perhaps the most progressive nation in restricting fecundity among the unfit."⁷⁴ They argued, "the individual must give way before the greater good."⁷⁵ Biology is equated with population and the organic equated to the body. The organization of the two allowed for the disciplinary order of the body.⁷⁶ The element that circulates between the two is the norm. Technologies of regulation and technologies of discipline

⁷² John Langdon Down, "Observations on an Ethnic Classification of Idiots," *Mental Retardation* 33, no. 1 (1866): 122-123.

⁷³ Galton., 335-327. In this chapter Galton also discusses his ideas about genetics and breeding in relation to Darwin's theory. Galton devotes only one chapter of *Hereditary Genius* called *The Comparative Worth of Different Races* to illustrate his belief of inherited traits among races

⁷⁴ Sofair and Kaldjian.

⁷⁵ Ibid.

⁷⁶ Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976". 252-253.

cover the whole surface between biology (population) and the organic (the body).⁷⁷ The use of biographical narratives became commonplace. Binet writes,

The clinical appearance of the two groups is much the same. The family history is needed to differentiate them. Apparently also the Binet tests are useful on this line, those who are primarily feeble-minded testing in the same manner as other feeble-minded persons, that is to say, succeeding in the tests up to a certain definite point beyond which they cannot go, whereas those who are primarily normal but have deteriorated as a result of the epilepsy, show a scattering in their answers, that is to say, in some particulars, they show the intelligence of, for example, ten- year-old people while in others, they are only six, the degenerative processes set up by the epileptic attacks having destroyed certain mental processes and not others.⁷⁸

The narratives are accompanied by visual representations of family lineages, where, for example, a dotted line was used to indicate children born out of wedlock. They often contain a legend and code for various social vices, for example, the abbreviation ‘sx’ for sexually immoral, ‘A’ for alcoholic, C for criminality, and so forth. The code for ‘sexually immoral’ was generally supplemented with terms such as ‘red light district’ without a clear indication of the scientific utility. Circles were used to represent males, and squares females. These representations pertain to a specific family lineage, but represent a schematic for marriage, sexuality, procreation, and so on. These representations have fundamental impact for the scientific practice of scientific inference. Subsequently, the concept of intelligence can hinge various social interest and scientific functions within a formal line of logical inference. The narrative was written out portraying the conception of natural occurrence linked by blood, genes, sex, and nature.

The development of hereditary causation left society in the grasp of purification rituals and the sacrament of scientific rationalism. Within scientific writing there is a question of what can be extracted from the individual for the betterment of society, and the individual as a social

⁷⁷ Ibid., 252-253.

⁷⁸ Henry Herbert Goddard, *Heredity of Feeble-Mindedness*, 3 vols., Reprinted from American Breeders Magazine, vol. 1 (Cold Spring Harbor, New York: 1911).

commodity.⁷⁹ These notions were infused in the principles guiding the social practices shaped around the concepts of man/woman, humankind/nature, virtue/vice, and good/evil in the twentieth century. The case studies are the articulation of scientific principles as well as modes of representation, and read as the attempt to structure a human essence within the confines of a formalized paradigmatic system of knowledge. Studying this interrelation of concepts and representations used to fashion social interest into a science allows us to question which the organizing principles and essential ideas still function in today's society. Because intelligence operated in a reconfiguration of the scientific ideas and the bio-politics popularized in the *fin de siècle*, there remains a need to trace the transition from scientific presuppositions to a web of interrelated beliefs. The general aspects of natural selection in the empirical genre, rationalist discourse, and development of a scientific intelligence could function as an optimistic and positivist science with an emphasis on life.

The human sciences utilized disciplinary power, but could only gain control over life by concerning itself with life. For example, marriage consultation and counseling grew out-of and was popularized by this ideology. An Indiana law passed in 1905, provides for compulsory sterilization of criminals, idiots, and imbeciles.... The second provides for uniform marriage...and goes on to state, "No license to marry should be issued where either of the parties of unsound mind or under guardianship as a person of unsound mind.... The need for uniform of national and uniform marriage and divorce laws is emphasized by any attempt at legislation in the interest of the purity, health, and vigor of the state."⁸⁰

⁷⁹ See "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons."

⁸⁰ "Highways and Byways," *The Chautauquan: A Weekly News Magazine* 67, no. 1 (1912).

Psychiatry was aligned and became legally sanctioned with the function of protecting society through classification, monitoring, and control of deviants.⁸¹ However, this did not occur until the disciplines associated with abnormality mapped social norms, cultural practices, and political significance onto the framework of intellect. For example, a report from the *Virginia State Board of Charities and Corrections* states, “The disregard for consequences, the inability to choose the right line of conduct, the lack of self-control and of foresight shown here, all are marked characteristics of the feeble-minded.”⁸²

Science accomplished an empirically based conception of humankind that remained linked to the natural or animal-world, and yet allowed for rationalist discourse derived from the configuration of empirical data. With the transition during the development of psychiatry from sexual acts or behaviors to figures of social deviance science found an intelligibility to guide its knowledge formation. They played a formative role in contemporary sexual ascetics and political ideology. The prostitute and the feeble-minded were two of the most popular figures popularized during this era. The following quote, reflects the social conception of feeble-minded in the early twentieth century,

Feeble-mindedness is a word that perhaps has caused undue alarm of late. Many of the ills from which society suffers have been laid at its door: crime, pauperism, vagrancy, immorality, to mention only a few. The rapid propagation of the feeble-minded, it has been said, means the undermining of our racial stock and threatens the decay of civilization.⁸³

For Goddard, the concept of feeble-mindedness provided a network to link intellect –to- instinct related to social problems, for example, the prostitute as feeble mindedness.⁸⁴

⁸¹ Foucault, "Abnormal: Lectures at the College De France 1974-1975"., 316.

⁸² *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded*, 67.

⁸³ Arthur K. Davis, "Our National Iq," *New York Times* October 18 1948.

⁸⁴ Lombroso and Ferrero, *Criminal Woman: The Prostitute and the Normal Woman*.

In 1912, Goddard published his infamous *Kallikak Family* case study, in which he claims that women carry the recessive gene for feeble-mindedness. Using the pseudonym *Kallikak*, derived from *Kallos* (beauty) and *Kakos* (bad), the work suggests that Martin, a man of social prominence seduced by a high functioning feeble-minded tavern girl, Deborah with whom he produced a line of degenerate children. Martin Kallikak was said to have a line of superior or descent with his wife, yet Deborah's family garnished Goddard's focus.⁸⁵

Goddard's narrative is a depiction of a family lineage plagued by a line of alcoholics, criminals, and sexually immoral individuals, and so forth.⁸⁶ This type of narrative is seen in scientific journals throughout the early-to-mid twentieth century. Science maintained the relationship between the concepts of feeble-mindedness and social vice with implications for class, race, and gender. Goddard's developed extensive biographical descriptions of individuals to which he attached everything from a disorderly house, pauperism, promiscuity, and criminality to feeble-mindedness, backwardness, and degeneracy.⁸⁷ The reconfiguration of the family portrayed aberration simultaneously with the periodic representations of pattern and predictability; a pattern, in which the abnormal are found to occur naturally.⁸⁸

Science maintained the relationship between the concepts of feeble-mindedness, social vice, with implications for class division and gender. Goddard's primary contribution was the collection and operation of extensive biographical descriptions of individuals, by which he was

⁸⁵ Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*.

⁸⁶ Henry H. Goddard, "Heredity of Feeble-Mindedness," *Proceedings of the American Philosophical Society* 51, no. 205 (1912); Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*.

⁸⁷ *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded*.

⁸⁸ Serge Androp, *The Probability of Commitment for a Mental Disorder of Anykind Based on the Individual's Family History*, Eugenics Research Association Monograph Series (Cold Spring Harbor, NY: The Eugenics Record Office 1935); Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*; K. E. Trounson, *Family Council Law in Europe: A Study Undertaken at the Instance of the Eugenics Society, 1927-1929*, ed. Eugenics Society London England (London: The Society, 1930).

to attach everything from a disorderly house, pauperism, promiscuity, and criminality. These studies were attached to the figure of the feeble-minded or to the figure of the abnormal; backwardness and degeneracy.⁸⁹ For Goddard, the concept of feeble-mindedness provided an epistemological network upon which to link prostitution, drunkenness, delinquency, and so forth.⁹⁰

The shift in axiological frameworks, the demands of state and institutional power, and the development of this knowledge over life was immersed in a variety of domains traditionally preceded over by religion. These divisions formed in this era remain imbedded in the organization of society. They form a representation that obscures the lines between the theoretical and social function of knowledge. The scientific case studies, of Goddard and others, dissolve the environmental aspects that appeared to undermine the predictability and function of intellect, social vice, and criminality. They dictate a conception or indication of success in life, or justification of class division, and they were reduced to leave only symbolic markings for what are, reserved for social control. In the scientific narratives prostitution and marriage are reconfigured under the context of life. This discourse presents a knowledge associated with a fall from social morality --one that threatened life-- with this threat as the basis for life. Sections of reports carry titles such as “Reasons Assigned for Entering the Life” and “The Girls That Went Wrong.”⁹¹

⁸⁹ *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded.*

⁹⁰ See Goddard, *Feeble-Mindedness: Its Causes and Consequences*; Henry Herbert Goddard, *School Training of Defective Children*, School Efficiency Series (New York, NY: World Book Co., 1914).

⁹¹ *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded*, 67-68.

The ideological strands and institutional structure has shifted in public perception in the post WW-II era. Perhaps, most significant in this shift is the anthropological notion of racial division to a racism used to validate one constructed variation of the species over another to the issue of innate ability determined by heredity.⁹² The connections intelligence had with the more extreme aspects of eugenic ideology are far reaching. By the interwar period intelligence achieved widespread scientific and social applications.⁹³ For example, by the mid 1940s the work of Goddard and others was utilized as Nazi propaganda as the concept of merit was transformed to a biological struggle between races.⁹⁴

The conditioning of mentalities, the rhetoric, myth, and discourse of intelligence was incorporated in contextual shifts between epistemological-axioms, scientific, and political schema. The modes and technologies produced did not remain autonomous and unique nor was it a conception derived from a cohesive structure. Throughout the nineteenth and twentieth century, it enveloped systems of classification, measurement, and distribution of bodies (individual, social, or otherwise) in non-relation.

The science of intelligence conceals its association to events, errors, and manifestations. It functioned in the fertile discourse of scientific racism and biology throughout the nineteenth and twentieth century. Its restructuring of our social fabric is difficult to fully assess, but we can say the social and political influence is comparable to changes that in earlier epochs were only brought about through the deployment of overt violence. Regarding the various domains, in

⁹² Smith. From the Chapter, 'The New Eugenics' which considers the relationship between racism and intelligence testing.

⁹³ See Goddard, *School Training of Defective Children*. MacDonald, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes*.

⁹⁴ Francis R. Nicosia and Jonathan Huener, *Medicine and Medical Ethics in Nazi Germany: Origins, Practices, & Legacies* (New York, NY: Berghahn Books, 2002).

which the science of intelligence operated.⁹⁵ Some historians suggest that WW-II and the Holocaust put an end to the racism incorporated in this science.⁹⁶ However, there is a persistence of social biology replicating eugenic ideas including the hereditary notion of intelligence.⁹⁷

The notion of hereditary intelligence continues to have a profound effect on society. As noted in *Race and IQ*, “In the academic world, the challenge was made explicit by the revival of attention given to the issue of race and intelligence.”⁹⁸ The utilization of intelligence as a determinant of ability shifted in relation to ethnicity, race, or gender and these shifts corresponded existing hierarchies.⁹⁹ Columbia professor and former head of the *American Psychological Association* Henry Garrett, for example, in the 1960s argued against desegregation on basis that it would “encourage intermarriage, and intermarriage will destroy the purity and quality of the white race.”¹⁰⁰ This factor extends beyond psychiatry. In 1980, sperm donated to the Repository for Germinal Choice by Stanford professor, American physicist, and co-recipient of a Noble Prize William Shockley drew great public intrigue.¹⁰¹ *The Repository for Germinal*

⁹⁵ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

⁹⁶ See Winzer, *Special Education in the 21st Century: Issues of Inclusion and Reform*.

⁹⁷ Bernard Benjamin, Peter Cox, and John Peel, *Population and the New Biology: Proceedings of the Tenth Annual Symposium of the Eugenics Society, London, 1973* (New York, NY: Academic Press, 1974); Don R. Brothwell, *Biosocial Man: Studies Related to the Interaction of Biological and Cultural Factors in Human Populations*, Eugenics Society Reader 1 (London: Institute of Biology for the Eugenics Society, 1977).

⁹⁸ Montagu.

⁹⁹ See Harding, *The "Racial" Economy of Science: Toward a Democratic Future.*, Graves., Alland., Montagu., Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*, 1st ed. (Cambridge, Mass.: Harvard University Press, 1995)., Thomas F. Gossett, *Race: The History of an Idea in America*, New ed., Race and American Culture (New York, NY: Oxford University Press, 1997)., Karier, *Scientists of the Mind: Intellectual Founders of Modern Psychology.*, Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹⁰⁰ See Henry E. Garrett, *Testing for Teachers*, 2d ed. (New York, NY: American Book Co., 1965); Henry E. Garrett, *Iq and Racial Differences* (Cape Canaveral, FL: H. Allen, 1973); Henry E. Garrett and Matthew Schneck, *Psychological Tests, Methods, and Results* (New York, NY: Harper & Brothers, 1933); Henry Edward Garrett, *Children: Black and White* (Kilmarnock, VA: Patrick Henry Press, 1967).

¹⁰¹ "Dr.Shockley's Genes," *New York Times* March 4 1980; Harold M. Schmeck Jr., "Nobel Winner Says He Gave Sperm for Women to Bear Gifted Babies," *New York Times* Mar 1, 1980 1980; Patricia O'Toole, "Hers," *New York Times* June 4 1989; Saxon Wolfgang, "William B. Shockley, 79, Creator of Transistor and Theory on Race," *New York Times* Aug 14 1989.

Choice known as the *Nobel Laureates' Sperm Bank* or "genius sperm bank" in California was developed with the specific intention of breeding superior children.¹⁰²

Perhaps Shockley, however, does not pose the most significant political problem. Hereditary elements through anxieties concerning learning problems, the problem of the improvement of human capital –that which made inevitable the problem of the control, screening and improvement of human capital through reproduction, educational investments, and measurement. These educational investments took precedence in the political discourse concerning education. Intellectual abnormality was the formalizing abstractions which gave this discourse legitimacy and function; genetics inscribed in human capital was connected to this problematic of needs.¹⁰³ However, the problem of the improvement of human capital was framed as concern over abilities and the time parents devote; time mother spends with her child, what parents feed children, plus the parents education, how adaptive the child will be, and so forth.¹⁰⁴

In the late twentieth century, brain-injury gave way to the disabled learner and schools maintained control over resurgence of the neurological body, a neurological body diagnosis through observation. The neurological body reemerges in the late twentieth century with the disabled child as an economic threat seen in the child who ‘appears normal’ but thinks or learns differently; specialists equate difference with disability. Thinking is intertwined in the neurology and biology of the individual so that either realm can equate to disorder. During the last twenty or so years a number of individuals carried on this line of research and claimed to have identified

¹⁰² Lawrence Van Gelder, "Creator of a Lens and a Sperm Bank," *New York Times* February ; Jr; "Nobel Laureates' Sperm Bank Reports Its First Birth, a Girl," *New York Times* May 25, 1982 1982; "Of Men and Mammoths," *Wall Street Journal* March 5 1980; Sherry L. Wleder, "A California Sperm Bank Expounds on Its Eugenic Mission," *New York Times* July 9 1982

¹⁰³ Morton and Bygrave, 227.

¹⁰⁴ L. Seidman and others, "The Relationship of Prenatal and Perinatal Complications to Cognitive Functioning at Age 7 in the New England Cohorts of the National Collaborative Perinatal Project," *Schizophrenia Bulletin* 26, no. 2 (2000).

a similar pattern of neurologically based learning and behavior problems in intellectually normal children.

A belief that the learning and behavior problems of intellectually normal children are the result of a neurological dysfunction has had a certain appeal in contemporary American society. This transformed disability and the brain-injured or mentally defective child to a condition that affects the intellect of normal children.¹⁰⁵

Others introduced the notion of discrepancy between actual achievement and expected achievement as a way of identifying students with disabilities.¹⁰⁶ For example, Monroe writes, “a boy who chronologically is at a grade of 3.6, who on the basis of the Stanford-Binet has a mental grade of 4.0, and who has an arithmetic grade of 3.5 would have an average of 3.7.”¹⁰⁷ These formations were not derived from the study of neurology but shaped from the power invested in the school; the school used as an apparatus to establish the norm.

¹⁰⁵ Seymour Wapner, Bernard Kaplan, and Heinz Werner, *Heinz Werner, 1890-1964: Papers in Memoriam*, ed. Eastern Psychological Association: Massachusetts Psychological Association, Clark University Monographs in Psychology and Related Disciplines vol. 3 (Worcester, Mass: Clark University Press, 1966; reprint, 3); Heinz Werner and Thuma Burton, "A Deficiency in the Perception of Apparent Motion in Children with Brain Injury," *The American Journal of Psychology* 55, no. 1 (1942); Heinz Werner and Doris Carrison, *Perceptual Behavior of Brain-Injured, Mentally Defective Children: An Experimental Study by Means of the Rorschach Technique* (Provincetown, Mass.: The Journal Press, 1945).

¹⁰⁶ Marion Monroe, *Methods for Diagnosis and Treatment of Cases of Reading Disability Based on the Comparison of the Reading Performance of One Hundred and Twenty Normal and One Hundred and Seventy-Five Retarded Readers: From the Iowa State Psychopathic Hospital*, Genetic Psychology Monographs, vol. 4 (Worcester: Clark University, 1928); Walter S. Monroe, *Feeble-Minded Children in the Public Schools* (Westfield, Mass.: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons at Fort Wayne, Indiana, 1897); Walter S. Monroe, *Ten Years of Educational Research: 1918-1927*, vol. 42 (Urbana: University of Illinois Press, 1928); Walter S. Monroe and Max D. Engelhart, *The Techniques of Educational Research*, Bureau of Educational Research Bulletin, vol. XXV (Urbana: University of Illinois, 1928).

¹⁰⁷ Monroe, *Methods for Diagnosis and Treatment of Cases of Reading Disability Based on the Comparison of the Reading Performance of One Hundred and Twenty Normal and One Hundred and Seventy-Five Retarded Readers: From the Iowa State Psychopathic Hospital*, 157-158.

The School as Social Filter

Aphasia was defined by Gall is virtually identical in its definition and theoretical basis as Kirk and learning disabilities.¹⁰⁸ Both connected brain injury to a neurological basis for learning because brain injured children made similar mistakes as non-injured kids.¹⁰⁹ The following quote captures this, “Minimal brain dysfunction is probably the single most common disorder seen by child psychiatrists... the correct treatment is often dramatically effective and is always cheap and readily accessible.”¹¹⁰ This tradition reflects an underlying presumption that behavior can represent a sign of abnormality or pathology.¹¹¹ In accordance with this view, learning is a neurological process, which takes place inside the brain. Anyone who does not adapt to school must have a neurological dysfunction.¹¹² It is impossible to trace any of these supposed neurological abnormalities through any form of medical examination or test. Abnormality is inferred from observing the child's behavior. A contributing editor to *The Journal of Learning Disabilities*, wrote: “No...one has been able to demonstrate to me that a specific, distinctly unique group of behaviors differentiate LD children from many of their classmates. To build an empire on such a foundation is very dishonest.”¹¹³ After decades of research, it is not demonstrated that neurological dysfunctions exist.

¹⁰⁸ Scott B. Sigmon, *Radical Analysis of Special Education: Focus on Historical Development and Learning Disabilities* (New York: Falmer Press, 1987), 40.

¹⁰⁹ Werner and Burton, "A Deficiency in the Perception of Apparent Motion in Children with Brain Injury."

¹¹⁰ Robert M. Knights and Bakker Dirk J., *The Neuropsychology of Learning Disorders: Theoretical Approaches: Proceedings of an International Conference, Korsør, Denmark* (Baltimore, MD: University Park Press, 1976), 5.

¹¹¹ D. Bishop, *Handedness and Developmental Disorder* (Hillside, NJ: L. Erlbaum, 1990).

¹¹² Sam D. Clements, *Minimal Brain Dysfunction in Children: Terminology and Identification: Phase One of a Three Phase Project*, ed. National Society for Crippled Children and Adults; Easter Seal Research Foundation, Nindb Monograph vol. 3 (Washington: U.S. Dept. of Health, Education, and Welfare, 1966); George W.; Marshall Hynd, Richard; Gonzalez, Jose, "Learning Disabilities and Presumed Central Nervous System Dysfunction," *Learning Disability Quarterly* 14, no. 4 (1991); John Abraham Ross Wilson and ed, *Diagnosis of Learning Difficulties* (New York: McGraw-Hill, 1971).

¹¹³ "Journal of Learning Disabilities," (Austin, TX: Donald D. Hammill Foundation, 1968).

Early researchers used words like brain injury, which led to disorder, dysfunction, and eventually classifications like minimal brain dysfunction.¹¹⁴ With new terminology researchers articulated the search to uncover the origin and treat the symptoms. To expose the origin and validate assertions of a neurological etiology researchers turned to the electroencephalogram or EEG.¹¹⁵ A 1967 review by Freeman concluded that for detecting the EEG is not the outstanding diagnostic tool that people had once thought. He wrote,

The EEG appears to be regarded with more awe than it deserves. It is not very reliable, and there are many technical problems in its use with children, yet our electronic age, with its admiration for gadgets and the paucity of knowledge in the behavior sciences, lends to this instrument a certain mystique.... The influence of the EEG among educators may possibly be due to the inundation of the literature with poorly done papers describing children with supposed minimal brain damage.¹¹⁶

¹¹⁴ Sam D. Clements, *Minimal Brain Dysfunction in Children*, Public Health Service Publication (Washington: U.S. Department of Health, Education, and Welfare. Public Health Service, 1966); Clements, *Minimal Brain Dysfunction in Children: Terminology and Identification: Phase One of a Three Phase Project*; Roger D. Freeman, "Minimal Brain Dysfunction, Hyperactivity, and Learning Disorders: Epidemic or Episode?," *The School Review* 85, no. 1 (1976); Knights and J.

¹¹⁵ M. Arns and others, "Different Brain Activation Patterns in Dyslexic Children: Evidence from Eeg Power and Coherence Patterns for the Double-Deficit Theory of Dyslexia," *Journal of Integrative Neuroscience* 6, no. 1 (2007); F. Ayers and F. Torres, "The Incidence of Eeg Abnormalities in a Dyslexic and a Control Group," *Journal of Clinical Psychology* 23, no. 3 (1967); E. Bigler, L. O'Neill, and N. Howes, "Technology in the Assessment of Learning Disability," *Journal of Learning Disabilities* 31, no. 1 (1998); E. Colon and others, "The Discriminating Role of Eeg Power Spectra in Dyslexic Children," *Journal of Neurology* 221, no. 4 (1979); G. Fein and others, "Eeg Spectra in Dyslexic and Control Boys During Resting Conditions," *Electroencephalography and Clinical Neurophysiology* 63, no. 2 (1986); L. C. Fonseca and others, "Epileptiform Abnormalities and Quantitative Eeg in Children with Attention-Deficit/Hyperactivity Disorder," *Arquivos de Neuro-Psiquiatria* 66, no. 3A (2008); D. Galin and others, "Eeg Spectra in Dyslexic and Normal Readers During Oral and Silent Reading," *Electroencephalography and Clinical Neurophysiology* 82, no. 2 (1992); Knights and J.; C. Kris, "Simultaneous Measurement of Binocular Eeg and Bilateral Eeg Activation Patterns in Dyslexic Children," *Electroencephalography and Clinical Neurophysiology* 29, no. 4 (1970); Joel F. Lubar, "Eeg Biofeedback and Learning Disabilities," *Theory into Practice* 24, no. 2 (1985); B Sklar, J Hanley, and W Simmons, "An Eeg Experiment Aimed toward Identifying Dyslexic Children," *Nature* 240, no. 5381 (1972); B. Sklar, J. Hanley, and W. Simmons, "A Computer Analysis of Eeg Spectral Signatures from Normal and Dyslexic Children," *Transactions on Bio-Medical Engineering* 20, no. 1 (1973); C. Spironelli and others, "Inverted Eeg Theta Lateralization in Dyslexic Children During Phonological Processing," *Neuropsychologia* 44, no. 14 (2006).

¹¹⁶ Freeman, R. D., "Special Education and the Electroencephalogram: Marriage of Convenience," *Journal of Special Education*, 1967, 61-73.

From 1949 to the late-1970s measuring and graphing electrical activity with electrodes placed on the skull supported scientific claims.¹¹⁷ However, when researchers were asked to distinguish the results of normal children with those labeled a disabled without being told which was which, the results were indistinguishable.¹¹⁸ Though the government has spent billions of dollars on research and treatment, the number of those labeled learning disabled has more than doubled, and the origin remains elusive.¹¹⁹ In order to study the scientific establishment and development of disability it is important to see how different historical paradigms of interpretation and analysis treated these concepts.

Science never achieved standard terminology. The term retarded was substituted for mentally deficient or feeble-minded in many articles; *The American Psychiatric Association* proposed using terms such as mild, moderate, and severe instead of the former terms of borderline, moron, and imbecile. This interest in terminology gave rise to new classifications by many writers. Some researchers, for example, used terms like mentally deficient, mentally handicapped, and slow learner to denote various levels of educability.¹²⁰

The post WWII era fused the slow learner of the child study movement with the neurological body, the brain damage to produce the learning disabled. The newly emerging trends that create 'specialized knowledge' limit professionals to specific paradigms for school failure, explain failure.¹²¹ William Cruickshank states,

Parents attending a lecture on learning disabilities have...seen fit in a public forum to question me about their child who stuttered, who teased the family cat,

¹¹⁷ Coles.

¹¹⁸ Ibid.

¹¹⁹ Gerald S. Coles, "The Polyphony of Learning in the Learning Disabled," *Learning Disability Quarterly* 7, no. 4 (1984).

¹²⁰ Samuel A. Kirk, "Papers," (Illinois: Institute for Research on Exceptional Children, 1933-1967), 74; Samuel A. Kirk, *Educating the Retarded Child* (Boston: Houghton Mifflin, 1951).

¹²¹ Thomas Latus Thomas Hehir, *Special Education at the Century's End: Evolution of Theory and Practice since 1970*, Harvard Educational Review; Reprint Series (Cambridge, MA: Harvard Educational Review, 1992).

who could not deal with geometry in the tenth grade but who otherwise was getting along well in school, who had night terrors, who was diagnosed by the family psychiatrist as depressed — all of these under the label of learning disabilities. I have had parents question me on the failure of the child of nine years of age to be able to swim, another who could type but could not write legibly, another who masturbated, and still another who did not like to go with girls. Parents in their concept of learning disability have talked with me about nail biting, poor eating habits, failure of the child to keep his room neat, unwillingness to take a bath, failure to brush teeth.... One parent asked me if the fact that his college-student son wore long hair and, he “suspected,” lived with a girl outside his dormitory was the result of a learning disability¹²²

The disabled child was still one who cannot adapt in the 1960s.¹²³ A statement by Barsch in 1968 in the inaugural issue of the *Journal of Learning Disabilities* illustrates the theoretical approach, “Any time an initial assumption of capability to benefit from a curriculum is made, based on tests or general educational judgment, and the learner fails, a learning disability is at work.”¹²⁴

¹²² William Cruickshank cited in: Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*, 100.

¹²³ G. Stanley Hall, *The Contents of Children's Minds on Entering School* (New York and Chicago: E.L., Kellogg & Co., 1893); G. Stanley Hall, *The Negro in Africa and America*, African American Pamphlet Collection (1905); G. Stanley Hall, *Youth: Its Education, Regimen, and Hygiene* (New York, NY: Appleton and Company, 1906); G. Stanley Hall, *Senescence: The Last Half of Life* (New York, NY: Appleton and Company, 1923); Sigmon.

¹²⁴ RH Barsch, "Perspectives on Learning Disabilities: The Vectors of a New Convergence," *Journal of Learning Disabilities* 25, no. 1 (1992). Disabilities reprinted in 1992. Cited in: H. Lee Swanson, Karen R. Harris, and Steve Graham, *Handbook of Learning Disabilities* (New York: Guilford Press, 2003), 16-17.

CHAPTER 4

PEDAGOGIC TREATMENT

The aim of this chapter is to evaluate the underlying assumptions of nature, reality, representation related to notions of self. This is essential for examining and reconsidering an ethos stemming from notions of thought in which meaning and knowledge that are abstracted from the self, because the reference is always to an exteriority, but an exterior reflected back at the very essence of our being.¹

In contemporary modes used to transmit information, representation, and meaning thought is a constituent aspect of knowledge, but not situated or located in the development of the self.² There is a paradox or problem here: does pedagogic treatment suppress the effect of abnormality or allow the pathology to manifest. What is the function of intervention? If pedagogic treatment is successful then it negates the basis of its own intervention. It must manifest or develop the symptoms it presupposes. Sequin wrote,

When we have secured the use of this function, even to the smallest extent, that little must be instantly applied to some educational purpose with the help of other instruments adapted to the present incapacity of the child, to make him appreciate the properties of bodies, which otherwise fall naturally under the sight of ordinary persons. These properties to be perceived by the sight with the help of special instruments are colors, forms, combinations of forms, dimensions, distances, plans, etc.³

¹ Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

² Foucault, *The Hermeneutics of the Subject*; Foucault, *Psychiatric Power*.

³ Sequin, *Idiocy: And Its Treatment by the Physiological Method*, 115.

From the outset the alienist believed idiocy was linked to the constitution of the being, which signified disability as opposed to disease. This loss of medical treatment was replaced with pedagogic treatment. Séguin reflecting on Itard wrote, “he was the first to educate an idiot with a philosophical object and by physiological means.”⁴ He goes on,

a philosophical method of education, he expressed and realized the first views on this subject; generalizing on his savage idiot the sensorial experiments made by Pereire on the touch of deaf mutes; and specializing on the same forlorn pupil the theories enunciated by Rousseau for the education of mankind.⁵

Pedagogic treatment entwined research and diagnosis. Scientists linked diagnosis to the inability to adapt to the educational system; and therefore diagnosis is often a tension between the individual and the teacher; yet while the inability to adapt to the system is central to diagnosis the prescription adaptation to the system⁶ Pedagogy was linked to knowledge transmission and augmentation of internal mental processes through ambiguity of classification. Binet wrote,

In spite of the great interest of these distinctions, we cannot find any light for us in this classification, especially from a pedagogic point of view, because the form of inferior mentality with which we most often have to do is what Ireland calls congenital idiocy; it is necessary to know the degrees of this, and Ireland does not furnish us the means of distinguishing them.⁷

Historically the social sciences have externalized and objectified mental processes.⁸ Modern beliefs regarding the subject retain a historical residue where external representations are superimposed over the structure of the mind. Binet notes the pedagogic point of view,

In spite of the great interest of these distinctions, we cannot find any light for us in this classification, especially from a pedagogic point of view, because the form of inferior mentality with which we most often have to do is what Ireland calls

⁴ Ibid. , 22.

⁵ Seguin, *Idiocy and Its Treatment by the Physiological Method*.

⁶ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, 18-19. Binet titled one section *The Pedagogic Point of View*.

⁷ Ibid., 18-19.

⁸ Hannah Arendt, *The Life of the Mind*, 1st ed., 2 vols. (New York: Harcourt Brace Jovanovich, 1978); Arendt, *The Human Condition*.

congenital idiocy; it is necessary to know the degrees of this, and Ireland does not furnish us the means of distinguishing them.⁹

The pedagogical approach is meant to endow the subject with capabilities and attributes as well as just knowledge. Our institutions of education, pedagogy, and theories of cognition retain a historical residue, where a logic of external representation is superimposed over the structure of the mind. There are a few aspects of this configuration, are key for understanding the mind's relation to knowledge and meaning. The function of this arrangement is a modification of the subject's relation to knowledge and a meaning guided by a predetermined set of techniques and a knowledge that exists prior to experience. In this context, the understanding of our thought is implicitly deeper than the structure of consciousness.¹⁰ The current role of education constitutes the relationship in which knowledge is constructed and disseminated. The relation between life and natural-life is politicized.¹¹

The approach to deconstructing these formations is difficult because the science does not remain fixed or static, and does not function solely in the objects it constructs.¹² Intelligence evolved slowly out of political and social concerns for grouping and classifying individuals. The science continues to work in a self-referential fashion with the rhetoric of intellectual abnormality. In other words, intelligence is a potential to capture in measurement a deviation, and a deviation is the measure by which intelligence is signified. This aspect of intelligence has remained consistent, though there are reactions and shifts to its underlying rational.

⁹ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*.

¹⁰ Foucault, *The Hermeneutics of the Subject*.

¹¹ This is a primary question in Foucault's work. See Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans., Alan Sheridan, 1st ed. (New York: Pantheon Books, 1977)., Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976"., Foucault, *The History of Sexuality*., Foucault, *The Archaeology of Knowledge*.

¹² Foucault, *The Archaeology of Knowledge*, 32. Foucault suggests, "...the problem arises of knowledge whether the unity of a discourse is based not so much on the permanence and uniqueness of an object as on the space in which various objects emerge and are continually transformed."

The individual's relation to science is part of a historically identifiable system of thought at an intersection of discourse, schemas of human nature, and ontological beliefs that lay outside the confines of science.¹³ In this configuration representation stands in proximity to a fixed or essential meaning as though there were there prior to representation and thought.¹⁴ This is connected to the constructive and interactive basis for knowledge. Again, the concept of intelligence provided an epistemological network upon which science could fuse knowledge and life to a level consistent with pre-Darwinian explanations for social hierarchies, status, and the human state within the natural world.¹⁵ Connecting this spectrum allows us to better understand how a scientific enterprise was established-in and elevated-above the domains of knowledge and life, as well as how the presuppositions and propositions are organized and how this organization operates in the service of social interests. It gives a uniformity to deal with the planes of reference that mediate presuppositions, concepts, and the functions that comprise scientific notions of thought, meaning, and intellect.¹⁶

The Asylum

The shift in religious, social, political, and scientific underpinnings of intelligence was facilitated by the formation of new scientific concepts and the psychosocial typecasting of the abnormal. The formation of an institutional apparatus justified upon the relationship of intelligence to the welfare of the state. At this point one sees the development and organization of our normative education system. The asylum functioned as a medically demarcated space and

¹³ Ibid.

¹⁴ See Stuart Hall, David Morley, and Kuan-Hsing Chen, *Stuart Hall: Critical Dialogues in Cultural Studies*, ed. David Morley and Kuan-Hsing Chen, Comedia (New York, NY: Routledge, 1996).

¹⁵ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

¹⁶ Deleuze and Guattari. Chapters 1-4

the question of its medical or administrative direction, the tokens of psychiatric knowledge, the technique of questioning; the interplay of medication and punishment.¹⁷ The disciplinary as part of the therapeutic process and moral treatment was central to scenes of cure.¹⁸

Newspapers printed articles detailing the architecture, arrangement, and nuances of daily life in the asylum.¹⁹ These articles maintain a cohesive projection of intellectual abnormality and natural social formation. They evoked the notion of a civilized and benevolent state apparatus caring for unfortunate creatures. However, the journals and newspapers of the nineteenth century presented contrasting views regarding the status of idiocy. The human sciences printed journals that suggested the advances in science and the growing potential and development of treatment for idiocy. Yet at the journals and newspapers state a growing crisis of mental and intellectual degeneracy. As early as 1850, the US census began collecting statistics on *Idiocy, Insanity, and Pauperism*.²⁰ This data was articulated in newspapers and journals.

With interplay in notions of crisis and cure the human sciences expanded the search for intellectual abnormality into realms that had previously been unrecognizable. As they established

¹⁷ Foucault, *Psychiatric Power*.

¹⁸ *Ibid.*, 2-3. "...we cannot even say of "individuals"; let's just say a certain distribution of bodies, actions, behavior, and of discourses. It is in this well ordered dispersion that we find the field on the basis of which something like the relationship of the medical gaze to its object, the relationship of objectivity, is possible—a relationship which appears as the effect of the first dispersion constituted by the disciplinary order. Secondly, this disciplinary order, which appears in Pinel's text as the condition for exact observation, is at the same time the condition for permanent cure. That is to say, the therapeutic process itself, the transformation on the basis of which someone who is considered to be ill ceases to be so, can only be produced within this regulated distribution of power."

¹⁹ Henry Charles Burdett, *Hospitals and Asylums of the World: Their Origin, History, Construction, Administration, Management, and Legislation* (London: J. & A. Churchill, 1891); "Business and Payroll Accounts Ledger: Illinois Asylum for Feeble-Minded Children," (Illinois State Developmental Center for Mentally Handicapped Children, 1880); "Daily Hospital Report: Illinois Asylum for Feeble-Minded Children," (Lincoln, IL: Lincoln Developmental Center, 1865); Alexander Henry, *An Address to the Citizens of Philadelphia, on the Subject of Establishing an Asylum for the Cure of Victims of Intemperance*, Joseph Meredith Toner: Pamphlet Collection (Library of Congress) (Philadelphia: Brown, Bicking & Guilbert, 1841); Illinois. Board of World's Fair Commissioners; Committee on State Charitable Institutions, *Brief History of the Charitable Institutions of the State of Illinois* (Chicago: J. Morris Company, Printers, 1893); "Weight Book: Illinois Asylum for Feeble-Minded Children," in *Experimental School for the Instruction and Training of Idiots and Feeble-Minded Children in the State of Illinois at Jacksonville* (Jacksonville, Illinois: Lincoln Developmental Center, 1896).

²⁰ "Facts from the Census," *New York Times* February 1883.

legitimacy and justification, the forms of classification were divided and subdivided and expanded into wider and wider realms. Idiocy was divided into several categories including feeble-minded, moron/moronic, imbecile, moral-imbecile, and many others were used in various areas and by various psychiatrists. As the scientific gaze expanded into wider and wider realms of social/spatial organization, the intelligence was an integral aspect of scientific racism and eugenics.

The sentiment expressed in the newspapers promoted the need for state custodianship of those deemed mentally inferior. Citizens were expected to express care for individuals through their support of the state and institutional apparatus. If the notion of loco parentis pervaded the growth of common schools, this concept was preceded by the conception of custodial care promoted through the asylum. The notion of custodial care formed in the asylum had a legal and judicial power connected to the socialization and treatment of individuals. This formation inherently connected the family or private sphere to the values and norms of the public/political sphere. With interplay in notions of cure and crisis the human sciences expanded the search for intellectual abnormality. As they established legitimacy and justification, the forms of classification were expanded into wider and wider realms.

The prison, asylum, and ancillary institutions: the reformatory, orphanage, almshouse were primary apparatuses of state and political power mediating societies' defense. These were effectively joined by the common and public school.²¹ The social body could then be screened, classified, and arranged according to a social validation of individual worth and according to their potential threat. Fernald states,

Whereas care of an idiot child at home takes up the time and energy of one person, the proportion of people employed in the asylums is one person for five

²¹ Karier, *Roots of Crisis: American Education in the Twentieth Century*.

idiot children. The care at home of one idiot, especially if disabled, consumes the wages and abilities of the people of the household, so that an entire family falls into poverty. Humanity and good policy call for families to be relieved of responsibility for these unfortunates.²²

Inclusion or exclusion was neither inevitable and random, nor born directly of scientific ideologies for treatment, but rather was a very necessary organizational principle upon which the scientific and discursive topologies of intelligence could be manifested. The transition in conceptual and spatial relations of intelligence is complex, cannot be described as fluid and linear, of a body of knowledge used to divide, classify, and arrange socially and spatially individuals in realms of perceived intellectual function. The theoretical function of intelligence shaped institutional manifestations, for example, asylums, schools, and hospitals or those spaces, which have historically arranged human beings according to perceived conditions of human intellect.²³ The social arrangement developed in public education, can be examined on various levels, such as the structuring of asylums and ungraded classrooms, or the very direct arrangement and structuring of schools and classrooms.²⁴

By the mid-nineteenth century several asylums/schools were predicated on their association to idiocy. In 1851 New York developed an experimental school for idiots that would become a state institution. The author stated that, "The original idea of concerning all these institutions was that of an asylum 'without exposure to violation' a refuge." later became known as the *Pennsylvania Training School for Idiots*. By 1865 similar institutions had opened in Connecticut, Ohio, Kentucky, and Illinois.²⁵

²² Foucault, *Psychiatric Power*, 214.

²³ Burdett; "Business and Payroll Accounts Ledger: Illinois Asylum for Feeble-Minded Children."; "Daily Hospital Report: Illinois Asylum for Feeble-Minded Children."; James P. Haney, "Education of Dull Children," *New York Times*, March 3 1899; Henry; "Weight Book: Illinois Asylum for Feeble-Minded Children."

²⁴ Haney.

²⁵ Seguin, *Idiocy: And Its Treatment by the Physiological Method*, 14-15.

Many of the institutions were started privately as experiments, but later adopted and received state funding. By 1891 there were roughly seventy-two asylums in the US. The asylums and training schools were built with day rooms, chapels, recreation rooms, dormitory space, dining rooms, workrooms, and classrooms. The asylums and training schools established separate wards, for example, the acute ward, the epileptic ward. At least one-fourth the inhabitants were to have their own room, simulating the domains of social life, a microcosm of society.²⁶

The administration block was often at the center of the building. The “more excitable cases” and those deemed least likely to be reformed were situated farthest from the center.²⁷ Corridors and hallways were purposely designed to section-off various locations, disrupting the flow of bodies, and designating various spaces with significance and purpose. If the asylums or schools housed both men and women, they were separated with one side for men, and the other for women.²⁸

The asylums, training schools, farm colonies, and hospitals manifested in their spatial arrangement in the idea that treatment involved the ordering and structuring of daily life. The prevention of further social degeneracy based on the successful structuring of life. Journals printed articles detailing the architecture, arrangement, and nuances of daily life in the asylum.²⁹ These articles, written in the nineteenth century, maintain a cohesive projection of intellectual abnormality in social/spatial formation. They evoke the notion of a civilized and benevolent state apparatus caring for unfortunate creatures.

²⁶ Burdett.

²⁷ Henry Barnard, *School Architecture: Contributions to the Improvement of School-Houses in the United States*, 3rd ed. (New York: A.S. Barnes & Co. , 1849).

²⁸ Ibid.

²⁹ Institutions.

The journals and newspapers of the nineteenth century presented contrasting views regarding the status of idiocy. The human sciences printed journals suggesting that advances in science and the growing potential and developments for treatment of idiocy. At the same time, however, the journals and newspapers present a growing crisis of mental and intellectual degeneracy.³⁰ According to the 10th census in July of 1880 the number of idiots in the US was reported to be 76,895, up from 24,527 in 1870, and from 18,930 in 1860.³¹ The sentiment expressed in the newspapers, promoted the need for state custodianship of those deemed mentally inferior. Citizens were only expected to express care for individuals through their support of the state and institutional apparatus. If the notion of *loco parentis* preceded the growth of common schools, this concept preceded by the conception of custodial care promoted with the growth of the asylum.

The notion of custodial care formed in the asylum had a legal and judicial power connected to the socialization and treatment of individuals. This formation inherently connected the family or private sphere to the values and norms of the political sphere. When the topic of idiocy appeared in academic journals, and newspapers it justified the human sciences move to draw intelligence away from a spectrum of philosophic inquiry with fluctuations in realms of epistemology to function as a political technology of the body. The prison and the asylum as well as their ancillary institutions: the reformatory, orphanage, almshouse are two primary apparatuses mediating societies' defense in post Jeffersonian era, and was effectively joined by

³⁰ Pick.

³¹ See "Facts from the Census.", or the US Department of the Interior, 1895, *Report on the Insane, Feeble-minded, Deaf and Dumb, and Blind* (Eleventh Census: 1890), Washington, US Government Printing Office.

the common and public school.³² The individual is screened, classified, and arranged according individual worth and potential threat.³³

From this point, psychiatry aligns itself and becomes legally sanctioned with the function of protecting society through classification, monitoring, and control of its' deviants.³⁴ The intelligence fashioned in the abnormal provided psychiatry legitimacy and the function of defending society from the character of the individual of abnormalities.³⁵ This function would give birth to a new social *episteme* of disciplinary power. The control over sexuality from the family's role in observation and monitoring sexual impulse and a location of for the protection of virtue would transfer, to a location in which the private sphere and family become the very existence of potential danger and threat to the body-politic. It's in this context, that the development and organization of the normative system of education intervenes, a state and disciplinary system of *loco parentis*, and justification of compulsory attendance. In 1851 New York developed an experimental school for idiots that later became a state institution. In 1852 a school was founded that later became known as the *Pennsylvania Training School for Idiots*.³⁶ By 1865 similar institutions had opened in Connecticut, Ohio, Kentucky, and Illinois.³⁷

Many of the institutions began as privately funded experiments, although many were later adopted and funded by states and therefore public funds. By 1891, there were roughly seventy-

³² David J. Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic*, 1st ed. (Boston: Little, Brown, 1971); David J. Rothman, *Conscience and Convenience: The Asylum and Its Alternatives in Progressive America*, 1st ed. (Boston: Little, Brown, 1980).

³³ Goddard, "Heredity of Feeble-Mindedness."; Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*; Henry H. Goddard, *The Criminal Imbecile* (New York, NY: Macmillan 1915); Goddard, *Mental Deficiency from the Standpoint of Heredity*; Goddard, *Heredity of Feeble-Mindedness*; Goddard, *Human Efficiency and Levels of Intelligence: Lectures Delivered at Princeton University April 7-to-11, 1919*.

³⁴ Foucault, "Abnormal: Lectures at the College De France 1974-1975". 316.

³⁵ Ibid.

³⁶ "Annual Report of the Pennsylvania Training School for Feeble-Minded Children," in *Elwyn Training School: Annual Report* (West Chester: Pennsylvania Training School for Feeble-Minded Children, 1857).

³⁷ Seguin, *Idiocy and Its Treatment by the Physiological Method*, 14-15.

two asylums in the US.³⁸ These asylums and the training schools were built with day rooms, chapels, recreation rooms, dormitory space, dining rooms, workrooms, and classrooms. Asylums and training schools established separate wards, for example, the acute ward, the epileptic ward.³⁹ At least one-fourth, the inhabitants were to have their own room, simulating the domains of social life. In short, they were to simulate microcosm of society.⁴⁰ Generally, the administration block formed the center of the building. The more excitable cases and those deemed least likely to be reformed were situated farthest from the center. Corridors and hallways were designed to section-off various locations, disrupting the flow of bodies, and designating various spaces with significance and purpose. If the asylums or schools housed both men and women, they were separated with one side for men, and the other for women.⁴¹

The asylums, training schools, farm colonies, and hospitals manifested in their spatial arrangement in the idea that *treatment* involved the ordering and structuring of daily life. The prevention of further social degeneracy was based on the successful structuring of life. In 1848, Samuel Howe opened an experimental school that was to serve as a model for the instruction of those designated idiots.⁴² In this school, the young were trained for ‘industry, order, and self-respect’.⁴³ Howe’s school and the ones modeled after it promoted the idea that schools, pedagogy, and training would relieve families and communities from the burden of idiocy.⁴⁴

Idiocy and its variants came to function in a restructuring of social space as the shift in religious, socio-political, and scientific underpinnings of intelligence facilitated by the formation

³⁸ Burdett.

³⁹ *ibid*; "Business and Payroll Accounts Ledger: Illinois Asylum for Feeble-Minded Children."; "Daily Hospital Report: Illinois Asylum for Feeble-Minded Children."

⁴⁰ Burdett.

⁴¹ *Ibid*.

⁴² Howe.

⁴³ *Ibid*.

⁴⁴ *Ibid*.

of the abnormal. The converging of biology with psychiatry over the nineteenth century also formed this shift. Additionally, this is where we mark the development and social organization of our normative system of education as a state and disciplinary systems.

The asylum allows one to conceive of a location, or space in which to situate the study of various social and historical phenomena. However, the social arrangement of asylums and the related justification transcend to the domain of normative education, hospitals, reform schools and a variety of other institutions. Additionally, it accompanied the justification in which institutions formed and established legitimacy.

These arrangements examined on various levels, such as the structuring and development of asylums and the ungraded classrooms reveal a direct structuring of schools and classrooms. The various notions of degeneracy, insanity, idiocy, feeble-mindedness, are often associated with the development and function of institutions, or to these specific locations. It becomes rather evident that specific social ideologies are associated with their development.

What is relevant for analysis is why certain social practices formed within and alongside those specific institutions on some level dissipated, but transformed practices throughout society. Directly related to these phenomena is the less assuring questions of what allows one institution the operation and function. The conceptions and mentality that allowed the asylum to operate also preceded the formation of the common school movement.⁴⁵

With the establishment of hereditary causation, where the emphasis becomes not cure or treatment but rather social control, and where psychiatry becomes aligned-with, and legally

⁴⁵ “All states but two established the asylum before the reformatory, and all but four states established the state hospital for the deaf before the reformatory. And, finally, all but 11 states, nine of which were in the far western territories, established the state reformatory before enacting compulsory attendance.” John G. Richardson and Tara L. Parker, "The Institutional Genesis of Special Education: The American Case," *American Journal of Education* 101, no. 4 (1993): 362.

sanctioned with the function of protecting society through classification, monitoring, and control of deviants, and the era in which the normative system of education is made compulsory.⁴⁶ Again, sterilization is often associated with the formation of psychiatry's normative function, but the more resilient ideologies or ideas such as *loco parentis*, the justification for compulsory attendance, reform schools, and the various models of segregation can all be thought of in the context of social control mediated within the concept of social defense. In this manner, and initially in this era schools were regarded methodologically to extend the scope of a state apparatus into areas of the social body previously inaccessible; but intelligence fashioned in the abnormal provided psychiatry legitimacy and the function of defending society from the abnormal. This function gave birth to new forms of disciplinary power. The control over sexuality from the family's role in observation and monitoring sexual impulse and a location for the protection of virtue transferred to a location in which the private become the existence of potential danger and threat to the body politic. Within this context psychiatry and the normative system of education intervenes and subsequently becomes a primary institution in class and race struggle of the twentieth century.

The basis for compulsory education mediated through a notion of social crisis, a degeneration of the social body through the lack of proper habit, and mental development.⁴⁷ The schools, and more directly the ungraded classroom, whose spatial manifestation was rooted in classification, labeling, and arrangement of individuals was employed as a solution to this crisis.

As early as 1855 architecture manuals used in the construction of the common school houses stated the need to build separate rooms and buildings, or 'ungraded classes' for backward

⁴⁶ Foucault, "Abnormal: Lectures at the College De France 1974-1975"., 316.

⁴⁷ See Karier, *Shaping the American Educational State: 1900 to the Present*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

and dull students.⁴⁸ The development of the common schools coinciding with ungraded-classrooms was a national phenomenon. Though idiocy is associated with the development and function of institutions, the study of idiocy permeated various domains; external authority and disciplinary power mediate the function and understanding of the social body. The science of intelligence situated the social body in relation to a perceived natural arrangement. Séguin wrote,

for fear that constant familiarity with the sight of idiots, in all their modalities, or modes of being, would blunt the senses of the standard man in the mind of the observer, we consider it paramount that any investigation made on idiocy upon idiots be conducted *pari passu* upon normal subjects with the strictest similarity; at play, at school, on the sick list, or on the cold slab, when possible; everywhere, near the abnormal, the normal; next to the shadow, the light.⁴⁹

This arrangement is not inherent but built around power, hierarchy, custom, and social order. The arrangements produced an ability to repeat their own signification in the space of the body and the ordering of the body. A school architecture manual from 1855 suggests an outline for classroom arrangement, “The desks and chairs are arranged diagonally on the floor so that no one Scholar can see the face of another without being at the right or left half face.”⁵⁰

Incorporated in the landscape of the asylum and classroom, is the architecture and arrangement of power, hierarchy, and authority. A space enveloped with ritual, privilege, and custom centered on the reinforcement of hierarchy and authority. Additionally, there remains within the scientific writing the question of what can be extracted from the individual for the betterment of society, and the individual as social verse family commodity.⁵¹ Social defense linked to ability to affirm the need to submit to state power, through the system of education

⁴⁸ "Annual Report of the Pennsylvania Training School for Feeble-Minded Children."; Thomas H. Burrowes, *Pennsylvania School Architecture: Manual of Directions and Plans for Grading, Locating, Constructing, Heating, Ventilating and Furnishing Common School Houses*, ed. Pennsylvania Dept. of Public Instruction (Harrisburg, PA: A.B. Hamilton, 1855).

⁴⁹ Séguin, *Report on Education 1875: A Facsimile Reproduction*, 25.

⁵⁰ Burrowes, 32.

⁵¹ See Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*.

(institution of schooling) to affirm ability through normative systems of evaluation and screening, and through the process of externally mediated identity formation.

The asylum, social arrangement of schools, and ordering of the social body was not independent and random; rather relations that are established between institutions and modes of governance, such as economic, social processes, development of behavioral patterns, systems of norms, techniques of classification, modes of classification, which are conditioned through contingent modes of knowledge.⁵² The knowledge produced separation-between lived space and social practices and the discursive and coded practices of science not confined to any single physical location, but a mapping or metaphor for social order through spatial arrangement, or as a primary component for ritual and production of self-understanding and self-formation.⁵³

The examination of spatial manifestations associated with intellect and abnormality, for example, asylums, schools, and hospitals that arranged human beings according to a perceived continuum of intellect are simultaneously a constituent element of social episteme and institutional structure. Schools and contemporary psychology were the merged the defense of society.

The result was a consistent percentage of individuals constructed as figures who cannot be integrated in the normative system of education. The set of relations or conceptualizations utilized by the human sciences and nineteenth century institutions re/produced formations of a social body, though it was mediated through concepts of disorder and deviance, individuals was placed in a new relation with themselves and others. Idiocy and its variants came to function in a structuring of social space. For scientists of the nineteenth century the asylum presented a semantic and conceptual obstacle, in that it portrayed notions of that which is incurable, terminal,

⁵² Foucault, *The Archaeology of Knowledge.*, 45.

⁵³ Henri Lefebvre, *The Production of Space*, trans., Donald Nicholson-Smith (Cambridge, Mass.: Blackwell, 1991).

and custodial. Psychiatrists and psychologists acknowledged from early on the desire to transcend the conceptual limitations imposed by the asylum. One doctor noted, “The movement for revision of names is a healthy one and indicates a better understanding of the newer and better purposes of the institutions.”⁵⁴ The common schools, ungraded classes, hospitals, and reformatories were to become these spaces, -the symbolic and metaphorical space to convey notions of treatment and progress. The transition in the houses of confinement had opened this possibility, but it would take a body of knowledge to move beyond the walls of the asylum, for the scientific gaze to permeate the public sphere. The de-specifying the psychiatric institution placed it within a range of different structures, such as prisons, schools, and establishments used to supervise and control the mode of life. The reference within an administrative field, the theoretical influence, institutions, and real practices formed a tie of indissoluble solidarity. The proliferation of schools, mental hospitals, prisons, and almshouses preceded the public school system.⁵⁵

The School

In the preface to *Idiocy and its Treatment by the Physiological Method*, Séguin states his book embodies “an outline of the direction to be given to the scientific efforts of the friends of idiocy and the apostles of universal education.”⁵⁶ This occurred as Mann and Sumner wrote in

⁵⁴ "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons." Vol. 1 No. 2, December 1896., 65

⁵⁵ Richardson and Parker.

⁵⁶ Séguin, *Idiocy: And Its Treatment by the Physiological Method. Preface.*, 2.

favor of the work at Bicetre. Horace Mann flocked to Séguin's Hospice des Incurables.⁵⁷ Séguin wrote,

As early as 1842-3, Horace Mann and George Sumner had become familiar with our personal labors at Bicetre, on which they wrote approvingly, sending over the seeds, which soon rose from American soil.⁵⁸

By 1855 manuals stated the need to build separate rooms and buildings or ungraded classes for backward and dull students in the common schools.⁵⁹ The special classes of New York City began with Public School-1 in Manhattan at the turn of the century.⁶⁰ The following quote in the *Journal of Psycho-Asthenics* and Paul H. Hanus well-known *School Efficiency* notes,

In the year 1900 the first ungraded class in New York City was started in Public School No. 1, Manhattan. In 1906 there were fourteen classes in Greater New York. Since that time the enormous growth of these classes is in itself both sufficient indication of the size of the problem and the reason for many shortcomings.⁶¹

These classes continued to grow and presently exist. The psychiatric conception of intellect preceded the formation of the common school movement. Architecture manuals used in the construction of the common school houses stated a need to build separate rooms and buildings for the ungraded country. Asylums, reformatories and institutions followed compulsory public schooling.⁶² Séguin wrote,

In 1852, a private school had been founded in Germantown by Mr. J. B. Richards, which soon became the "Pennsylvania Training School for Idiots," at Media. The States of Connecticut and Ohio opened their institutions, respectively, in 1855 and

⁵⁷ This point is noted in several reports. For example, "Reports of the commissioners of the U.S. to the International exhibition held at Vienna, 1873." Sections titles include: "Infant education, Education of the deaf-Mutes, Education of Idiots, and Popular Education as It Is and as It Should Be." Séguin, *Report on Education*.

⁵⁸ Séguin, *Idiocy and Its Treatment by the Physiological Method.*, 12.

⁵⁹ Burrowes, 12.

⁶⁰ Ellwood P. Cubberley, *Public Education in the United States; a Study and Interpretation of American Educational History; an Introductory Textbook Dealing with the Larger Problems of Present-Day Education in the Light of Their Historical Development* (New York, NY: Houghton Mifflin 1919).

⁶¹ Ibid. Paul H. Hanus, *School Efficiency: A Constructive Study Applied to New York City; Being a Summary and Interpretation of the Report on the Educational Aspects of the School Inquiry*, School Efficiency Series (Yonkers-on-Hudson; New York: World Book Co., 1913).

⁶² Richardson and Parker.

1857; Kentucky in 1860; and Illinois in 1865. Thus the United States has eight of these schools, in which nearly one thousand children are constantly in training. And this is only a beginning.⁶³

The primary method of education or instruction in these classes was manual training. The special classes of New York City had their beginning with Public School-1, in Manhattan in 1899.⁶⁴

The school methodically extended the scope of state power into areas of the social body previously inaccessible. The basis for compulsory education was mediated through a notion of social crisis, a degeneration of the social body through the lack of proper habit, and mental development. The schools and ungraded classroom whose spatial manifestation was rooted in classification, labeling, and arrangement of individuals was employed as a solution to this crisis.

A manual for school architecture, stating the need for the public education and the upgraded classes suggests,

it may be well to inquire whether an imperfect system of ungraded Common Schools may not have been the parent, to some extent, of those unrepublican classes and distinctions, which are becoming more strongly and obviously developed with every year of our progress as a nation, and which must be restrained.⁶⁵

The formation of the asylum in the social/spatial arrangement of schools, and the ordering of the social body was not independent and random. These relations established between institutions, economic, and social processes, behavioral patterns, systems of norms, techniques of classification, and classification.⁶⁶ Psychiatric power made school power function as a sort of

⁶³ Seguin, *Idiocy: And Its Treatment by the Physiological Method*, 13-14. He states, "All the Western and Southern States will soon possess similar establishments; and the city of New York, with its immense suburbs, cannot much longer send its idiots to the northern climate of Syracuse, depriving them of the warmth of the sea-shore, and of the visits of their friends. But more, New York city must have its institution for idiots, because it contains the mature talents and growing capacities in all the branches of human inquiry, whose concurrence must be insured to perfect the method of treatment of these children, and to deduce there from the important discoveries justly expected in anthropology."

⁶⁴ "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons."

⁶⁵ Burrowes, 220-221.

⁶⁶ Foucault, *The Archaeology of Knowledge*, 45.

absolute reality; in which the individual is screened, defined, and characterized. Promoting care and treatment in the asylum is the normalizing process. Seguin wrote, “Thus education connects a small body with all bodies, a small intellect with the general laws of the universe, through specific instruments of perception.”⁶⁷ He goes on,

This being the law of perception of phenomena it does not matter through which sense we perceive; the same operation being entirely from the mind, is always identical with itself; this law is nothing less than the principle of our physiological method of education.⁶⁸

Leonard Ayres published *Laggards in Our Schools* from his survey of city school systems. He estimated that nearly 34 percent of all elementary schoolchildren were retarded, as determined by a variation in grade level and age.⁶⁹ These types of statistical investigations by scientists informed policy decisions that would help guide the reform of schools, one of which was the call for the special class.⁷⁰ The national stature of these investigations was further stimulus to a systematic academic inquiry into the problems of retardation in city school systems. Representative of this was a *School Efficiency Series*.⁷¹ With an initial prompting from the Committee on School Inquiry of New York, these volumes addressed problems of school supervision and organization with an eye to their commonality across cities and states. Despite differences across city school systems, one problem seemed to unite them most: the problem of detecting and classifying mentally defective pupils.⁷²

⁶⁷ Seguin, *Idiocy: And Its Treatment by the Physiological Method*, 140.

⁶⁸ Ibid.

⁶⁹ Leonard Porter Ayres, *Laggards in Our Schools: A Study of Retardation and Elimination in City School Systems*, Russell Sage Foundation Publication (New York: Charities Publication Committee, 1909).

⁷⁰ Ibid. Also see: Hanus.

⁷¹ Hanus.

⁷² Goddard, *Feeble-Mindedness: Its Causes and Consequences*; Training School at Vineland, "Publications of the Training School at Vineland, New Jersey, Department of Research," (Vineland, N.J.: The School, 1914). The issue was made most clear with this volume submitted by Goddard, as the director of the Department of Research of the *Training School for Feeble-Minded Children* in Vineland, New Jersey

Scientists inserted the problem of feebleminded schoolchildren directly into the issue of school efficiency and did so with two specific policy recommendations. Individuals needed to be screened, classified, and labeled. Scientists sought divisions between normal and abnormal pupils and between the backward and the feebleminded.⁷³ This need to identify and delineate the feebleminded was tied to school efficiency. For Goddard, for example, the only viable option was to retain these children within the city school and to entrust their supervision to a superintendent of schools and classes for defectives.⁷⁴ This stage was the mental testing movement generally and its success in installing a pupil classification system that carried the legitimacy of science.⁷⁵

The growth of this chain of schools and institutions throughout the nineteenth century followed a discernible pattern, initiated first through private and philanthropic efforts, then proceeding to state institutions and finally to city school systems.⁷⁶ As private and philanthropic efforts inherited the traditional functions of apprenticeship, which transferred to state institutions, as the state through support of disciplinary and institutional systems increasingly assumed the authority over the life of the individual.

The path from apprenticeship to state institutions was in many respects a rationalization of binding out, a transposition of this traditional authority into formal institutions. By this

⁷³ Goddard, *Report of the Private Institution for the Education of Idiots, Imbeciles, Backward, and Eccentric Children*; Goddard, "Heredity of Feeble-Mindedness."; Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*; Goddard, *The Criminal Imbecile*; Goddard, *Heredity of Feeble-Mindedness*; Goddard, *Feeble-Mindedness: Its Causes and Consequences*; Goddard, *School Training of Defective Children*.

⁷⁴ Zenderland.

⁷⁵ Terman, *The Intelligence of School Children: How Children Differ in Ability: The Use of Mental Tests in School Grading and the Proper Education of Exceptional Children*; Terman, *Condensed Guide for the Stanford Revision of the Binet-Simon Intelligence Tests*; Terman, *Intelligence Tests and School Reorganization*. Terman both popularized and institutionalized Binet's work on the concept of intelligence testing.

⁷⁶ MacDonald, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes*, 104.

transposition, the reach of this authority was extended to populations that were not effectively accommodated by traditional arrangements. The influence of scientists had profound effects on society and education.⁷⁷ Thorndike wrote,

A complete science of psychology would tell us every fact about everyone's intellect and character and behavior, would tell us the cause of every change in human character, would tell the result which every educational force—every act of every person that changed any other or the agent himself—would have. It would aid us to use human beings for the world's welfare with the same surety of the result that we now have when we use falling bodies or chemical elements.⁷⁸

The notion that science would provide the most valuable and useful information in the development grew in popularity over the mid-to-late twentieth century.⁷⁹ The following quote from congressional documents formed by the child study movement captures this growth,

In 1906 a special inspector of ungraded classes was appointed. The duties of this inspector were to superintend the establishment of these classes, to secure teachers, and to decide what children should be placed in the classes, together with general oversight and direction of the work. Beginning, as we have said, with fourteen classes in 1906, there were forty-one classes in 1907, sixty-one in 1908, eighty-six in 1909, one hundred and three in 1910, one hundred and twenty-six at the beginning of 1911, and in April, 19 12, one hundred and thirty-one.⁸⁰

The report suggests,

Since the children that are placed in a special class are graded by mentality rather than by chronological age or physical height, the tables and chairs should be of varying sizes to fit the different children.⁸¹

Scientists grafted a vast range of capacities and traits onto intellect. This merges the notion of the gaze related to the medical examiners optics of truth and objectivity with the gaze connected to

⁷⁷ Lawrence A. Cremin, *The Transformation of the School: Progressivism in American Education, 1876-1957*, 1st ed. (New York, NY: Knopf, 1961); Lawrence A. Cremin, *Public Education* (New York, NY: Basic Books, 1976); Lawrence A. Cremin and Merle L. Borrowman, *Public Schools in Our Democracy* (New York, NY: Macmillan, 1956).

⁷⁸ Thorndike quoted in Lawrence A. Cremin, *The American Common School: An Historic Conception*, Teachers College Studies in Education (New York: Bureau of Publications, Teachers College, Columbia University, 1951), 3-4.

⁷⁹ Lawrence A. Cremin, "The Recent Development of the History of Education as a Field of Study in the United States," *History of Education Journal* 7 no. 1 (1955): 3-4.

⁸⁰ Ibid.

⁸¹ Ibid.

modes of power relations.⁸² It takes us from overt violence to a microphysics of power and from institutional regularities to arrangements of power.⁸³ This represents a move from a macrophysics of sovereignty to the microphysics of disciplinary power.⁸⁴ This helped reformulate the power-relations between psychiatrist and patient.⁸⁵

The function of protecting society through classification and control of deviants system of education is made compulsory.⁸⁶ The proliferation of schools, mental hospitals, prisons, and almshouses preceded the school system.⁸⁷ The notion of *loco parentis*, compulsory attendance, reform schools, and various modes of segregation were mediated through a notion of social crisis, the lack of proper habit, and mental development.⁸⁸ Ungraded classrooms were employed as a solution to this crisis.

The prison and the asylum as well as their ancillary institutions: the reformatory, orphanage, almshouse were the primary apparatuses of state and political power mediating societies' defense in post Jeffersonian era and was effectively joined by the common and public school.⁸⁹ The individual screened, classified, and arranged according to a social validation of individual worth and according to their potential threat.⁹⁰ The biographical descriptions of

⁸² Foucault, *Discipline and Punish: The Birth of the Prison*. Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (New York: Vintage Books, 1994).

⁸³ Foucault, *Psychiatric Power*.

⁸⁴ Ibid.

⁸⁵ Rabinow interprets 'subjectification' as a 'self-formation' (as opposed to identity formation, or a false consciousness) in which the individual is active. According to Foucault it consists of a long intricate series of, "operations on [people's] own bodies, on their own souls, on their own thoughts, on their own conduct." According to Rabinow, there is always a component of external authority involved in this process of self-understanding and self-formation. See: Foucault, *The Foucault Reader*.

⁸⁶ Foucault, "Abnormal: Lectures at the College De France 1974-1975". 316.

⁸⁷ Richardson and Parker.

⁸⁸ Karier, *Shaping the American Educational State: 1900 to the Present*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

⁸⁹ Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic*; Rothman, *Conscience and Convenience: The Asylum and Its Alternatives in Progressive America*.

⁹⁰ Foucault, *Psychiatric Power*.

individuals linked social vice to the need for social control. The following quote, reflects the social conception of feeble-minded in the early twentieth century,

Feeble-mindedness is a word that perhaps has caused undue alarm of late. Many of the ills from which society suffers have been laid at its door: crime, pauperism, vagrancy, immorality, to mention only a few. The rapid propagation of the feeble-minded, it has been said, means the undermining of our racial stock and threatens the decay of civilization.⁹¹

Once these connections were established in scientific discourse institutions defined and controlled what it meant to be educated.⁹² This is how individuals were made objects knowledge, and removed as active participants in the formation of knowledge. The function of surveillance and documentation in case-history and narrative is seen in the following example,

The child is weighed, measured, in his diverse proportions; his capacity for endurance and activity is tested, his powers of intelligence and speech ascertained [sic]; his will and habits delineated; a pen and ink portrait is drawn of his whole being, and kept together with his photograph. . . . Then the Superintendent, with a perfect knowledge of his subject, may launch him among the other children, not yet as an accepted pupil, but as a probationer on an experimental treatment of observation.⁹³

Though the education system is portrayed as dispensing knowledge for the common good it remains an institution that legitimates various power relations.⁹⁴ We can see this in segregated schooling, tracking and various other programs though some historians retain a positive explanation for the institutional legacy of the science of intelligence.⁹⁵

With the notion of crisis and need for social control science expanded the search for intellectual abnormality into unexamined realms. This can be seen in achievement testing and the

⁹¹ Arthur K. Davis, "Our National Iq," *New York Times* October 18 1948.

⁹² Karier, *Scientists of the Mind: Intellectual Founders of Modern Psychology*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

⁹³ Seguin, *Idiocy: And Its Treatment by the Physiological Method.*, 195.

⁹⁴ Karier, *Roots of Crisis: American Education in the Twentieth Century*, 161.

⁹⁵ Daniels and Garner; Mazurek and Winzer; Winzer, *The History of Special Education: From Isolation to Integration*.

emphasis on development. It also led to the idea that the most valuable and relevant knowledge for teachers would be determined scientifically in fields such as psychology.⁹⁶

The influence of science validating certain forms of knowledge and the growth of educational psychology over the twentieth century is complex.⁹⁷

The modes of generalization and psychiatrization of childhood were mediated through the theoretical specification of idiocy.⁹⁸ This includes the criterion of development, or the emergence of a psychopathology of idiocy and mental retardation.⁹⁹ The institutional annexation of idiocy by psychiatric power and moral treatment of idiots initiated by Séguin, as well as the process of confinement and the stigmatization of the dangerousness of idiots which was based on recourse to the notion of degeneration. Intelligence is an organizing principle used to guide the conceptual basis stabilizing binaries for conceptions of gender, sexuality, race, the family, and so forth. This occurs after naturalizing the concepts in scientific discourse.

The idea that intellect and performance are fixed variables which are quantifiable, uncontested, and universal and the idea that upon these basis individuals can be ranked judged is the basis of our contemporary system of tracking. There is external authority involved in this process of self-understanding and social formation.¹⁰⁰ *The Journal of Psycho-Asthenics*, for example, which was shaped around eugenic ideology contains the following depiction of students in institutions, “The boys are segregated into classes for larger industrial work at the age of thirteen and a half, and the girls into vocational classes especially fitted to meet their needs

⁹⁶ Freeman Butts in the *Emerging Task of the Foundations of Education* (the report of the Committee on Social Foundations, NSCTE)

⁹⁷ Archibald W. Anderson, "Is There a Functional Role for the History of Education in the Training of Teachers?," *History of Education Journal* 1, no. 2 (1949).

⁹⁸ Foucault, *Psychiatric Power*.

⁹⁹ Ibid.

¹⁰⁰ Karier, "The Quest for Orderly Change: Some Reflections.," Karier, *Shaping the American Educational State: 1900 to the Present*, 22; Karier, *Roots of Crisis: American Education in the Twentieth Century.*, 22.

between thirteen and sixteen years.”¹⁰¹ This explicit gendering was infused in the assumptions of a broad disciplinary apparatus. These classrooms are the manifestation or institutional analogy of the private sphere shaped, conditioned, and promoted through the public/political sphere.

Sections of asylum reports utilize the metaphoric of family trees carry titles such as “Reasons Assigned for Entering the Life” and “The Girls That Went Wrong.”¹⁰²

The history of education and lineage of intellectual abnormality discourse in the US is traced to the early nineteenth century and transcendence of idiocy from informal reference to formal scientific classification. This occurred during a dramatic shift in the nature and function of public education. The development of asylums and hospitals coincided with the development of a mass education system that was publicly-funded, non-sectarian, and bureaucratically organized.¹⁰³ Compulsory attendance, reform schools, and various modes of segregation were mediated through a notion of social crisis, the lack of proper habit, and mental development.¹⁰⁴ Ungraded classrooms were employed as a solution to this crisis.¹⁰⁵ The primary mode of education or instruction in these classes was manual training.

The concept of intelligence is a network upon which scientists explain social hierarchies and human status in the natural world.¹⁰⁶ Between the critique of statistical methodology, factor analysis, and justification for social hierarchies are the institutions shaped by our conception of intelligence. One of the most significant institutions affected by the preceding areas of examination is the public education system. The arrangement has persisted in contemporary

¹⁰¹ "Journal of Psycho-Asthenics: Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons," Vol. XVII Sept. 1912 No. 1., 22.

¹⁰² *Mental Defectives in Virginia: A Special Report of the State Board of Charities and Corrections to the General Assembly of Nineteen Sixteen on Weak-Mindedness in the State of Virginia, Together with a Plan for the Training, Segregation and Prevention of the Procreation of the Feeble-Minded.*, 67-68.

¹⁰³ Seguin, *Idiocy: And Its Treatment by the Physiological Method.*

¹⁰⁴ Karier, *Roots of Crisis: American Education in the Twentieth Century.*

¹⁰⁵ Burrowes.

¹⁰⁶ See Alland; Montagu. Alland.

schooling. In the 1960's the nature of industry changed, and in the school system emphasis shifted from manual dexterity to a focus on standard forms of perception.¹⁰⁷ In this context ability equates self-worth to forms of measurement and naturalized social norms. These norms defined the organization of schools, higher education, and social stratification. Even opponents of testing who questioned the validity accepted its application.¹⁰⁸ One example is the application of the Army Alfa tests where public officials were reluctant to cede authority to psychologists, but adopted the mechanism for sorting and arranging.¹⁰⁹

Esquirol developed plans for a hospital where rooms open to a garden.¹¹⁰ Gardens present a peculiar state of a realism derived from their production. They possess a naturalism that could only be contrived, and a sense of nature that is simultaneously hyperbolic and yet completely orchestrated and controlled. In Western society the peculiar relation between humanity and nature has been nurtured, perhaps, more by the garden than by the womb. In relation, the precepts, concepts, and function of the art of science at the level of a collective conscious in the social body, often becomes indiscernible from these modes of representation. In the schematics of thought prostitution and marriage are reconfigured under the context of life. This discourse presented a knowledge associated with a fall from social morality -one that threatened life- with this threat as the basis for life. Schools remain contested sites of struggle. When the individual is rejected he is sent back to the family as disciplinary system. When a number of disciplinary systems reject him or her as unassailable, incapable of being disciplined, or uneducatable he sent

¹⁰⁷ Carrier, "Masking the Social in Educational Knowledge: The Case of Learning Disability Theory."; Carrier, "Sociology and Special Education: Differentiation and Allocation in Mass Education." Carrier, "Explaining Educability: An Investigation of Political Support for the Children with Learning Disabilities Act of 1969."; Carrier, *Learning Disability: Social Class and the Construction of Inequality in American Education*.

¹⁰⁸ Carson.

¹⁰⁹ Yoakum and Yerkes.

¹¹⁰ Foucault, *Psychiatric Power*, 338.

back to the family. The family's role at this point is to reject him as incapable of being fixed and to consign him to pathology.

Institutions position the self in both relation and distance from others. In this system we embody potential and our social valuation is a distinct and inherent feature. Human beings thus become inherently connected and yet completely disconnected. The science of intelligence must maintain this notion in standards of chronology, normality, and development, yet it must reinforce and maintain abnormality to sustain the continuum of ability.

Contemporary notions of intelligence formed in the discursive formations that operated in the scientific establishment and political/social deployment of intellectual abnormality. The body of knowledge that allowed intelligence to function, did not simply emerge as a unified body of knowledge, but was it put together in piecemeal fashion from a variety of discursive and spatial organizations. As the basis of thought became the object of scientific discourse the disciplines like psychiatry and psychology, called on individuals to view various behaviors through paradigms of intelligence -in referential relation to abnormality- internal and inherent to the self. The conditions that allowed the theoretical formulation of intellectual abnormality to transcend from theory to scientific truth were predicated in the tropes of intelligence and spatial organizations. The human sciences gaze has since remained fixated in the body, and within the realms of mental space.¹¹¹ This space, where language and the body intersect is not neutral or uncontested. The approach to deconstructing these formations is difficult because the science does not remain fixed or static, and does not function solely in the objects it constructs.¹¹²

¹¹¹ Ibid.

¹¹² Foucault suggests, "...the problem arises of knowledge whether the unity of a discourse is based not so much on the permanence and uniqueness of an object as on the space in which various objects emerge and are continually transformed." Foucault, *The Archaeology of Knowledge*. 32.

Social space contains a symbolic and concealed meaning also provides connection to the study of public schools.¹¹³ Schools tend to value and reward those student who are docile and compliant, while systematically objectifying and penalizing those who challenge authority or the status quo. This is how schools maintain as social hegemony. This can be explored in the spatial formations, such as the process of tracking students into vocation classes. These formations each have their own location, processes, and symbolic meaning that conceal more than reveal.

Separate Classes

A quote from the *New York Times* in 1899,

To provide a course of training for the child of school age who is incapable, by reason of mental infirmity, of profiting by the ordinary course—this is the function of the special class. It is class designed to teach the defective child to labor and to be happy in labor... In short, the special class is one which at a most critical period seeks to help over that child who is on the line of mental insfficiency [sic], thus making a good citizen of him who without such aid would be quite certain to prove a useless or bad one.¹¹⁴

The stress on scientific management, expertise and industrial models led to the implementation of a differentiated curriculum and a shift from the moral focus of the common schools to an economic focus based on a complex, hierarchical labor market.¹¹⁵ These factors helped introduce policies that made education a necessity for social and economic success and testing to establish a so-called scientific and unbiased basis for differential placement. Change was shaped by industrialization, discipline of factories, and laws of supply-and-demand labor.

¹¹³ Lefebvre.

¹¹⁴ Haney, 11-14.

¹¹⁵ Clarence Karier “Testing for Order and Control in the Corporate Liberal State” in: Block and Dworkin, *The Iq Controversy: Critical Readings* .

The differentiation of students relates to political and economic concerns.¹¹⁶ It was on the ideological basis that particular groups of individuals possess a limited intellectual potential or a disposition toward labor as opposed to academic work, schools began widespread tacking into industrial based education programs. Scientists justified these practices.¹¹⁷ Schools developed structures that mirrored industrial work.¹¹⁸ Emphasis placed routine, assembly, and following sequential directions as trade schools, vocational and industrial arts programs became prevalent.¹¹⁹

In the scientific literature there is a question of what can be extracted from the individual for the betterment of society.¹²⁰ This also ties into the basis for compulsory education, which is mediated through notions of social crisis; a degeneration of the social body through the lack of proper habit, and mental development.¹²¹ The basis for compulsory education connected to a notion of social crisis, a degeneration of the social body through the lack of proper habit, and mental development.¹²² The function of protecting society through classification and control of deviants system of education made compulsory.¹²³ Walter E. Fernald wrote,

the majority of the feebleminded would become industrially efficient, sexually safe or economically self-supporting, if only they could be supervised. I have no illusions regarding the difficulty of providing anything approaching adequate supervision, but I am convinced that for the present there is no other way of getting at the problem and after all, it is not as if we had not already taken upon ourselves responsibility for trying out such plan when we began the movement for ungraded and special classes for feebleminded children. Is that work all to be wasted? Are we to look after these children until they are fourteen or sixteen and

¹¹⁶ Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹¹⁷ Floyd M. Hammack, "Review: Rethinking Revisionism," *History of Education Quarterly* 16, no. 1 (1976): 54.

¹¹⁸ Karier, *Shaping the American Educational State: 1900 to the Present*.

¹¹⁹ Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹²⁰ Goddard, *Report of the Private Institution for the Education of Idiots, Imbeciles, Backward, and Eccentric Children*.

¹²¹ Hammack.

¹²² Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹²³ Foucault, "Abnormal: Lectures at the College De France 1974-1975". , 316.

then suddenly throw off all responsibility even to the extent of making no attempt to provide institutional care when it is obviously needed?¹²⁴

He goes on,

The school and the ungraded class give us the nucleus for a system of supervision which could be worked in so simply that it would not only not meet with opposition but would be welcomed by the children and by the parents.¹²⁵

Intelligence provided the rationale exercised in the observation over the domain of life.¹²⁶

Individual are screened, classified, and arranged according to a social validation of worth and their potential threat.¹²⁷ Robert Bennett wrote,

the anatomical basis for the complete failure of the negro schools to impart the higher studies – the brain cannot comprehend them any more than a horse can understand the rule of three...[and] leaders in all political parties now acknowledge the error of human equality...It may be practicable to rectify the error and remove a menace to our prosperity – a large electorate without brains.¹²⁸

Here we see sexuality as the focal point of a power promoted by the protection of life and defense of society. In the wake of evolutionary theory a materialism infused the historic and political discourse of class struggle and the blood myth.¹²⁹

Every component of the individual assessed according to what it contributes to the whole. The birth of the sciences of man distributing man in these terms no longer required taxonomy as much as a tactic. When the taxonomy of classification dissolves the taxonomy trying to fit men into species and genus the tactic is panoptic or a ‘new mode of obtaining power of mind over

¹²⁴ "Canadian Journal of Mental Hygiene," (Toronto: Canadian National Committee for Mental Hygiene), 168-169 and see: Fernald, *Report of the Commission to Investigate the Question of the Increase of Criminals, Mental Defectives, Epileptics and Degenerates*.

¹²⁵ "Canadian Journal of Mental Hygiene," 168-169.

¹²⁶ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

¹²⁷ Foucault, *Psychiatric Power*.

¹²⁸ Robert B. Bean, *The Weights of the Organs in Relation to Type, Race, Sex, Stature, and Age*, 11 vols. (Reprinted from the *Anatomical Record*, 1917); Robert Bennett Bean, *Some Racial Characteristics of the Spleen Weight in Man*, 1 vols., *American Journal of Physical Anthropology* (1919).

¹²⁹ Foucault notes, "...as soon as Psychiatry becomes a technology of the abnormal, of abnormal conditions fixed by heredity through the individual's genealogy, it is easy to see that the project of curing has no meaning." Foucault, "Abnormal: Lectures at the College De France 1974-1975"; *ibid.*, 316.

mind'.¹³⁰ A power aimed at everyone but one which distributes each person; in other words a power directed at a series of individuals. Clara Schmitt wrote,

Warburg found that the condition existed only among the poor class and that many of the mothers of such children had borne many children, were wage-earners at the same time, and were undernourished. He thought that the defect was a result of this antenatal condition of poor nutrition... commenting upon the fact that girls constitute a small percentage of the cases, attributes the larger percentage of boys to the fact that the heads of boys are larger at birth than the heads of girls and more liable to injury. He also makes the suggestion that more boys may be reported because the education of boys is more important than that of girls and any interference is more likely to be reported, or that girls attend to their studies better.¹³¹

Related to these changes was the formation of encyclopedic configurations of personal histories in scientific discourse. In this mode, various traits were randomly configured around the individual. It was not until the point of an evolutionary paradigm that science made the notion of a biologically based intelligence fully functional in a political sense. The notion of the abnormal grafted social vice, and the compromise of physical ability upon the entire social body. This latter figure was one whom behavioral and psychiatric deviations became inscribed in a normative system of education, and a society's responsibility for protection through social control.

Idiocy presented a justification for contemporary notions of intellect and the more formal science of intelligence. A verifiable continuum of intellectual function was not established in the metaphysical potential of the mind, but rather built upon a foundation of a science rooted in the

¹³⁰ Jeremy Bentham, *Panopticon: The Inspection-House: Containing the Idea of a New Principle of Construction Applicable to Any Sort of Establishment, in Which Persons of Any Description Are to Be Kept under Inspection: And in Particular to Penitentiary-Houses, Prisons, Houses of Industry, and Schools: With a Plan of Management Adapted to the Principle: In a Series of Letters* (Dublin; London: Reprinted and Sold by T. Payne, 1791); Jeremy and McHugh Bentham, James T., *The Rationale of Punishment*, ed. James T. McHugh, Prometheus's Great Books Series (Amherst, N.Y.: Prometheus Books, 2009).

¹³¹ Clara Schmitt, "Developmental Alexia: Congenital Word-Blindness, or Inability to Learn to Read," *The Elementary School Journal* 18, no. 9 (1918), 68.

abnormal. It took the nineteenth century to complete this transformation, and required the deployment and continual reinforcement of abnormality discourse to permeate the public sphere.

The dominant philosophical ideas had allowed science to gain prominence through the seventeenth and eighteenth centuries, there remained a significant obstacle for the biological and human sciences focused on mental processes and the basis of thought. By the twentieth century the discussion of idiocy was reconfigured from medical symptoms to pathology. Once these groupings were established in scientific discourse institutions and agencies could define and control what it means to be educated.¹³² This is how individuals are made objects knowledge and negates individuals as active participant in the formation of knowledge. In the school children are finally individualized.¹³³ Goddard's belief in the innateness of intelligence levels, for example, was so firm that he argued for the reconstruction of society along the lines dictated by intelligence,

If mental level plays anything like the role it seems to, and if in each human being it is the fixed quantity that many believe it is, then it is no useless speculation that tries to see what would happen if society were organized so as to recognize and make use of the doctrine of mental levels...It is quite possible to restate practically all of our social problems in terms of mental level...Testing intelligence is no longer an experiment or of doubted value. It is fast becoming an exact science...Greater efficiency, we are always working for. Can these new facts be used to increase our efficiency? No question! We only await the Human Engineer who will undertake the work.¹³⁴

The arrangement of asylums and justification transcended to the domain of normative education and a variety of institutions.¹³⁵ Additionally, certain social practices formed alongside these institutions and transformed practices throughout society. The mentality that allowed the asylum

¹³² Karier, *Scientists of the Mind: Intellectual Founders of Modern Psychology*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹³³ Foucault, *Psychiatric Power.*, 81.

¹³⁴ Goddard, *Human Efficiency and Levels of Intelligence: Lectures Delivered at Princeton University April 7-to-11, 1919*.

¹³⁵ David J. Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic* (Boston: Little, Brown, 1990).

to operate preceded the formation of the common school movement.¹³⁶ The decline in the capacity of apprenticeship to care for and protect poor and defective minors foretells the sequence of events that established the "institutional state".¹³⁷ This sequence of events saw the establishment of the insane asylum and state hospital for the deaf and blind prior to legislation for a state reform school or industrial school for delinquent youth. It accompanied the justification of institutions and legitimacy of compulsory education.¹³⁸

The pedagogical defense of manual training was made on the grounds it was an integral part of general intellectual development and not a distinct mode of learning. Against claims that manual training was a unique mode of learning, different from a liberal education in both content and instructional form, its defense was anchored in references to the historical function of apprenticeship generally and to its educational purpose specifically. The motivation to establish hospitals for the physically and mentally defective, reformatories for the delinquent and a broadened curriculum to encompass manual training resulted in an institutional order that was more differentiated than hierarchical, resting on the relative administrative autonomy of local trustees. This loosely coupled array of schools encompassed a range

The disciplinary space of the asylum offered early psychology recourse to a pathological anatomy in the relationships between abnormality and crime.¹³⁹ Yet for the social scientists of the nineteenth century the asylum presented an obstacle because of its association with the incurable, terminal, and custodial. Psychiatrists acknowledged early on a desire to transcend the limitations of the asylum. Hospitals, reformatories, and schools became the space to convey

¹³⁶ See Burdett.

¹³⁷ Katz.

¹³⁸ Richardson and Parker.

¹³⁹ Foucault, *Discipline and Punish: The Birth of the Prison*; Foucault, "Abnormal: Lectures at the College De France 1974-1975".

notions of treatment and progress.¹⁴⁰ Idiocy and scientific conceptions of intellect give psychiatry access to the domain of the family, and the constitution of the child as target of psychiatric intervention.¹⁴¹ Idiocy is not defined according to development.”¹⁴² The asylum had functioned as a medically demarcated space and the question of its medical or administrative direction, the tokens of psychiatric knowledge, the technique of questioning; the interplay of medication and punishment all become major themes.¹⁴³

This merges the notion of the gaze related to the medical examiners optics of truth and objectivity with the gaze connected to modes of power relations.¹⁴⁴ It takes us from overt violence to a microphysics of power and from institutional regularities to arrangements of power.¹⁴⁵ This represents a move from a macrophysics of sovereignty to the microphysics of disciplinary power.¹⁴⁶ This helped reformulate the power-relations between psychiatrist and patient. The function of protecting society through classification and control of deviants system of education is made compulsory.¹⁴⁷ As noted, the proliferation of schools, mental hospitals, prisons, and almshouses preceding the school system.¹⁴⁸ Ideas such as *loco parentis*, compulsory attendance, reform schools, and various modes of segregation were mediated through a notion of

¹⁴⁰ Foucault notes it took a refined knowledge for the scientific gaze to more vastly permeate the public sphere. He writes, “we cannot even say of “individuals”; let’s just say a certain distribution of bodies, actions, behavior, and of discourses. It is in this well ordered dispersion that we find the field on the basis of which something like the relationship of the medical gaze to its object, the relationship of objectivity, is possible—a relationship which appears as the effect of the first dispersion constituted by the disciplinary order. Secondly, this disciplinary order, which appears in Pinel’s text as the condition for exact observation, is at the same time the condition for permanent cure. That is to say, the therapeutic process itself, the transformation on the basis of which someone who is considered to be ill ceases to be so, can only be produced within this regulated distribution of power.” Foucault, *Psychiatric Power*, 2-3.

¹⁴¹ Foucault, "Society Must Be Defended: Lectures at the College De France 1975-1976".

¹⁴² Foucault, *Psychiatric Power*, 206.

¹⁴³ Ibid.

¹⁴⁴ Foucault, *Discipline and Punish: The Birth of the Prison*. Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*.

¹⁴⁵ Foucault, *Psychiatric Power*.

¹⁴⁶ Ibid.

¹⁴⁷ Foucault, "Abnormal: Lectures at the College De France 1974-1975". 316.

¹⁴⁸ See Karier, *Shaping the American Educational State: 1900 to the Present*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

social crisis, the lack of proper habit, and mental development.¹⁴⁹ Ungraded classrooms were employed as a solution to this crisis. The individual was screened, classified, and arranged according to a social validation of individual worth and according to their potential threat.¹⁵⁰ Goddard wrote extensive biographical descriptions of individuals attaching everything from a disorderly house, pauperism, criminality, and promiscuity, to the concept of intelligence and abnormality.¹⁵¹ Once this grouping was established in scientific discourse institutions and agencies could define and control what it meant to be educated.¹⁵² This is how individuals are made objects knowledge, and negates individuals as active participant in the formation of knowledge. The function of surveillance and documentation in case-history and narrative can be seen in the following example,

The child is weighed, measured, in his diverse proportions; his capacity for endurance and activity is tested, his powers of intelligence and speech ascertained [sic]; his will and habits delineated; a pen and ink portrait is drawn of his whole being, and kept together with his photograph.... Then the Superintendent, with a perfect knowledge of his subject, may launch him among the other children, not yet as an accepted pupil, but as a probationer on an experimental treatment of observation.¹⁵³

¹⁴⁹ Martin Deutsch, *Communication of Information in the Elementary School Classroom*, New York Medical College: Institute for Developmental Studies (New York, NY: Institute for Developmental Studies, Dept. of Psychiatry, 1964); Deutsch, Katz, and Jensen, *Social Class, Race, and Psychological Development; Perspectives on Human Deprivation: Biological, Psychological, and Sociological*, National Institute of Child Health and Human Development (Washington, DC: Government Publication Office, 1969); "To Assure the Free Appropriate Public Education of All Children with Disabilities: Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act," in *Special Education Programs: US Division for Innovation and Development* (Washington, DC: US Dept. of Education, 1991).

¹⁵⁰ Foucault, *Psychiatric Power*.

¹⁵¹ Goddard, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*; Goddard, *The Criminal Imbecile*; Goddard, *Mental Deficiency from the Standpoint of Heredity*; Goddard, *Feeble-Mindedness: Its Causes and Consequences*; Goddard, *School Training of Defective Children*; Goddard, *Human Efficiency and Levels of Intelligence: Lectures Delivered at Princeton University April 7-to-11, 1919*.

¹⁵² Karier, *Scientists of the Mind: Intellectual Founders of Modern Psychology*; Karier, *Roots of Crisis: American Education in the Twentieth Century*.

¹⁵³ Seguin, *Idiocy: And Its Treatment by the Physiological Method*, 195.

Though the education system is portrayed as dispensing knowledge for the common good it is also an institution that legitimates various power relations.¹⁵⁴ We can see this in segregated schooling, tracking and various other programs though some historians retain a positive explanation for the institutional legacy of the science of intelligence.¹⁵⁵ With the notion of crisis and need for social control science expanded the search for intellectual abnormality into unexamined realms.

We see this today in achievement testing and the emphasis on development. It also led to the idea that the most valuable and relevant knowledge for teachers would be determined scientifically in fields such as psychology.¹⁵⁶

The influence of science validating certain forms of knowledge and the growth of educational psychology over the twentieth century is complex. The modes of generalization and psychiatrization of childhood mediated through the theoretical specification of idiocy.¹⁵⁷ This includes the criterion of development, or the emergence of a psychopathology of idiocy and mental retardation. The pathological child was one who could not imitate or replicate. James Hinshelwood, who formulated the notion of dyslexia, wrote,

There is thus manifest in these children such a striking contrast between the capacity of the auditory and the visual memories that it at once reveals a condition which is so abnormal that it can only be regarded as pathological.¹⁵⁸

He goes on,

It is thus in their failure to acquire the art of reading by sight alone and without appeal to any other cerebral centres than the visual that this defect becomes conspicuously manifest. They have been unable like the other children to furnish their visual memory centre with the visual memories of words, and it is the great

¹⁵⁴ Karier, "The Quest for Orderly Change: Some Reflections," 161.

¹⁵⁵ Daniels and Garner; Mazurek and Winzer; Winzer, *The History of Special Education: From Isolation to Integration*.

¹⁵⁶ See Seymour Bernard Sarason, *Psychology Misdirected* (London: Free Press Collier Macmillan 1981).

¹⁵⁷ Foucault, *Psychiatric Power*.

¹⁵⁸ James Hinshelwood, *Congenital Word-Blindness* (London, UK: H.K. Lewis & Co., 1917), 56-57.

and persevering efforts which are necessary to repair this failure and to remedy this defect which makes their educational career so different from that of the ordinary child.¹⁵⁹

Hinshelwood was the first to attribute the disability to a dysfunction in the area of the brain responsible for language. Hinshelwood's belief that because the children he examined exhibited reading problems that were similar to adults with known brain lesions who were also neurologically impaired. He wrote it was "evident that their cerebral defect was a purely local one,...that it was strictly confined to the cerebral area for the visual memory of words and letters, the left angular gyrus, and did not extend at all beyond that."¹⁶⁰ Hinshelwood concluded that the root of congenital word-blindness lay in children's brains because he had observed that 'dysfunctional reading symptoms found in adults with brain lesions were analogous to those of certain children with reading problems.'¹⁶¹ The domain that these notions occupy can be situated on the axis of distinct continuums; ones that include the rhetoric and myths of intelligence; and those in which our social body is distributed. The conditions that allowed the theoretical formulation intelligence to transcend from theory to science was rooted in abnormality. Intelligence developed slowly evolved out of concerns for grouping and classifying individuals. Scientists generalized notions between the sense, the physical, and the mental from their work in various asylums; as seen in the various quote,

I was able easily to trace out the good effects of many evils; to show how they had stimulated mankind to exertion and contrivance, physical and mental; to tell of the discoveries, inventions, and improvements that were the consequences. In particular, I dwelt upon the sad privations those individuals are subjected to who were born deaf or blind. The institution of the Asylum for the Deaf and Dumb, at

¹⁵⁹ *ibid.*, 56-57., 56-57.

¹⁶⁰ James Hinshelwood, "Four Cases of Congenital Word-Blindness Occurring in the Same Family," *British Medical Journal* 2, no. 1229-1232 (1907): 3-5.

¹⁶¹ *Ibid.*

Hartford, was then of recent date, and a school for the blind was said to have been opened in Paris.¹⁶²

Idiocy was connected to schools for the blind through philanthropy. The idea was how much senses are alike at the core and that senses could be substituted.¹⁶³

Schools have very distinct spatial arrangements. Students are arranged or spatially segregated according age. This arrangement is based on the idea that human beings progress in a linear and universal fashion. Each stage is marked by an overall progression. Those who deviate from this ordering are symbolically marked. The idiot child gained more than the power that controls and corrects; it becomes power over the abnormal; the power to define, control, and correct what is abnormal. De-specifying the psychiatric institution placing it within a range of different structures, such as prisons, schools, the establishments used to supervise and control the mode of life. As might be expected in such circumstances, implementation happened according to the idiosyncratic styles of teachers and schools.¹⁶⁴ Funding provided incentives to classify more and more students as disabled.¹⁶⁵ Some believe this arrangement might fundamentally be doing more harm than good.¹⁶⁶ Dunn flatly stated that far too many children from are misidentified as mentally retarded or emotionally disturbed on the basis of identification procedures and inappropriate use of intelligence testing.¹⁶⁷ Dunn argued that those children—of

¹⁶² Seguin, *Idiocy: And Its Treatment by the Physiological Method.*, 10.

¹⁶³ Hinshelwood published paper on 'congenital word blindness' in the *British Medical Journal* same year Séguin published *Idiocy: Seguin, Idiocy and Its Treatment by the Physiological Method.* Hinshelwood, "Four Cases of Congenital Word-Blindness Occurring in the Same Family."

¹⁶⁴ Ellen Brantlinger, "Using Ideology: Cases of Nonrecognition of the Politics of Research and Practice in Special Education," *Review of Educational Research* 67, no. 4 (1997); Ellen A. Brantlinger, *Dividing Classes: How the Middle Class Negotiates and Rationalizes School Advantage* (New York: Routledge Falmer, 2003).

¹⁶⁵ Anne McGill-Franzen, *Shaping the Preschool Agenda: Early Literacy, Public Policy, and Professional Beliefs*, Suny Series, Literacy, Culture, and Learning (Albany: State University of New York Press, 1993).

¹⁶⁶ L. M. Dunn, "Special Education for the Mildly Retarded--Is Much of It Justifiable?," *Except Child* 35, no. 1 (1968); Lloyd M. Dunn, *Exceptional Children in the Schools* (New York, : Holt, 1963); Lloyd M. Dunn, *Exceptional Children in the Schools: Special Education in Transition*, 2d ed. (New York, NY: Holt, 1973).

¹⁶⁷ Dunn, "Special Education for the Mildly Retarded--Is Much of It Justifiable?."; Dunn, *Exceptional Children in the Schools*; Dunn, *Exceptional Children in the Schools: Special Education in Transition.*

whom he estimated 60 to 80 percent were from “low status backgrounds”—were then placed in segregated, inherently inferior special education settings raising “serious educational and civil rights issues which must be squarely faced.”¹⁶⁸ Some were especially concerned about the possibility that bias might underlie the schools' label and segregate disproportionate numbers of minority pupils.¹⁶⁹ In posthumously published letters, Blatt expressed doubt about the category learning disability, and the motives behind its inception.¹⁷⁰

Following the Brown ruling, a number of school systems found other ways to sort pupils, and many increased provisions for the mildly retarded and to a lesser extent the emotionally disturbed. The most famous instance of this was the Washington, D.C., school system, which began tracking based on intelligence test “shortly after it was ordered to dismantle its dual school system” when the policy was attacked successfully in the landmark case of *Hobson v. Hansen*.¹⁷¹

The bases of sorting led to the search for devices that could both explain the poor performance and used to sort pupils. The prime example of this sort of model is cultural deprivation theory. The screening and classification of children is still dominated by medical terminology even though there no consensus among researchers. There are disproportionate numbers students from low-income families classified as disabled and removed from general education. Nonetheless, “Physicians, psychologists, and social workers do not seriously entertain

¹⁶⁸ Dunn, “Special Education for the Mildly Retarded--Is Much of It Justifiable?,” 6-9.

¹⁶⁹ Jane R. Mercer, *Labeling the Mentally Retarded: Clinical and Social System Perspectives on Mental Retardation* (Berkeley: University of California Press, 1973).

¹⁷⁰ Brantlinger, “Using Ideology: Cases of Nonrecognition of the Politics of Research and Practice in Special Education.”

¹⁷¹ David L. Kirp and Mark G. Yudof, *Educational Policy and the Law: Cases and Materials* (Berkeley, CA: McCutchan Publishing, 1974), 38.

the idea that sickness, mental illness, and social deprivation will be totally eliminated any time soon.”¹⁷²

These categories came about with the advent of mental testing and the concepts of norm and normal.¹⁷³ The attempt to diagnosis is not to determine causality; rather it remains the very process of formulating the conception of disability. Scientists have proposed various forms of causality, for example, alcoholism was thought to cause alexia. Here causality works in a twofold mechanism. In other words, social vice causes idiocy, feeble-mindedness, and problems of the mind, but also proposed as the basis for pathologies. Binet notes the variations and obscurity in terminology and classification,

It is a hackneyed remark that the definitions, thus far proposed, for the different states of subnormal intelligence, lack precision. These inferior states are indefinite in number, being composed of a series of degrees which mount from the lowest depths of idiocy, to a condition easily confounded with normal intelligence. Alienists have frequently come to an agreement concerning the terminology to be employed for designating the difference of these degrees; at least, in spite of certain individual divergence of ideas to be found in all questions, there has been an agreement to accept idiot as applied to the lowest state, imbecile to the intermediate, and moron... to the state nearest normality. Still among the numerous alienists, under this common and apparently precise terminology, different ideas are concealed, variable and at the same time confused.¹⁷⁴

Intelligence or lack of intelligence linked instinct and mental traits. Instinct is regarded by science as the cause for social vice including prostitution alcoholism and various other forms of crime. We begin to see with the notion of the neurological body or the nervous system in relation to the mind and the will. Muscular contract ability is noted by Séguin in relation to disorder. This is a question of how the individual becomes oriented toward the notion of intelligence.

¹⁷² James M. Kauffman and Daniel P. Hallahan, *The Illusion of Full Inclusion: A Comprehensive Critique of a Current Special Education Bandwagon* (Austin, TX: Pro-Ed, 1995), 61.

¹⁷³ Brantlinger, "Using Ideology: Cases of Nonrecognition of the Politics of Research and Practice in Special Education."

¹⁷⁴ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*.

Intelligence is linked to muscular control, will, and instinct. This is seen very explicitly put the grouping of abnormality seen in the context of immediacy and feeble-mindedness scientists regarded epilepsy in the same context because they linked neurology and muscular control to the notion of the mind. Goddard, for example, in the *Heredity of the Feeble-Minded* wrote,

Feeble-mindedness and epilepsy are often combined, constituting a complex that is very troublesome. In the writer's opinion the problem would be much simplified by recognizing two groups: first those who belong to a strain of pure feeble-mindedness upon whom epilepsy has been grafted, and second a group of normal people suffering from epilepsy but in whom the epilepsy has produced an arrest of development and even set up a degenerative process.¹⁷⁵

This also meant however that instincts regarding sexuality placed in instinct were also linked to intelligence. Early case of this is with Itard and his work with Victor's sexuality, where instinct linked to will and desire is a primary concern for Itard.¹⁷⁶ The problem of diagnosis in medicine and psychiatry is also seen with the emergence of the neurological body introduced in the analysis of Broca and Duchenne de Boulogne.¹⁷⁷ Hinshelwood concluded that the root of congenital word-blindness lay in children's brains because he had observed that dysfunctional reading symptoms found in adults with brain lesions were analogous to those of certain children with reading problems.¹⁷⁸ Hinshelwood believed the problem was caused by localized brain damage that was probably hereditary.¹⁷⁹

There was a direct theoretical influence between institutions and real practices, and a system that led from the hospital to our system of learning.¹⁸⁰ As Canguilhem wrote, "Normal" is

¹⁷⁵ Quoted in: Stanley P. Davies, *Social Control of the Mentally Deficient*, Crowell's Social Science Series (New York, NY: Crowell, 1930); Goddard, "Heredity of Feeble-Mindedness."; Goddard, *Heredity of Feeble-Mindedness*.

¹⁷⁶ Itard, *The Wild Boy of Aveyron*; Itard, *Rapport Fait À Son Excellence Le Ministre De L'intérieur Sur Les Nouveaux Développemens Et L'état Actuel Du Sauvage De L'aveyron*.

¹⁷⁷ Foucault, *Psychiatric Power*. Foucault notes the problem of diagnosis in medicine and psychiatry, and the place of the body in psychiatric nosology as the model of general paralysis.

¹⁷⁸ Hinshelwood, "Four Cases of Congenital Word-Blindness Occurring in the Same Family."

¹⁷⁹ *ibid*; Hinshelwood, *Congenital Word-Blindness*.

¹⁸⁰ Foucault, *Psychiatric Power*.

the term used by the nineteenth century to describe the scholastic prototype and the state of organic health.”¹⁸¹ In the school, the child is individualized.¹⁸² If the individual is rejected he or she is sent back to the family as disciplinary system. When a number of disciplinary systems reject the individual unassailable, incapable of being disciplined, or unable to be educated he sent back to the family. The family’s role at this point is to reject him as incapable of being fixed and to consign him to pathology or whatever.¹⁸³

The system sets up the regularities that allow for the monitoring of the body, the discipline, regularities, and order in which a condition of objectivity between medical knowledge and the criteria of established validity. The initial problem of where to put them does not refer to their treatment; the go from asylum to schools; then back to asylum; as a result of their parents employment and the inability of the school to account for them.¹⁸⁴ Séguin wrote,

When we have secured the use of this function, even to the smallest extent, that little must be instantly applied to some educational purpose with the help of other instruments adapted to the present incapacity of the child, to make him appreciate the properties of bodies, which otherwise fall naturally under the sight of ordinary persons. These properties to be perceived by the sight with the help of special instruments are colors, forms, combinations of forms, dimensions, distances, plans, etc.¹⁸⁵

Intelligence provided the rationale exercised in the observation over the domain of life.¹⁸⁶ In the school individuals were to be screened, classified, and arranged according to a social validation of worth and their potential threat.¹⁸⁷

One of the primary themes throughout the history of science of intelligence is the distinction between classification and diagnosis. The gap in this distinction allowed scientists to

¹⁸¹ Ibid., 202.

¹⁸² Ibid., 81.

¹⁸³ Ibid., 81-82.

¹⁸⁴ Ibid.

¹⁸⁵ Séguin, *Idiocy: And Its Treatment by the Physiological Method*, 115.

¹⁸⁶ Foucault, "Abnormal: Lectures at the College De France 1974-1975".

¹⁸⁷ Foucault, *Psychiatric Power*.

reclassify abnormality and structure intelligence. Diagnosis was caught in the complexity of classification. The search for diagnosis led to an emphasis upon further modes of classification. Likewise, the inability to classify properly led to an emphasis on modes of diagnosis. Diagnosis did not lead to any form of cure. It primarily linked to education to treatment. Classification linked to pedagogy in the sense that classification was the inability of the child to adapt to the traditional pedagogic method. This led to a form of abnormality with a type of curious paradox where the child who cannot adapt to do the traditional structure is diagnosed with a form of abnormality and prescribed a further pedagogic treatment; if this treatment is successful it undermines diagnosis. The failure of the child to adapt to the pedagogic treatment is the basis upon which further diagnosis or classification was established. This was seen first with the case of Itard and his inability of diagnosis.¹⁸⁸

This is connected to perception one of the early factors of modern psychiatry and a lingering aspect of intellectual abnormality is the connection between attention and perception. Perception becomes one of the primary diagnostic features integrated are incorporated in the ambiguity between classification diagnoses the inability of the child to adequately perceive the intended instructions were supposed out, resulted in the inability to adapt to lead to the classification and diagnosis. This led the attempt to measure attention over distraction; attention was given precedence over distraction the ability to attend were to remain attentive to a task was the basis upon which sciences measured the level of intelligence.¹⁸⁹ Spencer wrote,

This inability to select nutritive facts necessarily accompanies low development; since, until generalization has made some progress, and the habit of generalizing has become established, there cannot be reached the conception that a fact has a remote value apart from any immediate value it may have. Again, we see in the

¹⁸⁸ Itard, *The Wild Boy of Aveyron*; Itard, *Rapport Fait À Son Excellence Le Ministre De L'intérieur Sur Les Nouveaux Développemens Et L'état Actuel Du Sauvage De L'aveyron*.

¹⁸⁹ Fonseca and others.

young of our own race a similar inability to concentrate the attention on anything complex or abstract.¹⁹⁰

This has remained a primary focus in the science of the abnormal child, that there is a syndrome characterized in some patients by attention deficits, hyperactivity, and soft neurological signs.¹⁹¹

The ambiguity between classification and diagnosis allowed scientists to diagnose in areas such as personal habit, instinct, will, and desire. Attention and the ability to accept commands are also factors incorporated into diagnosis this remains a lingering aspect of intellectual abnormality.

Education does not augment intelligence rather education works in relation or literally in spite of it.

If any factor that connection to general biologic process grafted onto intelligence through abnormality; a good indication of this is development because development connected to norms related to physiology and biology of the human being they were easily connected to intelligence. One can see this very explicitly in the practice of anthropometric measurement of body sizes is also connects to the desire for distinct forms of measurement they weigh various body parts can measure capabilities. Various figures held the desire to apply these methods -used in schools for idiots-- to public school students.¹⁹² This became one of the primary modes through which diagnosis took place for classification.

The notion of will is simply desire, though the will of the idiot is distinctly connected to ability though a perceived disconnect between ability and capacity; will is the inability to resolve the tension between desire, expectation, and the actual action being carried out; any point at which one does not complete the action can be connected to a whole spectrum of pathologies.

¹⁹⁰ Spencer, *The Principles of Sociology*.

¹⁹¹ Michael W. Torello and Frank H. Duffy, "Using Brain Electrical Activity Mapping to Diagnose Learning Disabilities," *Theory into Practice* 24, no. 2 (1985): 97.

¹⁹² Spencer, *The Principles of Sociology*.

This pathology is then connected to neurology. Séguin states that when action is not entirely under control of the will at the outset, the training of idiots and in the medical treatment of disorder is necessary.¹⁹³

Dyslexia is one of the early disorders, labeled word and mind blindness, where disconnect between expectation and action align to pathology. Initially dyslexia is linked to chronic alcoholics. The idea was that the disorder was cured when alcohol is withheld.¹⁹⁴

There is another class of cases referred to by Professor Berlin where dyslexia sometimes appears — viz., in chronic alcoholics. In these cases he found that the disturbance gradually passed away when the alcohol was withheld. My case belongs to this category. The patient's habits, the continuous improvement when alcohol was withheld, and the non-appearance of any further symptoms of cerebral disease, all combine to confirm the opinion that the dyslexia was of toxic origin due to disturbed nutrition of the cerebral centres or connecting fibres from excessive indulgence in alcohol.¹⁹⁵

The notion of dyslexia was linked therefore to have it notion about all this is also noted is a lack of connection to symptoms of cerebral disease leading to the idea that dyslexia was of a toxic origin due to nutrition due to an indulgence about all.

A standard debate regarding the study of intelligence is that its measurement can produce an accurate prediction of success in life.¹⁹⁶ In addition, the notion of intelligence as derived from heredity causation verses environmental factors measured as intelligence. The work is also used to influence social policy stemming from civil rights legislation and compensatory programs. In

¹⁹³ Hinshelwood, "Four Cases of Congenital Word-Blindness Occurring in the Same Family."; Hinshelwood, *Congenital Word-Blindness*; Seguin, "Idiocy as the Effect of Social Evils, and as the Creative Cause of Physiological Education."; Seguin, *New Facts and Remarks Concerning Idiocy*; Seguin, *Report on Education*; Seguin, *Importance of the Early Recognition of Epilepsy*.

¹⁹⁴ James Hinshelwood, "Letter, Word, and Mind-Blindness " *Mind* 9, no. (1900); Hinshelwood, "Four Cases of Congenital Word-Blindness Occurring in the Same Family."; Hinshelwood, *Congenital Word-Blindness*.

¹⁹⁵ Hinshelwood, "Letter, Word, and Mind-Blindness " .

¹⁹⁶ Linda S. Gottfredson, *Intelligence and Social Policy*, No. 1 vols., Intelligence vol. Vol. 24 (Norwood, New Jersey: Ablex, 1997), 87. Gottfredson rejects the idea that education can significantly alter an individual's intelligence (specifically g). She states that, "Large differences in intelligence in the population are evident by the early school years and this distribution is not substantially changed, at this time in history, by school or work environments."

contemporary studies on intelligence there is a vast discrepancy in the conclusions reached regarding the impact of education and culture.¹⁹⁷ Other studies suggest that intelligence is impacted by educational differences.¹⁹⁸

The arguments and debates related to intelligence caught in a circular logic where intelligence promoted as the primary predictor or cause of educational attainment, economic success, and social-status; and education, income, and social-status seen as intelligence. Educational attainment is either seen as the product of intelligence, or intelligence as the product of educational opportunity. In the research, education is usually accounted for in relation to years of schooling, and the degrees reached. Age and education are used as variables, that when manipulated, produce various results. Assessments of intelligence maintain standards around chronological development, and normality. While psychometric testing is used to identify abnormality, it must reinforce and maintain abnormality to sustain the continuum of intellectual ability. In other words, intelligence testing seeks to uncover or confirm a continuum between abnormality and ability, to re/produce its' basis, rationale, and meaning.

Scientific studies have utilized various physical attributes empirically linking foundational elements for intelligence to developmental features. For example, a study titled *Aging, Brain Size, and IQ* cites several studies published in the 1990s that suggest a relationship between brain size and intelligence.¹⁹⁹ The authors state that, "future research should consider age as more of a contentious variable and examine brain size, aging, and IQ at specific ages

¹⁹⁷ Linda S. Gottfredson, *The Role of Intelligence and Education in the Division of Labor*, Report from National Institute of Education (Baltimore, MD: Center for Social Organization of Schools at The Johns Hopkins University, 1984), 4.

¹⁹⁸ Robert J. Sternberg and David Preiss, *Intelligence and Technology: The Impact of Tools on the Nature and Development of Human Abilities*, The Educational Psychology Series (Mahwah, NJ: Lawrence Erlbaum Associates, 2005).

¹⁹⁹ Mark D. Allen and others, "Functional Neuroimaging Evidence for High Cognitive Effort on the Word Memory Test in the Absence of External Incentives," *Brain Injury* 21, no. 13 (2007); Bigler, O'Neill, and Howes.

rather than grouping data by decade.”²⁰⁰ This type of study and the search for an etiology in intelligence has occurred throughout the twentieth century.²⁰¹ The significance of the study and the conclusions reached are similar, but still inconclusive when compared to current research on physical attributes, development and intelligence.

Intelligence and the various debates surrounding it have infused two major political struggles of the twentieth century, those of class and race, and studies of intelligence often seek to directly affect theories of human ability and influence cultural change such that those changes are seemingly interrelated.²⁰² These studies use the conception of intelligence in relation to environment and development to influence social policy. Researchers contend that social structures have occurred as direct result of differences in intelligence.²⁰³

In this context education and opportunity are seen as fundamental to social mobility.

²⁰⁰ Bigler, O'Neill, and Howes.

²⁰¹ See MacDonald, *Man and Abnormal Man: Including a Study of Children in Connection with Bills to Establish Laboratories under Federal and State Governments for the Study of the Criminal, Pauper, and Defective Classes*. This study provides a detailed account of measurement of school children referred to in documents as ‘Anthropometrics’. Researchers conducted additional studies to determine links between unruly school behavior and criminality.

²⁰² Gottfredson, *The Role of Intelligence and Education in the Division of Labor*; Gottfredson, *Intelligence and Social Policy*; Linda S. Gottfredson, *Special Issue Intelligence and Social Policy*, Intelligence (Greenwich, Conn.: Ablex, 1997); Linda S. Gottfredson, "The General Intelligence Factor", Scientific American, Inc; Linda S. Finucci Joan M. Childs Barton Gottfredson, *The Adult Occupational Success of Dyslexic Boys: A Large Scale Long-Term Follow Up*, Report (Baltimore, MD: Center for Social Organization of Schools, The Johns Hopkins University, 1983). Two studies conducted by Linda Gottfredson, for example, argue that social and occupational hierarchies are the result of a natural and static general intelligence (g). Gottfredson’s utilization of intelligence are similar to the view presented in Herrnstein and Murray. Linda Gottfredson was one of the fifty-two experts in intelligence to sign an article printed in the Wall Street Journal supporting the conclusions reached in the Bell Curve.

²⁰³ Gottfredson, *The Role of Intelligence and Education in the Division of Labor*, 134. She states that: “The employment processes that create socioeconomic inequalities originate in large part from the differential ability of the members of a society to perform the more difficult and critical tasks that individuals and societies rely on for their well-being. The irony, of course, is that non-meritocratic employer practices do not create the occupational hierarchy as revisionists have maintained; non-meritocratic practices put a brake on the power of intelligence to do so.”

This disruption of individuals and groups along a continuum of norms is a phenomenon of the nineteenth and twentieth century. The development and changes that have occurred in the scientific paradigm have interacted with cultural and theoretical shifts.²⁰⁴

²⁰⁴ According to some, intelligence testing is a culturally self-authenticating device. In other words, the measurement of intelligence reflects the dominant values of the culture in which the measurement occurs. See Thomas S. Popkewitz, Barry M. Franklin, and Miguel A. Pereyra, *Cultural History and Education: Critical Essays on Knowledge and Schooling*, ed. Barry M. Franklin Thomas S. Popkewitz, Miguel A. Pereyra (New York: Routledge, 2001).

CHAPTER 5

CONCLUSION

Individuals situated socially and spatially through the function of discourse that positions the self in relation to others. According to the science of intelligence each person embodies an identifiable intellectual potential and social valuation as a distinct and inherent feature. Human beings thus become inherently connected and completely disconnected. In this disconnect we maintain the notion in standards of chronology, normality, and development. Intelligence is used to identify a potential yet must reinforce and maintain abnormality to sustain the continuum of intellectual ability. We seek to uncover or confirm a continuum between abnormality and ability, the very basis or rationale it presupposes. The abnormal was forged throughout the twentieth century as well as the utilization of intelligence to influence social policy.

The knowledge that allowed intelligence to function did not emerge as a unified body of knowledge, but was it put together in piecemeal fashion from a variety of discursive and spatial organizations. As the basis of thought became the object of scientific discourse the disciplines like psychiatry and psychology, called on individuals to view various behaviors through paradigms of intelligence -in referential relation to abnormality- internal and inherent to one's self. The approach to deconstructing these formations is difficult because the science does not remain fixed or static, and does not function solely in the objects it constructs.¹ The science of

¹ Foucault, *The Archaeology of Knowledge*, 32. Foucault suggests, "...the problem arises of knowledge whether the unity of a discourse is based not so much on the permanence and uniqueness of an object as on the space in which various objects emerge and are continually transformed."

intelligence shifted little within the various domains of scientific foundations. It seemingly lends no real insight into, nor derives its conceptual basis from either traditional rationalism that dissolves the senses preceding knowledge formation, or empiricism.² The influence of Darwinian naturalism or evolutionary theory, as well as phenomena, and various other scientific transformations have not altered the paradigm of intelligence measurement in a significant manner since its' developed in the late nineteenth century.³

The arguments and debates related to the concept of intelligence get caught in a circular logic where intelligence is promoted as the primary predictor or cause of educational attainment, economic success, and social-status; and yet education, income, and social-status are seen as the indication of what is measured as intelligence. In other words, educational attainment is either seen as the product of intelligence, or intelligence as the product of educational opportunity. In the research, education is accounted for in relation to years of schooling, and the degrees reached. Age and education are used as variables, that when manipulated, produce various results.⁴

Scientific studies have utilized various physical attributes while attempting to empirically link a foundation for intelligence in developmental features. Intelligence is bound to a belief in instruments and measurement as opposed to theoretical insight.⁵ The various fragments, connection, and pieces of language never held a logical connection to the presupposed

² Locke and Winkler.

³ Edmund Husserl, *The Idea of Phenomenology*, trans., William P. Alston and George Nakhnikian (The Hague: Nijhoff, 1964); Edmund Husserl, *Phenomenology and the Crisis of Philosophy: Philosophy as a Rigorous Science, and Philosophy and the Crisis of European Man* (New York: Harper & Row, 1965); Edmund Husserl, *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy* (Boston, MA: Nijhoff, 1980); Edmund Husserl and John B. Brough, *On the Phenomenology of the Consciousness of Internal Time* trans., John Barnett Brough (Boston: Kluwer Academic Publishers, 1991).

⁴ "Average American No Adonis to Science," *New York Times* August 22 1932; Binet and Simon, *A Method of Measuring the Development of the Intelligence of Young Children*.

⁵ Galison, *How Experiments End*; Galison, Gordin, and Kaiser, *Science and Society: The History of Modern Physical Science in the Twentieth Century*.

foundation of intelligence. It was the attempt to capture its essence. Intellect never existed but rather functioned. Before the body could become a location for determining potential human worth, the mind needed was fashioned to the physical.

The twenty-third question of the Binet-Simon intelligence tests asks:

Why is it better to persevere in what has been commenced, than to abandon it to commence something else?

Binet helps researchers interpret the potential response his question stating,

Good replies are rare. Most often (second reply) the thing is affirmed without the motive being given. Several give scholastic motives, indicating that their outlook is limited. There are finally several unintelligible replies.⁶

⁶ Binet and Simon, *The Development of Intelligence in Children: The Binet-Simon Scale*, 133.

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