

The Moral Construction of Educational Psychology: The American Case

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Abstract

This paper examines the historical and social construction of educational psychology. Educational psychology became the dominant theory of learning and teaching during the early decades of the 20th century. The paper argues that the success in defining American public schooling as its professional jurisdiction is owed, in large part, to how educational psychology framed a meta-narrative that spoke to the major economic transformations generally and to the social and cultural problems that came with them. The resilience of educational psychology as the dominant ‘theory’ of schooling extends to the present, repeating the interpretation of (non)learning in terms of individual differences and their moral implications.

Introduction

This paper examines the factors that contributed to the jurisdictional dominance of educational psychology within American public schooling. The link between educational psychology and public schooling was much more than a companionship; it might be more accurate to describe it as an intellectual appropriation. Most notably, E. L. Thorndike argued that psychology had much to contribute to the emergent system of public schooling within. In his three-volume work on educational psychology (1913), the affinity between psychology and public schooling was forcefully proposed, as both natural and necessary. From this educational psychology rapidly gained disciplinary legitimacy. Yet, the tight coupling of educational psychology and public schooling was not inevitable. Educational sociology provided intellectual competition for educational psychology as evidenced by scholars such as Snedden (1924) and the inaugural publication of the *Journal of Educational Sociology* in 1926.

The first textbooks entitled “Educational Psychology” emerged in the 1880s (see e.g., Hopkins, 1886). This greater historical depth, in the number of intellectual predecessors and psychological works on education, leads naturally to conclusions that the achievement of jurisdictional dominance by the turn of the century was the inevitable outcome of a maturing knowledge base that beat out competition (cf. Charles 1987; Grinder 1989; Hilgard 1996; Alexander 2003; Walberg and Haertel 1992; Hagstrom, Fry, Cramblet and Tanner 2007, p. 798). In contrast, this paper does not presume that psychology’s professional dominance over public education was an inevitable outcome. Opposing such natural or functional views, the perspective explored here highlights how educational psychology was “made” over the decades from the late 19th century to the second decade of the 20th century. While this exploration focuses on the evolving knowledge base, the argument focuses on the affinities that linked the application of specific psychological principles to specific economic and political phenomena.

The affinities that linked psychology to socio-political relations, and rendered possible a jurisdictional dominance over public education, evolved by ‘relocating’ post Darwinian thought to the practical application of this thought to problems of teaching and learning. Yet, while ideas and central figures abounded, the selection of only some ideas and only certain figures requires that we examine intellectual and contextual affinities that may not ordinarily be considered.

These affinities explored here emanated within and flourished across three levels, those that C. Wright Mills aptly noted as biography, social structure and history (Mills 1959). In other words, we argue that the influence of the ideas any one individual figure, from the French psychologist Alfred Binet to his American counterpart E. L. Thorndike, is not adequately explained by the merits of their ideas. The recognition of their work is the more challenging explanandum. The rise of particular intellectual figures to prominence, and the declaration of their ideas as their ideas, stems in large measure from macro-level definitions of social problems as well as mechanisms to head off or ameliorate their effects.

In turn, this legitimates the claim of professional networks to establishing jurisdictional authority over particular social problems. We argue that this effect is informed by the impact of broader social structures on the value accorded to the content of intellectual arguments.

A Theoretical Framework

The latter decades of the 19th century were notable for the rapid pace of economic transformations, fueled by the “labor question” and its cultural ramifications. The crucial transformation was in large measure, the rise of the “new middle class”, those in technical and professional occupations who found themselves sandwiched between a consolidated capital wealth above them, and an increasingly organized laboring class below, played a central role in shaping the contours of the emerging society. The social and cultural conflicts that were generated by these large-scale changes also had implications for common schooling. The beliefs and writings of figures such as William James, G. Stanley Hall, E. L. Thorndike and John Dewey were conceived and crafted, believed or critiqued, within the boundaries that linked their biographies to the context of these social structural changes. Applying psychology to education was, in short, socially mandated.

Above both biography and social structure are beliefs in what direction history is taking. The future of those in professional and technical occupations, ones which shaped the biographies of James, Hall, Thorndike and Dewey, was a critical contextual factor that influenced the selection of the ideas and concepts that would constitute the discipline of educational psychology. Leading were, from this view, philosophers for the historical future of new middle class occupations.

We propose that the opportunity for a jurisdictional dominance of educational psychology within public schooling emanated from two conditions: 1. An emergent consensus about the “laws of learning”, articulated by leading figures who linked human developmental stages to the age-graded progression of schooling; and 2. A context of dramatic shifts in macro-economic conditions that stimulated institutional reforms reflected the anxieties of those in technical and professional occupations in particular. These conditions were necessary but not sufficient for the establishment of jurisdictional dominance, however. For their coincidence to become determining, the writings of central figures needed to become a comprehensive and comprehensible explanation for the direction history seemed to be taking. In essence, their intellectual compatibility required an overarching theme that rendered the professional ideas of psychology able to diffuse culturally. What was needed was a moral canopy, one that linked the laws of learning to the moral attributes of intelligence (see Brigman 1923; Dewey 1909; Goddard 1920, 1921, 1923; Haller 1963) and thus legitimated institutional reforms on moral grounds (Haber 1964; Kolko 1963; Radest 1969; Ross 1907; Weyl 1912).¹ In essence, the “laws of learning” needed to be aligned with the “normative” laws of social and cultural interaction.

We argue that the laws of learning, cast largely in the psycho-physiological terms of attention, memory, fatigue, and will, parallel what Somers (1995), in her discussion of the western topic of citizenship, terms an epistemological infrastructure. In the case of western citizenship a “social naturalism” (p. 241) represents a “foundational knowledge”, for it is conceived as non-contingent and invariant and presumed to precede the impact of social institutions such as education. In similar ways, the laws of learning are grounded in a social naturalism that privileges heredity, instincts and the complex of sensori-motor attributes.

Like the western theory of citizenship, the “natural” side of the epistemological infrastructure, whether it be in relation to citizenship or within educational psychology, is only one half of the theory. The other side of the divide is the narrative structure, highly variable for it is culturally and historically contingent. As such, it is subordinate to what is identified as natural. Nonetheless, when integrated with the epistemological infrastructure, their combination yields a coherent account or theory not founded on logical or rational terms, but rather social credibility. The epistemological infrastructure of learning, however technically informed, was (and remains) subject to methodological critiques and evidentiary challenge. Indeed, what is coherent is how the narrative structure blunts or inhibits critiques and challenges to problems of evidence or conceptual inconsistencies that may threaten the validity of the epistemological infrastructure.

In the case of educational psychology, a sufficient condition for its jurisdictional dominance required that the moral implications of (not) learning be viewed as constituting a culturally meaningful narrative, one that became popularly known and understood. At the turn of the century, this narrative structure was formed around the major political issues of the period, specifically the salience of foreign immigration and the identity crisis of the new middle class.

Guided again by Somers (1995) and others (Alexander and Smith 1993) we argue that the combination of the epistemological infrastructure of learning and the narrative that linked political issues to this structure constituted an integrated metanarrative, a deeply embedded story that came to be centered on public schooling and conveniently and efficiently explained its routine regularities and more long-term influences.

Prelude to a Psychology of Education: The Social Uses of Darwinism

Among the topics that filled the “climate of opinion” across the last decades of the 19th century was certainly that of evolution, stimulated by the publication in 1859 of *Origin of Species* by Charles Darwin. The outline of Darwin’s work had been known before *Origins* was published, and its potential to ignite intense debates was certainly anticipated (Russett 1976, pp. 8-9). The timing of publication with the start of the civil war, and the plausibility of its central theme to explain post-bellum changes gave to *Origins* and Darwinism an intellectual power that was nothing short of revolutionary. What Darwin said about plants and animals could, and soon was extrapolated to humans; “social Darwinism,” and its central imagery conveyed in the epithet survival of the fittest, soon overshadowed the biological implications of Darwin’s theory (Hofstadter 1955b). A genre of scholarship emerged that was as grand in volume as in scope. Matching Herbert Spencer’s volumes on social evolution in the 1870s were the works by John Fiske (1874; 1879; 1883; 1884) and James Mark Baldwin (1897; 1898; also 1909). The works by Fiske and Baldwin, both personally religious, reveal how deeply “Darwiniana” (Gray 1876) had stimulated scholarly debate over the relation between religion and science generally, and complicated the authority of traditional theological interpretations of natural descent and social change.

The significance of this scholarship was how it extended the premises of heredity to encompass social behavior. This extension was new, for as Rosenberg details (1974), up to mid-century there was little real concern, much less study, of the hereditarian transmission of social problems. Beginning in the 1840s, however, there was a marked shift in the legitimacy assigned to this causal argument: “Hereditarian explanations of both individual disease and antisocial behavior became with each succeeding decade increasingly pervasive and emotion-filled” (p. 202). The spread of hereditarian ideas was quite “independent of the formal debate on species and evolution,” and Darwin’s own theory had “little if any effect in reshaping generally accepted attitudes toward the process of hereditary transmission” (p. 203).

The assumption that “like begets like” increasingly framed how individual deficiencies and marginal social groups were viewed (see e.g. Boies 1893, p. 279). During the last third of the 19th century, the “specter of neuropathic constitution” (Rosenberg, p. 218) was becoming widely accepted as the mechanism that explained the generational transmission of diseases and the range of social abnormalities. The attraction of such a mechanism lay, in part, in its deterministic utility. Neuropathic constitution denoted a hereditary origin, specifically the “germ-plasm” (Weismann [1893]/2010) that was at the root of degeneracies. For the individual, these degeneracies become manifest as one develops; but more ominous was the spectre that descendants inherit the degeneracy of their forbearers, often eventuating in a worse degeneracy (Royce 1877/1972; Talbot 1898). Two important implications became evident: any one degeneracy, say crime, was the normal expression of a hereditary condition; and if this is so, there would be correlations between degeneracies, such as between crime and feeble-mindedness, or pauperism and lunacy.

The extension of a hereditary mechanism to social behaviors gave legitimacy to strategies designed to control and rehabilitate. Principle among them was eugenics, closely associated with Francis Galton who summarized it as a solution to improve the “inborn qualities of a race” (Galton 1904, p. 1). The extension of hereditarian causation to social abnormalities, and the intellectual acceptance of eugenic strategies, was encouraged by a cultural environment infused with racial thinking and marred by immigrant, nativistic conflicts (Higham 1955). The premises of genetic inheritance provided an explanation for the social contrasts that distinguished native and foreign-born, but especially for the social deviancies of immigrant groups. To be sure, the reception of Darwinism as a theory of social problems was further reinforced by the dramatic economic and demographic changes of the 1880s and 1890s. Yet as it moved from reaction to application, social Darwinism achieved a level of autonomy from the disruptions of urbanization and immigration. The determinism of social hereditarian ideas provided a measure of certainty, a sense of knowledge about the outcomes one could expect from a particular origin. The role of chance as a cause of social problems could be rendered moot.

But the potential of social hereditarianism was even more nuanced and ingenious.

It linked biological knowledge to social beliefs in a way that constituted a coherent explanatory framework that reduced the distance between the esoteric knowledge of professionals and the popular knowledge of lay audiences. Key to bridging this distance was eugenics, as much a popular opinion as a bio-genetic strategy (Haller 1963). For both lay and professional, eugenics certainly had its nativistic intentions. Yet the broader applicability of social hereditarianism lay in its extension of biological and genetic principles to the array of social problems, an argument essentially immune from empirical falsification. By likening social deviancies to contagious diseases, social, economic and cultural factors were given their own degree of priority, for poor environments activate inherited deficiencies, which in turn produce bad habits that then become hereditary (cf. Boies 1893; Dugdale 1887/1970). Because the social and the biological were so intertwined, each being a metaphor for the other, empirical falsification was elusive (see Leary 1990; Soyland 1994).

This protection allowed nativistic sentiments to be reconceived, reformulated in the positive terms of “racial health” and community identity (see e.g., Royce 1878/1972, pp. 124-132). The collective, racial health was the sum of individual conditions, for the individual was the only real, concrete source of collective differences. Where the individual was the ultimate causal unit, collective differences were emergent, largely unforeseeable outcomes. What made social hereditarianism additionally attractive was how the focus on individual conditions dissolved, as it were, the reality of social categories by explaining for how the two levels were connected. As the analog to natural selection among plants and animals, social hereditarianism offered an explanation that was “explicable in terms of will and consequent action” (Rosenberg 1974, p. 233). Disrupting the bad habits of individuals was a means to alter the “degeneration and regeneration” of collective abnormalities (Boies 1893, chpt. XV). Linking racial health to individual will provided a motivation and target for change, provided the returns were sufficiently rewarding.

As Rosenberg keenly notes (pp. 227-228) “the rewards of individual achievement [were] placed in a communal and in that sense selfless, transcendent, and morally acceptable context” (1974, p. 227-28, emphasis added). This communal context had its own degrees of transcendence, from one’s racial ancestry, one’s nation, to the civilization of which both race and nation were a part. Although the focus of individual will and consequent action would vary, that is, the focus of individual conduct, the standard against which the results of individual actions were judged was more constant and universal: what contributed to collective moral health. The standard of social utility was the determinant of what was morally acceptable, implying a subordination of self-interests to what improves and advances the whole.

The principles of social hereditarianism closely paralleled the key principles of Darwinism. The central mechanisms of natural selection and its attendant emphasis on survival of the fittest, are embedded within these period-specific explanations of social deviancies. The distinction between ontogeny and phylogeny fit easily the distinctions made between individual conditions and the collective health and status of social groups. Thus, by first situating them in a hierarchical order, and then extrapolating from their specific location to issues associated with accommodation, adaptation, and competitive advantage simplified the social problem of the management of different immigrant and racial groups within specific societal structures, with particular attention to the symbiotic relationship between education and work. The latter notion was especially central. The Darwinian emphasis on evolutionary change, that evolution is directive, was particularly applicable to the comparative evidence of racial and national differences.

The compatibility of Darwinian principles to social justice questions and problems was articulated best in the theoretically ambitious works of John Fiske (1842-1901), and Mark Baldwin (1861-1934), two of the more influential figures of social Darwinism (Russett 1976, pp. 48-55; 114-120; Wilson 1967; Hofstadter, 1955). The earlier of the two, Fiske was a devoted and energetic popularizer of Darwinism, triggered by his early admiration for Herbert Spencer’s *The Principles of Psychology* (Fiske 1909, chpt. 1; see Berman 1961, p. 36). In his four volume work *Outlines of Cosmic Philosophy*, published in 1874, Fiske elaborated upon how Darwinism had rendered the traditional antagonism between religion and science irrelevant. Drawing on Spencer as the philosophical framework, and on Darwin for the evidentiary support, Fiske proposed a synthesis between religion and science that was grounded on common genetic roots and mutual psychological mechanisms. The common genetic root was derived, in part, from a sharp rebuttal to Comte’s three stages. Although Fiske found much in Comte to admire, he proclaimed Comte to be in error when he argued that the theological, metaphysical and positivistic stages were successive processes.

To Fiske, there is only one process where all modes of explanation had the common property of “stripping off of [the] anthropomorphic attributes” until the tendency to ascribe such attributes “has reached its minimum” (1903, volume 1, p. 260). With the culmination of consciousness and thought in a single Causal Agency, the division between religion and science vanishes, indeed “religion was the final goal of social evolution” (Berman 1961, p. 161), a view that in essence reverses Comte. Most importantly, this minimization of anthropomorphism was a psychological law, where theology, metaphysics and science all “have their common starting point in mythology” (p. 262-3). At the root of mythology, and all later forms of thought, was the human mind, and more precisely, its genetic structure that seeks uniformities in nature by segregating phenomena “into groups according to their relations of likeness and unlikeness” (p. 266). The direction of this single, evolutionary process was predetermined toward the “principles of right living,” and involved “the negation of miracle or extraneous disturbance of any kind (p. 269. The justification for ethical behavior could shed its dependence on religious dogma, for Darwinian knowledge revealed the intimate connection between moral conduct and the “constitution of the universe” (1883, p. 303).

As a universal property of the human mind, the progressive ordering of phenomena by their likeness and unlikeness explained the interdependence of thought and action. With brevity Fiske asserted that “action is always the result of [our] thought” (1898, p. 16). To the neutral process of natural selection, Fiske added a mechanism that joined the social with the psychological – the “general principle” of Motor Suggestion (1903, p. 17). Suggestion was the causal force behind all thought, for “there can be no thought that does not have a direct influence upon [our] conduct.”

James Mark Baldwin was in much respect the parallel to Fiske. In the volumes of published works, the depth to which he espoused Darwinism and amplified upon its relevance to social and moral questions, Baldwin mirrored Fiske in terms of grand theoretical scope. Where Fiske combined his extraordinary knowledge of philosophy and history, Baldwin’s writings showed an equivalent breadth, yet were anchored more to the principles of psychology and to mental development in particular. Like Fiske, he demonstrated a command of Darwinism, requiring a working knowledge of the conceptual and technical language of genetics and biology. Finally, whereas the compatibility of religion and science was the steadfast theme for Fiske, the role of ethical utility was Baldwin’s centerpiece. Whether it was referred to as religion or the ethical, for both the central issues of evolution, biological or socio-historical, was its direction. To Fiske, the very dynamics of natural selection operated to evolve man toward an ever-widening, universal awareness that was fundamentally the same as a universal, religious consciousness (unseen world). For Baldwin, “the directive factor” (1902, p. 143) explained both the dynamics of natural selection and its purpose. For both men, the theory of history was best formulated in biological and genetic terms.

Baldwin termed the directive factor in evolution “orthoplasmy”, underscoring the dynamic relation between organic selection and the enhanced adaptation of a species to its environment. The plasticity of the relation derived from the “correlation of character,” where the variation in one character or trait was connected to variation in another (1902, p. 24, pp. 202-209). What characteristic or trait is maintained, or “is complete enough to stand alone” (p. 174), is not accidental, but is determined by its utility toward strengthening environmental adaptation and survival. The retention of a social behavior is likewise explained in orthoplastic terms. In addition to its functional utility, however, was its ethical significance. For Baldwin, the ethical dimension was how the behavior, as a trait or character, contributed to the greater collective welfare. A trait that was confined to more uses peculiar to an individual, or that deviated from the integration and generational continuity of the social group or community, was neither functional nor ethical.

The concept of orthoplasmy focused on the “ontogenic agencies” of individual development, or ontogeny (1902, pp. 91), but could in turn, be applied to group differences, or phylogeny. Baldwin outlined three agencies that were arranged in sequential order. The first (physico-genetic) was the “mechanical” – the modifications that arise in response to the impact of physical influences in the environment. These adaptations are largely “fortuitous and accidental”. The second (neuro-genetic) was the “nervous” - encompassing the spontaneous adjustments that originate from a “readiness and a capacity” to “make gain out of the circumstances of life”. The third (psycho-genetic) was the “intelligent” – the role of “higher mental processes” or the “association of ideas”.

For Baldwin, intelligence was an essential element of social progress. While the mechanical and nervous were biologically invariant, or “inherited habit,” their influence on behavior was subject to the directive influence of higher mental processes.

Intelligence supplements the instincts, and in so doing “makes them functional, and so keeps the creature alive” (p. 65). Intelligence was the factor that “set the direction of the development of the complex instincts,” and as a result, the growth of intelligence frees man “more and more from the direct action of natural selection” (p. 145). The higher mental processes defer the hereditary impulses, giving individuals and group a greater capacity to make and transmit accommodative adjustments more favorable to survival. For Baldwin, evolutionary survival was progress, and social progress was measured by the conscious cooperation among individuals (Sewny 1967, p. 57).

Fiske and Baldwin were among those principally responsible for outlining the Darwinian case for how the laws of psychology were the necessary mechanisms behind the evolutionary development of individuals and social groups. They were both theorists of development, armed with the Darwinian terms of adaptation, modification, correlated and determinate variation, ontogeny and recapitulation. What made their works relevant and consequential was certainly the growing fascination and acceptance of Darwinism. Yet beyond this was the timing of their works with the growing preoccupation with the theory and measurement of human intelligence. While hereditary differences in intelligence varied across individuals, ensuring a constant range of deviation, the constraints on this range came from standards set by the “communal tradition” that expressed the limits of acceptable toleration. As Baldwin phrased it (1899, pp. 71-81), these limits necessitated and legitimized the “social suppression of the unfit.” The standard of social utility was the measure for such suppression, for the natural heredity of individuals can be embarrassments to the communal as much as criminal threats and economic burdens. The requirements of the communal good are prior to the individual, and as Baldwin concluded, permitted two summarizations: “(1) The individual must be born to learn; and (2) all the individuals must be born to learn the same things” (p. 71).

The Intellectual Genesis: The Epistemological Structure of Educational Psychology

In the short time from Alfred Binet’s first intelligence scale in 1905, to Lewis Terman’s Stanford Revision of the measure in 1916, psychology secured its ties to education. It had defined its knowledge base and scientific methodologies as critical to teachers and teaching, to pupil learning, to the development of personality and character, and to the identification of student capabilities and deficiencies. In spite of their different topical interests and professional rivalries (Lagemann 2000, p. 58), early theorists shared a deep, if not messianic commitment to the promise that education in general and teaching in particular could be better informed if theories of pedagogy were grounded on the scientific principles of psychology. Among those most influential as early theoretical architects that helped forge this relation were Charles H. Judd, who published his influential *Genetic Psychology for Teachers* in 1903, E. L. Thorndike, who published *The Principles of Teaching, Based on Psychology* three years later, and G. Stanley Hall, whose *Adolescence*, published in 1904, was followed by *Youth, Its Education, Regimen and Hygiene* in 1906, and *Educational Problems* in 1911. In the words of Judd (1903, p. xi), the scientific methods of psychology would “save [teachers] from sentimentality and vagueness...to allow them to judge what facts of mental life are important for the work of education and what are not.”

The great promise of scientific psychology expressed by Judd was equally axiomatic to Hall and Thorndike. It would be these two figures more than others that articulated the essential outline of a practicing educational psychology. Like Fiske and Baldwin, Darwinism and its implied potential to explain and guide the “educative process” influenced both Hall and Thorndike. Both were theoreticians in their own right. Both were fiercely committed to the methods and rules of scientific observation and engaged in experimental studies. While Hall preceded Thorndike by enough years to lay the groundwork of an educational psychology, it was Thorndike who emerged as the principle architect, and whose work set the theoretical framework that would be followed by many for several years.

The practical, instrumental significance of Hall and Thorndike must not, however, be taken to be extensions of their own biographic strengths – which were no doubt considerable. As architects of an educational psychology, their commitment to an alliance between psychology and education did not emerge solely from their experimental studies. The passion that helped each pursue their experiments was already in the air, legitimated by a figure of pre-eminent stature: William James.

To set the beginning of educational psychology as a discipline with Judd, Hall and/or Thorndike would be incomplete and misleading, however.

Preceding such architects of educational psychology's epistemological infrastructure were ideas that envisioned such a structure without grounding it in observational experiments but in words that spoke to the real and practical tasks all teachers faced on a daily basis. It was James' *Talks to Teachers on Psychology* that not only preceded the works of Judd, Hall and Thorndike; it elevated the influence of their work.

The Science of Learning and the Art of Teaching: William James and Talks to Teachers

As much as Baldwin and Fiske were central to the prelude of an educational psychology, defining the relevance of Darwinian theory to social matters, William James was the central figure to the rising significance of the "new psychology" that would pave the way for educational psychology to stake its claim to public schooling. Among his many and diverse writings, his lectures on teaching given between 1891 and 1898 and published in 1899 as *Talks to Teachers on Psychology*, is arguably one of the most coherent arguments for the role of psychological theory in framing the instructional practices of teachers. The enduring place of *Talks*, revered as a bridge between education and psychology, is owed as much to its breadth of knowledge as much as the clarity with which James explained such otherwise esoteric knowledge. Able and willing to write in more popularly comprehensible way than did either Baldwin or Fiske, James' "talks" to teachers invoked Darwinian theory with scarcely little discussion of Darwinian concepts anywhere in the text. Consistent with his adherence to "radical empiricism", James focused on the real and immediate tasks faced by teachers, working up from the ground level to more abstract ideas and concepts.

In *Talks*, James moves between principles of psychology that refer to the "laws" of mental states and their behavioral manifestations, and principles that refer to more abstract and collective ideals. The mechanics of consciousness, habit, attention and the like are counterbalanced by an almost literary exegesis on what constitutes a significant life. James argues that the laws governing mental life revolve around a specific mechanism. Key to much of mental life and routine behaviors is the law of association. Habitual behaviors, the extent of attention and memory, are rooted in prior associations that linked ideas and behaviors. Their replication is most often without conscious reflection. For James, of primary importance is the "margins", for behavior is not so much sustained by what is the object of focus as it is by the objects that are marginal. We alter habits, temporarily forget, or lose attention because elements on the margins exert a greater associative strength.

James' review of the mechanics of association was not simply an informational lecture to teachers. On the contrary, he had a broader intention conveyed, in part, by emphasizing a simple fact that always prevails: "...although we cannot work the laws of association forward, we can always work them backward" (1983, p. 59). What "baffles our prevision" was itself a central element of the mechanics of association. Because objects on the margins can distract focus, triggering "diverse possible associative sequences" (p. 58), mental states and behaviors can change quickly and dramatically. The more dominant path is an equilibrium, where distractions are resisted by prior associations. Nonetheless, the possibility of diverse associations inserts an indeterminacy that can refashion thoughts and redirect behaviors – toward the bad as well as toward the good. Whether it be moral or immoral conduct, the core mechanics are the same. Indeed, they are universal: student behaviors everywhere obey the laws of association.

That said, James then moves beyond the reach of such laws. In likely the most important if not most interesting chapter, situated at the end of *Talks* and entitled "What Makes a Life Significant", James explores what distinguishes the highest of character and moral conduct from the mechanics of association. There is more to explaining the will to act morally than reflexes and extensor muscles. Beyond these universal physiological attributes is one far less prevalent: an "inner ideal".

Certainly moral conduct is subject to the laws of association. Invoking Spinoza, James likens good behavior as acts of a freeman, and bad behavior to the acts of slaves. The task of teachers is thus clear: to "habituate them to act under the notion of the good" (p. 113). Yet this by itself is not sufficient to ensure moral conduct. The inner ideal is not a predictable result of consistent associations. The conduct of laborers, much admired by James for its "stern stuff of manly virtue," is indeed noble, if mainly for its habituations and privations. So also is the conduct of the poor. Yet both do not necessarily command the recognition of others. While an individual laborer may experience an inner peace or joy, these fall short of ideals, for they are a "private sentimental matter" (p. 164).

The true ideal that can render a life significant comes from outside the self, from a will to act beyond one's own interests and joys. To this end, a significant life comes, necessarily, from a deferral of private gratification, but more decisively, from a deferral in the service of others.

Teachers must not only habituate their pupils to act in the notion of good, but also “multiply their sentimental surface by the dimension of the active will” (p. 164). The inner ideal is, in essence, defined by and oriented toward the collective good.

Thus, the task of teaching is caught up in the struggle between two opposing forces: a “leveling down” that comes from “outer gloriousness and show” and a “leveling up” that comes from the “common meaning” of ideals (p. 156). With leveling down, social distinctions separate individuals into divisions that are accentuated by inequalities of wealth and status. With leveling up, rich and poor, capitalist and laborer “look at each other sub specie aeternitatis” and as a result, inequalities would lose their force and meaning. Social distinctions are overshadowed by tolerance and good humor, and a “willingness to live and let live” (p. 167).

There is little doubt that *Talks* accelerated the movement to anchor psychology in public schools. By his stature alone, James’ contribution to this momentum was considerable. Indeed, his contribution may be viewed as decisive. Amidst the elegance of his words, the precision of his arguments, and the sincerity of addressing teachers directly, the single most important feature of *Talks* is arguably the attention he gives to ‘ideals’. For James, the ideal had a near sacred quality, irreducible to profane bio-physical determinants of the mechanics of learning. While reflexes and sensori-motor processes are within the individual, ideals come into the individual from the outside. They are, in this regard, prior to one’s original nature that is given through the laws of heredity. The sacred character of ideals derives from their capacity to symbolize collective, or social structural forces. The ideal of restraining immediate gratification as an instructional practice is framed as moral, taught “under the notion of the good”. If this framing extends to correlate with greater attention, memory and honest behavior, a pupil’s act of resisting immediate pleasures and impulses is no longer one behavior among many. It is distinguished from others by its sacredness. The real effect, however, is much broader than upon the individual pupil. The deferred behavior is a significant symbol of larger social distinctions. As a consequence, the educational awards that are associated with such behavior are ancillary to the social benefits that are agreed, by both teachers and students, to come later in life. Higher occupational attainment is not only a functional extension of acquired educational skills, it is – like religious salvation – a deserving outcome of educational behaviors framed as moral conduct.

As Baldwin and Fiske demonstrated the relevance of Darwinian concepts to social problems, James narrowed the connection even more. Ideals were the one element that could reduce the baffling complications faced with we try “working the laws of association forward”. The laws of association are neutral; they do not convey a narrative about why students behave beyond the mechanisms of attention, memory and fatigue. In contrast, ideals are not neutral; they do convey a narrative, for they embody the larger topics beyond the local confines of a classroom within a school. Energized by the manifesto character of *Talks*, the path was cleared for more concrete formulations of the epistemological infrastructure of educational psychology. Two figures stand out as central to this task: G. Stanley Hall and E. L. Thorndike.

G. Stanley Hall, Child Study and the Ideal School

Preceding both Judd and Thorndike, and a host of others during the first two decades of the 20th century, was G. Stanley Hall. It would not be unreasonable to denote Hall, along with William James, as most central to the initial formulation of the practical implications of psychology for education. Throughout the 1880s and 1890s, the enduring focus of Hall’s work, intellectual and practical, was the area of child-study (Hendricks, 1968, pp. 48-81). During these decades Hall became an established leader of the movement for a “new psychology,” conceived by Hall as the displacement of the philosophical dominance in psychology by the rigor and objectivity of experimental, scientific methods (Hall 1885; Leary 1987). Hall’s commitment to a scientific psychology was nourished by his brief time in Germany between 1868 and 1871. The allure of German philosophical idealism was a welcomed respite from his New England, Presbyterian background. But the attraction of Hegel, Fichte and Kant would wane as he encountered the laboratory studies of Wundt, and read and embraced the empirical cosmology of Herbert Spencer (Ross 1972, pp. 66-67). His early attraction to philosophical idealism would, in fact, become the prime motivation for his intense rejection of philosophy’s control over psychology. Nourished by his studies at Harvard and his association with William James in particular, Hall found the basis for a “new” psychology in physiological processes.

His professional career was now stabilized by his appointment at Clark University.

By anchoring psychology to the natural sciences, scientific psychology would isolate specific physiological mechanisms that were at the root of consciousness, and thereby reverse the causal arguments commonly advanced by ‘speculative’ philosophy (Hall 1887, p. 3). At the base of a number of psychological topics, from reaction time to hysteria, were nerve impulses and muscular processes, reducible to measurable sensorimotor dynamics, specifically reaction time or reflex action. The significance of this reduction, as Hall would claim, was considerable in itself, but was especially so for it now provided an objective basis for an “exact” science of education (1893).

Hall’s intellectual evolution away from philosophical idealism and his avowed embrace of scientific research methods were not, however, a complete break. Hall remained intrigued by such “psychical” phenomena as hypnotism, telepathy, mind reading and clairvoyance. He was instrumental in the formation of the American Society for Psychical Research in 1884, modelled after the example of the British Society formed two years earlier (Ross 1972, p. 162; Noonan 1977; Leary nd). Although he was publicly ambivalent about the place of such phenomena in professional psychology, Hall’s interest in spiritual and mystical modes of consciousness outlived his departure from the Society in 1886. Such an interest endured, in part, from a religious commitment that was not in any way antithetical to his scientific beliefs, for psychical phenomena and religious experiences were related on physiological grounds (Ross 1972, p. 139).

For Hall, their connection was not accidental but was representative of a key thesis, indeed discovery, of the new psychology. A notable contribution of genetic psychology was its study of human “degeneracies,” the deviancies of insanity, crime, pauperism, and the physical deficiencies of the deaf and blind. The “human degeneracies,” that state institutions had made accessible for clinical study, were “being substituted, in the world’s great algebra of morals, for the almost unknown symbol, sin” (pp. 716-17). From the “morbidity of love” to the “periodicities” of lunacy, all degeneracies “traced up into normal life” so that “disease almost shows us our normal life with each phenomenon and tendency magnified” (p. 717). While genetic psychology had rendered the older philosophy of degeneracies false but quaint, it nonetheless enabled a new pedagogy founded on matters of degree. All degeneracies were magnifications of normal traits, traceable to physiological dynamics common to all humans. Thus, aphasia was in actuality “hesitation for a word,” and mania “momentary excitement,” and hypnosis was “concentration of attention”. This discovery of a common, genetic foundation had, unwittingly, revealed the truth of the biblical doctrine of sin, for “the Bible is being re-revealed as man’s great text-book in psychology” (1894, p. 719).

The promise of this new genetic psychology had direct pedagogical implications. The findings of child study would improve teaching by informing teachers of the actual content of children’s minds at certain ages and stages of development. Knowledge gained from the observational and experimental study of children was the basis on which the “ideal school” would be constructed. Just as degeneracies were magnifications of natural features common to normal individuals, matters of degree yielded new stages in children, indeed a “new kind of being” (1901, p. 34). Children at different stages demanded new pedagogical methods and organization. The ideal school was constructed upward from the natural differences between children. Thus, with increasing age teaching must not be coercive, but must “lead and inspire” if a student’s personality “is to come to full maturity” (p. 35). With adolescence, the separation of the sexes follows logically from the natural differences between boys and girls. Because girls are more conservative and males more radical, it follows that girls “should be educated primarily to become a wife and mother.” Thus the ideal school, its educational methods, regime and hygiene (1912), was one most consistent with the natural endowment of the young.

E. L. Thorndike and the Centrality of Original Nature

Out of a comparatively small but growing field of educationally oriented psychologists, E. L. Thorndike would attain a prominence as arguably the central theoretician of American educational psychology. Throughout his extensive body of published work, Thorndike consistently joined evidence from experimental studies to his theoretical views. Thorndike’s essential framework for the application of psychological principles to education was outlined in his slim book published in 1903 that bore the title *Educational Psychology*. A decade later he would publish the first volume of his trilogy on educational psychology. Collectively, these volumes signalled a break with earlier and traditional approaches that suggested the relevance of psychology to education, but did so by overemphasizing theory to the neglect of demonstrated, practical application.

While confident in and most comfortable with the former, Thorndike defined educational psychology by its demonstrated utility for education. There is little doubt that the works of those advancing the new psychology made their imprint on Thorndike's own intellectual and professional evolution. When Thorndike began to publish his own inaugural works that elevated him to prominence by the first decade of the 20th century, Hall's reputation was well established as a pioneer of the new psychology. Yet it would be fortuitous for Thorndike that G. Stanley Hall preceded him by several years, for he could sharpen his ideas against as much as in concert with Hall's position. Most central to Thorndike's volumes of work was his commitment to the priority of original nature was unwavering, not as an expression of philosophical preferences, but as a necessary deduction from the results of experimental study. Research certainly pointed to the influence of environment, but this influence was through the "connections" individuals made in specific situational experiences, and the order of connections made defined what would be retained. As Joncich notes (1968, p. 329), Thorndike drew an important distinction between the original nature of man and man's nature. The former was neutral, for original nature "knows nothing of guns, fishhooks, rods and reels, canoes, tennis or foot-balls" (1913, p. 293).

Man's nature, on the other hand, was constituted by traits that are acquired and thus carry the valuations of social conventions. To declare that what is natural about man is prior and good results in a false opposition and confuses the role and capacity of education. With little regard for this view, Thorndike emphasized the complexity of original nature, an emphasis that was everywhere evidence in the range and wonderment of "individual differences." The range was not illusive, for it was measurable and useable. Because the collective distribution of original tendencies takes the form of the normal curve, every individual could be located in the "surface" of this distribution. Yet, as Thorndike stated emphatically, an individual's various capacities did not necessarily "transfer," that is, one might be exceptional in (say) math, but this strength did not mean one would excel in literature or history. Thus, individual differences referred as much to the variation within each individual as much as it referred to distinctions across individuals. Knowledge of these differences as distributions provided insight into nature's stamp, and was, therefore, the central rationale for applying psychological study to the practice of teaching and to comprehending the limits of learning. The contributions of educational psychology would be flawed and its promise unfulfilled if it set out from the idealistic but unsubstantiated premise that what is natural is good.

Invoking the authority of experimental research, Thorndike identified the core topics of educational psychology and proposed the order of their importance to education generally, and to each other in particular. Thorndike's outline would become a widely acknowledged model to which subsequent foundational texts adhered, save for minor, idiosyncratic additions. At the center of his outline were the "original tendencies" of man, consisting of those traits that are inherited, from both near and distant ancestry. The original nature of all individuals defined the essential wants and requirements of individuals (1940, p. 138). An individual's original nature constituted their hereditary endowment, their physical and mental "equipment". The significance of this endowment was how it charted the curve of growth and set the limits of development. This original capacity shaped, in turn, the way an individual sensed and perceived their environment, both physical and social. This accommodation, as it were, determined the "laws of learning," evident by measurable differences in rates of retention and memory. This structure would be the model for the subsequent publication of textbooks in educational psychology well into the 1930s.

Before he published his three volumes on educational psychology, Thorndike had been promoting what was for him the specific utility of psychology to education. Often combining a staunch commitment to experimental study with admonishments about the limits of speculation, Thorndike's contrast with G. Stanley Hall is especially revealing of the theoretical tensions that were undercurrents in the "new psychology". Hall's own commitment was to child-study, employing less experimentally bounded observations of children in natural settings. With some contrast to Thorndike's quantitative vision of educational psychology (1905), Hall had earlier advanced the study of the "content of children's minds" (1883) as the basis for an "exact education" (1893).

Thorndike's view decidedly avoided conceiving of intelligence as thought or ideation, a view no doubt stimulated by the works of John Dewey. He was no more emphatic than in his work on animal intelligence: "Human beings are accustomed to think of intellect as the power of having and controlling ideas and of ability to learn as synonymous with ability to have ideas. But learning by having ideas is really one of the rare and isolated events in nature" (2000, p. 284).

Human intelligence, or thinking, evolves, but it is dominated by making associations or connections that increase an individual's adaptation to his or her environment, and increases the experience of pleasure.

Human intelligence emerges at a point when “an apparently *new type of mind* results, which conceals the real continuity of the process” (294, emphasis added). At the point when this new mind results, ideas supersede gross responses and the individual looks forward more than to the past. In contrast, Dewey's view was on the future, decidedly emphasizing the role of thought as an intrinsic property or instrument of adaptation. As thought, intelligence is a creative, “inventive construction” that entails the continuing exercise of inferences about the future consequences of acts (1917, 21, 23).

Many of the contrasts and tensions between Thorndike, Hall, and Dewey can certainly be attributed to the entrepreneurial phase of educational psychology. Yet such intellectual divisions originated from the broader culture and how it was informed by the salient events and circumstances of the time. Such events and circumstances condition “mental models” (cf. Gentner and Stevens 1983; Lakoff and Johnson 1980) which, in turn, give expression to theoretical conceptions and technical methods as well. Images of intelligence, popular and professional, are likewise composed of relational predicates that link high or low intelligence with different attributes and outcomes, albeit shifting and inaccurate.

Analogical thinking is a strategy to maneuver through what Pickering keenly terms the “mangle of practice” (1995). Because the future states of scientific practice cannot be known, future images are constructed from the present, existing culture, largely to prediscipline “the extended temporality of human intentionality” (p. 19). Thus definitions and theories of intelligence, images and accounts of learning, as well as their instruments of measurement, are never so new. Throughout it all the resilience of intelligence as an idea and as a socially meaningful quality remains. This resilience cannot, in brief, be explained on empirical grounds alone. The resilience of intelligence suggests that an explanation must be found beyond recurring efforts to tighten its conceptual ambiguity and correct its empirical faults.

What was required was a good story, one that both explained the technical content of this new science, but more importantly, linked it to broader and more pressing concerns. This was the narrative that explained the salient political issues of the time and that legitimated the professional reforms that institutionalize these changes by grounding them in existing public organizations. This, in turn, legitimated, but did not complete, the link between educational psychology and public schooling.

Institutionalization:

Intellectual Responses to Political Change And the Legitimation of Educational Psychology

Educational Psychology as a Social Imaginary: The Metanarrative

The last two decades of the 19th century were years that witnessed the seemingly unending ramifications of economic transformation. The triumph of an industrial, wage-labor system now extended its reach westward, as well as into a defeated South. Carried by a growing network of railroads that would tie cities to distant points yet to be inhabited, this economic force penetrated once local communities, making them in Robert Wiebe's term, “the great casualty of America's turmoil” (1967, p. 44). As the scale of capital and property holding enlarged, there was a growing “loss of confidence” in the capacity of community to define and preserve the very meaning and purpose of life. This loss of confidence was especially felt by the native-born that experienced the economic changes as alien and beyond their control. The combination of intensified labor unrest and the swelling of urban-industrial centers with foreign immigrant populations fed a growing perception that the very ground upon which goodness and decency were once founded was eroding, and doing so from distant sources. The crisis of the native-born was an unease felt at an individual psychological level; collectively there was a growing confusion “that inclined [them] toward a vague class consciousness, a very general urge to find and join others like themselves” (Wiebe, p. 47).

This vague class-consciousness was most keenly felt among those members of the professional and technical occupations. In contrast to the generation before them that owned some land or a business that could be handed down to their offspring, the members of this “new” middle class were de-propertied and salaried, working as county or state employees. Most importantly, they were sandwiched between an increasingly organized and militant labor movement and an emerging plutocracy in whose control corporate power was becoming concentrated.

To native-born groups, the city, once the symbol of America's economic future and social promise, now reflected growing ethnic tensions and the specter of class divisions. Filled with growing foreign-born populations, the city had exposed the threat, if not the breakdown of America's ideal of a classless new nation.

Against this context of rupture and violence, discontinuity and uncertainty, the distinction between the native and foreign-born assumed a deep meaning, becoming a fault line commonly referenced as the root cause of social problems. A simple dichotomy with visible racial and religious attributes, the distinction was at the core of a narrative that tied the volatile facts of immigration, economic inequality and urban ethnic politics to the societal themes of citizenship, national character and civilizational progress. Individual encounters between native and foreign-born were bounded, as it were, within a larger interpretive frame. Whether benign or conflicting, face-to-face or distant, interactions reminded both native and foreign-born of their distinction and were validations of the story about national development and progress. Broader issues of citizenship and progress defined the meaning of cultural differences and the occasions and modes of social interactions. The binary opposition of the native/foreign-born divide, and its corollaries of citizenship and progress, constituted what Taylor keenly describes as a "social imaginary," the way "ordinary people 'imagine' their social surroundings," which is not the esoteric languages of professionals, but is "carried in images, stories, and legends" that "makes possible common practices and a widely shared sense of legitimacy" (2004, p. 23). The combination of native/foreign-born status with citizenship and progress provide a "sense of how we all fit together," a sense that was both "factual and normative" – factor for it provided a sense of how things "usually go," but normative as well for they were "interwoven with a sense of how they ought to go" (p. 24). The social imaginary is more than a background or context within which decisions and actions are made. The social imaginary captures how broad notions reach down into very micro acts, indeed defining the "repertory of collective actions" (p. 25) that is available, popularly understood and commonly practiced at any given time.

As factual and normative, social imaginaries are indeed coherent, but not on empirically consistent grounds. As Taylor notes, the social imaginary of the 18th century was structured as a vertical chain of social levels, each interdependent but grounded on patriarchal principles. Nonetheless, "elite males spoke of rights, equality, and the republic," yet "thought nothing of keeping indentured servants, not to speak of slaves, and kept their women, children, their households in general under traditional patriarchal power" (p. 146). This was not a contradiction, as long as there was widespread, collective acceptance of "the background structuring idea" – that the social imaginary "ought to be animated by a *uniform principle* in all niches" (pp. 146-147, emphasis added). If the background structuring idea remains both widely known and legitimate, it sustains behaviors that are practiced across very different 'niches'. If, however, the background structuring idea loses its influence, uprooted from diverse groups and social institutions, an opposing idea can emerge as a legitimate challenge. Here the social imaginary may remain in elite niches but decline in marginal ones. Thus, periods of transition may be especially good examples of the dynamics that form and transform imaginaries, whether they are ones where an imaginary is ascendant or ones where a once diffuse imaginary is on its decline.

The years at the end of the 19th and early 20th centuries were ones that witnessed the ascendancy of a social imaginary around the structuring idea of intelligence. As measurement techniques broadened its applicability, the idea of intelligence enabled ideas of citizenship and progress to be joined with native and foreign-born (Fass 1980). This structuring, in turn, was in time joined to the growing legitimacy given to a common schooling, with particular emphasis on its practices. This structuring was especially beneficial to educational psychology, for it gave concrete representation to broad, societal issues in very immediate and practical ways.

The ascendancy of educational psychology as the carrier of a new social imaginary is not adequately explained on empirical grounds. That is, the practical utility of measuring the intelligence of school children is only a partial explanation. Moreover, the added claim that such practices enhanced the efficiency of a common school system is not well supported (see Ayers 1909; Strayer 1911; Callahan 1962). To be sure the ascendancy of educational psychology relied on empirical evidence and technical expertise; yet this alone did not secure its professional legitimacy nor its connection to common schooling. Rather, it became the carrier of a new social imaginary by joining its empirical base to "images, stories and legends" about the broad, societal topics of native/foreign-born status, citizenship and progress. Here we may draw on the Somers' definition of a metanarrative, conceptually akin to Taylor's social imaginary, but more specifically operationalized (1995, p. 232). By distinguishing between an "epistemological infrastructure" and a narrative of the western idea of citizenship, Somers identifies not only its internal structure but also its resilience over time.

Its epistemological infrastructure was based on a social naturalism, while its narrative was a story about the relation of civil society to political authority. A major advantage of Somers' metanarrative, one shared with Taylor's social imaginary, is how a metanarrative is immune to empirical falsification. What is key, as Taylor emphasized, is how "ordinary people" imagined their social surroundings, not whether they fully comprehended social theory and methodology.

The ascendancy of educational psychology as a social imaginary was enabled precisely because its epistemological infrastructure was successfully linked, in a comprehensible and timely way, to a narrative that explained the native/foreign-born divide, and the salient issues of citizenship and progress. Its epistemological infrastructure was grounded on the naturalism of "original nature" and intelligence. This original endowment was, in turn, determinant of bodily growth and physiological and neurological reflexes crucial to cognitive growth. Higher thinking skills were the outcomes of both, manifesting themselves as observed "individual differences". These skills, namely problem solving and abstract reasoning, in turn were the primary determinants of achievement in school subjects.

An epistemological infrastructure grounded in heredity and intelligence did not have a natural affinity to a narrative about the native/foreign-born status, or to citizenship and progress. As discussed earlier, prior to mid 19th century the relation of heredity to social problems was not thought to be significant, if thought about much at all. Again, as Taylor makes clear, the relation becomes evident as part of an "imagined community" (Anderson 1983); it is what is imagined that enables broad and distant topics to be related to immediate and routine practices. If confined to its epistemological infrastructure, educational psychology would have remained a subfield within psychology whose fate rested with its cumulative record of experimental studies. It was, however, simultaneously a subfield within psychology and a professional guide to an emerging public educational system. As the latter educational psychology was as much a story about the relation of heredity to social problems as it was a science of learning.

Like the apparent inconsistency of Taylor's 'elite males' of the 18th century, early educational psychology wrote of development and potential, the uniqueness of personality and the self, while at the same time it was committed to the determining forces of heredity and endowed intelligence. The centrality of intelligence to educational psychology becomes especially evident only when its theoretical and empirical consistency is removed as a criterion for its resilience. As a scientific concept, intelligence enjoyed contrasting definitions and contrasting results found with different measurement instruments. Yet, as a background structuring idea, intelligence enjoyed a flexibility that allowed it to withstand empirical inconsistencies and to penetrate multiple and varied social 'niches'. This adaptive resilience was forged by way of two central principles that became the organizational axes of a common schooling: the principle that social ideals define and guide effective learning; and the principle that academic success resulted from deferred behavior.

The first principle embraced more than a premise that effective behavior required direction. In addition to directed behavior was the necessity of a social ideal that represented collectively approved behaviors. The distinctive property of social ideals was their morality, a dimension inherently superior to an instrumental or utilitarian intent. The latter was inferior because it derived from within an individual, and as a consequence it was isolated from the purview of the community. The social ideal was superior because it was external to the narrow-serving intentions of individuals and was, therefore, consonant with the standards that sustain collective longevity. The "laws of learning" were certainly influenced by individual utilitarian actions, but their dynamics were most effective, indeed healthy, when they were in obedience with broader, community ideals.

The second principle extended the first by subordinating sensations and perceptions to the 'higher' levels of the cognitive and intellectual. The potentiality for abstract reasoning and problem solving was contingent on the suspension of immediate behavior, in deference to a social ideal. To gratify immediate impulses is to divert growth and blunt potential; to withhold behaviors from their immediate gratification is to enlarge the range of learning, and as a consequence enlarge the likelihood of achievement.

The meaning and legitimacy of each principle could not be attributed to the epistemological assumptions or practices of educational psychology. On the contrary, they derived their meaning and legitimacy from the broader social imaginary. Their meaning and legitimacy to 'ordinary people' did not require knowledge of theory and methodology. Their derivation was obscured as well by the ascendancy of educational psychology itself.

As intelligence assumed its central role as a background structuring idea, the principles became intricately linked, not only to each other, but to the narrative about native/foreign-born status, citizenship and progress.

Each principle had different but related sources that gave it its meaning and legitimacy. At the core of the sources was the post Civil War transformation of American society along economic and social lines. But more specifically, it was the response of the 'new middle class' to this transformation that was particularly instrumental in the structuring of a common school system. These new middle class occupations and professions were de-proletarianized and salaried, but a most conspicuous attribute was their educational credentials.

Neither worker nor owner of capital, the "white-collar worlds" of lawyers, stenographers, clerks and copyists, teachers, editors, police and ministers grew dramatically from 1870 on (Blumin 1989, p. 267). They were heterogeneous by occupational niche but otherwise homogenous with respect to a common anxiety. As Basil Bernstein's research has sought to answer (1977, 1990), what would be their place in an industrializing society seemingly dominated by two opposing classes?

For the first, the source was an intellectual response to the social and economic disorder of the late 19th century that was especially amenable to frightened new middle class. The particular content of this response that alleviated this fright was a 'utopian reflection,' one that helped a new middle class secure its authority over an emerging public education. For the second, the source was an intellectual response as well, but one directed more to the political corruption of urban politics than to the social disruption of an advancing industrial economy.

While the first principle aligns with the forming of pedagogical ideals, the second aligns with the formulation of pedagogical practices. Each is explored in turn.

A) The Pedagogical Ideal: Social Disorder, Utopian Reflection and the Collective Good

The response to this complex of fear and confusion, anger and anxiety, did not require the physical presence of foreign-born immigrants. The rising tide of nativism, with xenophobia fueled by anti-immigrant hostilities (Higham 1955), was certainly a diffuse undercurrent. Yet above communities were shared intellectual sentiments that nourished Progressive political reforms, centering around what Wiebe identifies as a desire for community self-determination (p. 52) and a preoccupation with purity and unity (p. 56). The former found its expression in anti-monopoly reforms resulting in anti-trust legislation (Kolko 1963), while the latter found its expression in the direct democracy measures of the referendum, recall and direct primary designed to eliminate corrupt urban machines controlled by foreign-born groups (cf. Cree 1892; Bryce 1905; Wilcox 1912; Lloyd 1984). Yet the progressive activism of the early years of the 20th century did not spring forth as if it were some spontaneous response, nor was its intellectual content formulated in direct relation to the examples of social disorder intensifying during these early years. Rather, much of the intellectual content and strategies of progressive political reforms were outlined by the intellectual ferment of the 1880s and 1890s. These decades were especially transitional, defined by a retrospective reflection on the passing of local communities and their traditional social relations and an anxious contemplation about what lay ahead, and not too far ahead. The result was the confluence of the fictional and non-fictional, generating a flurry of utopian thought, found in some forty-nine novels published between 1880 and 1900 (Forbes 1927).

The production of a utopian and science fiction literature often embedded political commentary in a literary format. Most of this "utopian radicalism" (Welter, 1962, pp. 218-224) was principally concerned with the scale of changes in economic production and wealth consolidation. The literature was simultaneously produced and consumed by members of the rising new middle class who felt keenly a rising powerlessness to both alter and redirect the scale of economic change. Utopian writings gave this vague class consciousness a public expression, and became a means for the individuals of these diverse occupations to "join others like themselves." Amidst the range of provocative works that presented their own panacea to end the evils of politics and the corruption of economic greed (cf. George 1879; Donnelly 1890; Lloyd 1894), it was the writings of Edward Bellamy that most successfully tapped popular anxieties about the scale and direction of economic changes. Bellamy's utopian works, namely *Looking Backward*, and in its sequels, *The Religion of Solidarity and Equality*, became the literary and intellectual reference for a receptive middle class audience of lawyers, doctors, editors, teachers, clergy, social workers. Soon after its publication in 1888, Bellamy Clubs were begun as educational fora to discuss the social and political ideas advanced by Bellamy. As the clubs grew in number, they changed their names to Nationalist Clubs to mirror the scope of the movement that was now reaching from Boston to San Francisco.

By 1890, 158 clubs were established in twenty-seven states, accounting for some four thousand Bellamy societies across the nation (Sadler 1944, p. 536; Franklin 1938; Lipow 1982).

Looking Backward was much more than an engaging novel about the future (2000); it was a “religious fable, an account of the triumph of the sacred over the secular forces of evil” (Thomas 1983, p. 237). It provided an explanation for how the future would unfold, and most of all for how individuals of like consciousness need not fear the contemporary disorder surrounding them. Bellamy told his story of looking back to the late 19th century through the voice of Julian West, the central figure who awakens from a mesmeric sleep in the year 2000 from having been entombed in his basement in 1887.

His conversations with his host Dr. Leete cover a range of topics, from the elimination of labor strife, hunger, and crime to the place of professions, the role of money, and the place of women. At the center of these exchanges were twin, interrelated themes: the corruption and inequality that typified 1887, and their elimination as the great achievement of the twentieth century. The corruption and inequality that plagued the late 19th century stemmed from an economic greed that when unchecked led to a widening of rich and poor. To Bellamy, the evil of economic inequality was how it fragmented the individual self, whether one is rich or poor. Bellamy’s critique of the greed of capitalism was rooted in a personal loathing for its generalized damage, especially for how it penetrated the inner soul. Whether a capitalist or a laborer, the more consequential damage wrought by capitalism was psychological, for the ravages of economic inequality isolated individuals from themselves as much as from others.

For Bellamy, the root evil was “individualism,” a result of a weakening of the social bonds that join everyone to a collective whole greater than oneself. As he put it in Looking Backward: “Individualism, which in your day was the animating idea of society, not only was fatal to any vital sentiment of brotherhood and common interest among living men, but equally to any realization of the responsibility of the living for the generation to follow. Today, this sense of responsibility, practically unrecognized in all previous ages, has become one of the great ethical ideas of the race” (p. 180). The individualism of 1887 reflected what Bellamy saw as the partial and transient aspects of the self, for as the “animating idea of society” it joined men only to false and expedient indulgences, and not to what is universal and enduring. A truer individualism is deeper and more original than the personality identities that might distinguish capitalists and workers. This is a “universal solidarity” that is “common in nature to all souls,” but “is isolated by the conditions of individuality” (1940, p. 31; also 1897, p. 245). With striking similarity to William James’ “ideals”, Bellamy’s “universal solidarity” is the collective identify that transcends the divisions and distinctions of economic inequalities. The “conditions of individuality” corrupt the attainment of this higher form of solidarity.

Bellamy’s vision of a universal solidarity was not an extension of Christian principles of equality and individual freedom. Rather, Bellamy’s vision was more akin to a “gnostic spiritual democracy” where true equality and freedom derived from an unmediated access to a “psychic power” that was superior to the mundane necessities of politics and work (Tumber 1999, p. 612). How this superior psychological state came to be was that aspect of Looking Backward that was especially attractive to its reading publics – particularly those in expanding technical and professional occupations of the new middle class. The universal solidarity of 2000 was founded on the elimination of private property and the acceptance of compulsory work for the “Nation,” now the sole employer and owner of property. The corruption and erosion of public life that so haunted 1887 were replaced by the nation as the higher source of personal identity. The elevation of the nation above all now rendered organized politics irrelevant and economic inequalities impossible. The corruptions that were rooted in the consolidations of wealth among capitalist owners and in the organizational strengths of labor were mirror images of each other, and the essential cause of the loss of personal identities and collective community.

Bellamy’s answer for how this all came to pass was that feature of Looking Backward which captured the imaginations and stimulated the political activism of an educated new middle class. The elevation of the nation resulted from the very processes that were thought to be so threatening in 1887: “The movement toward the conduct of business by larger and larger aggregations of capital, the tendency toward monopolies, which had been so desperately and vainly resisted, was recognized at last, in its true significance, as a process which only need to complete is *logical evolution* to open a golden future to humanity” (1960, p. 54, emphasis added). The logic of this evolutionary process eliminated worker strikes and their violence, eliminated political parties and their sectarian corruption, eliminated lawyers and law schools, money and crime.

As consolidation led inexorably to the nation as “the one great business corporation,” the conditions of individuality became the remnants of an earlier time. With the nation as the superior identity, each man and woman was now free to know him or herself more fully. Because each man and woman was now connected to a higher, universal identity, this was a deeper and thus truer knowledge of one’s self.

Bellamy’s depiction of a logical evolution as the process whereby all the negative conditions of 1887 were simply eliminated provided a reasonable and comfortable alternative interpretation for the anxieties of those in new middle class occupations and professions.

The elimination of “biting poverty” and “wanton luxury”, and of the conflicts of labor strife and crime, were the result of natural processes that affected all as individuals, for the principle on which the nation now rested was “that a man’s natural endowments, mental and physical, determine what he can work at most profitably to the nation and most satisfactorily to himself. With the nation now embodying the sole employer and universal identity, each individual would find the occupation that best fit his or her natural aptitude. To this end, “parents and teachers watch from early years for indications of special aptitudes in children” (p. 59). The pedagogical assumption of a natural fit was consistent with an overall harmony at the level of the nation. Unlike 1887, the inequalities of labor and capital were now replaced by differences in individual tastes and inclinations. The distribution of individuals across occupations that varied in skill requirements as well as drudgery was, again, a result of natural processes. Yet, where the number of volunteers for any given occupation may not equal the demand, the “administration” makes the necessary adjustments by “simply [following] the fluctuations of opinion among the workers themselves as indicated by the rate of volunteering,” following the principle that “no one man’s work ought to be harder for him than any other man’s for him” (p. 60).

The role that Bellamy assigns to the administration was more avowedly one that oversaw fluctuations in the ratio of individual volunteering and the demands of the nation. Bellamy’s image of a social naturalism reflected the decline of traditional 19th century conceptions of the organic harmony between kinship, occupation and community. But the role assigned to the administration reflected a conception of source and mechanics of social regulation as well. The “nation” was a new model of organic unity, but one on a grander scale to be sure. Its evolutionary emergence necessitated a bureaucratic organization that rationalized, out of necessity, the links between kinship, work and community. While the “natural endowments” of individuals were transcendent forces (Auerbach 1994, p. 33) that obeyed their own laws of allocation, the nation possessed its own transcendent force, an updated “official nationalism” (cf. Hofstadter 1955a; Anderson 1983; Gutek 1964; Trachtenberg 1982).

B) The Pedagogical Practice: Deferred Behavior as Moral Reformation

Fueled by the turmoil of the populist decades, the social thought and political reforms of the Progressive movement arose as beneficiaries. At the core of the Progressive conception of politics was the urge for a more “direct” democracy unimpeded by partisan political machines. The attraction of a direct democracy that would circumvent the politics of foreign-born populations was enhanced by its capacity to nullify the cultural standing of such groups as well. To progressive reform, the moral impurity of politics derived from how the sway of group interests overrode the autonomous individual.

The belief that the political process could and ought to be amenable to the methods of social science was especially pronounced with regard to the very idea of measurement. Charles Merriam stated it well in his *New Science of Politics* (1925, p. 118):

Evidently measurement has the advantage of setting up a definite unit, which, if and when calculated, may be made the basis of comparison with other units or with the same unit under varying conditions. It tends to eliminate opinion based upon general observation or belief, resting perhaps upon self-interest or custom; and to substitute facts upon which there can be relatively little argument.

Merriam’s image of measurement reflects a dominant motive of direct democracy, the wish to rise above conflicting and prejudicial social groups by means of a more unified method of inquiry. The equality of men and the ethic of individualism were conceptualized in terms of the identity of units to be measured, a property common to all individuals regardless of cultural or economic background. This promoted renewed interest in the role of psychology, an interest that could “desensitize” politics as an impartial mechanism. The role of psychology had urgency, for the lag between technological changes and social and political adjustments was a persistent and aggravating fact.

Yet the persistence of such a lag was precisely the rationale for the measurement of psychological responses, for such measurements could facilitate proper social and political adjustment. Key to both the rationale and the measurement of such psychological responses were the twin ideas of the public and of public opinion.

The years between 1900 and 1930 saw much written on the topics of the public and of public opinion. John Dewey, in *The Public and Its Problems* (1927), concerned himself with the questions of what constituted the public, under what circumstances it became consequential in society and the means by which it could be better articulated.

Dewey's book is a clear and concisely written attempt to define the nature of the public, arguing that its "eclipse" is due in part to the fact that political interpretations have looked at the alleged agents of power and not, as he contends, at the consequences of political acts. By focusing on the "indirect" consequences of political decisions we could discern the outlines of the public: "The public consists of all affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for" (pp. 15-16). The sociological boundary was called into play under circumstances whereby a common interest resulted from the "evil consequences" of political acts. The problem of democracy was in the final analysis the problem of the public and hence the conditions that promoted debate, discussion and communication within this public sphere.

The twin ideas of the public and public opinion were consonant with a political climate that favored a direct involvement of individuals in democracy. In a climate hostile toward urban politics, viewed as controlled by special groups and corrupted by their graft and favoritism, the public symbolized the dissolution of those group divisions that held politics captive and responsive to private, and namely ethnic, interests. The public was the totality of individuals whose best interests were expressed in a collective opinion. This collective, public opinion was not the property of a ruling few, but an emergent property neither the same as nor reducible to the sum of individual opinions. The location of any one individual in this statistical totality was itself a measure of the fundamental equality of public opinion. Like the political reforms of direct democracy, the individuality of opinions was most pure because they were unobstructed by the machineries of organized politics. Moreover, a characterization of public opinion as the direct reflection of the public was a moral one, and one associated with the middle class in particular. Because both the working and capitalist classes were tainted, only the middle class "ha[s] its feet firmly planted in the world of present needs; its mind is trained to comprehend that world and to move it".

In his influential *Public Opinion*, Walter Lippmann undertook to ground the idea of a public opinion in social psychological theory. To Lippmann, the amorphous and inchoate nature of the public was the framework within which a public opinion emerged: "a public opinion deals with indirect, unseen and puzzling facts and there is nothing obvious about them [for] the situations for which public opinions refer are known only as opinions" (1922, p. 17). The opinions of individuals who possess incomplete knowledge and a limited range of experiences are mediated by stereotypes. The analysis of public opinion must focus upon problems of error in purposeful behavior (p. 48):

The mass of absolutely illiterate, of feeble-minded, grossly neurotic, undernourished and frustrated individuals is very considerable; ...The stream of public opinion is stopped by them in little eddies of misunderstanding where it is discolored with prejudice and far-fetched analogy.

The real problem of the public was, in Lippmann's term, the "tyranny" of public opinion. But this tyranny was not only that the numbers of illiterate and feeble-minded were much greater than generally thought; more so was the tyranny of the "group mind". As portrayed so starkly by McDougall (1920), group membership involves a paradox: participation in group life "degrades the individual," yet "only by participation...does man rise above the level of the savage" (pp. 27-28). The goal of collective psychology was to unravel the paradox. The central complication, however, was the limited ability to "foretell the behavior of the group from knowledge of the individuals alone" (p. 31). A social or collective psychology must study the group at its own level, as having an organization and existence independent of the individuals who comprise it.

A technology that could measure and aggregate individual opinions could circumvent the obstructions of groups not planted in the world of present needs, while yet at the same time reflect the moral world of a middle class.

Such merits and benefits help to explain much of the parallel development and diffusion of intelligence tests, personality scales and vocational inventories; as well as the recurring patterns of racial-ethnic, socioeconomic and gender disparities.

Pedagogical Reflections

The Raison d'être of Educational Psychology

The structural circumstance of the new middle class situated individual members in a contradiction (Bernstein 1977). In contrast to those above and below them, their social capital of kinship and community ties was delegitimated by their inclination, if not necessity to promote political reforms that targeted the unearned power of capital consolidation and the immoral corruption of labor organizations.

Their mode of generational reproduction was not symbolized by close-knit community life, but of social mobility and its personal and spatial disruptions. In sharp contrast to capital accumulation or wage promotion, the central mechanism for new middle class professions and of public employment was the meritocratic structure of schooling.

The economic plight of the new middle class, that Edward Bellamy so keenly exploited, seemed inescapable. To those caught in a system perceived to be fundamentally corrupt, access to traditional, 'organized politics' seemed remote. The path seen as most attractive and effective was to 'go around' both capital and labor and their respective party structures. To members of the new middle class, the political reforms of the initiative, recall and direct democracy, and such institutional reforms as civil service, pure food laws and anti-trust legislation, were options that seemed both ethically and politically effective. All such reforms had the symbolic imagery of transcending the exclusionary and partial practices of capital and labor. All such reforms ameliorated the anxieties of the de-propertied, salaried public employees. The establishment of the civil service was exemplary, for it best symbolized institutional reform based on meritocratic principles. With affinities to Bellamy's "Nation", the civil service represented a hierarchy based on natural capabilities, circumventing the illegitimate inequalities of wealth and status. The political reforms of the late 19th century reflected the "leveling up" that William James, like Bellamy, saw as the necessary precondition to education.

The coincident development of public opinion, intelligence, personality and vocational interest may not have occurred had it not been for the accessibility of an institutional site with broad logistical significance: public education. It is here that the political and social psychological climates converged, rendering public education an ideal jurisdiction for the practical application of psychology. American common schools were especially receptive, both ideologically and organizationally.

The rise of mass schooling provided an accessible site for an early detection of the incapacities that blocked one's ability to participate fully in social and political life. Like the progressive reforms envisioned through direct legislation, the common school need not be corrupted by the differences and divisions of groups, whether nationalities, ethnic or religious groups. The elevation of "individual differences" over group divisions held out the promise of a moral equality that would have educational as well as political advantages. The promise would be the emergence of the "everyday individuality of everybody" which, as Foucault told it, would usher in the new "disciplinary methods" that reflected the link between the macro forms of political domination and the institutional technologies of control (Foucault 1979, p. 191). The theories and practices of educational psychology would play a major role in the growing disciplinary methods of public schooling.

The omnipresence of individual variation had a particular democratic character to it. One individual may be high in one trait relative to others, but lower than others in another trait. The source for both was an individual's original nature. With the organizational expansion of secondary schooling at the turn of the century, enhanced by the completion of passing compulsory attendance laws by 1918, reliance on ability grouping and vocational tracking became more common and routine. As means to more effectively teach a diverse population, the distribution of students by ability level became a principle *raison d'être* of educational psychology. What was key to this *raison d'être* was its legitimation, established prior to avowed purposes of intelligence testing, much less an affirmation of their theoretical or methodological validity. The legitimation originated in the broader context of economic and social change generally, and in the response of the new middle class in particular. The measurement of individual differences and the sorting of students by ability was a means not only to enhance instruction, but a means to achieve "school efficiency" – by reducing waste and inefficiency (Callahan 1962; Ayes 1909; Hanus 1913).

Like the initiative, recall and direct primary, educational psychology held out the promise that public schooling could circumvent inefficiency and corruption. The promise, backed by the science of individual differences, embodied a utopian ideal, an image of a social order that transcended the illegitimate inequalities based on wealth and ethnic advantage. Educational psychology soon adapted itself to the promise, and in so doing, became the central architect of and moral counselor to the organizational routines and development of public schooling.

Conclusions

The focus of this essay, as its title suggests, is the making of American educational psychology generally, but most concretely, the forging of its jurisdictional dominance over public education. The making of this dominance in education signified, for all intents and purposes, that it had come of age. If its place in public schools had not been secured, it most likely would have remained a subfield of psychology, top heavy in theory by virtue of its lack of a laboratory for the experimental research so strongly advocated by G. Stanley Hall and E. L. Thorndike, and others. That it gained more than a foothold by 1910 was a remarkable achievement, and one achieved comparatively quickly.

If the question is one of disciplinary origins, the anchoring of educational psychology in public education offers a seemingly indisputable marker. Yet, as Marc Bloch noted long ago, the allure of ‘origins’ can be dangerous, if its two meanings are conflated: as ‘beginnings’ and as ‘causes’ (1964, pp. 29-34). The time, or point, when something originates can be as difficult to define, as it is elusive. Each origin point has its own antecedent, luring us ever further back in time. And invoking causes can give way, or intend as an ideological means to render judgments on the present, not to understand it or explain it. The dangers feared by Bloch have plagued accounts of the “historical foundations” of educational psychology. A major impediment has been the atheoretical nature of accounts, for the very method of accounts is to chronicle figures, important moments and events along a linear plane of time. We see the contour of events deemed the most significant, but lack an interpretation that might seek their logical interrelation or alternative path dependencies. The cost can be great: figures are given too much significance, some events are over-dramatized for their significance, and the present is presumed to be the natural and inevitable outcome of all that came before.

The risk of approaches that conflate beginnings and causes may be that interpretations are free to select origin points that can differ significantly from others, and this freedom is seen as healthy scholarly inquiry. The cost of this may be even greater: what needs to be explained remains obscured or invisible. In his insightful explanation for the “invention” of public opinion in the English Revolution, David Zaret captures this issue succinctly: “This is why, in addition to divergent theoretical perspectives, wildly inconsistent answers exist for questions about the timing and social origins of the public sphere – too much speculative latitude exists in exegetical accounts of reflective writings by philosophers and theologians” (1996, p. 1551, emphasis added). The relevance of Zaret’s study to this one is revealed by his resolution to the problem of “wildly inconsistent answers”. He goes on to say: “Answers to questions about the birth of the public sphere should be sought in empirical study of communicative practices in popular politics and not in second-order, philosophic renditions of these practices” (p. 1541). In effect, as he implies, the object of study is not the origins of the public sphere, which impresses some need to locate an origin point in time, but rather the onset, or making of “communicative practices”. With striking similarity, the object of study here has not been the origins of educational psychology, but of the communicative practices that gave to educational psychology the formal requisites of a behavioral science.

By say 1915, these formal requisites were neither central figures, nor theoretical or methodological consensus, nor national conferences that declared the organizational prominence of educational psychology. The formal requisites were embodied in communicative practices, specifically three: the publication of textbooks averaging almost 10 per decade, almost all entitled Educational Psychology; the publication and systematic evaluation of intelligence, motivation-personality and vocational tests; and the routine employment of such tests across a highly diverse public school system. What these features signified was not the ‘emergence’ of educational psychology, but the affirmation that the psychological study of educational matters would be on-going through time; it would be self-referential.

Again, Zaret’s interpretation is especially insightful and relevant: the invention of public opinion, and thus of the public sphere, was “the imposition of dialogical order on conflict” (p. 1543). With notable parallels, educational psychology’s achievement of jurisdictional dominance over public education was an invention, made secure when the communicative practices of publishing texts, tests and professional research became routine.

An unintended gain from this was immunity to empirical inconsistencies that protected the epistemological infrastructure from challenges, be they theoretical, methodological or judicial. The routinization of practices masked the metanarrative, thereby affirming the infrastructure as the essential explanation of individual behavior.

Endnotes

1. The moral dimension of intelligence reaches well back historically. In the works of the French philosophes of the 18th century, a major preoccupation was with the conditions of human “understanding,” or the sources of knowledge. In his *Essays on the Mind* (1970), Helvétius discusses “probity” toward the “public utility” as an intelligent conduct, the basis “on which all human virtues are founded” (p. 63).

Yet, while the virtuous, or moral dimension of intelligence has a long history, the concerted effort to measure this human faculty arose during the latter decades of the 19th century, and accelerated soon thereafter. These efforts were stimulated by the parallels between the experimental studies of Wundt in Germany, and the survey of eminent relatives by Galton in England. Most influential, however, would be the work of Binet in France. Although formally trained in law, Binet’s interests turned to psychology and to the sources and consequences of levels of intelligence. Binet would join a group of professionals commissioned by the French government in 1904 to devise a means to identify intellectually subnormal students for whom alternative educational arrangements would be established. In collaboration with Theodore Simon, the Binet-Simon Scale was published in 1905, and would exert an influence on conceptions of intelligence generally, and on constructions of tests in particular. The most direct influence was on American psychology, a legacy that would be carried on and elaborated by Lewis Terman at Stanford.

The Binet-Simon Test was a watershed marking the application of theoretical principles to practical problems of learning. This practical application became the nearly sole province of educational psychology, at once a subfield of psychology and dominant theory of pedagogy for systems of education that were increasingly national in scope. The ascendancy of educational psychology was certainly facilitated by the formalization of national educational systems, yet the converse is equally true.

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