The Politics of (Non-)Belonging in *The Education of Henry Adams*

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Chaos was the law of nature; Order was the dream of man.

“The Grammar of Science,” The Education of Henry Adams

Introduction

Ever since its 1918 posthumous publication scholars have looked at The Education of Henry Adams, as a hybrid work of biography, autobiography, history and philosophy, and a case can certainly be made for each of these classifications. Henry Brooks Adams (1838-1918), political journalist and essayist, biographer, novelist, and historian, constructs in his third-person autobiography an individual identity around a set of political principles inherited from a family legacy of participation in the res publica which had become outmoded in post-Civil War, post-Reconstruction America. I will argue in this paper that in The Education of Henry Adams we have a dystopian vision of America and its political system, infused with the pessimism and dislocation of its author, which may be attributed to the fact that Adams used his third-person narrative to (re)order his experience both as an individual and as a citizen of the republic. Because Adams could not identify with the political and economic transformations which followed the end of the Civil War, he became more and more estranged from his fellow citizens. As a citizen, Adams belonged to an imagined polity informed by the values of civic republicanism that had animated the Founding Fathers, centred on the notion of dedication to the common good, selflessness, self-denial, and virtue, but which were no longer present in “his” America. By examining the nature of Adams’s sense of dislocation and estrangement, dystopian in many ways because it did not correspond to the idealized political community he favored for his country, it is possible, in my view, to map some of the (dis)continuities which characterize his thought as regards the future of the American polity.

Adams had the Education published at his own expense in 1906, copies of which he then sent to those people mentioned in the book, inviting corrections and comments from them.¹ Posthumous publication of the Education occurred in 1918, following the author’s death. Adams’s concern about his image for posterity becomes evident when we read the “Editor’s Preface,” which he wrote on behalf of his friend Henry Cabot Lodge, who was to be in charge of the publication of the work. The full title of the work was then to be The Education of Henry Adams – A Study of Twentieth-Century Multiplicity, which was to be read with its companion piece Mont Saint Michel and
Chartres – A Study of Thirteenth-Century Unity (1911), likewise, first privately published in 1904. Taken together, they provide us with two world views: one centered on the dynamo and the forces associated with mechanical power, multiple and unlimited (increasingly the standard by which the nations were starting to be measured); the other, on the Virgin, as a unifying and centralizing force capable of bringing individuals and nations together towards a common goal.

Early assessments of the Education proved invaluable in terms of establishing Adams’s name within America’s literary canon. One of these was T. S. Eliot, who one year after Adams’s death (and also the year it was awarded the Pulitzer Prize for Literature), reviewed the Education for the Athenaeum. In his review, Eliot wrote that Adams was an acute observer of American society and culture, noting that the Education could be regarded as a source of commentary on American society and culture from the Civil War years onwards. Another early assessment of Adams which also significantly contributed to his inclusion within the American literary canon was Carl Becker’s review of the Education for the American Historical Review, again one year after its publication. Describing Adams as an individual who was interested in the philosophy of history, Becker questioned, however, whether the Education should be regarded as an autobiography, highlighting instead Adams’s political commitments.

Another early assessment still, was Ezra Pound’s, who placed Adams within the great intellectual tradition of the Founding Fathers statesman, one of the few remaining examples of New England’s intellectual tradition, along with Henry James. Much has been published on Adams since these early studies and very few academic works fail not to place the Education at the heart of the criticism on this American author, from J. C. Levenson’s The Mind and Art of Henry Adams (1957), to George Hochfield’s Henry Adams: An Introduction and Interpretation (1962), to R. P. Blackmur’s Henry Adams (1980), to mention only the most significant ones, including the seminal three-part biography of Adams by Ernest Samuels, published over a period of three decades (1948, 1958, and 1964, respectively), as well as Elizabeth Steveson’s Henry Adams: A Biography (1955). These days, it is generally agreed that the Education must be used with caution both as a source of information on Adams’s personal life (Adams omitted practically all references to his family life in it) and as reliable commentary on America’s historical past (Adams neglected important historical aspects while concentrating on others excessively). Brooks D. Simpson, for instance, in the
introductory text to his 1996 book *The Political Education of Henry Adams*, maintains that the *Education* is neither history nor autobiography: “It is part personal recollection, part polemic, and part philosophy.”

Part One: Imagined Polity

The American Revolution pointed towards the possibility of creating in the New World model communities of social and political organization hitherto non-existent in Europe (non-oppressive, equalitarian, respectful of individual rights), based on the enlightened belief in the perfectibility of men and the potential that all human beings had for self-realization. The political leadership which carried out the movement for the independence of the colony understood that well and framed those ideas in the first political documents they produced for its citizenry, thus complementing still further Winthrop’s visionary (and utopian) idea of setting up in the North American continent “a city upon a Hill.” From its inception to the present time, the American polity has been informed by what has been aptly termed as “a transnational national optimism,” defined as a “complex sublimation involving idealism, denial, inspired obtuseness, a forward impetus, and a selective reading of the past.” This has fueled Americans’ immanent sense of optimism, which has persisted right to this day, and has led to regular relapses of pessimism and disbelief among them, in particular when current realities do not match past hopes and dreams. For Adams, the ideal republic, the one he imagined for his country, is the one which the Founding Fathers framed in the Declaration, the Articles of Confederation and the Constitution (the moral framework for citizens and statesmen alike), one characterized by dedication to the principles of civic republicanism, by which I mean an unswerving dedication to the *res publica*, to the common good, and to the well-being of the nation.

The imagined political community we find in the pages of the *Education* is one marked by the absence of political corruption, of paper money, of a spoils system, as well as of populist democracy (of the Jacksonian type). Ideologically, all the Adamses, quite possibly the first political clan the United States had, were anti-spoils/patronage, anti-party/political machines, and anti-paper money. Adams partook of the ideals of his ancestors, exhibiting throughout his writings a Puritan conscience combined with eighteenth-century rationalism, a deep-seated anti-slavery stance, a tendency to equate
virtue with knowledge, especially in his assessment of the nation’s political and economic leadership, and unremitted support for a republican form of government. Just like his political ancestors, he held a strong pro-federal position and opposed the concept of states’ rights. He also possessed an elitist conception of politics, where deference still played a key part in the realm of the public sphere. For these reasons some scholars have described Adams as the last of the civic republicans, those individuals who believed America had been destroyed by the excesses of liberalism.  

A close examination of Adams’s works offers evidence of a dialectical tension between commerce and virtue, as well as between individualism and public good. His eighteenth-century education had not prepared him effectively to deal with the capitalist ethos his fellow citizens embraced so strongly in the aftermath of the Civil War, and with which he refused to identify himself, preferring instead to hold on to outdated forms of political behavior, where virtue and dedication to the common good hold a prominent position. He often asserts in his works, namely in the political biographies he wrote on two prominent public figures from the Early Republic, Albert Gallatin and John Randolph, that the survival of the republic was dependent upon individuals willing to serve the country without expecting honors or privileges in return. There are innumerable instances in his writings, the Education included, which allow us to infer that he felt that wealth had a negative impact on public affairs, commerce and prosperity being clearly responsible for the corruption of the moral character of the citizens of the republic.

Part Two: Liberal Values and Republican Principles

Adams attributes the commercialism and materialism which took hold of the American psyche in the postbellum period to the excesses of liberalism, the dominant ideology in the country from very early on in the history of the United States. The truth is that as soon as the country started to expand territorially, the acquisitive spirit of Americans became exacerbated, a fact which, in Adams’s view, destroyed a pristine concern with the public good, leading to deterioration in the quality of the nation’s political players (examples abound in the Education, but Ulysses S. Grant stands out). Adams saw his imagined polity at risk in the post-Reconstruction era not because of some underlying structural fault in America’s political system, but because of the excessive
individualism/materialism of Americans, who, as far as he could see, neglected public affairs to attend to their economic future. Unquestionably, Adams would agree that among Americans the forces of liberalism, unleashed by the opportunities of material progress offered to citizens in general, revealed themselves stronger than those of republicanism. Moreover, Adams clearly doubted whether Americans were becoming better citizens (and advancing intellectually) as they progressed materially. He lamented in strong terms the disappearance of a simpler, purer America, refusing to identify with the crass materialism that had become the norm for the majority of his countrymen in the decades that followed the end of the Civil War.

Adams is a man at odds to reconcile his republican ideals with the realities of industrial capitalism, namely when he expresses the idea that private interests had come to dominate America’s political system during the “Gilded Age,” after the title of the 1873 novel by Mark Twain and Charles D. Warner. In this excerpt from the Education, for instance, Americans are criticized for their loss of a sense of purpose as a people and as a nation over their short history:

Indeed the American people had no idea at all; they were wandering in a wilderness much more sandy than the Hebrews had ever trodden about Sinai; they had neither serpents nor golden calfs to worship. They had had lost their sense of worship; for the idea that they worship money seemed a delusion. Worship of money was an old-world trait; a healthy appetite akin to worship of the Gods, or to worship of power in any concrete shape.⁹

As a man of means, entirely free from financial worries, it was relatively easy for Adams to deprecate those who seemed to be governed by an acquisitive spirit. Labeling himself “the Boston moralist” in the Education, his uncompromising attitude of criticism as regards the capitalist ethos indicates that he never abandoned the idea that wealth corrupts virtuous individuals and that a business ethic driven by material accumulation is detrimental to the political life of the nation. Adams disliked Boston, for instance, because it embodied the practices of financial capitalists, whereas Quincy is associated with the political activity of his ancestors, with republicanism, its values having become, as James P. Young has noted, a kind of “lost utopia” for him.¹⁰ Adams
wrote much against the power of capital to contaminate the body politic, but like many others who shared similar visions he was not able to control those forces. In the following quotation, summing up his whole life, Adams’s dislike of capitalist society, despite his privileged status among America’s political and economic elites, is evident:

He had stood up for his eighteenth-century, his constitution of 1789, his George Washington, his Harvard College, his Quincy, and his Plymouth Pilgrims, as long as anyone would stand up with him. He had said it was hopeless twenty years before, but he had kept on, in the same old attitude, by habit and taste, until he had found himself altogether alone. He had hugged his antiquated dislike of Bankers and Capitalistic Society until he had become little better than a crank.11

Adams suggests in the Education that America’s governing class had failed to rise to the occasion in the postbellum, post-Reconstruction era, as political corruption, jobbery, economic speculation became widespread. The dystopian vision of America’s ruling class we have in the autobiography, when compared to the political leadership of the Early Republic, is not because it behaved in an oppressive or violent way towards its fellow citizens, but because it had failed to meet the standards of the Founding Fathers. For Adams, the Civil War had had a negative impact on the constitutional framework of the nation in the sense that it increased the level of partisanship among citizens, provoked a loss of executive power and triggered rampant corruption among members of Congress. It is no surprise, then, that no administration is depicted in the Education as negatively as Ulysses S. Grant’s. His presidency is the object of virulent criticism on the part of Adams because it embodied the antithesis of what statesmanship should be about (the distinction Adams often makes between statesmen and politicians is itself telling, the first more commonly-found in a republic, the latter in a democracy). In chapter xvii of Adams’s personal narrative, covering the year 1869, the Civil War hero is compared to a prehistoric creature, a terebratula, unfit to rule over millions of citizens. To his mind, unintellectual types such as Grant should have become extinct ages ago:
What worried Adams was not the common-place; it was, as usual, his own education. Grant fretted and irritated him, like the Terebratula, as a defiance of first principles. He had no right to exist. He should have been extinct ages ago. The idea that, as society grew older, it grew one-sided, upset evolution, and made of education a fraud. That, two thousand years after Alexander the Great and Julius Caesar, a man like Grant should called – and should actually and truly be – the highest product of the most advanced evolution, made evolution ludicrous.¹²

Four-fifths of Americans had voted for Grant in the presidential elections held in 1869, thus placing huge expectations on the recently-elected president. A widespread level of optimism had taken hold of the nation, Adams included, because Grant represented a return “to regular practices in government.”¹³ Grant was no great administrator, though: his presidency was marked by political and economic scandals, the most salient of which were those surrounding Jay Gould and Jim Fisk, the owners of the Erie Railway who had attempted to corner the gold market in 1869, and in which a member of the president’s family was thought to have been involved. Moral laxity in government meant that politicians had lost their creditability among voters, according to Adams: “The moral law had expired, – like the Constitution.”¹⁴

In Walt Whitman’s “Democratic Vistas” (1871) we have negative views of America and of its political leadership which are not too far off from Adams’s own appraisal of the country in the aftermath of the Civil War. Whitman’s description of the widespread level of political and economic mismanagement at this point in the nation’s history is dystopian, as we can infer from this passage:

The depravity of the business classes of our country is not less than has been supposed, but infinitely greater. The official services of America, national, state, and municipal, in all their branches and departments, except the judiciary, are saturated in corruption, bribery, falsehood, mal-administration; and the judiciary is tainted. The great cities reek with respectable as much as non-respectable robbery and scoundrelism. In fashionable life, flippancy, tepid amours, weak infidelism, small aims, or no
aims at all, only to kill time. In business, (this all-devouring modern word, business,) the one sole object is, by any means, pecuniary gain. The magician’s serpent in the fable ate up all the other serpents; and money-making is our magician’s serpent, remaining to-day sole master of the field.15

Whitman, like Adams, found it difficult to understand the rapid transformations of the American polity from a republic governed by the few to a liberal democracy governed by the many. Furthermore, both had similar misgivings about the impact of materialism on the American psyche. Whitman’s preoccupations, however, were different, in the sense that he was particularly concerned, most notably in “Democratic Vistas,” with the emergence in the United States of a civilization based on a new literary order that could rival with past civilizations.16

Neither Whitman nor Adams were alone in their critique of the impact of corporate power upon the body politic. Edward Bellamy, the author of the literary utopia Looking Backward (1888), addressed in Equality (1897) the same kind of issues as Adams. In it, Bellamy marks the year 1873 as the starting point of the final period of the “pseudo-American Republic,” the year the country began to open its eyes to the impact of the growth of capitalism. For Bellamy, the growth of capitalism had raised a novel question, one that Americans had not posed before: “a conflict between the power of wealth and the democratic idea of the equal rights of all to life, liberty, and happiness.”17 Bellamy notes in Equality that in the period of approximately twenty-five, thirty-years, the expansion of capitalism had changed the country completely: monopolies evolved, open competition disappeared, as well as the opportunities for free enterprise for ordinary Americans. One of the consequences he identifies as having resulted from the expansion of the new industrial capitalism was the fact that, for example, a “public servant abused his trust by using the administration under his control for purposes of private gain instead of solely for the public interest – that is to say, he managed his public trust as if it were his private business and tried to make a profit out of it.”18

Part Three: A Philosophy History
Worried about the possibility of political chaos in the aftermath of the Civil War, Adams spent the 1870s and 1880s actively involved in the reform movements of the time, which included the currency, the civil service, and the question of free trade, among others, convinced that the republican principles of the Founding Fathers were being jeopardized by the political and economic corruption of his fellow citizens. When he failed in his attempt to restore a pristine purity he believed had existed at the time of the founding of his country, he withdrew to academia and editorship, which is why there are virtually no references in the *Education* to the most intellectually-productive years of his life, the period between 1871 and 1892. In this twenty-year period, Adams wrote two historical biographies, two novels, a nine-volume history of the administrations of two presidents, as well as innumerable political and economic pieces. Still, when he resumes his personal narrative in the chapter entitled “Twenty Years After,” it becomes immediately apparent to contemporary readers that his interests have changed. Adams is in a new frame of mind in the remaining chapters of the autobiography: the subject-matter is denser, more obscure, harder to follow, everything suggesting disorder, chaos, absence of direction, whether political social or economic.

Among Adams’s new intellectual pursuits we find his thoughts on the possibility of formulating an all-encompassing philosophy of history, that is to say, of how scientific rules may apply to the study of history. This newly-found interest can be seen in three essays he wrote late in his life, all of which share a marked pessimism should historians fail to use the methods of science to study the past: “The Tendency of History,” (1894), “The Rule of Phase Applied to History” (1909), and “A Letter to American Teachers of History (1910). As has been observed by Natalie F. Taylor, Adams’s interest in a philosophy of history represents his attempt at finding an answer to the transformations in American society in the *postbellum* period. Unable to make sense of those changes, and having lost his “moral certainties,” he turned to science for an explanation.

Adams included chapters in the *Education* on the subject of science and history, relying on the second law of thermodynamics and the principle of entropy (the tendency of energy in a closed system to reach a maximum equilibrium and then to begin to dissipate itself) to suggest that human societies, like living organisms, progressed up to
a certain point in time, stagnated, and then began to decline, that is to say, to lose their power and influence entropically.\textsuperscript{21} In the chapter entitled “The Grammar of Science” (1903) of the \textit{Education}, for instance, the historian has simply become an individual who aims to measure “thought-motion,” given that the “laws of history only repeat the lines of force or thought.”\textsuperscript{22} In a “Dynamic Theory of History” (1904), the development and fall of societies is explained in terms of forces or motion, as two masses, nature and man, interact, each one affecting the other in turn through a process of attraction and reaction, important moments in the history of mankind being moments of acceleration of power/energy. And in “Law of Acceleration” (1904), the progress of societies is examined in terms of coal production, the “vertiginous violence” with which the ratio of acceleration increased manifold throughout the nineteenth century, forcing Adams to conclude that it was folly to imagine that an American born in 1800 could educate one born in 1900, or else for someone who had come to life in 1900 to educate an individual born in 2000.\textsuperscript{23} Adams knew that America had been at the heart of this process of acceleration of forces. For this reason, the “new American,” because he is the child of massive technological and scientific progress, is described by him as “a sort of God compared with any former creation of nature.”\textsuperscript{24}

Some scholars, among whom we find Ernest Samuels, have called attention to the pseudo-scientificity of Adams’s writings on these subjects, arguing that they are not to be taken literally.\textsuperscript{25} Others, such as Henry Steele Commager, have suggested that Adams must have been aware of the inherent fallacies of trying to apply scientific laws to the study of history.\textsuperscript{26} Certainly, the highly speculative nature of these writings, their level of abstraction and lack of clarity imply that they must be read with a considerable amount of skepticism. Commager’s words, in my view, sum up succinctly the whole discussion: “Adams illustrates the rejection of the Victorian idea of progress for the idea of entropy, the rejection of a teleological universe for a mechanistic universe, the substitution of science for philosophy, of the machine for man, of force for faith, of the dynamo for the Virgin, and, at the same time, the convulsive effort to discover a philosophy that would satisfy the requirements of both instinct and reason.”\textsuperscript{27}

Adams was given a glimpse of America’s future when he visited the Chicago Exhibition of 1893. There he realized for the first time it was to be a future based on technology, not some abstract, religious or philosophical idea. This can be inferred from
this passage in the *Education*, where his misgivings about technology and mechanical power (measured in horsepower) are not just material, but also metaphysical – what will the impact of unchecked energy be on the mindset of an entire people, he wonders?

One lingered long among the dynamos, for they were new, and they gave to history a new phase. Men of science could never understand the ignorance and naïveté of the historian, who, when he came suddenly to a new power, asked naturally what it was; – did it pull or did it push? Was it a screw or thrust? Did it flow or vibrate? Was it a wire or a mathematical line? And a score of such questions to which he expected answers and was astonished to get none.28

A few years later at the Great Paris Exposition of 1900, he realizes that the dynamo used in the production of electricity is the 20th century force equivalent to that played by the Virgin in 12th century Europe. The acceleration of society from unity to multiplicity is all too much for Adams, who acknowledges that a new social mind will be required in order to accompany the speed of change. From this moment on, estrangement and dislocation ensue for the sixty-year-old Adams, who seeks refuge in medieval Europe, in the notion of unity symbolized by the Virgin and in the architecture of Gothic cathedrals, such as Chartres and Mont Saint Michel, the latter offering a staggering contrast to the multiplicity of forces Adams saw rising everywhere.

These doubts and reservations do not prevent Adams from recognizing the power of American society and its members as he continues to couch his ideas in terms of energy, force, coal production, horsepower, in the remaining pages of his autobiography. His thoughts in connection with the St. Louis Exposition in the chapter “Vis Nova” (1903-04), for instance, attest to that:

The new American showed his parentage proudly; he was the child of steam and the brother of the dynamo, and already, within less than thirty years, this mass of mixed humanities, brought together by steam, was squeezed and welded into shape; a product of so much mechanical power, and bearing no distinctive marks but that of its pressure. The new American, like the
new European, was the servant of the power-house, as the European of the twelfth century was the servant of the Church, and the features would follow the parentage.²⁹

It is clear as we read the *Education* that Adams disapproved of an America ruled by science, technology and business interests, spreading their influence tentacle-like, and undermining the kind of polity he imagined for his country. Adams has little in common with this America, confessing in the *Education* that he, too, “had plunged into anarchy;”³⁰ to such an extent that he has joined an anarchist party – the Conservative, Christian, Anarchists – which has only two members, his former student, Bay Lodge and himself, and whose philosophical inspiration happens to be Hegel and Schopenhauer. Adams is unable to come up with his own synthesis of Church, State or Thought, just like the rest of Americans, proclaiming that quite possibly, in the end, “order and anarchy were one, but that unity was chaos.”³¹ And so, close to the end of the century, as the aftershocks of the financial meltdown of the Panic of 1893 make themselves felt across American society, Adams is in a “bystander’s spirit”, detached from politics and society, watching it all unfold before him, as capitalistic forces, victorious, take control of everything.

Conclusion

It seems to me, in conclusion, that Adams is a good example of the citizen who finds it difficult to bridge the gap between past concerns and present realities, and thus becomes more and more marginalized both as a citizen and as an individual. In the *Education*, the language of republicanism, the language of virtue, morals, and civic virtue, is an ever-present theme, as I hope to have shown, attesting to the enduring presence of republicanism in American political culture and rhetoric throughout the second half of the nineteenth century. By permanently contrasting the imagined polity of the Early Republic and the political and economic realities he could observe in America during the latter part of the nineteenth century, Adams accentuated what separated him from his fellow countrymen. This, coupled with an inability to make sense of where America’s technological growth and exponential rise in mechanical power might lead the country, added to the feeling of dislocation, estrangement and non-belonging we
find so unceasingly in the pages of the Education, creating in contemporary readers a dystopian view of the American polity in the eve of World War I.

NOTES

1 Only three copies were actually returned, one of which by William James. His comments are most telling: “The boyhood part is really superlative. It and the London part should become classic historic documents. There is a hodge-podge of world-fact, private fact, philosophy, irony, (with the word “education” stirred in too much for my appreciation!) which gives a unique cachet to the thing, and gives a very pleasing gesammt-ein-druck of H.A’s Self.” Quoted in Jean Gooder, Introduction to The Education of Henry Adams (Harmondsworth, Middlesex: Penguin Classics), xl.


5 Brooks D. Simpson, The Political Education of Henry Adams (Columbia, South Carolina: The University of South Carolina Press, 1996), x. In the same passage, he also writes: “In addition to unconscious warping of the past in his memory, Adams consciously distorted his life story to illustrate larger themes and to explain the reasons for his failure.”


8 For one of the earliest assessments of the impact of liberal values in American political culture, see Louis Hartz, The Liberal Tradition in America, New York: Harcourt Brace & Company, 1991 [1955]. More recently scholars have begun to question this all pervasive influence, among whom we find John P. Diggins, Gordon S. Wood, Bernard Bailyn, J.G.A. Pocock, as well as the above-mentioned Russel L. Hanson and Richard W. Merriman.


10 James P. Young, The Political Education of Henry Adams (Columbia, South Carolina: The University of South Carolina Press), 194.

11 Adams, Education, 1034.

12 Idem, 963.

13 Idem, 958.

14 Idem, 976.


16 Whitman’s call for a new class of American authors that can impact upon the citizenry is as follows: “Our fundamental want to-day in the United States, with closest, amplest reference to present conditions, and to the future, is of a class, and the clear idea of a class, of native authors, literatures, far different, far higher in grade than any yet known, sacerdotal, modern, fit to cope with our occasions, lands, permeating the whole mass of American mentality, taste, belief, breathing into it a new breath of life, giving it decision, affecting politics far more than the popular superficial suffrage, with results inside and underneath the elections of Presidents or Congresses -- radiating, begetting appropriate teachers, schools, manners, and, as its grandest result, accomplishing, (what neither the schools nor the churches and their clergy have hitherto accomplish’d, and without which this nation will no more stand, permanently,
soundly, than a house will stand without a substratum,) a religious and moral character beneath the political and productive and intellectual bases of the States.” Whitman, “Democratic Vistas,” 121-2.


18 Idem, 402-3.

19 Adams relied extensively on the ideas of Karl Pearson (1857-1936) for the formulation of his own philosophy of history, and which we can find in his book The Grammar of Science (1899). Pearson is best known for having provided some of the earliest contributions of statistics to the biological and social sciences.


21 Entropy involves the dissipation of energy by the constant degradation of its vital power in line with the 2nd law of thermodynamics. As such, the sun will eventually become extinct as its energy is lost; this applies to societies as well: “social energy” will eventually lead to entropy, since societies are not progressing, but are instead moving in the opposite direction, that is, towards their own extinction. Entropy is, therefore, the opposite of progress.

22 Adams, Education, 1137.

23 Idem, 1173.

24 Idem, 1147.


28 Adams, Education, 1033.

29 Idem. 1146.

30 Idem. 1090.

31 Idem. 1091.

BIBLIOGRAPHY


