Enough: A Pedagogic Speculation

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Robbie McClintock

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Acknowledgements

The Summer of Our Discontent

I have written *Enough* as a scholar in the Emersonian sense, as a person thinking, speaking his mind about questions of serious import in the conduct of life. Some will agree, others disagree, and many will situate the issues entirely differently—none of that is reason to be silent. A spectrum of persons, thinking, need to speak out, about the whole world, to the whole world, as humanist educators who have an appetite to lead the public, a passion about their purposes, and real rigor in their reasoned reflections on what is taking place.

Lame laments about the contraction of the liberal arts, and the loss of their prestige, will not help invigorate humane reflection. Humanists need to envision a world in which the humanities matter and evoke a desire, will, and understanding from people at large to bring that world to its fruition. To meet that challenge, *Enough* is clearly not enough. To fulfill the book's aspiration, it is essential that its readers each reach far beyond it to create a stronger, deeper public discourse about the conduct of life in which *Enough* may be one small voice.

In notes written in 1875, Nietzsche exclaimed. "To educate educators! But the first ones must educate themselves! And for these I write." Let us agree that Nietzsche was wrong. It is not the first ones who must educate themselves, but each one. All educators must educate themselves!—And for these let us write!

Robbie McClintock
August, 2011

The blossom and goal of all real philosophy is pedagogy
in the widest sense—the formative theory of man.

Wilhelm Dilthey, "Vorwort"
Geschichte der Pädagogik

An Opening, Here and Now

Do you ever wish you could get away, someplace really far, to
see things from a different perspective? I do. Not to chill out and
stop caring, but to can the clutter, all the chatter; perhaps to think
unexpected thoughts and aspire to more fulfilling deeds.

Let's imagine we are far in the future, looking back, voicing
reflections of a special sort, in the form of an extended essay, to be
read in whatever way people will read, 150 years into the future.

This essay, contributed to a Historical Commons in 2162,
concerns Rob Carlyle, my alter ego. It enables us, now, to concen-
trate attention on matters that the bustle of our time normally
obscures from thoughtful view. And what are those matters? Well, I
am not going to wade through the bill of particulars. It is long, and
rehearsed incessantly: too much anger, greed, ignorance,
complacency, pride, duplicity, envy, fear, and stupidity too; we have
put our nation at risk, defiled the climate, and wallow in a culture of
impassioned platitude.

Our future essayist propounds no remedial policies. From a far
distant, imagined future, the writer discloses the hard-won advent of
a different mode of living, hints of which our future author gives,
here and there, largely by inadvertence. The point, however, is not
to marvel at a utopian world to come, but to give ourselves some
perspective on our own.

Soon in historical time, our world—all its causes, truths, and
institutions—will merely linger in the memories of people pursuing
their own distinctive ways of life. Let us try to see ourselves as they
might see us in a different time to come. By casting our vantage
point far forward, we reduce the intellectual overhead that dealing
with the noise of present discourse would consume. We can
concentrate on issues of historical vision by situating ourselves as if

in a future era in which different principles are at the base of human aspiration. And from there, we can imagine what sharp observers might then say about those that are currently familiar to us.

What follows offers one effort to look back upon our present from the perspective of a different future. I do so, trying to explain how and why this future would differ from the historical world as we know it, and how it might emerge from our present situation. I make no claim that this different future is destined to take hold in history, nor that it is the best of possible futures that might do so. It is conjectural. I advance it as speculation, and examine its generative principles, in order to reflect on our present, our past, and our future.

One last preliminary: this is a short book, but not a quick read. Those in a hurry may be tempted to skip the notes, making it both a short book and a quick read. But in doing so, they will rush by the purpose—to reflect, to disengage from familiar habits of thought, to consider our lives in the world from a novel, far distant perspective. A few notes simply give some documentation; most add substance and nuance to the overall argument of the text. So—

Here's to the future! Let our reflections begin.

SHIT HAPPENS

A Reflective Contribution to
The Rob Carlyle Retrospective

by
Keepers of the Commons

2162

Buenos Aires
34°36′12″S/58°22′54″W
Global City-State

The Carlyle Archive
Study 23

Readers' Notes

We post *SHIT HAPPENS* for comment and revision. In keeping with general practice in the Historical Commons, the work has three authorial voices, each in the first person plural.

- *The Commoner* has responsibility for the whole text, writing in the voice of a single author. Only seasoned Keepers of the Commons can contribute in the voice of the Commoner.
- *The Digger*, the authorial voice for Tillers of the Commons, facilitates research and contributes, along with the Commoner, substantive material to the notes.
- *The Sojourner*, a voice for readers on the commons, submits queries, comments, and suggestions to input@liberallearning.org, to which the Commoner or Digger will respond through the footnotes.

September 1, 2162, the comment period will end, the text will be fixed, and formal publication will occur.

Work in the Carlyle Archive follows conventions of the Historical Commons. In *SHIT HAPPENS*, we separate our authorial voices from Rob Carlyle and his contemporaries by conveying our interpretative assertions, made on the authority of the Historical Commons, in the present tense. Otherwise, we use one or another past tense (except in direct quotations)—the simple past ("he was") to represent Carlyle's early twenty-first century present, the pluperfect ("by then it had happened") to represent past events relative to Carlyle's present, and the future perfect ("he thought it would happen") to represent future events relative to then.

In addition, the Carlyle Archive participates in a test to avoid awkward usages of pronouns by resurrecting the grammatical gender of some English nouns: "person," as in French, is feminine, taking "she" and "her" as pronouns; "child" is neuter, as in Old English, taking "it" and "its". Generically, "pupil" and "student" are masculine, as are professions, "lawyer" etc., unless explicitly feminine, "actress" etc. Of course, if known, the actual gender of the specific referent for these nouns will control the gender of the pronouns. With inanimate objects, in cases in which well-spoken English still shows traces of grammatical gender, some further nouns, generally of Germanic derivation, will carry a gender—she's a "fast ship" and "it's a slow boat."

This morning I saw a wrecked car. A mangled bumper sticker, just legible, cried out—**SHIT HAPPENS**.

Too true! The good and the bad in life, even the indifferent, take place, not through well-planned causalities, but through the immediate actuality of complex interactions—the expected mingling with the unexpected, all reciprocating together— immanently disastrous, mundane, perhaps even fortunate.

In the midst of what is taking place, to live is to struggle to maintain control. Life must sense, and actuate, what is just enough—neither too little nor too much—to steer a sustainable path through the never-ending flux of contingent circumstance.

<div align="right">Rob Carlyle, Daybook, July 13, 2011</div>

1—Situating the Question

Almost 600 years ago, the great essayist, Michel de Montaigne, celebrated the intellectual commons in which all peoples live and work:

> *Truth and reason are common to everyone, and no more belong to the person who first spoke them than to she who says them later. It is no more according to Plato than according to me, since he and I understand and see it the same way. The bees plunder the flowers here and there, but afterward they make of them honey, which is all theirs; it is no longer thyme or marjoram. Even so with the pieces borrowed from others; each person will transform and blend them to make a work that is all her own, to wit, her judgment. Her education, work, and study aim only at forming this.*[1]

Three full generations have passed since the Stabilization, and the principle of *enough*—neither too little nor too much—has become secure as the primary criterion of judgment in the conduct of life.

Our great commons, with the Global City-State enveloping Earth, has decisively displaced the chaos of nations, each wasting the commonweal, the general good, in pursuit of more power and riches. We all work together to construct, to enjoy, to inhabit the commons in its many forms. Here, in what we call the Historical Commons, we invite you to join in exploring the Carlyle Archive, newly added to the many archives documenting life in prior times. And specifically, with *SHIT HAPPENS*, we post a first gift from the Archive, harbinger of more to come.[2] In it, we interpret a small

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[1] *Commoner*: Throughout his career, Carlyle frequently quoted this passage and we suspect it colored his intuition that the cultural achievements wrought through the slow sequence of generations constituted a great commons, shared by all—the human cosmos. We have adapted this passage slightly from Montaigne's essay, "Of the Education of Children," as it appeared in Carlyle's copy of Montaigne, *The Complete Works: Essays, Travel Journal, Letters* (Donald M. Frame, trans, 2003) p. 135.

[2] *Commoner*: Certain currents of thought 150 years ago presaged the disclosure of the commons, so important in our time, among them the

part of the Carlyle Archive in the light of the whole.

1.1—Before the Stabilization

With this essay, we start a long effort to interpret how people early in the twenty-first century coped with their contingent circumstances. Since the Stabilization, we live in an inclusive commons, material and intellectual—conditions fundamentally different from those of prior times. We have realized freedom more fully in a world where personal aspiration and public purpose dependably converge, each informed by respect for *enough*. One of Rob Carlyle's favorite authors, Jean-Jacques Rousseau, declared it impossible to reconcile the choice—to become a fully developed person or a wholly responsive citizen.[3] We stand apart from those

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importance of the gift, and beneath it, reciprocity in human relationships. We are still benefitting from the generosity of mind evident in *The Gift* by Marcel Mauss and the recognition by Lewis Hyde that the fruits of creative activity are gifts to the human commons. Their concepts underlie the human self-understanding that allows all persons to freely participate in fully developing culture, scholarship, art, and science. Looking back, Hyde's two seminal tracts, *The Gift: Creativity and the Artist in the Modern World* (1983) and *Common as Air: Revolution, Art, and Ownership* (2010), helped to lay the foundation for the Stabilization late in the twenty-first century. In the context of the present study, they merit sustained attention.

» *Digger*: Readers can find all materials cited here reproduced in the Carlyle Archive, in the editions then current, and in some cases the archived copies include marginalia revealing the state of thought early in the twenty-first century.

3 *Digger*: Celebrating the 400th anniversary of Rousseau's *Emile*, we call attention to it, as it served as a powerful resource early in the twenty-first century as thinkers criticized conventional wisdom about educational purpose. "Forced to combat nature or the social institutions, one must choose between making a man or a citizen, for one cannot make both at the same time." *Emile, or on Education* (Bloom, trans., 1979) p. 39. This divergence—either flourish as an autonomous, responsible person or embody a conventional role as consumer and producer in a competitive political economy—was deeply troubling to thoughtful people.

» *Commoner*: In another Working Paper, we will examine how critics suggested that a widespread failure to read Rousseau with depth and subtlety was contributing to the lack of pedagogical adaptability in American culture. Slowly they undermined the idea that the putative

who came before because our commitment to the commons, where each now participates equally with all, finally reconciles that choice, which before was so impossible. We aim in what follows to deepen our historical understanding—of ourselves, of our predecessors, of our differences from them, and most of all, of this advent of humane possibilities that they lacked and that we enjoy.

What differentiates the alienation, once endemic to all, from the solidarity now pervasive in our lives? In the Historical Commons, we collaborate to explore this question, this great theme. Our vast holdings record how an unexpected emergence took place in the unique experience of innumerable persons. As each lived a particular life, struggling to overcome contradictions in it, an emergence both internal to the self and external to conditions took place. Through the records of this emergence, we can better see our era becoming active on the networks of history; we can better understand what is unique in our circumstances; and we can better grasp how our lives now differ from those lived in prior times.

Around 130 years ago, in 2032, at the age of ninety-three, Rob Carlyle persuaded most of his family to emigrate from New York City to Buenos Aires. He loved New York but he lost the capacity to tolerate the steady rise of corporate fascism, which had infected the American nation over the prior half-century. He, and a growing number like him, bridled at the arrogance of wealth, checked by neither tact nor law, and held self-serving elites responsible for the steady, serious decay in the quality of American life, glossed over by their strident propaganda and incessant mongering of resentment and fear. People like Carlyle, some tacitly and others vocally, thought that future life in urban places would thrive best where self-governing people joined as honest equals to care for natural resources, the human mind, and the social infrastructure.

For Carlyle, American democracy had become a hollow ritual. The few had come to dominate the many. As the populace slipped deeper into ineffectual resentment, self-congratulatory elites—many oblivious, some indifferent—calculated that popular frustration

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imperatives of political economy, arrived at by considering the national interest in education, should define the purposes controlling the intentional formation of individuals and societies. We, of course, have learned much from those critiques and now hold the urban interest in education to be profoundly different from the national interests in education that these critics were beginning to denigrate.

would remain passive, ineffectual. The happy few could so manipulate decline that whatever happened to the commonweal, they and theirs would become ever more sated. The vibrancy—for long what had made the world love New York—was moving to Buenos Aires and other cities then rising to their greatness. Carlyle—like others—chose to move with it.

Since their arrival in Buenos Aires, members of the Carlyle family have participated fully in the global commons as citizens in our community, suffering through the time of chaos and finding a new way of life after the Stabilization. Others can study activities by the Carlyle family in Buenos Aires. In these Working Papers, we concentrate on their lives prior to their immigration, both on the cultural life of family members, and even more, on how their experience evidenced the life of their time. We seek to appreciate the rich complexity of what took place in the particular, human lives of persons living in a distant place and distinct time. Our understanding of their seeking and suffering can inform our conduct as we, in turn, seek and suffer, and even flourish, too.

This Working Paper gives the first of these appreciations. It begins some twenty years prior to Carlyle's immigration with one small aspect of his work. But it leads from there to broader matters, which are the ongoing concern of the Archive. We will observe important ideas emerging into the field of historical experience and interpret carefully what was happening to those crafting these ideas and what they felt might be at stake in what was taking place. We will interpret reflections by those outside the mainstream of thought in their time, for they anticipated educational and social possibilities that bore real historical fruit. Their contemporaries, who confidently assumed their unexamined beliefs represented the historic currents of the time, were impervious to these possibilities.

We start with Carlyle's effort to review several books about education as people then commonly understood it. His critique made points that seem commonsensical today. But our inquiry must go beyond merely finding our present way of thinking in past documents. Rather, we look for signs of self-recognition among those initial inklings. Were people then beginning to foresee emerging alternatives to the dominant thinking of the time? What is so easy for us—to recognize an emerging way of life foreshadowed in a fugitive idea darting through the interstices of the past—was then so hard, plainly absurd. Yet the absurd was emerging, beginning its historical introjection into common sense.

To be sure, Carlyle was not alone in thinking as he did. We cannot find the actual origination, when the transition to historical maturity began, nor should we seek it. Instead, we must marvel at the complexity of what took place, and perhaps in doing so to understand it. Ways of thinking take place, one waning, another waxing—here and there; person by person; a few, more, many; each by his or her own counsel; each a distinct illumination, a recognition, an emergent understanding of life. To imprison what happens, in all its wondrous potentialities, in the schematic necessity of a causal explanation, would wring from it all living meaning and laden us with one more dead thing, another stone in the cold sequence of time.

Long ago, the venerable Foucault, and even before, the demonic Nietzsche, taught that beginnings cannot be found, and even if found, an instance of origination would lack significance in itself.[4] An originating causality, a temporal sequence from a prior cause to a later consequence, does not determine significance, for significance is not caused. It takes place; it emerges from the reciprocal interactions between an immediate actuality and its coexisting, contextual situations, all simultaneous with one another. There is no causal sequence leading to significance. And for that matter, nothing starts in the Carlyle Archive. What is there, exists there—we look at it and seek to make sense of it, to interpret what we find given there. In doing so, we contemplate historical difference as archaeologists, as genealogists, exploring distinct strata, the residues of which co-exist, by looking closely at archival materials to uncover clues about how persons in each historical stratum thought and acted. We can compare givens; we do not explain the production of one from another.[5]

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[4] *Digger*: Even at this historical remove, we still take works that Carlyle and others were finding important—*The Archaeology of Knowledge* and *The Order of Things* by Michel Foucault among them, along with the *Genealogy of Morals* by Friedrich Nietzsche—to be essential starting points for an interpretation of *historical difference* such as the one developed here.

» *Commoner*: Our goal is not to explain change, but to show the significance of difference. Foucault pointed the way. For a selection of his work, see the bibliography.

[5] *Digger*: Early in the twenty-first century, critical scholars had a sense of these methodological principles, for they were well versed in early examples of them. We have studied many works, then

Our Carlyle Project is Foucaultian. As archaeologists contributing to the Historical Commons, we examine how two distinct mentalities, each representative of its historical stratum, layer one upon the other, enabling us to marvel at the alchemy of historical emergence in the prior, twenty-first century, as the dominant mentality shriveled, and the nascent alternative flexed and matured, quick and surprising. A succession took place; any transformation of one into the other is a mysterious complexity forever lost in time. We contemplate the apparent difference, which still endures.

Our field report starts as Carlyle began early in 2009 to draft an essay review for one of those specialized academic journals, then so numerous in the late era of print. By itself, this review might not be worth our close attention, for the text itself went through numerous versions, and he never finished it. Carlyle regretted agreeing to write it. Yet his effort on it was essential for the further growth of his work. Through it, he worked out a significant agenda for several books that followed. It took time for these to develop a following, but his ideas clearly anticipated pedagogical developments that flourished many decades later. In addition, his unfinished work becomes especially interesting for us because we have a great deal of contextual material in the archive, giving us insight into what he

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contemporaneous, as part of our research in the Carlyle Archive; among them, *The Arcades Project* by Walter Benjamin, *Archive Fever* by Jacques Derrida, and *Imagined Communities* by Benedict Anderson. These have left a significant impression on our sense of how to construct and interpret a meaningful archive. As we shall show as this Working Paper proceeds, Carlyle rather characteristically developed what we call the "archaeological attitude" in thinking about historical change. People with the archaeological attitude came to understand significant change as something that erupted into history. New ways of perceiving and acting emerged as many persons adopted alternative guiding principles in living their lives. Significant examples were the surprising shriveling of the Soviet system and then rapid onset of Al Qaeda's terrorism, and then, even more unexpected, the rise of democratic movements in the Middle East. They were less transformations than historical substitutions.

» *Commoner*: Exactly. Accident, failure, illness, age, and death all subtract from the vital presence, diminishing and vacating actuality. Into the vacancy, one or another potentiality springs, sometimes several, which then struggle to secure the open place in actuality. Thus the kaleidoscope of history turns. Possibilities take place.

was thinking, and the ideas, interests, and resources from his time on which he drew. Hence, we can see, not a finished essay—a cosmetic lie—but Carlyle's thinking as he worked.[6]

To introduce Carlyle, we reproduce a capsule biography from his departmental website. It gives an initial, outward sense of the man, roughly when he drafted his review. He presented himself as well-situated, fortunate, successful, but strangely irrelevant, at odds with his peers and his time.

> I grew up in eastern Pennsylvania and graduated from Urbane Hall in 1961, then going directly to graduate school in a New York City research university. I began in the history department, but after the draft of my MA thesis evoked my advisers' wrath, I switched to the school of education, specializing in the history of Western educational thought. I was lucky: in the mid-1960s, academic talent was in great demand. I taught for two years in Baltimore at an esteemed university, and then joined the faculty of CGSE in 1967. There I stayed, rising through promotion and tenure, eventually holding a chair in the foundations of education.
>
> Through the early 70s, I published extensively in prominent journals but then my zeal for publication weakened as I began to doubt whether anyone gave a damn about what interested me. In the late 70s, I dabbled in digital technologies and for twenty years from the early 80s, directed several well-funded projects to integrate net-worked computing into educational environments in schools and universities. Since 2002, I have returned to concentrating on the history of educational thought, even though I still grouse that nobody cares about it. Throughout my career, I have been deeply at-tached to the academic ideal of disinterested inquiry, while highly critical of its implementation in the contemporary university. I am now retiring from academe to devote my remaining energies to understanding "the city as educator," that is, to illuminate how people use the intentional and inadvertent features of urban life as resources, educative and miseducative, in their efforts at self-formation. An idea of formative justice, as distinct from distributive justice, will be central to this work.

We now meet Carlyle a little over a century and a half later. We

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[6] *Digger*: Carlyle worked on the essay with sustained periods of activity and inactivity for two years or so, greatly trying the patience of his editors. During that time, his thinking displayed a great deal of recursion, spiraling repeatedly through a set of key ideas. In our exposition, we have muted his cycles of recursion without removing them entirely. Thought emerges mocking strictures of sequence.

start with an effort he was starting about the time he had decided to retire from the CGSE faculty. He liked teaching, especially the interaction with strong doctoral students, but there were not so many of those. He could continue influencing them through informal interactions, and concentrate on writing while avoiding all the make-work of faculty life. It had been feeding his sense of discontent, a disappointment with himself and the intellectual situation. He had begun his career as a strong critic of the dominant educational ideas and practices, which ignored the pedagogical power of the student. Looking back, he thought that the efforts he had tried to further had been ineffectual, for the ethos he opposed had become steadily stronger, nearly impervious to criticism throughout his career. What he had been doing for close to fifty years seemed to have had very little effect. He decided to retire, not to stop, but to work in a different way. Exactly how, he was not sure, however.

In that state of mind, the request from a colleague to consider the future of education for a prominent journal of educational theory seemed opportune. Would he develop his view of the future of education in critical interaction with three recent books, which had depicted the educational future in superficially different ways?[7] Carlyle was intrigued, but hesitated to accept the commission for he was a willful writer and had trouble delivering on commissioned work. But he accepted, thinking he would be able develop his views as a critic of the dominant ethos. He would write as an outsider, even though his long career had deeply ensconced him among professional educators. He would try to differentiate how he expected the future of education to eventuate from the other authors' expectations. He thought the other writers were, despite their

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7 *Commoner*: We have thought it best to leave the three books unnamed in the body of this essay, for their relevance after more than a century and a half is not great. For the record, they were

- Kieran Egan, *The Future of Education: Reimagining our Schools from the Ground Up* (2008).
- Gene Glass, *Fertilizers, Pills, and Magnetic Strips: the Fate of Public Education in America* (2008).
- Terry Moe and John E. Chubb, *Liberating Learning: Technology, Politics, and the Future of American Education* (2009).

If discussion of the books helps us understand core ideas then at stake, we will indicate the gist of them in further footnotes.

differences, representative insiders in the profession.[8] He perceived the differences among them to be superficial, relative to their common assumptions, which he did not share, and he wanted to explore the implications for the future of education arising from his divergent assumptions. To do so, he asked himself some initial questions. What was similar, uniting the different books? In particular, did the three authors think about the future of education in similar ways? Was their way of thinking about education representative of the patterns of thought then dominant? How did his ideas differ from what was similar between them?

1.2—Schooling or Education

As we follow Carlyle's reflections, we see that his ideas were neither unique nor original, but they were deeply discordant with the dominant pedagogical currents, as those had spread broadly across the full ideological spectrum, especially in the United States. Hence, his testimony helps us understand those times from within. The books Carlyle reviewed represented the ideological spectrum of mainstream educational thought very well—one to the right, one to the left, and one trying to hold the dispassionate center. Carlyle's position was outside their fray, outside the entire flow then coursing inexorably between the right and left banks of public discussion. His purpose was not to establish where truth, or the sound position, resided within the bounds of current contention. He wanted instead to examine why the whole discussion seemed to miss the point. With respect to his time, Carlyle had given up trying to change

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[8] *Sojourner*: How could Carlyle be such an outsider while spending his whole career dedicated to the profession, certainly doing OK within it?

» *Commoner*: It was a paradox. Part of it derived from externals. Carlyle's own education had taken place entirely in private schools, while the ethos of public schools characterized most of his colleagues among professional educators. More substantially, Carlyle had entered the mid-twentieth-century world of professional education as a radical reformer, bent on changing both school and society. His career started at a favorable time and he initially had powerful patrons. Individually, he got ahead well in the role of a dissenting insider, even though he had little effect on the profession. A few responded to his work, most ignored it. Hence, he persisted, working consistently towards intellectual and professional goals that did not become central to the understanding of education until many decades later as a part of the intellectual foundations for the Stabilization.

minds; he simply wrote to bear witness to the possibility of a coherent alternative. Could he have seen the eventual emergence of that alternative, he would have been gratified, but surprised that it eventually took place.[9]

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[9]   *Commoner*: We should be careful, perhaps, not to cast views like Carlyle's as those of fatalists who had neither hope nor purpose in their immediate world. Radical critics believed that real improvements in current pedagogy and politics were both needed and possible. To get them, they held it essential that people change their own minds, not have their minds changed for them by others. This was frustrating, however, because it seemed to become increasingly difficult for people to disentangle themselves from the dominant ideas. It appeared that people were not changing their own minds in significant part because a surfeit of pre-packaged opinions deluged them, all of it canceling itself out, leading to drift in practice. Critics could see the problem from their own experience, engaging the press, the media, and the blogosphere— the "echo chamber" as some derisively called it, in which opinionated imperatives drowned out reflective questioning. Thoughtfulness had difficulty winning a hearing in the midst of all the strident opinions. Intellectuals might favor writers who would explain what they thought and why they thought that way, not to instruct a reader about how he should think, but to provide him, in his inner life, with some information and concepts that he could use as he saw fit in thinking out those matters of importance to him. Critics might want to write for readers who would entertain a question, not to be provided with an answer to it. But such appeals were voices in the void. By only asking others to think out and adopt unexpected courses of action, critics risked appearing to be aloof fatalists who were unwilling to prescribe, and beat the drums for the programmatic implementation of their ideas.

» *Digger*: Our Commoner, ever the voice of disinterested reason, may scorn too strongly the passion with which many people held to their opinions. Fearing blind dogma, we now may lack sufficient conviction. Intellectuals, both then and now, may chronically downplay the power that faith and emotion exercised on thought.

» *Commoner*: Well, what can we say? Romantic youth always tries to soar beyond its real means. Most of us working on the Historical Commons have learned to keep our hopes more private and to check passion in order to speak with circumspection. And even though we do not wear our hearts on our sleeves, from the earliest days of Wikipedia, until now, the Talk Pages, from which we distill our common voice, jump with strong convictions. Contrary to rumor, we do not work as emotionless drones and we do not worship a god of disembodied

In all its variants, mainstream thought about education concentrated on educational institutions, especially on schooling and the aggregate effects of schooling on children. Within the mainstream, everyone espoused various programs of causal action aimed at imparting learning and tested the effectiveness of these programs by tracking effects on groups of pupils and students.

- Towards the right, people wanted to improve schools and universities by subjecting them to market forces, which would diversify them as they became more responsive to parental preferences, and make them more economically efficient by introducing competition.[10]
- Towards the left, people felt uneasy and defensive. Over decades, affronts to educational pride like Sputnik, followed by wide publicity about long, widespread declines in test scores, convinced the public that American students were lagging and the fault lay with the scholastic status quo, reliance on a massive school system managed by professional administrators and well-unionized teachers. Demographics, economics, and the political climate all weakened support for the system of schools, a process likely to continue indefinitely. Those who wanted to improve

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reason—I don't, I really don't! And, damn it! now and then, we can even take a joke!

[10] *Digger*: The following passages from Moe and Chubb, *Liberating Learning* (pp. 5–6) exemplified these ideas that market driven forces could improve the quality of education while decreasing its costs: "Over the last half century, however, the schools have faced new and daunting challenges, driven in large measure by globalization, intense international competition, and a heightened emphasis on education. . . . The public schools have not met this modern challenge—and the nation is still at risk. . . . American students continue to do unimpressively in tests of international achievement—and the older the students, the farther they fall behind. . . . For the nation as well as for individual students, these gaps in educational performance matter more and more every day. The world is becoming more competitive, not less. The industries and jobs that promise prosperity in the future are increasingly dependent on higher levels of education. . . . America's ability to prosper in such a world . . . critically depends on its ability to educate its citizens more effectively. No one disagrees with this assessment: the increasing value of education is recognized by one and all, regardless of ideology or party allegiance. But will America's schools ever take the leap forward that a bright future so clearly demands?"

common, public schooling needed more resources to upgrade schools, especially the status and quality of the teaching profession.[11]

- In the middle, researchers tested the performance of different instructional strategies by devising measures to ascertain whether students learned what teachers taught. Despite an effort to make research more rigorous by concentrating on the sustained test of significant interventions over extended periods, political imperatives and methodological constraints concentrated research on the short-term study of small components of the full program of schooling without coherent attention to the whole process.[12]

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[11] *Digger*: In *Fertilizers, Pills, and Magnetic Strips,* Glass gave an excellent diagnosis of these developments, although his prescription could appear to be an exercise in black humor insofar as the only solution he espoused to be possible was one that he had previously demonstrated to be increasingly impossible. After showing the dynamics of decline over 250 pages, Glass noted a few exceptional schools. These "can no more be 'scaled up' than one can scale up great families, great marriages, or great love affairs. In this I am an optimist: that the only reform that stands any chance of making our public schools better is the investment in teachers—to aide [*sic*] them in their quest to understand, to learn, to become more compassionate, caring, and competent persons." (p. 249)

[12] *Digger*: Through the last half of the twentieth century and well into the twenty-first, educational researchers produced countless studies testing the effectiveness and efficiency of a great variety of instructional interventions and strategies. Generally, the intervention period lasted a few hours, some days, perhaps several weeks, with the test of efficacy following almost immediately at the end of the intervention. Taken together, results were chaotic and contradictory, and the more serious researchers called for more rigorous standards of research. But it was difficult: longer studies might be more realistic but they made the control of variables increasingly problematic. For instance, Robert E. Slavin, "Evidence-Based Education Policies" *Educational Researcher* (2002), a prominent proponent of experimental rigor in research on school programs, called for year-long tests of promising instructional techniques for use in schools, rather than the usual testing durations, which were much shorter. But Slavin did not really come to grips with the fact that a successful student would spend twenty years, plus or minus, in instructional institutions, far longer than the duration of the

Across the board,—right, left, and center—educational policy concerned a cacophony of programmatic action to be implemented, helter-skelter, through instructional institutions.

At the start of the twenty-first century, most educators assumed, unselfconsciously, the necessity and timeless purview of their ways of framing their ideas. They did not question their shared generative metaphors. These were too tacit for us to describe as formal Kantian categories, although they operated as categories at the level of unconscious intuition, as shared means for making experience intelligible. But unlike Kant's epistemological categories, the generative metaphors of educational thinking were inductions from prevailing historical practice, a key matter too easily overlooked. Most educators, and the public with them, believed their educational concepts had validity independent of history, a truth independent of historical time. Confusing their accidental experience with timeless necessity, they rarely doubted that instruction had causal power, that good teachers could effect specified results, and that effective schools could underwrite the well-being of the American nation.

At this time, a few critics like Carlyle were starting to question these assumptions, advancing generative metaphors that significantly differed from those predominantly in force. The critics' ideas were much closer to the ones we now favor and it is a little strange for us to see a writer like Carlyle struggling to bring his tacit metaphors into conscious reflection and use by the public. We have the perspective of distance on their intellectual situation, one in which everyone, both the conventional and the incipient critics,

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research he called for. One year in the context of a student's full experience of schooling was still a very short part of it.

» *Commoner*: Some critics, Carlyle among them, took the whole construct of educational research to exemplify a misplaced emphasis on causality in education. They were just beginning to raise the possibility, which we have fully come to support since the Stabilization, that education takes place through an emergence, which we support through resources ubiquitous on the commons without trying to force it with programs of causal instruction. To grasp what was beginning to happen, we need to recognize how nearly everyone then relied on an unquestioned theoretical paradigm, which represented education as something the adult part of society did to its young through a causally effective, tripartite agency: teaching the curriculum through the school. That tripartite agency was then the quintessence of mainstream thought about education.

were immersed, almost submerged. Hence, we need to understand, not what Carlyle and other critics were trying to say, for that seems almost self-evident to us, but why in their time it was so difficult to get what they had to say across to others. These critics present to us the intellectual drama of persons coming to recognize that their ideas differed fundamentally from those of their peers.

A key element in this drama was a faint inkling, one with a little rustle, that the way of thinking about education, shared across the spectrum of prominent contentions, was approaching the limits of its potentiality. For over fifty years, educators had proclaimed innumerable reforms, but observers still witnessed the stubborn persistence of the pedagogical problems these reforms proposed to solve. Perplexed by this persistence, some wondered whether systems for schooling large numbers of youths, grouped by age and aptitude, were pressing against systemic limits of effectiveness. Critics started to hope, and at times, they even believed, that the dominant mode of pedagogical reasoning might give way to some significant alternative. But such hopes were insufficient. School reform, one way or another, monopolized the discourse of the time.[13]

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[13] *Sojourner*: I thought members of the public were then highly concerned about the quality of education with a lot of talk about "the nation at risk" and a sense among parents, at least middle-class parents, that the public schools were not adequate and the private schools too expensive. I would think that critics of schooling would have a field day.

» *Commoner*: You have a point, at least with respect to the 1960s and early 70s, especially in the most advanced countries, in particular the United States. For a time, "de-schooling" was the rage, envisioning patterns of de-institutional, spontaneous learning initiated by the young and the curious. But the vogue of that movement quickly passed. By the turn of the century, certain sectors, religious conservatives on one side and liberal humanists on another, turned to "home schooling," which nevertheless worked largely with ideas about causally effective instruction and remained relatively marginal. For most, who stuck with the system of formal schooling, an unusual pedagogical angst set in, which may have been some sort of deep-seated, spontaneous development, or something engineered by groups that benefitted from the status quo. Whichever, a self-sustaining status anxiety took hold, concerning the economic competitiveness of the nation at large and the prospects of individuals in job markets and the social quest for status and security. Things were a little different in other parts of the world, emerging-market nations and elsewhere, but more or less everywhere

Educational thought and practice became deeply conformist. Many felt the status quo needed to change, but they had great difficulty making any potential change seem credible. People espousing new ways of thinking felt implicit pressure to explain in realistic, practical ways, what they needed to do to bring about the changes in educational thought and practice that they believed would enhance the human worth and significance of educative experience. But they had no idea how to produce these changes, or what might produce them. They felt a strong pressure to say precisely how they would implement their goals. It was excessive, imperious, a block to intelligent effort. Was implementation, planned pedagogical action, really the best route or the only path to constructive innovation?

Carlyle thought that each of the three books he was reviewing failed as an anticipation of an educational future, because each applied the dominant modes of reasoning about education, albeit each in a distinctive way, as if these ways of thinking were timeless, trans-historical principles. Consequently, each work, like many others on education, described an extended present, not a historical future. From time to time in his thinking, Carlyle had reflected on how "the present" could have a duration that varied from the instantaneous, as in the successive oscillations of a CPU, to the extremely prolonged, as in the succession of geologic eras. As long as a particular generative principle of thought and action remained dominant in human concerns, the course of events generated by it would remain within an extended present, one defined by its mode

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the intense educational concern among policy-makers and the general public concentrated the quality of schooling and potential practical programs for making schooling have more tangible public and personal pay-offs. People structured this concern, both internally and externally, with reference to national systems of schooling and higher education. Entry into the most selective institutions became an obsessive quest, pursued on a scale and intensity far beyond the objective values at stake. With everything structured through particular institutions within specific national constructs, whatever the level, with each competing against others, people developed tunnel vision. They found it very hard to see the common urban interest in personal self-formation supported by shared resources afforded in the immediate circumstances of each within the Global City-State. They had great difficulty imagining real alternatives, ones that appear to us concretely as self-evident in the daily actualities of our lives.

of operation. For developments to be significant as a future, to be something distinct from the extended present, they would have to arise from a different principle generating thought and action.

This reasoning suggested that an extended present encapsulated the futures, which the three books under review envisioned, each in its distinctive way. The author of one of the books wrote exclusively about what he called "the future of education" and described how the school, its curriculum, and procedures for teaching it, might change during the next fifty years, resolving long-standing contradictions of pedagogical purpose in the process. In another, a senior professor of education at a major state university wrote about the support and direction of public school systems, especially at the state and local levels. He worried that changes in demography, technology, and political economy would jeopardize public education in coming decades, weakening the shared, democratic ethos transmitted to the young. In the third, two major proponents of what reformers then touted as "school choice" argued that in the not-too distant future technological and political changes would overcome resistance to reform; the entrenched power of the teachers' unions and school administrators to buffer schools from the rigors of market exchange would end. Lo, the magic of the market would liberate learning by increasing instructional variety and invigorating it with innovative initiative, thereby satisfying parental preferences and student needs, enhancing the wealth of entrepreneurs and the power of the nation. The nation, long at risk, saved at last!

Taking each book on its own terms, Carlyle had the most sympathy and respect for the study by the senior professor, but he thought none of the books dealt with the future very effectively. All shared a dubious assumption. From our vantage point, it seems self-evident how and why the general assumption was wrong and inappropriate. But in 2012, almost no one stooped to question it, namely that education and schooling were pretty much one and the same thing. A few thought that inherently education and schooling had little to do with each other. But they experienced difficulty getting people, who saw no significant difference between education and schooling, to distinguish the one from the other. To most people then, schools were the locus of education, and education the work of schools.

Of course, the conflation of education with schooling was not unique to the three books that Carlyle reviewed. They shared this

hegemonic idea with virtually the whole literature on education as it had developed through the twentieth century into the twenty-first. That hegemony set the challenge: how could a critic effectively call into question something basic and ubiquitous? People like Carlyle had a sense of intellectual futility because they had opposed, throughout their careers, confusing education with schooling. But in doing so, they seemed powerless: the reduction of education to schooling became ever stronger.[14] Their stating that education and schooling were not the same thing, however obvious it seemed to them, would have little effect. To break through the hegemonic mind-set, they had to cast doubt, not simply on the assumption—on the conflation of education with schooling—but on the way of thinking that made the assumption axiomatic for almost everyone. They had to cast into question the generative metaphor that led people, when they sought to think about education, to equate it with schooling.

In Carlyle's review, as in everything else by him about education that we have studied, he reminded readers that education was an experience of human persons, not of institutions or collections constructed by grouping persons together by their shared accidents. Others too, recurrently in various writings, would try to state this view by observing that education was an aspect of personal life whereas schooling acted on abstract individuals and groups—a pupil, a class, or a grade. Schooling, even when it involved efforts to "individualize instruction," entailed actions on groups of persons. Ironically, with significance having become statistical, people judged the success or failure of individualized instruction by comparing the results manifest in the groups receiving it to those

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[14] *Digger*: An effort among historians of education had started in the late 1950s to develop an understanding of education that took in much more than the work of formal educators. These revisionist historians wanted to use a much more comprehensive understanding to show how education had shaped American society. As a graduate student, Carlyle participated in this effort with youthful enthusiasm. Between 1970 and 1983, his mentor, Lawrence A. Cremin published a major, 3-volume history of *American Education*. At first, highly influential among other scholars, the consensus quickly formed that the effort to use a very broad definition of education resulted in unwieldy work. Carlyle had been dismayed at how quickly historians of education returned to concentrating on the history of schools and other educational institutions, and the teachers who worked within them.

achieved by groups subjected to other forms of instruction. Naturally, in our time, we do not subsume persons, each of whom has a unique integrity, into abstracted members of groupings, which observers construct by inventorying who has what impersonal characteristics, lumping those with the "same" characteristics together. Early in the twenty-first century, educators had to attend, for instance, not to the particular performance of a particular child on a particular test, but to the aggregated performances of many children on many tests, however standardized the numerous instances of these might be.[15] People judged the quality of schooling according to norms applied to these aggregate statistics. But education in substance was an attribute, not of aggregated group characteristics, but of the persons comprising the groups.[16]

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[15] *Digger*: People railed about the most egregious examples of "teaching to the test," which resulted from legislation like the No Child Left Behind Act. Carlyle thought highly of *The Death and Life of the Great American School System* (2010) by Diane Ravitch, a leading critic of education at the time. In a courageous about-face, having been a prominent spokesperson for charter schools and the testing movement, Ravitch now criticized the effects these innovations had for narrowing and destabilizing the system. However, in actuality, teaching to tests had long been a basic principle of institutionalized pedagogy—the self-proclaimed reformers merely had constricted the scope of testing.

» *Sojourner*: If you ask me, it looks like the whole idea behind the old system of schooling was to teach to the test. Wasn't the formal curriculum something like a compilation of what students were expected to know?

» *Commoner*: It looks that way. All sides of the argument thought educators, and the public at large, should be able to predict what a good student would know on proceeding through the many stages of instruction, and they designed student assessments accordingly. The arguments about tests were less about how to measure student performance than about what performance to measure, who should measure it, and with what purposes in mind. Carlyle thought that educators could not and should not predict what a good student would know. Intelligent access to knowledge had become far too open and diverse for such predictions to be possible.

[16] *Sojourner*: How did people like Carlyle start thinking about education as self-formation if the idea that students should learn whatever teachers teach so dominated contemporary practices?

» *Digger:* In Carlyle's case, he had become aware that education involved a personal act of self-formation during his secondary school

Early in Carlyle's career, what they called "the deschooling movement" had intrigued people, especially the work of that itinerant, charismatic priest, Ivan Illich. He aroused great interest in the 1970s as part of a widespread romantic rebellion against constraining institutions.[17] Later, the effort to distinguish between education and schooling was not a call for doing away with schools,

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experience at an excellent boarding school run by a revered headmaster, who had earned his fame largely through his gift for making adolescent boys reflect on and take responsibility for their educational choices. During college, Carlyle had worked in the summer program of an American school in Switzerland, taking small groups of kids camping and seeing the sights in Switzerland, Italy, Austria, Germany, and France. Inspired by this experience he wrote his senior thesis on education for Americans in Europe. In it he had propounded a pedagogy of engagement with cultural differences and was dismayed how he could find no schools taking up the opportunities he outlined—neither comprehensive high schools on military bases, nor selective boarding schools for pampered kids, nor capital-city day-schools for the children of diplomats and corporate executives. They all conformed to a homeland model, enforced by curricular and staffing conventions and by the demands of the college entrance process. Hence, Carlyle began his graduate studies of education thoroughly aware of the tension between pedagogies adapted to large groups and the educational interests of the person.

» *Commoner*: In addition, we should take a broader view in response to your question than Digger has given. Like us, educators in the twentieth and twenty-first centuries were inheritors of a pedagogical tradition, the formative theory of human possibility, derived from classical and enlightenment sources. These sources knew nothing about statistical obsessions and much about personal lives, about people asserting their hopes in the face of contingency. Perhaps we should rephrase your question: at the turn of the twenty-first century, how had it come about that the dominant sensibility had so completely lost touch with the idea of education as human self-formation?

[17] *Digger*: We can take as a sign of cultural difference between now and 150 years ago the way Illich's work has taken on classic status. After a brief heyday, his ideas became obscure. But now that cooperative activities in the commons have become so central to our way of life, we have trouble imagining how people could think Illich's ideas—especially the concept of conviviality, introduced in Illich's *Deschooling Society* (1971) and developed further in later essays, particularly his *Tools for Conviviality* (1973)—could have seemed merely visionary and impractical.

however. Critics like Carlyle thought good schooling to be potentially valuable to the person, which was why he felt sympathetic to the effort by Gene Glass to defend the political commitment to a strong system of public education.

As we have followed Carlyle's considerations in starting his review, he had situated himself, and us as interpreters of his work, in the midst of a difficult question. Speaking out against the conflation of education and schooling would accomplish nothing. He needed, both to differentiate education and schooling and, more importantly, to understand how public discussion could have conflated such different domains. Essentially, critics needed to identify the mode of generating ideas that had led people to situate education in institutions such as schools, rather than in a person's lived experience, in and out of schools.

Only a century and a half separates us, little more than a long lifespan, from that time, late in the era of dynamic enclosure, but the cultural distance between then and now seems far greater. To bridge it, we need to take some care to see life as it then appeared, from the inside, so to speak, not to critics who think as we now do, but to their contemporaries, from whose mode of thinking the critics stood apart. How did ideas reaffirming the traditions of education as the autonomous fruit of Emerson's "man thinking" differ from the mainstream conventions reducing education to groups in schools, their members learning whatever it was that teachers were supposed to impart? To answer, we need to ask with the critics,

> Why did people think it plausible to equate education with the work of schools?

2—Schooling in an Era of Enclosure

Life experience stimulates reflection. From the early 1980s on, innovative educators, Carlyle among them, had spent considerable effort trying to introduce digital networks into schools, to make the networks active pedagogical resources throughout the school, and between the school and the entire world, for both teachers and students to use in ways they saw fit in their work. Through these networks, they wanted to link everyone in different schools with one another and to connect each school network with networks in universities and to computers in homes, communities, and throughout the world, creating an unbounded, rapid, resourceful field of educational interaction. Digital technologies seemed to them to have had the potential to enable all persons to engage in educational work, at any time, from any place. Such a move intuitively seemed to be a simple way to empower inquiry-based education, enabling students to assert their intellectual autonomy and capacity for self-direction.

What happened disappointed the innovators' expectations. In trying to carry out technology-based reforms, innovators found it relatively easy to get the computers and networks into place, but the consequences they anticipated did not take place. They became acutely aware of existing schools as enclosures, bounded spaces enclosing smaller enclosures, the classrooms, where people, demarcated by age and alphabetization, acted in concert to use the bounded spaces for bounded times, class periods, to soak up bounded portions, lessons, in bounded subjects.[1] Carlyle spent two

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[1] *Commoner*: The discrepancy between action and result for technical innovation in schools illustrates how reciprocities between different sides of a person's character support the emergence of their activities in the course of life. It is hard to tell whether a penchant for reflection drove the reformers to act as educational innovators or whether their activities working concretely with new technologies originated their eventual speculations.

» *Digger*: An extended email exchange in July 2009 between Carlyle and his son, John, gives much insight into the intellectual sources of much

decades introducing cultural connectivity into educational institutions, witnessing limited effects almost exclusively in colleges and universities. He spent the following years thinking extensively about the differences between networks and enclosures.

2.1—Conceptual Enclosure

Numerous acts of conceptual enclosure provided most people the basic generative metaphor for thinking about schools and what took place within them.[2] An observer postulated boundaries in time and space enabling him to concentrate on what lay within them, to inventory the various attributes of things observed there, and to search for causal relationships determining how one thing within the bounded space acted on another there according to a temporal sequence. Children entered one grade or another depending on whether their birthdays fell between certain dates. Various boundaries tied them to one school or another, architectural boxes divvied up into many classrooms, each a walled space enclosing a teacher and her pupils, the one to teach and the rest to learn. A complex schedule assigned each to particular rooms, teachers, and periods for the scholastic regimen. All these procedures entailed numerous acts of conceptual enclosure, the projection of postulated boundaries, with activities carefully sequenced, hour by hour, day by day, year after year. The scope and sequence of the instructional program enabled teachers and students, everyone involved, to concentrate on what lay within the bounds, restricting effort to a few spatiotemporal causalities that could work within the enclosed spaces and times to produce desired effects, the program of

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innovative work with communications technology at this time, particularly how people expected it to serve as an alternative means of education. See for July 2, 6, 19, 14, 2009 in *The City as Educator* site, at http://www.studyplace.org/wiki/EmiliaA17.

[2] *Commoner*: In the decades before and after 2000, the idea of "compartmentalization" became somewhat influential. People conceptualized different aspects of their experience and character as belonging to separate compartments, so to speak. It allowed them to manage a wide diversity of activities, each of which having distinctive challenges and anxieties, without those resonating with each other, building tensions and complexities the person could not support. Compartmentalization, however, sometimes allowed for astounding contradictions in a person, which could become highly dysfunctional.

schooling, the sum of which people insisted on calling *education.*

Conceptual enclosure was an essential step in the construction of modern schooling. Someone like Carlyle, a historian by training, would have been deeply aware that the system of schooling had not developed as a recent accident of American exceptionalism. Modern schooling had been a historical construction stretching from the 16th century through the twenty-first. It came to span the globe, thoroughly integrated with other major constructions of modern life—the nation-state, industrial corporations, citizen armies, social services, and ever-spreading bureaucratic organization. Conceptual enclosure was not unique to schooling. Historical development for the prior 500 years had resulted from systematically applying principles of enclosure to major human concerns. That had driven what an important twentieth-century economist, Karl Polanyi, called "the great transformation."[3] What was the role of enclosure in these arrangements? What did it do? How did it work? What were its limits?

Polanyi had concluded *The Great Transformation* with glimmers of optimism, however, suggesting that the experience of the Great

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[3]   *Commoner*: Of course, we still reason extensively by applying a principle of enclosure and by thinking about causalities within the boundaries. But we do it in ways secondary to our primary attention to reciprocities and interactions. Hence, we have difficulty sensing how dominant and pervasive such reasoning about enclosed causalities was, especially through high modernity. Among other things, enclosure had been fundamental to modern conceptions of property and to the creation of autonomous markets for its exchange. Early in the twenty-first century, critics in a variety of fields, including education, started to value very highly *The Great Transformation: The Political and Economic Origins of Our Time* by Karl Polanyi (1944). Polanyi thought that economic markets were sociopolitical creations that people had initiated under particular historical conditions to achieve their shared purposes. In contrast, market economists had convinced themselves, and many, many people, that markets were autonomous features of the natural order, encompassing all sociopolitical arrangements. The result subordinated human social and personal interests to the dynamics of the market, which passed as natural and necessary. To be sure, economic activities were an important part of life—now too. But the market and its logic of operation was not a timeless foundation. A purposeful construction that people had created to serve their economic, social, and political purposes, the market was not a self-subsisting entity.

Depression and civic mobilization in World War II had disabused
people of beliefs in the autonomy of the market, enabling them to
regulate it intelligently in accordance with democratic social pur-
pose. Polanyi's readers in the twenty-first century shared this
expectation, but believed it premature to expect to witness its
fruition, for they could see how short-lived the primacy of the
common interest, which had seemed evident during the stress of
total war, had proved to have been.[4] How could people achieve and
sustain a pervasive solidarity, glimpsed in extraordinary times,
without having to undergo the terrible discipline of economic and
political collapse? That was then the historic challenge people faced.
Having attained and preserved it, solidarity constitutes the
difference between our Stability and the prior modernity.[5]

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[4] *Commoner*: Those looking for a topic ripe for further exploration in the
     Historical Commons might examine the sense of optimistic solidarity
     that coping with the Depression and World War II seemed to have
     forged. Various thinkers voiced it during the denouement of that
     terrible war. *General Education in a Free Society* by the Harvard
     University Committee on the Objectives of a General Education in a
     Free Society (1945) was a good example, which has become far more
     practicable since the Stabilization than it was in its own time. The
     consensus it counted on did not last long in the Post War period, nor
     did many other visions of what a unified society could accomplish, for
     the competition within society for economic and political advantage re-
     asserted itself, as did the competition between societies with the Cold
     War. Looking back on the early twenty-first century, we can see that
     visionaries like Rebecca Solnit, in *A Paradise Built in Hell: The Ex-
     traordinary Communities That Arise in Disasters*, showed how
     unexpected calamities have brought out the capacity for solidarity in
     populations that ordinarily displayed high levels of internal conflict. In
     such situations, the human capacity for full solidarity disclosed itself,
     but the ubiquitous use of enclosure as the principle of organization in
     political, economic, social, educational, and cultural life made it
     impossible to maintain. The rationale of enclosure pit people against
     one another.
[5] *Commoner*: Unfortunately, it took a prolonged pedagogy of events, a
     convergence of calamities, some predictable and some not, to wise the
     world up at extraordinary cost. Fortunately, by the time these calamities
     really set in with the catastrophic effects of climate change coinciding
     with the widespread breakdown in effective governance and economic
     production, an understanding of the urban interest, networked globally,
     had built up significantly. When the chaos began, people in the great

Late in the twentieth century, commentators had begun thinking about the representation of causal relationships and the depiction of bounded spaces in trying to clarify how cities, as a locus for human experience, differed from bounded polities, particularly nation-states. In so doing, they had begun to reflect on how area mapping, constitutive of nation-states, contrasted to place mapping, common facilitators of urban interaction. Of course, they recognized that from about 1500 onward, printing had powered a rich historical development for both types of mapping, but they thought that area maps had had the greatest significance in structuring the organization of life in the modern era.

Area maps established boundaries differentiating what lay within the boundaries from what lay without. By census, survey, and inventory, observers could then classify, compare, and contrast the distribution of characteristics included inside the boundaries, thus defining "it," the bounded area. With this information, people could better plan and more effectively deploy actions that would bring about a more desirable distribution of the characteristics inside the area in question, and reason strategically about how "it" related to neighboring areas, so defined.

By the nineteenth century, people had so deeply internalized the logic of area mapping that they readily inverted it. Rather than project a boundary to define a collectivity and then identify its characteristics, people would select a defining characteristic and use it to postulate boundaries in their minds. In this way, enclosures in the realm of thought, abstract collectivities, arose through the metaphorical extension of area mapping. A thinker would use a defining criterion to demarcate and bound off a category of people. Those who met the criterion organized conceptually in a closed set, thereby distinguished from those outside the boundary of the set. They become members, residents of a virtual area—the bourgeoisie,

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enclosures, initially following their national interests into destructive competition and conflict, unexpectedly put down their arms and joined together. Faced with chaos, people recognized that a global network of urban interests provided a more stable, fulfilling basis for organizing human life than the wasteful, dangerous competition of nation-states and closed corporate interests. A new order emerged as the old collapsed into a historical vacuum.

the working class.[6] Thus, people would hypothesize collectivities and theorize about how one acted upon another, an invitation to hypostatize what they had hypothesized. These steps described the strategy and practice of enclosure in its many forms.[7]

In contrast to area maps, place maps, such as an urban street map, located points of interest and links between them, schematizing places and the means of interaction available to people. Place maps enabled users to interact with each other and with their surroundings by moving along all the pathways between the different places located on the map. While place maps had had significant uses, the intellectual characteristics supported by area mapping had more deeply characterized the way of thinking in what was then called the modern era, the print era, what we now see as the era of enclosure.[8]

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[6] *Commoner*: Marx's class struggle is just one of numerous examples. Marx and his subsequent followers, even while belting the refrains of *L'Internationale*, enclosed peoples within abstract boundaries—

> C'est la lutte finale
> Groupons-nous, et demain
> L'Internationale
> Sera le genre humain

"Group ourselves"—into the working class, and "them" into the bourgeoisie—and after the final struggle, the workers will have become the whole of humanity, the dialectic of history having eliminated the last Other, the class of owners and exploiters. For Marx, the Communist movement had first to take the principle of hypothesized enclosures over from the bourgeoisie and then drive it to a historical culmination, turning enclosure inside out, incorporating all within the one remaining class.

[7] *Sojourner*: Hey, I hadn't thought about it much before, but it is a way to think about the political mess in the USA early in the twentieth-first century. Marx was gone. But wouldn't you say there was a lot of conceptual enclosure through opinion polling going on? And that conceptual grouping got mapped back loosely as geographical enclosure, using political boundaries—Red States v. Blue States. And broadcasters got everyone pumped up. It didn't take long to have a new Civil War going, Cold War style, with the US Congress playing the United Nations. This is COOL STUFF, man.

[8] *Sojourner*: But weren't the uses of place maps important as well? I'm under the impression that topographical maps and nautical charts are forms of place maps.

Area mapping and enclosure were conceptually one and the same. We look back and see an era of enclosure, a ruthless period in which the commons was ripped apart into an endless overlay of alienable areas, properties of all sorts improved through concentrated policy, built up through structures of governmental and commercial power. We call that long period the era of enclosure because the principles of enclosure, mapping areas and treating them as if they were separate and distinct, were then very productive in many different kinds of activity. Enclosure proved to be an effective, productive mode of organization, enabling those with enough power to assert all sorts of boundaries and use the postulated demarcations to promulgate all sorts of procedures and privileges with respect to what the boundaries contained.[9]

» *Commoner*: Right! If pressed, we might not claim robust historical truth for thinking area mapping to have been more influential than place mapping. But the uses were different, although historically intertwined. Nautical charts, place maps, *par excellence,* had immense historical influence, as did many other place maps, making modern transportation systems possible. We might capsulize the difference this way: place maps facilitated innumerable discrete interactions; area maps shaped large-scale historical initiatives. A simple indicator of the difference: nations fought wars *with* place maps, but *over* area maps. For instance, with the hot Civil War, the conflict pitted two geographic areas fighting over principles of governance and the definition of property, but the armies fought using detailed place maps. Thus, Sherman's March to the Sea did not follow just any random shortest route, but one calculated to destroy places of maximum economic value. Nevertheless, we think one can defend a claim of preeminence for area mapping because the rationale for its construction extended powerfully into the organization of modern experience. Since the Stabilization, place mapping has become far more important than area mapping. Even in the late twentieth century, place maps in the form of road maps and tourist maps had become the form of maps most people used most of the time. Area maps were becoming the purview of specialized researchers.

[9] *Sojourner*: I can see how area maps must have affected the politics between the nation-states through which people were then governed. But was area mapping essential to schools and schooling?

» *Commoner*: Consider how culture became nationalized during the nineteenth, twentieth, and twenty-first centuries. We think that throughout this period, schooling, aka "education," provided a preeminent example of this way of thinking and acting. On a macro scale, it

Modern life developed through a long historical era during which people projected precise boundaries into political, economic, social, legal, scientific, cultural, and educational space in order to elaborate systematically what fell within those projections. Contiguous states precisely surveyed their boundaries, negotiated over them, fought ferociously for them. They normalized the ways of living within their boundaries, pressing onto people ways of speaking, dressing, thinking, and valuing through the cascading pressures of convention, worship, school, and spectacle. In the twentieth century, critics talked a lot about various International Styles in art, poetry, film, literature, and architecture, but one need only look at the work of Leni Riefenstahl to see how easily policies of enclosure could turn all that to *our* glory and the denigration of *them*. Throughout the modern era, authorities promulgated law codes, administrative regulations, tax schedules, public health requirements, market surveys, and much more and put all of it in force according to controlling boundaries. The land within and the prerogative of its uses, minerals deep below and air rights rising up high above, all became defined as formal property, protected by the

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was rather obvious with all the gerrymandering of school districts and the practice of busing to protect property values and disguise patterns of prejudice. But on a more micro level, schools and schooling, historically long-lived, innovating institutions within modernity, were pioneers in structuring institutions by establishing boundaries enclosing people, ideas, and activities. Schools and school systems operated by grouping students within carefully mapped areas, a whole hierarchy of them from classrooms, to grades, to buildings, to districts, to state and national systems. Educators typically made judgments about key characteristics of a bounded group and developed plans of pedagogical action to alter those characteristics. Massive testing programs like the National Assessment of Educational Progress (NAEP) within the United States and the Program for International Student Assessment (PISA) gained extraordinary influence. Such testing entailed defining geographic areas and age cohorts within them, administering carefully designed standardized tests of aptitude and achievement in various subjects and skills, and interpreting the results as generalized characteristics of the populations tested. Comparisons of the results were powerful drivers of public concern about education and the basis for major decisions about instructional practices, the management of school systems, and the allocation of public resources. For interested readers, Digger has included the Internet sites for NAEP and PISA, circa 2012, in the Archive.

power of the state and its courts. Indeed, from our distinctly different vantage point, we now see quite clearly how area maps made enclosure possible, and many forms of enclosure made different kinds of area maps decidedly important.[10]

Critics like Carlyle began to see this strategy of enclosure, of projecting boundaries on the vast plane of experience and then giving privileged, restricted attention to what lay inside this boundary or that one, to have been the intellectual strategy, the generative metaphor, facilitating action on ideas in the modern era. We can imagine them posing a series of rhetorical questions driving the point home.

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[10] *Sojourner*: I saw in an exhibit how they used to address mail—first a big area, a country, and then a smaller area, a state, and then finally a definite address of a person and their place. Our use of latitude and longitude plus an address seems both more intuitive and precise.

Digger: Yes. We find it natural and efficient to indicate our place on the globe by latitude and longitude, rather than the archaic reference to nationality and country.

Commoner: True. A global network of cities makes a much more effective topology, avoiding unnecessary intermediate groupings and subgroupings. Even 150 years ago, those weary distinctions that had arisen with arbitrary boundaries had begun to lose meaning with the historical dismantling of borders within the old EU. Bounded states ceased to have any substantive meaning when the Global City-State adopted its Common Legal Code during the Stabilization. What counts now is where you *are*, not where you *belong*, as if somehow the area owned those it enclosed! In Carlyle's time, few people yet saw the law as an expression of the commons. Of course, it was still biased towards the interests of the rich and powerful; and different nations maintained different legal codes, but a recognition that universality was implicit in the idea of the law was beginning to take hold. People became more concerned about crimes against humanity. Associations, like Doctors Without Borders, were becoming influential. Montaigne's phrase—"truth and reason are common to all"—took on greater substance in the minds of many. But it took time. Too many public figures seemed to follow Humpty Dumpty in thinking that when they used a word "it means just what I choose it to mean—neither more nor less." Anti-democratic reactionaries used their control of the media to legitimate such usage and undermined the possibility that the populace would formulate a reasonable consensus. It made outrageous wealth long ascendant, and it took an unprecedented crisis to reestablish enlightened self-interest as the guiding principle on the sovereign commons.

- What was a nation-state but projected boundaries, fought for and successfully defended, within which national citizens, those bearing allegiance to the bounded place by virtue of their birth or "naturalization" there, could constitute its political, social, and cultural order?

- What was property but the legal projection of a defining boundary enabling someone to assert ownership—the right *to use*, the right *to exclude*, and the right *to exchange*—resulting in untrammeled control over the contents within?

- What was a field of study or the purview of a profession but the metaphorical extension of the practice of bounding the actualities of life within imagined enclosures, which then became the blueprints for the actual organization of different domains of life, a person's "area" or "field," to the imagined discipline of which practitioners strove to conform?

- What was consumerism in the marketplace but the transformation of objects of use into signifiers of wealth, status, personality, interest, and other characteristics that people could acquire and display on their bodies, through their homes and cars, to indicate the enclaves of the world to which they belong?

Historians of the modern era had massively documented the centrality of nationalism, property, and intellectual specialization. Unquestionably, bounding phenomena, subjecting experience to principles of enclosure, had been a basic principle of modern thought and action. In the United States, especially, it was then running rampant with the rise of mass incarceration, and its mirror twin, the spread of gated communities. Where that mode of thinking and acting had prevailed, it was natural to enclose education, existentially a diffuse aspect of all experience, in the bounded time and space of schools and other instructional institutions.[11]

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[11]   *Sojourner*: Recently I read something about "branding" as an important commercial practice in the early twenty-first century. Did it have anything to do with the way people thought about education?

»   *Digger*: Interesting. Yes. Perhaps educational institutions initiated one of the early social uses of branding. It may have been relatively trivial, something that arose from the way people intellectually extended the principle of grouping by extrinsic characteristics. Graduates of old-time colleges, especially the prestigious ones, would identify themselves, for instance, as a "Princetonian." That was branding, metaphorically extending a kind of area map, not a place map, despite its reference to a

2.2—Instructing Abstractions

Quantitative reasoning dominated the study of human experience, showing how deeply the principle of enclosure and area mapping dominated the modern mind. To gauge it, we should ignore their parochial arguments in favor of one statistical technique or another and concentrate on the implications of the old adage that you cannot compare apples and oranges. It meant, as we now see so clearly, that the whole apparatus of statistical analysis depended on the conceptual construction of bounded sets. Statistics applied to a population. To survey or sample its characteristics, observers had to carefully bind the population in space and time, and then count or

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place, a particular college. Anyone—grounds keeper, matriculated student, professor, or passing visitor—might have used a place map of the Princeton campus to find their way around. An area map, however, would have signaled specific characteristics. A literal area map—say a survey of the land owned by the University—would have indicated significant parts of the town that had become exempt from local property taxes. A metaphorical area map—permitting some people to be described as "Princetonians"—would have arisen by using a defining criterion, having earned a degree through that university (or of having been at least admitted and subsequently achieving great prominence), to bound a group, to set those to whom the criterion applied apart from those to whom it did not. It branded them.

» *Commoner*: When we think about its uses and effects circa 2010, we see that educational branding acquired more than trivial significance. Branding, and the related practice of profiling, pervaded the instructional practices. Life branded many kids as losers at birth, the children of inner-city dropouts. And throughout people were dumbly competing for badges of prestige, not matters of substance. Many kids who attended lesser institutions acquired far better educations than many who attended only the most prestigious places, yet the competition for access to the prestigious brands was both intense and absurd. Each year, elite colleges constructed an entering class as their admissions officers sifted through a surfeit of qualified applicants to select those who would fill out the range of student profiles they wanted in a high-quality, well-rounded freshman class. Branding and profiling in education was a gigantic distorting force on the integrity of human experience, and the assessment agencies, like the Educational Testing Service, played along, high-minded, as if they had nothing to do with the farce.

sample it in ways free of distortion. Developing sound techniques to define and sample a population was what statistics was all about— the rest, some would quip, was simply mathematics.[12] When a researcher had set the boundaries defining what to count poorly, or had failed to respect them, his counting of different things would yield no intelligible relation to one another, and the results of his manipulating them mathematically would be deceptive, either by intention or by inadvertence. But when the boundaries had been soundly set, with clear definitions of what to count carefully followed, a statistical inquiry became possible. Researchers classified the observed characteristics of things found within the set, ascertained the frequency of their occurrences within the isolated space and time, and used numeric relations to clarify relationships between selected characteristics, the variables, dependent and independent, that had thus been described and inventoried.

Applying these techniques to observed changes in comparable characteristics yielded insight into factors associated with sequential change, and under special circumstances, into the factors causing the sequence of successive states. The productive efficacy of

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[12]   *Commoner*: We have largely lost any special expertise in the use of statistics, a technique whose utility diminished as people ceased to obsess over distributive justice and paid much more attention to the importance of formative justice in their conduct of life. The history of probabilistic reasoning and its application to the study of risk helps us appreciate the old-time use of statistics. Those of us who enjoy traditional games of chance such as poker get a taste for it. Without going deeply into the arcana of statistical techniques, one can learn much from general texts from that era, for instance *Emergence of Probability* (1984) by Ian Hacking, *The History of Statistics* (1986) by Stephen Stigler, *Creating Modern Probability* (1994) by Jan Von Plato, or *Against the Gods: The Remarkable Story of Risk* (1996) by Peter Bernstein.

»   *Digger*: To marvel at how elaborately educators statistically broke down the human experience of education in the early twenty-first century, we include the 2011 set of statistical definitions, as they were maintained by a branch of the Department of Education in the Archive. One can lose oneself for years in the endless categories for students, teachers, and diverse institutions and activities, as the statistical analyzers defined them in the *Handbooks*, without ever encountering a person. See National Center for Education Statistics (NCES), "Education Statistics Surveys and Program Areas at NCES." U. S. Department of Education, Institute of Educational Sciences, 2011.

modern life, its causal acumen, had been built up through the assiduous application of these rational techniques. [13] Thus,

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[13] *Sojourner*: I don't understand. Were they really so superstitious to believe that one, or even a few factors, could actually cause what takes place in all its complexity?

» *Commoner*: Well, they took statistical constructions very seriously, and after all, in our time, we do too. The difference between now and then is complicated, and we will be developing an understanding of it throughout these reflections. We still draw heavily on their techniques, but frame our analysis differently—it is somewhat like the changing construction of what a Gestalt sketch represents.
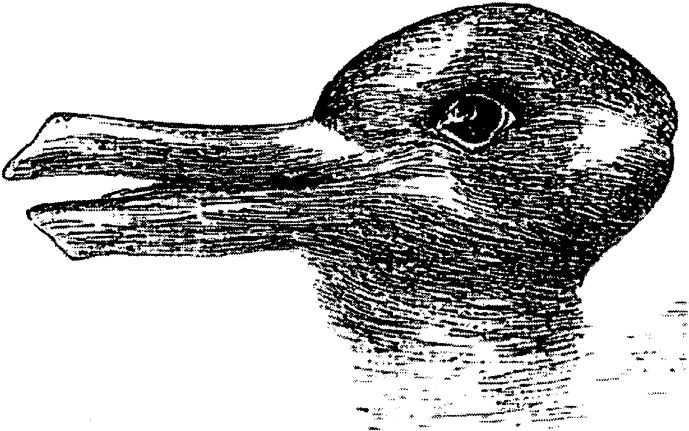
(Source: Joseph Jastrow, "The Mind's Eye,"
Popular Science Monthly, Vol. 54, No. 1, January 1899, p. 312)

Throughout, we are trying to understand a few, very basic differences, which could easily vanish from sight if we go too deeply into the prior mentality. Statistical analysis in high modernity had extraordinary levels of sophistication, which took into account, like medieval scholasticism at its best, all sorts of subtleties. And we too rely heavily on important areas of statistical analysis in planning, in science and technology, and in medicine. Then and now, at a level of effective sophistication, people recognize that causality is complex, involving numerous variables operating through many layers of iteration, yielding, not certainties, but probabilities. The basic problem in thinking about causality arises because it leads to an infinite regress. The many forms of "regression analysis" strive to bound the regress in ways that lead to an analysis that is both feasible and not distorting or

establishing boundaries, which were usually rather arbitrary academic, legal, or administrative constructions, had come to have immense operational significance in the human world, too often without any objective priority in the natural order. Should one remove the boundaries, which were usually conceptual fictions, stipulated with no observable, *empirical* actuality, the numeric relations would immediately lose their potential for "significance," in that peculiar sense of the term then claimed by statisticians.[14]

Statistical thinking had become a crucial system of expedience, one with no substantive truth-value, in itself: it had become essential to modern life because it provided useful responses to questions

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deceptive. In high modernity, inquiry paid primary attention to the sequence of causality seeking to explain the determinative factors. Inquiry fixated on origins. Now we pay far more attention to the interactions taking place at the instant when something is occurring with the intent to exercise as much control as we can. We look at the variety of ways two billiard balls can interact, deciding that a lot of back spin might make a shot feasible that otherwise we could never make.

[14] *Sojourner*: I am still a little uncertain what is going on here. I get what you were just saying about the Gestalt sketch, but your text seems much more fundamentally hostile to statistical thinking than a Gestalt switch would call for. Which is it?

» *Commoner*: Fair enough. We are trying to understand Carlyle's ideas in the context of his time. At some level, he probably appreciated the finer points of statistical reasoning, but he lived in a context in which such reasoning was highly hegemonic. With some difficulty, he was trying to assert the primacy of an alternative to causal analysis. He was starting to see the Gestalt sketch in a different way than most people were seeing it, and as sometimes happens, when one sees such a sketch in a new way, it becomes very hard to revert back to see it as one did before. Carlyle had a vivid perception of the alternative and a strong sense of the limitations of the dominant view. Hence, our text concentrates on an exaggerated, one-sided critique, a minority view in that time. Since then, the context has changed. His minority view has become the foundation for our majority understanding and we consequently can express it with a bit more magnanimity in appreciating the virtue of positions Carlyle strongly rejected.

» *Digger*: In a time when quantitative reasoning arbitrated so many significant choices in personal and public life, the misuse of it provided critics with a frequent target. Hence many books, like *Proofiness: The Dark Arts of Mathematical Deception* (2010) by Charles Seife, then received wide attention.

people then felt drawn to pose about the selected contents of isolated areas that they had projected onto the all-inclusive commons. If people started posing alternative questions, ones to which statistical thinking produced answers of little cash value, in the then influential phrase of William James, the hegemony of statistical reasoning might quickly implode. Quantitative knowledge was not superior. Rather people had judged during the modern era that it had been more useful. That judgment was historically contingent and as we well know, different people in a different time might find good reasons for making a very different judgment.[15]

Yet for most, early in the twenty-first century, collections and their labels were what counted, and indeed, they were counted. How the characteristics labeled in the collections seemed to act causally on one another determined the outcomes deemed important in life.[16]

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[15] *Sojourner*: OK, but you seem to imply, and I think you are right, that we direct our attention to what is taking place in the midst of simultaneous interactions primary, and the study of successive causalities we now make secondary. Since we recognize value in each, why make one or the other primary?

» *Commoner*: Good question! If we were omniscient and never had to allocate attention and effort, it would probably never seem reasonable to favor one mode of thinking and acting over some other one. We are far from omniscient, however, and having a structure of rational priorities helps us make full use of our intellectual capacities. If someone preferred causal reasoning, he would normally run through a series of if-then propositions about the causalities pertaining to a given question. That would seem more efficient than struggling first with the open-ended problem of deciding whether the best way to proceed was through causal inquiry or through the study of emergent properties.

» *Digger*: We might question whether William James was really onto something with his idea of truth as a cash value, but certainly his analysis of habit and its uses still has remarkable value. See William James, *The Principles of Psychology* (1890), especially Chapter IV.

» *Commoner*: Yes, but we might hold, however, that habits, structures of attention, while pressed upon us from without as James suggested, are done so more from our immersion in humanly constructed culture, than from the surrounding presence of nature.

[16] *Digger*: Of course, the great hurdle in applying such reasoning was to demonstrate not only the association of characteristics, but the causality of one on another. They believed they could accomplish such demonstrations through precise identification and measurement of relevant variables. Often the complexities arising in studying large,

Characteristic intellectual practice then consisted in mentally enclosing a space and a time. Researchers observed and characterized what they found inside. By trial and error or possibly by a controlled experiment, they tried to account with reference to observed characteristics for the causal sequences that determined how and why certain characteristics were distributed as they were found to be. Then policy makers used that account to develop and guide actions that would change the distribution of observed characteristics in desired ways. The production of those desired changes was called assessment and showing whether the assessments improved or worsened was called accountability. And such thinking had been rife in the world of education.[17]

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portentous associations made the rigorous demonstration of causality very difficult. And when interventions based on quantitative assessments were very costly and disruptive, the degree of rigor needed in demonstrating causalities in order to mobilize a public will to act would prove inordinately high, paralyzing the formation of effective policy. As is infamous, the peoples of the world procrastinated in taking concerted action about major problems such as global warming because they chose to haggle endlessly over the marginal uncertainty of statistical correlations. Despite such failures, the quantitative analysis of defined causalities within a closed domain of relevance was the mode of reasoning shaping almost all the domains of life in the modern era. Perhaps most surprising was the way, circa 1950, with the Reports by Dr. Alfred Kinsey, that statistical surveys even pervaded the domain of human sexuality, undoubtedly affecting, not only knowledge, but behavior as well, as a study by Miriam Reumann, *American Sexual Character: Sex, Gender, and National Identity in the Kinsey Reports* (2005) showed.

[17] *Digger*: Organizations such as the Educational Testing Service waxed large and powerful providing standardized assessment of vast numbers of people. Critics like Carlyle became increasingly distrustful of these assessments and of the accountability movement in education, which relied on them. To us, the very pernicious economic, social, and political consequences seem self-evident. The instructional system had long served as the essential means for legitimating invidious distinctions among people. Everyone by law had to pass through a sustained period of compulsory schooling and the extent of their success and failure within it was evident to all. The successes and failures that people had in schools significantly affected important probabilities in the rest of life—the likelihood of going to prison, of voting, of earning an above average income, of enjoying a longer life

Schools enclosed educative activities conducted by teachers guided by the curriculum, with its scope and sequence, acting on groups of children, graded by age and other characteristics. Educators defined outcomes and postulated causes; and then they devised accounts of how the causes operated and the outcomes came to be. Virtually everything that people had to say about the educational aspects of human life involved the demarcation of boundaries enclosing instructional work, classifying the salient characteristics that children should manifest and achieve within the spaces of the classroom and the duration of the lesson. Pedagogical knowledge consisted in developing theories suggesting strategies for causally transforming given student characteristics into other ones that parents, professionals, or public officials deemed desirable. In Carlyle's time, given general frustration with the high costs of schooling and its uncertain results, mass testing of vast cohorts became a major industry purporting to tell the world something about the quality of education.[18]

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expectancy, and other probabilities. Important critics—among them, Michael Young in *The Rise of the Meritocracy* (1958), Bourdieu and Passeron in *Reproduction in Education, Society, and Culture* (1970), and Nicholas Lemann in *The Big Test: The Secret History of the American Meritocracy* (1999)—had shown how success in the system of schooling triggered the evident distinctions in modern societies and helped to pass them off as the legitimate achievements of earned merit. This peculiar legitimation of extensive inequalities in the modern world, despite solemn profusions about human equality, was historically vulnerable. If success or failure in the system of schooling proved to be contingent upon accidents of birth, the socio-economic status of parents, vagaries of geography, or other factors extraneous to earned merit, differential educational achievement would cease to be persuasive as grounds for privilege and distinction. Hence, critics increasingly rejected the accountability movement, contending it was not an effort to improve education for all, but one that tried to shore up the justification of pervasive inequalities and avoid confronting public hypocrisy in the profession of principles. The critique became more and more convincing and during the Stabilization, large educational testing agencies were shut down, much as wealthy monasteries had been in the Reformation, and there has been no Counter-Stabilization to bring them back.

[18] *Sojourner*: Did they really believe that good education required all the young to acquire a sanctioned body of knowledge? And even stranger, did they really think that standardized testing of large cohorts grouped

Like everyone else writing on education, the authors under Carlyle's review shared the idea that education could be observed inside numerous bounded, conceptualized spaces of the home, school, community, state, and nation. They took as their task to explain and reshape, through a causal sequence of action directed at salient characteristics of students, what observers would find there within the bounded space and time of education. The enclosures were often much like those Russian dolls of old that we can still see in museums, a whole series, each shaped alike, one enclosing the other. Unfortunately, in education the series could get really complicated with different principles of enclosure cutting across each other in various ways—for instance, enclosure by age cohort, and by subject grouping, showing up within international, national, state, district, school, and classroom demarcations, each time with different classifications and implications, with a bevy of causal agendas overlaying one another. How could researchers keep all the variables active in real life from confounding one another? Little wonder, the dominant study of education had become a vast incoherence. It consisted of a great complexity of poorly defined conceptions of education, mapped onto practice in a jumble of inconsistent and unstable ways.

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by age could reveal anything about the quality and long-term value of a person's education?

» *Commoner*: We will let your questions stand, rhetorically self-sufficient.

» *Digger*: Of course, twenty-second century readers find this mindset most strange. To sample, in its native jargon, what Carlyle and many others derided, consult *No Child Left Behind: A Desktop Reference*, which we include in the Archive.

3—Taking Place

In the modern era, culminating in the first half of the twenty-first century, people thought about schools as enclosures for the young, grouped into cohorts by age and other characteristics. Such enclosures, the world around, were the locus of conducting a carefully delimited instructional program—packaged subjects divided into lessons, sequentially deployed for use year-by-year as the material teachers were to impart, preferably by proven, causally effective methods, to the learners in their charge. The program consumed vast amounts of time and money, and diverse statistical indicators reported its results to parents and teachers, to officials from the smallest locality to the most inclusive international bodies, and to the public at large.

All this was a huge program of instruction, but everyone generally called it education. The conflation of education and schooling made prima facie sense to people because it suited their basic way of concentrating on causalities, observing, explaining, testing, and acting by means of them. Such reasoning had been con-stitutive of the major components of modern experience since 1500 or thereabouts. It had progressively spread around the globe— education, commerce, politics, social organization, technology, health, and so on. An alternative had to be something more than "an improved approach to educational reform" or some other pedago-gical potion.

An alternative was not easy to articulate, however. The instructional construct was an instance of a more general way of thinking and acting characteristic of the whole modern era. One could not develop an alternative to educational enclosure, simply by thinking about education in a different way. One needed to think and act generally in a different way. A pedagogical critic needed to develop an alternative to the structure of modernity, with its base in enclosure and the causal manipulation of objects. That task required finding a very basic point of departure, a mode of thinking that might apply to all experience. To achieve that, one needed to speak in a way that would have seemed strained to most in the modern era,

even though it now seems perfectly natural to us. One needed to say that persons, and all other living identities, were never *existentially in* some bounded space or enclosure, for such spaces or enclosures were merely arbitrary constructs in the minds of one or another external observer, which they would project onto the existential actualities. Enclosures were imagined, not real.

3.1—The Space of Place

A person might appear to another, even to himself, to be inside of something, a cipher beside all the others, each ripe for enumeration, manipulation, and disposition. But that status would be, at most, an appearance, a perspectival projection, overlaid by an observer onto the actual existence. Codifying observed externals invited both the commissar and the capitalist alike to treat all the resulting descriptive ciphers as the objects of action and manipulation—"the lowest quintile," "pupils below grade-level by two or more standard deviations," etc. As an observed object, a person might appear to be in a box, a room, a school, an organization, a nation-state, what-have-you. But as a living person, a person lived in an immediate actuality, existing and interacting with surroundings that in principle included the entire cosmos. In actuality, persons, and all beings that have existential reality, are *never in this or that*, but are always in the course of *taking place*, occurring as lived experience, as happenings, co-existing with everything else that is taking place. The knowledge worth knowing as a life takes place involves what is happening for and through the living person.

Take an instance in which a person seemed decidedly enclosed. The existential reality was not the enclosure, but what was taking place in the life lived. For instance, what made Edgar Allen Poe's great story, "The Cask of Amontillado" (1846), so terrifying was not merely his telling readers that Montresor sealed Fortunato in a hidden niche deep in a castle wine cellar. Rather, what terrified them was Poe's ability to evoke in them a vicarious experience of what was taking place in Fortunato's dwindling life, existentially aware as he lived his plight. His drunken camaraderie snapped into sober fear. His entreaties—to a merciless Montresor and to a merciful God—evoked no response. His futile thrashing against his chains, and his painful kicking against the walls, failed to free him. Until Fortunato, with his final, diminished gasp, a feeble expression

of last life, expired along with the faint torch flickering at his feet, their oxygen both breathed and burned away.[1]

In life, what is taking place is our knowing and acting here and now, immersed in a boundless co-presence of all that stands about us, our circumstances. For Fortunato his circumstances were not only the walls, but the revelers above, not so far away, who might save him could they hear or see his plight, but do not as they dance and flirt above his crypt. Circumstances, manifold and complex, co-exist as components, near and far, of what is taking place. In our view, in contrast to the way area mapping showed what was inside some projected boundary, place mapping schematized what potentially could take place by showing locations and the channels of interaction between them. Place maps helped people decide and effect what place they wished to take and how they might go about taking it—to visit a museum, to buy a gift, to get to work, to see a movie, or to find a restaurant. In the world that was just beginning to emerge at the turn of the twenty-first century, knowing how to get around seemed likely to become more important than figuring out how to define and label a collection of people and things.[2]

To overcome the conflation of education and schooling, one needed to see a causal account of how to bring historical change about as part of the problem, not the solution. The felt need to plan and activate potential causes sufficient to transform educational practices was a consequence of the very mode of thinking that had brought about the problematic situation. Alternatively, a growing number of observers like Carlyle were thinking about emergent changes in which the role of specific causalities was obscure. Within a complex of reciprocal influences, many matters of great importance appeared to take place without anyone ever being able to account for those occurrences by a clear sequence of necessary and

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[1] *Digger*: Edgar Allen Poe, *Poetry and Tales* (1984), pp. 848–54. We must note that the Commoner, in her eloquence, has taken the liberty of embroidering a bit on the text, imagining, as a reader might, what Fortunato must have experienced as it was taking place. I guess everyone has a flight of fancy, now and then.

[2] *Digger*: Tourism and travel from place to place had increased globally to unprecedented levels. In urban areas, people "ate out" more and more and a whole life-style of being out and about was spreading. The way people were adopting cell phones, displacing land-lines, belied a growing preference for breaking tethers to stable enclosures.

sufficient causes. Carlyle noted in his *Daybook* that the bumper
sticker he had spotted—SHIT HAPPENS—had a raw profundity.[3]
But despite such popular intuitions, he and others found it hard to
get educators to think about education without thinking about what
parents, teachers, and/or the public should do in order to cause
desired effects in their children, pupils, or students. We can see in
Carlyle's essay, and other work of this period, ideas forming about
the possibility of an alternative way of thinking. Over against the
generative metaphor of enclosure, critics were beginning to offer an
alternative vision, one leading to a distinctive future, based on a
different generative metaphor, not of enclosure, but of taking place.[4]

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[3]   *Commoner*: We hope that some Keeper of the Commons will before
      long do a comprehensive study of "bumper stickers in late modernity."
      Many of these reveal little of interest, beyond the quirkiness that many
      so displayed, but some were important harbingers of emerging
      historical differences.

»   *Digger*: And don't forget the T-shirts!

[4]   *Sojourner*: You frequently speak of "critics" and their views—I
      imagine you're referring to the period around the turn of the twenty-
      first century. Why are you so indefinite? Was there a clear-cut group
      that you are really speaking about?

»   *Commoner*: That is an excellent and difficult question. Unlike now,
      when authorship is generally published under a collective name, it was
      still the norm then for people to write as individuals, under their own
      names. That amplified the Babel effect in several ways, especially in
      the opening decade or two of the century as technical innovations
      lowered the thresholds of publication. Further problems added to the
      difficulty people with like-minded views had in recognizing each other
      and concerting their efforts. Academic incentives encouraged far too
      much publication, making it hard to figure out which were actually
      important. The competitive ethos hurried everyone and put a premium
      on self-differentiation. Hence, a cacophony of isolated voices arose,
      which we loosely lump into an ill-defined community of views—
      "critics" doing this and thinking that. For someone like Carlyle, there
      would be a relatively small, somewhat accidental enclave of colleagues.
      They would recognized each other as making common cause, even
      though they were often too busy to keep up with each other's specific
      work, which might sometimes even appear outwardly a bit divergent. A
      case in point would be René V. Arcilla, whose *Mediumism: A
      Philosophical Reconstruction of Modernism for Existential Learning*
      (2010) would fall specifically and squarely within what we mean here
      by "critics" within Carlyle's milieu. As would work by others, some of

Slowly this built into what we now look back on as the great disclosure of the commons.

Language often has unexpected ways of making choices and problems evident. Common speech at the turn of the twenty-first century, quite encapsulated within the mindset of enclosure, chattered about thinking "outside the box." We have found it very hard, however, in searching through the past usage of this cliché to find an example of a specific and powerful meaning for it: to think, not outside *the* box, whatever that might be, but outside *any* box, to consider what happens without enclosing it inside a bounded space and time. The incessant call to think outside the box ironically showed how dominant thinking with enclosures was, for it assumed that every idea was somehow inside its box and implied that the creative path was to get outside the box of what was given and to conceive of something new, something inside some alternative box. The challenge of the time was to think outside of any box.[5]

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which we cite as we go along. In addition, "critics" has a more diffuse provenance, indicating highly educated, critical humanists, well-traveled and articulate, who leaned left while being suspicious of organized activism, academics with a specialty at the limits of which they chafed, and tried to transcend, while feeling reluctant to speak up in the commercial marketplace. They often had commonalities of views that they had difficulty recognizing or acknowledging.

[5] *Sojourner*: In introducing the importance of enclosure, you mentioned Kantian categories, which got me thinking what I recall about Kant— not too much, unfortunately. But if I remember correctly, he was important for showing that all reasoning had to use categories of space and time in thinking about experience. Space and time were prior to all experience, the constituent principles of all possible experience. Isn't it a bit strange to be commending the idea of thinking outside of *any* box, not simply the familiar, given ones? Are you leading us here into some metaphysical realm outside space and time in trying to think outside of any box?

» *Commoner*: No. But it is a good question and we will be paying a lot of attention to Kant in what comes. Generally, we find it helpful to avoid getting caught up in trying to decide whether what Kant said is correct or not. Instead, it is helpful to try to think what he must have been thinking when he said what he said. That is what we mean by "making sense of a text." For instance, what Kant said about space as "the form of all experience" and time as "a necessary representation that grounds all intuitions" and other such locutions. People frequently think of some huge, abstract volume, a box or sphere, in trying to imagine what

Whatever "takes place" was prior to and independent of anything enclosing it. A baby "in its mother's womb" is simply a nascent life, taking place, accepting nourishment, forming organs, gaining mass, contracting muscles, sensing inchoate stimuli. Living happens; it takes place, embedding itself in the actualities of the immediate present. Concentrating on how things take place, we can continue our reflections about maps, asking how, fundamentally, place maps

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Kant meant by *space*. Both as our own interpretative practice, and one Carlyle took seriously, we need to form our own sense of what a key term such as space may be all about. Around 2010, Carlyle spoke precisely to this point in a lecture, interpreting the Kantian categories of space and time in a way that is fundamental, as we will eventually grasp, to assessing the place things have in our experience. He observed that in trying to understand what the Kantian concept of space meant, many would think of it as some sort of abstract volume—a big box or sphere with a great continuum of other volumes, jumbled together, some enclosing others and all inside the giant one of space. A late-twentieth-century film, *Powers of Ten*, reinforced the sense that space was a set of abstract areas and volumes, larger ones enclosing the small, progressing ever outward, leading eventually to a conundrum—What lies beyond the outermost boundary of the universe? Carlyle explained the category of space very differently; it was not a big volume, neither box nor sphere, but a system of coordinates. He asked those at the lecture to stand up, erect at attention, eyes looking forward. "Imagine a line from the furthest point you can see to the point between your eyes, passing through your head and out the back stretching away behind you. Imagine another at right angles to it, passing in one ear and out the other. And then, stand straight, feet together and imagine a third vertical line from where your ankles touch, projecting downward and upward through the intersection of the other two, out the top of your skull." These lines defined the three-dimensional category of space relative to which each person situated all possible experience that could take place in her life and once we think of them in this way, this coordinate space comes to seem very naturally connected in an integral way to "all appearances of outer sense." Space is not a vast, empty enclosure, but a set of coordinates immanent in each of us with which we can locate everything that takes place in our phenomenal experience. Carlyle indicated that this construction of Kantian space literally passed through the key organs for visual, auditory, and kinetic perception and coordination. As we will see, he based provocative ideas about the nature of consciousness and the mind-body problem on the way the human physiological form seemed to embody synthetic *a priori* categories.

differed from area maps. What did a place map represent that differed from the enclosed spaces arising from the boundaries projected onto area maps? Postulated boundaries defined areas and volumes, container-spaces in two or three dimensions, four with duration in time added on. In contrast, place maps had no boundaries. To be sure, they stopped at the edge of what was printable on a given sheet of paper or screen, but in principle, the representation of places and links ramified out to gird the globe.

If place maps did not represent closed areas, what did they represent? They defined, not enclosed areas, but sections of networks, systems of interaction consisting of *nodes*, locations or addresses, and *links*, channels of interaction between nodes—streets, sewers, roads, phone or electrical lines, tracks, airways, stairs or elevators, pathways, harbor channels, and the like. Digital networks inherently had no intelligible boundaries; they were endlessly extensible and no matter how extended they remained remarkably efficient. Networks did not define an inside and an outside; they had at most an attribute whereby something was *on or off the network*, but whether something at some time was on the network or off it was an accident of its current state, how it was taking place.

Networks were fundamentally different from enclosures. Indeed, at the turn of the twenty-first century, network theorists sometimes talked about bounded networks, ones with a limited number of nodes, but these were theoretical fictions useful in thought experiments advancing the art. Systems like the Internet had an indeterminate, ever fluctuating, number of nodes. Circa 2012, authorities also expended great effort to make some real networks secure, ensuring that unwanted outsiders could not get on the network. But such closed systems were not operating as an internet at their borders, but as bounded areas, an intranet. Furthermore, notorious groups like Wikileaks disclosed how hard and costly it was to bound digital secrets and to ensure that those borders could not be breached.

As such, networks had no inside and no outside. They were infinitely extensible, in principle linking everything to everything. Networks had been active and building since the beginning of history. They had been, and would continue to be, the principle of urban life, of transportation systems, of communication, of thought itself. In practice, however, prior to the twentieth century, material dependencies had circumscribed networks, and therefore their scope

and power had seemed local and viscous. But since the introduction of railroads and telegraphs, and all the innovations in communication that followed, the material limitations of networks had been rapidly falling away. Yet over the centuries, people had not yet fully understood their significance for human self-formation. Until late in the twentieth century, the systematic study of networks, their properties, and the principles of their formation, was in a relatively early stage of development.

Those limitations had started to disappear. During the opening decade of the twenty-first century, important contributions to network theory were being published and it struck someone like Carlyle, a cultural historian, how little network theory had yet served in illuminating historical developments. For instance, being able to assign addresses to persons and places was an essential ability in forming networks—addresses were to networks what boundaries were to enclosures. Techniques of assigning addresses to people, places, and ideas had had an incredibly fruitful history in human culture, yet no useful study of that history had yet been written. Only now, are we filling this gap with the large project in the Historical Commons, *Forms of Address*, which aims to show the cultural effects that followed from the invention of different ways to give addresses to what takes place.[6] It is a huge project touching on all forms of communications, even showing how physics, chemistry, or any science, developed not as an enclosed subject to be studied, but as an intellectual activity concentrating on what will take place as an experimenter gives selected objects and actions distinctive, unambiguous addresses, specifying determinate channels of interactions among them as the experiment takes place. The records of experiments and observations are not area maps, but spatial-temporal place maps enabling the physicist, or chemist, or geologist, botanist, biologist, or any scientist, to observe precisely what will happen if he repeats what the record specifies. And even more fully, the project is showing that developing the modes of civic and cultural interaction among humans depended fundamentally on inventing and implementing possible forms of address—names, street numbering, ID systems—that enabled people to engage in

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[6] *Digger*: Carlyle's time witnessed a great deal of creativity in developing techniques creating addresses and making use of them, the Internet and genome decoding being two examples of historical significance.

effective interaction. Politics has always taken place through network interactions, even in the heyday of the nation-states warring over their contested boundaries.

To be sure, the principle of enclosure, the postulation of a bounded space, or something metaphorically like a bounded space, had also been a tremendously powerful intellectual principle over the previous five centuries. People had used it productively to think and act on anything and everything conceivable. Yet close observers suspected that enclosure had begun to reach the limits of its fruitfulness. Working in the Historical Commons, we find it helpful in looking back to take seriously the implications of Kant's *Critiques*, concentrating on the *Critique of Pure Reason,* and of Hegel's *Phenomenology of Spirit* for understanding culture and education. These studies deepen our awareness of the gulf separating the immediacy of raw perception and lived action from how people represent it to themselves through the potential stability of conscious thinking. Much intellectual work from the modern era has no continuing interest, for it consisted in contributions to the internal discourse of self-sustaining professional enclaves, which neither sought nor achieved relevance to anything beyond their boundaries. But the most challenging, important work in many fields pertained not only within the field, but to human concerns at large, which means that we need to enter into these fields far enough to grasp and elucidate the general importance of these specialized achievements of general significance. The major works of Kant and Hegel, along with a few other academic philosophers, clearly require such attention.[7]

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[7]   *Commoner:* Permit me here a pedagogic interjection. Since the Stabilization, with its general reopening of specialized fields to serious amateur engagement, we assume that full participation in the Historical Commons, as with other parts of the inclusive commons, is open to all and anyone may exercise it as their interests lead them to do. We do not value expertise set apart and seek instead to illuminate the implications for our shared, common lives in all inquiry. Many sources in the Historical Commons, however, were the work of specialists of many different sorts who labored to set their work apart. We seek to appreciate these contributions to the cultural commons for the value they contribute to us as a whole, not to the confined progress of a special field. And in putting their accomplishments in the context of the whole commons, we need to avoid reducing them to a meaningless common denominator. In this particular case, we want to understand

Like everything else, thinking takes place in the time and space of lived experience, and experience, the phenomenal world, is such that more than one intelligible framework can elucidate it.[8] In this sense, we have become deeply Kantian, for we recognize that the only possible object of our reasoning is the actualities of lived experience, but reasoning about lived experience can take several different modes, each a distinct version of well-disciplined,

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how Carlyle made use of Immanuel Kant's thought, particularly ideas that Kant advanced in the *Critique of Pure Reason*. There was a vast specialist literature on Kant in Carlyle's time, but we are not interested in how Carlyle's interpretation of Kant may have stood up in the context of that literature. He drew on it to a degree, but mainly read Kant for himself, carefully and independently in a spirit that presages the way we now deal with work drawn from academic specialties. Studying how Carlyle dealt with Kant helps us perceive clearly the intellectual style dominant in an older outlook and a new one emergent in a newer sensibility. Doing so actually puts a burden on all of us interested in the Historical Commons, for Commoners, Diggers, and Sojourners alike cannot rely on specialist authority for deciding how to interpret difficult work. We are like hikers who cannot always follow the valleys. We need to share the burden of inquiry—questions are as important as their tentative answers. Let us aim to identify and to grasp the essentials clearly, and to remain as aware of the complexities as we can be without stopping ourselves in excessive uncertainty about peripheral problems.

» *Sojourner*: That sounds good. I'll keep speaking up, asking questions when I feel confused about the path or uncertain about something that seems important. Through thought and inquiry, we can together illuminate a few things to which we attend in the obscurity of our ignorance. So far, you and Digger have been helpful guides.

[8] *Sojourner*: Well, that didn't take long. With Kant, people always seem to talk about phenomenal experience and the like. I know they are not talking about the phenomenal time we had on vacation last year, but to be truthful, I'm not exactly sure what "phenomenal" means in Kantian thought.

» *Digger*: Most simply, "phenomenal" applied to something people could experience as a tangible object, something in their field of sensible awareness. In a basic sense, the *Critique of Pure Reason* addressed the question, how was reasoning about a phenomenon possible, thinking about a perceived or observed object, an occurrence, or change that one sensed or knew in some direct and evident way. The phenomenal world included anything and everything for which a person might find meaningful evidence.

intelligible thought. Using the principle of enclosure generates one system of intelligibility and we can apply it to everything. Doing so does not preclude simultaneously applying other principles to everything, with, perhaps, quite different potentialities for action thereby becoming evident.

Modes of thinking carried disadvantages for living, as well as affording advantages to life. In an era when postulating enclosure was the hegemonic way of thinking, alienation frequently characterized human experience, for enclosure set things apart, encouraging their appropriation as property, dividing things up as "mine" and "not yours," separating people as "us" and "them." Since the Stabilization, with the commons securely established, we see these effects, which derived from a primary reliance on enclosure, in clear perspective. In Carlyle's time, many felt the ills of alienation, of a surfeit of possessive individualism, of habitually seeing life as a partisan, zero-sum conflict between us and them, and sought an alternative. But overcoming these disadvantages was not easy, for they wrapped together with ubiquitous patterns of action in a historical block.

At any particular time, the historic character of human life depended on the relative hegemony in human practice that different possible principles of thought and action exercised, each with its characteristic uses and disadvantages. Thought and practice: here was the problem for educational reformers 150 years ago. Critics could advance different, more cooperative ways of thinking, praising solidarity, human dignity, and sufficiency for all persons in a just social democracy. But it was hard, indeed, to restructure the dominant modes of practice according to that new mode of reasoning. This was the problem of hegemony. As Antonio Gramsci had taught, a set of ideas or a way of thinking became hegemonic when it and the prevailing modes of practice, the patterns of action embedded in the living of life, worked in concert with each other, like a hand and glove.[9]

How an established hegemonic way of thinking and acting gave way to an alternative one, deeply puzzled critics like Carlyle. They

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[9] *Digger*: Carlyle regularly participated in a yearlong reading course on social thought in the twentieth century. Participants in it recurrently studied Gramsci, *The Gramsci Reader: Selected Writings, 1916–1935*, which included an excellent selection of texts on Gramsci's ideas about hegemony (pp. 189–221).

had a strong sense that principles of enclosure were approaching the limit of their potentialities. Both the strategy of bounding things and that of addressing things could and would find use in thought. But what made a generative principle dominant was not its intellectual superiority at achieving truth-values. Rather, a generative principle became dominant as people built up a habitual preference for it as their basis for thinking about prospective action. The two interlocked—the way of thinking and the way of acting mutually reinforcing one another—and thus an extended present could persist through a long period of stasis.

At any time, people could think about a matter according to a variety of principles, but in actual historical situations, they would have a preferred mode of reasoning relative to their currently perceived constraints of action. Consequently, reasoning might have an ecology with a dominant mode taking hold, not by virtue of its rational superiority, but by virtue of a felt perception that it had greater relevance to the vital choices people had to make. For instance, people on the move, physically and mentally, might adopt a way of thinking and acting quite different from others cultivating a set area of land and life. The one might prefer simple, inexpensive living quarters to have time and resources to spend on public amenities, while the other might favor a large, well-appointed home as the center of family life. Members of both groups might find the ways of thinking associated with each to be equally plausible, as ways of thinking; but they would differ over the way of thinking they would find practically compelling according to how well it suited their prevailing modes of action—one way vaguely plausible, the other necessary to their favored mode of conduct. Here was the material determination of thought in operation. [10] For several centuries, closing off a bounded area to concentrate on what fell within it had seemed to people to be the most promising strategy for the thinking that would guide productive action. But how does such a preference pass away to be supplanted by another? This question

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[10] *Digger*: Classics in the sociology of knowledge, particularly Georg Simmel and Karl Mannheim, were having significant influence on Carlyle and his colleagues. See: Simmel, *The Sociology of Georg Simmel* (1950), Mannheim's *Ideology and Utopia: An Introduction to the Sociology of Knowledge* (1936) and his *Essays on the Sociology of Knowledge* (1952). A later generation of writers such as Bruno Latour, Jacques Rancière and Anthony Giddens were also influential.

seemed both very difficult and very dangerous. Twentieth-century history had been full of large-scale disasters because people were ignorant about how a new hegemony would replace an old one. They did not know that they did not know what would enable the new thinking to work and they ignorantly used the means of the old to force the advent of the new. Then there was blood.[11]

How does fundamental change come about as a historical reality? 150 years later, we still ponder this question. We can see what differentiates the ethos of twenty-second century life from that of the twenty-first: most basically, the displacement of a principle of production by one of interaction. In the prior era, people pursued growth; now we preserve stability. When we now speak of solidarity, we characterize qualitatively how diverse people interact, even how the different dimensions of a person's inner life interrelate with one another. Solidarity arises when the various interactions are not discordant and at cross-purposes and when they fit together in a

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[11] *Digger*: A passage from *The Education of Henry Adams* (1907), had stimulated Carlyle as an undergraduate to formulate a basic challenge to educators of the public. The passage went: "The picture of Washington in March, 1861, offered education, but not the kind of education that led to good. . . . Not a man there knew what his task was to be, or was fitted for it; everyone without exception, northern or southern, was to learn his business at the cost of the public. Lincoln, Seward, Sumner and the rest, could give no help to the young man seeking education; they knew less that he; within six weeks they were all to be taught their duties by the uprising of such as he, and their education was to cost a million lives and ten thousand million dollars, more or less, north and south, before the country could recover its balance and movement." (Adams, *Novels: Mont Saint Michel: The Education*. pp. 818–9). At the bottom of the page in Carlyle's copy, which he had carefully read in college, he had commented: "the function of education is to provide that minimum of certain knowledge that permits an individual to embark upon constructive action in relation to the level of life surrounding the actor. The level of life had transcended the capacities of traditional educational sources: Family, church, school, college, travel and apprenticeship. When that happens history forces everyone to learn what they do not know." That thought stuck with him, and throughout his career, Carlyle continued to believe that the only real measure of whether intentional education had been good or bad would be whether a person or a people succeeded, through the exercise of intelligent foresight, in avoiding historical catastrophe, and its result, a terribly costly lesson in what it was that they must do.

harmonious, balanced, sustainable way—neither too much nor too little. We now, in the twenty-second century, understand alienation of group from group, of one side of a person from her other sides, to be a debilitating pattern of interaction, one that associates with the causal production of desired results, but one that has inherent in the desired outcomes discord and unhappiness as side effects of what is taking place.

Over the past century and a half, people have come to prize the quality of the interactions taking place in their lives. We now recognize that the quality of an interaction in life, its meaning for us, has little to do with the productive causalities that appear retrospectively to have brought about the outcome of it. Such changes, however, can easily seem mystifying. They are evident to people at the surface level, although what makes the change possible or impossible takes place at the deeper level of working principles. The twentieth-century thinker, Michel Polanyi, called these principles "personal knowledge," those favored strategies of decision and explanation that a person unreflectively turns to when faced with a problem or choice.

3.2—Kantian Critique

Fundamental change entails changes in these tacit dispositions. How that change takes place is obscure. The lived experience might be constant, but the way a person thought about it would shift. Carlyle had an intuition of this difference, and he was working towards a full understanding of it. An entry in his *Daybook* about Immanuel Kant's ideas indicated his growing awareness of a possible shift away from explanations through causalities, towards one's involving reciprocities. We will take the liberty here of dwelling on it at some length because we have come to the conclusion that doing so helps us understand with some precision the difference between the thought of the modern era and that of our own.[12]

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[12] *Sojourner*: OK, but please remember that Kant can seem very obtuse to many of us. Your explanation a bit back of the category of space was helpful.

» *Digger*: Obtuse not only to many of us, but I fear to all. But we can help each other clarify and understand. Recall that our reflection started with Carlyle trying to understand how the conflation of education with schooling was possible in the thought of his time. An inquiry into how

In studying Carlyle's work, we at first passed over this entry as

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people thought about education required a Kantian categorical analysis, a *critique* of what made their thinking possible. We have been building up to that, and now we are getting it under way. Kant's understanding of a critique as an inquiry into the possibility of a form of thinking or action was important as Carlyle developed his understanding of what was taking place. In the Preface to the *Critique of Pure Reason*, Kant explained what "critique" meant. A good critique demonstrated how an evident capacity—here, the ability to make sense of our ordinary experience in the world—became humanly possible.

» *Sojourner*: Am I correct, then, that there might be many kinds of critique? For instance, I might observe that it is possible for me to ride a bike and then ask—What makes it possible for me to do that? The answer would be a "critique of bike riding."

» *Digger*: Yes, but it would not get you the fame that Kant attained. In working out how a capacity such as reasoning about experience is possible, one can then distinguish intellectual claims that contravene those conditions of possibility and see what one cannot do in reasoning about experience, setting limits on the appropriate use of reason.

» *Sojourner*: OK—back to the bike. Someone explained that I keep the bike I'm riding upright by continually falling to one side and then the other—not by staying in perfect balance all the time, but by moving forward and steering against the direction of fall. Tipping to the right, I steer to the left, which stops the fall, of course by too much, and then I plop to the left but steer a bit to the right and weave back in the other direction, staying upright by correcting one fall and then the next. And in thus knowing what makes it possible to ride the bike, I also understand why just sitting upright on a stationary bike is nearly impossible—without moving forward, I can't steer to either side.

» *Digger*: Exactly. We see Carlyle initiating a critique of education. Education was possible, for people acquired and used a huge stock of culture in conducting their lives. He wanted to understand how this acquisition and extension of culture was possible. Education occurred. What made it possible? A Kantian critique would explain what made education possible, and what in it was impossible. Explaining the possibility of education would disclose its limits. What sorts of activities transgressed its limits of possibility? How did those transgressions arise through educational antinomies—contradictions that nevertheless, under certain circumstances, would seem logical and sound? His response to how education was possible was not simple, for he did not think parents or teachers had the power to cause learning in others the way a billiard ball could transmit its momentum to another that it hits. The possibility of education was more complex.

» *Sojourner*: OK. But all this will not be quickly settled, I suspect.

one of those notes we all write reminding ourselves about some
passing idea. But as we have been developing a fuller sense of
Carlyle's intellectual interests and idiosyncrasies, we see that he had
read Kant extensively and thought a lot about him, frequently mak-
ing observations like the one that follows. It is important, we think,
to remember that Carlyle worked as an intellectual historian. He
read numerous philosophical works, among them Kant's. He
obviously read them extensively, but many closely as well, and he
drew heavily on them. Yet we cannot cite a single instance in which
he claimed to be a philosopher and very rarely, if ever, did he
venture, as most academic philosophers then did, to declare a
philosophical argument he had studied to be either sound or
incorrect. This reserve is puzzling unless we remember that as a
historian, his purpose was to grasp prior work. He sought to appreci-
ate and understand it, and especially to perceive how others had
grasped it, whether they had distinctively understood it, and not
infrequently misunderstood it, integrating elements of it into their
own work, thereby making it part of the ongoing self-actualization
of human culture. And he believed it to be his proper business not
only to interpret that process, but to engage in it as well.[13]

Carlyle's engagement with Kant was somewhat atypical for his

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[13]   *Digger*: Specifically, Carlyle worked in a historicist tradition, an early
       landmark of which was the thought of Giambattista Vico. In 1744, Vico
       articulated a key proposition in this tradition at the start of his section
       on "Principles" in the *New Science*: [#331, 3rd edition]. "Still, in the
       dense and dark night which envelops remotest antiquity, there shines an
       eternal and inextinguishable light. It is a truth which cannot be doubted:
       The civil world is certainly the creation of humankind. And con-
       sequently, the principles of the civil world can and must be discovered
       within the modifications of the human mind. If we reflect on this, we
       can only wonder why all the philosophers have so earnestly pursued a
       knowledge of the world of nature, which only God can know as its
       creator, while they neglected to study the world of nations, or civil
       world, which people can in fact know because they created it." (pp.
       119–20, italics original) The historian not only knew the civil world
       through the past creation of it, he participated in extending that civil
       world through his own creative contributions. Consequently, the
       historian really checked his interpretation of human achievements, not
       merely by explaining them, but by effectively extending them. The test
       of good interpretation would be a capacity for wise action. But it was
       not a test that would identify ahead of time who was right and who
       wrong.

time, rather a model for ours, for he read Kant both extensively and quite closely, but he did so as interested reader, not as an academic specialist. His view of Kant was not exactly that of an autodidact, but it was distinctive. Well educated peers who did not specialize in philosophy would have encountered Kant through one of his shorter works—*Prolegomena to Any Future Metaphysics* (1783), "What Is Enlightenment?" (1784), *Groundwork of the Metaphysics of Morals* (1785), and other short work following the first *Critique*. Specialists in philosophy would usually read, in a more disciplined way, the major works of Kant as milestones in the development of epistemology or ethics, or a variety of more specialized concerns. Carlyle had a keen sense of what made Kant's three critiques important for the educational and cultural issues he took most seriously, valuing in particular Kant's sense of critique and the way he attributed constructive power to human reason and intellection.

Carlyle did not pay much attention to the nuances of Kant's critiques, but concentrated on their fundamental import. As we have noted, Kant started each of the three by trying to grasp an important form of thinking, which he took as a given starting point, asking in each how it was possible that people could think in this way. The first critique took as given that people perceived and reasoned about the immediacies of ordinary experience, resulting in thoughts about experience. The second started with the recognition that people sometimes acted freely on principle because something struck them as the right thing to do, even if the consequences of doing so might be disadvantageous for them. And then, the third began with the way people developed patterns of attention, judging it fitting, or compelling, to attend to this or to that out of the many matters within the periphery of awareness. The working mind could lock onto something out of many possibilities and ignore much else, responding selectively to the welter of stimuli impinging on them. In each case, Kant inquired how it was possible that people could do these things, and by working out the possibility of them, he also disclosed the limitations on the capacities. All this was his method of critique. Thus, one might succinctly state Kant's purposes in each of the three *Critiques*:

- to ground how we can formulate sound propositions about the objects of disciplined speculation, of everyday experience, and of scientific observation, through *Pure Reason*;
- to ground acts of conviction independent of consequences,

through *Practical Reason*; and

- to ground judgments of attention and affinity, aesthetic and biologic, through *Judgment*.

Of the three critiques, Carlyle clearly paid the most attention to the first, *The Critique of Pure Reason*. He advanced a relatively consistent interest in it, starting in his graduate work, and continuing through the draft essay we are studying. Like most late twentieth-century secularists, Carlyle took very seriously Kant's view, explained in difficult language in the first *Critique*, that thinking and acting dealt only with the contents of experience. Knowledge claims involving things outside of experience were entirely moot. In Carlyle's view, what Kant did to expand the idea of *pure* reason greatly enhanced the claims that the mind, reason, had great constructive, legislative powers. The first and foremost reason for Kant's historical importance was this expansion of what the rational mind contributed to human experience.[14]

What did Kant do to accomplish this feat? At least in the first critique, Kant did not really invent any new conceptual tools for thinking. Time and space and the concepts in his table of categories were familiar elements of thought. Kant took these familiar concepts and radically revised their provenance and intellectual function. Traditionally, all the different schools—empiricists and realists, theists and rationalists, proponents of induction and of a *deus ex machina*—used two basic polarities, implicitly or explicitly, to

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[14] *Sojourner*: You are jumping ahead of me a bit. To help me understand these analogies, fill me in a bit on the overall argument of the first critique.

» *Digger*: With respect to the *Critique of Pure Reason*, it is best to think of it as having two halves, preceded by an introduction and followed by a conclusion. The first half addressed how reasoned knowledge of the world was possible, so long as it dealt only with phenomenal experience. The second half concentrated on examining the limits of thought, which Kant carried out, forswearing any claim to transcendent knowledge (knowledge of anything outside the scope of possible experience). In the second half, especially, he had to do a delicate dance with authorities, religious and civil, for they claimed their powers to be legitimate owing to transcendent sanctions. For most of us, living in a secular age, the second half has long ago done its work and no longer holds much interest, but the first half has had an enduring importance, both to the full development of the modern era and to the emergence of post-modern times in the Stabilization.

describe the provenance and function of the basic concepts of thinking: the polarity of *a priori–a posteriori*, and that of *analytic–synthetic*.

For Kant, both polarities pertained to the predicate of propositions. The first concerned the relation of the predicate to experience, and the second involved the relation of information in the predicate to the subject of the proposition. In the first set, a proposition would be *a priori* if what it predicated about the subject of the proposition was prior to and independent of the substance of experience, e.g. "The sum of two odd numbers is an even number." The proposition would be *a posteriori* if what the predicate indicated about the subject derived from experience, e.g., "On a clear day the sky appears to be blue." The second polarity involved the relation of subject and predicate to each other. A concept was *analytic*, if the predicate expressed characteristics derived by logically analyzing the subject for implications implicit in it, e.g., "A point is a dimensionless location." Or it could be *synthetic* if the key elements of the concept stated through the predicate added, through the synthesis of subject and predicate, substantial information about the subject that was not implicit in it, e.g.,. "A written sentence ends with a small dot, a period."

Prior to Kant all the different schools held the basic concepts of thought to be distributed, in different ways, in the three gray components. Kant's innovation was to demonstrate many of the most important concepts for dealing with experience to be synthetic *a priori* concepts, the import of

	Analytic	Synthetic
a priori		
a posteriori		

which was prior and independent of experience and the function of which was to add substantively a wide range of significant characteristics to experience. He did not really account for where they came from in the sense of explaining how they came to be endowments of the human mind. Part of his originality was to show that such questions of origin were necessarily moot. Reason in any form could deal only with phenomenal experience, which had the synthetic *a priori* components as inherent endowments given in it. Phenomenal experience comprised the synthetic *a priori* as the conceptual resources that made all that experience possible. By showing the *a priori* components of pure reason to have powerful synthetic capacities, Kant greatly expanded the constitutive powers

of reason.[15]

Of course, not all thinkers accepted Kant's arguments about the synthetic *a priori*, but they quickly exerted a great deal of influence.

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[15] *Sojourner*: Am I correct that before Kant "pure reason" would include only *a priori* analytic concepts, which would be mainly logical conceptions?

»   *Digger*: Yes—provided the logical proposition did not have empirical observations mixed into it. Both before and after Kant, reason was *pure* if it was strictly *a priori*, not having any data derived from experience mixed into its content.

»   *Sojourner*: I'm a bit uncertain about the meaning of "*a priori*" in all this. If reason could only deal with phenomenal experience, how could Kant know about concepts prior to it?

»   *Digger*: Kant was very clear that the priority was not temporal, but rather logical, in principle. Existentially, there was no thought without experience—purely logical or substantive—and the distinctions we are discussing would be all muddled together. The sources drawn on in constructing the existential experience derived, in part, the *a priori* part, from thought itself, as a necessary component of the experience contributed by the reasoning mind itself. They also derived in part, the *a posteriori* part, from the raw perceptions of the inchoate experience as reason was structuring it.

»   *Sojourner*: OK. I'm beginning to get it. Suggesting that important concepts were *a priori* and synthetic was both radical and significant, attributing creative potency to human reason. Wouldn't most synthetic *a priori* concepts have formerly been thought to be *a posteriori*, implying that they somehow came passively into the mind from outside of human reason? If I recall correctly, philosophers and theologians held reason to be either a blank slate, derivative from the workings of the external world, or a divinely given faculty in the great chain of being, granted to us by a creator God as the tool of thought necessary for our human mode of being. Kant opened a third way.

»   *Digger*: Right on! You have the import of it all. Kant suggested that much of mathematics, which thinkers had formerly took to be analytic *a priori* reasoning, belonged to the domain of the synthetic *a priori*, but that was no big deal. Kant became the Kant of history with his claim against his predecessors that almost the whole conceptual repertoire for thinking about the world of our experience consisted of synthetic *a priori* concepts with which the mind endowed experience with explanations and meaning. That was the Copernican revolution that Kant elicited, and it really outdid Copernicus, for it made the whole universe, whether substantive or imaginative, an expression of our intellectual capacities.

Kant both celebrated and amplified the sense of human agency. As we have seen, he attributed a great deal of active power, constructive potency to the human mind, to reason, to the capacity to think in different ways. He was by no means alone in doing so in the modern era—a long period in which humans vastly expanded in number and in power. In unprecedented ways, they took command of their physical and cultural environment. The strengthening of human agency continues, for the Stabilization did not end it, but shifted its *telos* from *more* to *enough*. Kant, we suggest, is important to both the modern and the postmodern effort—that is what drew Carlyle to his work, and what makes both Kant and Carlyle important to us in the Historical Commons. During the modern era, when people thought, both casually and closely, about the kind of agency for which Kant was most important, they thought about causal agency. Here is where Carlyle's reading of the first critique became somewhat distinctive.

Kant's foundation for causal explanation culminated in the very center of the first critique with the "Analogies of Experience," which really culminated the half in which Kant showed how synthetic *a priori* concepts were key in all possible experience. Kant was an orderly writer. He worked through the first half in three key steps. To begin, he inventoried, in a systematic way, the key elements of pure reason, the synthetic, *a priori* concepts (or categories), explaining what each did.[16] Then he demonstrated that

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[16] *Sojourner*: Is this where space and time, and all those categories, came in?

» *Commoner*: Kant's initial inventory laid out the basic concepts of space and time and his table of twelve categories. Space and time, powerful coordinates as we have noted, enabled reason to form, fix, and follow objects of experience in the perceptual flux. The basic categories of time and space enabled a person to locate things to see, hear, touch, or smell them. This was an essential first move by a constitutive reason, but by itself, it would not provide much effective capacity for understanding of present there in reasons temporal/spatial field. The person might be vaguely aware of a buzzing confusion going on, but have very little meaningful perception about it.

» *Sojourner*: OK, but after time and space, would all the other categories come into play? I imagine they would enable reason to do a lot with it all.

» *Digger*: Yes. Space and time did not complete Kant's inventory. In order to think about the immediacy of experience, people used some

experience became possible through the synthetic use of these to convert the chaos of raw perception into coherent phenomenal experience.[17] To conclude, he explained how reasoning employed its synthetic *a priori* concepts to think productively about phenomenal experience.

In this concluding part of the first half, Kant's attention shifted from concepts to principles, from the components of thinking to its modes of operating. This was in a sense the clinical part of the work where the elements of pure reason came together in a working rationality. The three Analogies of Experience were central to this section, really to the whole work, for Kant was essentially saying that the upshot of it all was that reason had three essential ways to think rationally about possible experience. He introduced the analogies with a proposition—"Experience is possible only through the representation of a necessary connection of perceptions." Kant thought that time was the category key to representing necessary connections of perceptions and there were three ways to consider perceptions connected in time: through persistence, through succession, or through simultaneity. Each of these yielded its associated analogy: the first, the principle of the persistence of substance; the second, the principle of temporal sequence according to the law of causality; and the third, the principle of simultaneity,

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further categories, powerful operators allowing thought to act on the stuff of experience. Kant laid them out in his tables of twelve *pure concepts of the understanding*, four groups of three transformative principles of thought that a reasoner could apply to spatial/temporal perceptions in an effort to make them intelligible. The four groups involved operations pertaining to quantity, quality, relation, and modality. With respect to *quantity*, a person could make distinctions about the objects of her experience, noticing unity, plurality, or totality. With *quality*, she could recognize the reality, the negation, or the limitation of something. With regard to *relation*, a person could consider something as a substantiality, involved in a causality, or linked in communal reciprocity. Finally, with *modality*, a person could discriminate between possibility and impossibility, between existence and non-existence, and between necessity and contingency.

» *Sojourner*: I'd be glad to save the details for some other occasion. Given what computers can do with a binary bit, this set of operators should make for a powerful mind.

[17] *Sojourner*: I'll take his word on this, but I suspect his critics would have aimed at this demonstration.

according to the law of interaction, or community.

With the analogies of experience, Kant made the implications for how we understand the world explicit. For more than 200 years after publication of the first critique, the second analogy, "all alterations occur in accordance with the law of the connection of cause and effect," received the most attention. [18] Kant himself devoted considerably more space to proof of the second than to the proofs of the other two analogies. After all, it was Hume's argument that causality was nothing but the appearance of frequent association of a prior state with one subsequent to it that had famously roused Kant from his dogmatic slumber. And throughout the modern era, causality was the mode of human agency that aroused people to mounting heights of enterprise. For most, the principle of persistence was a forethought, and that of simultaneity an afterthought, to the important principle of causality. Carlyle's assessment of Kant was relatively distinct in his time because he thought the third analogy, "all substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction," was very important. Perhaps Kant had included it simply because it was required for the symmetrical completion for his system, but sometimes the perfunctory sleeper can come to life in unanticipated circumstances.

3.3—Sequence or Simultaneity

Here is Carlyle's entry in his *Daybook*, "For future work," which we initially ignored. The "future work" was not only his own future work, but also the future work of others as they reflect on possible

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[18] *Sojourner*: Hey! I'm beginning to see the connection between causality and enclosure, I think. If causality is a necessary connection between things succeeding one another in time, a person cannot reason causally about too many things at once. You couldn't tell which was doing what.

» *Digger*: Exactly. Regression analysis permits the analyst to attribute portions of an effect to several causal variables. But even very complex techniques have proved to be highly limited in the capacity to analyze complex systems of causality. And the analysis of causal action by multiple actors requires a researcher to abstract all sorts of differences among the actors away so that one or a very few attributes are being analyzed for their causal effect. All this takes careful bounding to limit and define the variables in a manageable way.

changes in the characteristic intellectual strategy that might take place in an emerging future. The entry stated the gist of the second and third analogies and then recorded some questions about the relative importance of each for understanding experience in the emerging future.

> Kant's second and third Analogies of Experience as keys to the modern era and to its successor:
> - Second Analogy: Principle of temporal sequence according to the law of causality. All alterations occur in accordance with the law of the connection of cause and effect.
> - Third Analogy: Principle of simultaneity, according to the law of interaction, or community. All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction.
>
> One can think about an experience using either principle, but not both at once. The consideration of the experience according to one or the other has quite different implications. Take sexual intercourse as an example: according to the second analogy, A acts on B, an active subject and a passive object, and considered solely as a caused act, rape would appear to be the paradigmatic example. In contrast, according to the third analogy, A and B reciprocally interact, together, simultaneous in time, with responsive intimacy the paradigmatic example.
>
> Apropos of second analogy: Must one enclose objects, separating them from consideration of everything else, in order to see a temporal sequence of cause and effect altering them from one state to another? Or more precisely, in perceiving appearances causally, through "a relation in time, as a series (one after another)," [B262] must one conceive them inside a spatiotemporal boundary, isolating them from everything else, the presence of which would confuse the causal sequence?
>
> Apropos of third analogy: Must one connect substances via network linkages in order to consider them as simultaneous and in thoroughgoing interaction? Or more precisely, in perceiving appearances interactively, "in time as a sum of all existence (simultaneous)," [B262] must one think of them as unbounded, held together by a network of interactions, connecting everything that simultaneously co-exists?
>
> In the past, the modern era, Kant's importance has been recognized primarily for his having given strong epistemological grounds for the possibility and the authority of causal reasoning via the second analogy. In the future, an era to follow, will he be appreciated more for his grounding inquiry into the emergence of

phenomena taking place through interactions between all that simultaneously co-exists via the third analogy?

How would Kant rewrite his discussion of the analogies if he could do so in the light of what scientists think at the start of the twenty-first century? Looking ahead, will the third supplant the second in importance? That is a fundamental question for reflective thinking in our time.[19]

From our vantage point, this *Daybook* entry is striking. As modernity waned and the conditions for the Stabilization began to mature, the importance in intellectual work accorded to causal explanation started to diminish, relative to its prior status. Concern for understanding emergence through reciprocal interactions that can take place in the complexity of simultaneous phenomena began to increase. From his first fruitful engagement with Kant's *Critique of Pure Reason*, which had taken place during his doctoral studies, Carlyle had thought the section on the Analogies of Experience was essential to understanding the whole work. Even then, he found the third analogy especially interesting for his study of the human sciences. Based on these indications, it is fair to say that throughout much of his own work, he must have had a strong intuition that a historical shift might be coming, and we suspect that other critics did as well.[20]

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[19] *Digger*: We include editions of Kant's writings that Carlyle relied in the Archive—primarily the translation of Kant's *Critique of Pure Reason* by Paul Guyer and Allen W. Wood (1998). Carlyle's thinking about Kant's Analogies of Experience had influenced his whole career, and he thought the analogies highly pertinent to his reading of subsequent thinkers, especially Hegel, Nietzsche, Wilhelm Dilthey, Edmund Husserl, José Ortega y Gasset, Martin Heidegger, and William James.

[20] *Sojourner*: So in epistemological terms, the shift we have been following, the Gestalt switch from causal programs within bounded enclosures to simultaneous interactions taking place across networks, involves thinking about what happens primarily with Kant's third analogy of experience, making the second analogy, previously primary, now secondary.

» *Digger*: That is it in a nutshell.

» *Sojourner*: By the way, what was the first analogy about? Was it important?

» *Digger*: It was the principle of the persistence of substance—in thinking about something, it persists even though it changes over time and our attention to it may not be continuous. We have said little about

This switch in the prevailing mentality is easy for us to see in retrospect, but as we noted early on, critics like Carlyle, sensing the grounds for a radically different sensibility from the one that then prevailed, had difficulty perceiving how the new might emerge from the old. Hence, critics felt ironically trapped by the established mentality. They could postulate a difference between the old mentality and a potential new one, but they could conceive of the substitution of new for the old , whether in historical or personal life, only by explaining it causally. To account for the dynamics of change in public life or in processes of education, causal regimens such as those embedded in schooling seemed necessary. Education resulted from learning caused by teaching. How simple and so clear! Yet some like Carlyle stubbornly doubted that teaching was causally effective and believed that education was something that happened through complex interactions that no one could reduce to a sequence of necessary and sufficient causes.

Those seeking to institute a different way of thinking found themselves stymied in trying to describe how one historical condition, the hegemony of a generative metaphor, for instance, might give way to an alternative without relying on causal explanations to account for the passing of the former and the advent of the later. Yet they remained convinced that historical change happened without its having been produced: at most, the causal understanding of historical change was an *ex post facto* appearance that observers projected back on the living uncertainties by comparing what had been taking place at one time with what was taking place at another. Happenings at different times were causally bound to one another only in retrospective explanation by historical observers, who often disagreed about the determining causalities in looking back on complicated events.

Let us grant, Carlyle noted in his *Daybook*, the potential applicability of the principle of enclosure, and the attendant causalities explaining the changes observed within, to whatever we might choose to apply it. In principle, a causal explanation was possible for all things—retrospectively, once their sequence in time had happened, with all contingencies having been determined. Modern history could speed by in a rapid vision, like those time-lapse films of a plant growing, showing the many ways over many centuries

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it because people use it with reference to both the second and third analogies. It is the ante in the poker pot, so to speak.

that people had applied the principle of enclosure through their historical actions, becoming more and more adept at causing desired outcomes to happen within the boundaries they projected. Thus, they acted in ways that seemed to give rise to nation-states, to modern science, medicine, and technology, to specialized institutions like schools, hospitals, prisons, factories, armies, to the assertion of all sorts of property rights and to the pursuit of more and more private wealth by means of them. Causes were often clear enough, but only after the fact.

Causal action had a record of productive achievement. But from Rousseau and Marx on, many historical observers shared a basic intuition that the claims of property, and the political regimes designed to protect and promote them, would eventually exhaust themselves and give way to something else. Would the actual re-volution be a causal event? Was trying to make it come about through the astute causal manipulations of a revolutionary vanguard perhaps the great error where Lenin and others had gone so very wrong? Would the postulation of boundaries in the world of science and scholarship also begin to exhaust its creative potency in the early twenty-first-century world, with that loss of potency perhaps rapidly accelerating? Specialized enclosure of the mind could go too far. Could an alternative to the principle of enclosure and causal reasoning in rigorous thinking gain a countervailing sway? But how would one displace the other?

Network thinking eschewed boundaries, addressed locations and identifying linkages between them, created an ever-expanding world of interaction, a boundless world, yet an intimate one owing to small-world effects. Surely such thinking could construe all possible phenomena as an alternative construction to the principle of enclosure. But would people make reasoning about networks dominant by choosing it as their best mode of meeting problems and achieving their potentials in action? Were they starting to shift in that direction? Clearly, at the turn of the twenty-first century, with the rise of the Internet and the transformation of communication and control that it brought, networks were catching the contemporary imagination.

Here we see a whiff of millennial fever. How easy it was to postulate a brittle order in tension with supple, emerging possibilit-ies. In reflecting on the difference between area maps and place maps, one could inventory, at least rapidly, how the practices of enclosure were essential for statistical analysis, for almost all of

economics and sociology, legal reasoning and statecraft. Were they not vulnerable in contemporary practice? Many innovators were active in developing what people were beginning to call the *digital commons*, and many found immensely inspiring the way Wikipedia and some software initiatives, which explicitly relied on open networks of collaborators, were proving to be as productive, if not more, than their enclosure-based predecessors had been.[21]

In the material world, proponents of possessive individualism had judged the commons to be tragic, owing to its susceptibility to over-use. A powerful current of scholarship was showing such arguments to have no timeless, supra-historical validity—network thinking might guard against the tragedy. All sorts of speculation was beginning to promulgate a periodization defining the modern era as having ranged from roughly 1500 to 2000, setting it apart from a new period of post-modernity. Although poorly defined in 2000, post-modernity intimated a closing of enclosure and a prospective era of disclosing the commons. For many years, Carlyle had thought about resource depletion and global warming; he had studied United Nations population projections and anticipated the stabilization of world population just short of 10 billion.[22] He

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[21] *Digger*: Early in his work with technology, Carlyle had become convinced that copyright, whatever its legal and economic status, had become technologically obsolete, and he looked forward to all intellectual property becoming freely accessible, any time, any place, through digital means. The work of Lawrence Lessig in developing the Creative Commons had been very liberating, and Carlyle was an admiring reader of the work pointing to a digital commons by Lessig, Yochai Benkler, Robert Darnton, and Eben Moglen (see bibliography for particulars).

[22] *Commoner*: Carlyle would ask his students in courses on the history of educational thought to contemplate a very basic projection of world population and wonder about its implications for prospective educational work. The diagram showed data from *World population to 2300* projected by the UN Department of Economic and Social Affairs, Population Division (2004). We include it in the Archive as it anticipated future demographic trends rather well. Of course, strains associated with adapting to a demographic and economic steady-state, significantly contributed to the late twenty-first-century chaos prior to the global Stabilization achieved early in this century. It is impressive how accurate the UN projections have so far turned out to be. At the same time, it is sobering how little foresight people displayed in thinking about the effect those demographic prospects would have on

Number of persons inhabiting earth, 1750 to 2250

In billions

What values, skills, and knowledge will enable persons born in 2010 to realize their fullest potentials?

US Constitution

World War I

World War II

Velvet Revolutions

80 year life-span 2010-2090
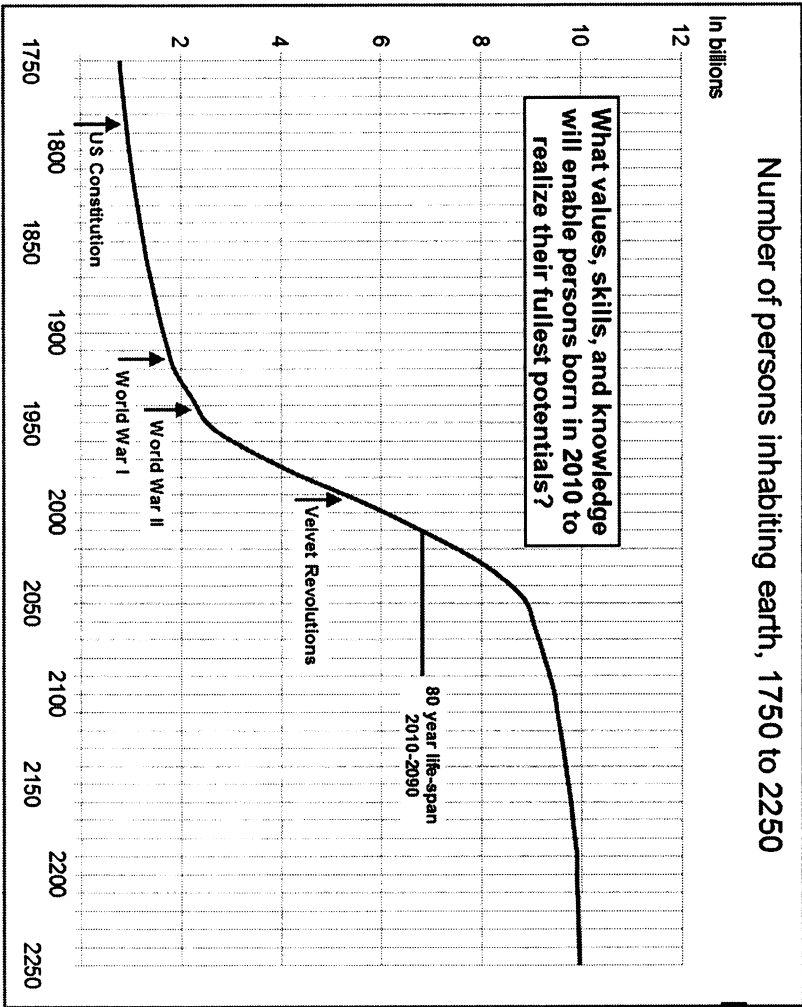
1 Long-term demographic prospects

suspected that population growth had been a deep-seated source of economic growth. And even if past growth had had other sources, he thought that the unending pursuit of continuous growth would at

the values and expectations that had taken hold during the era of enclosure and expansion. Then far too many people assumed that the endless growth in the production and consumption of material good was a timeless purpose, the permanent goal of human effort. It is strange how people can study history as if they somehow stand outside of it.

some point give way to a quest for sufficiency as the goal of economic policy in what would be, basically, a steady-state demography. Perhaps another "great transformation," this one in a reverse direction, an unexpected *disclosure of the commons,* was about to appear.

4—Skepticism and Reasonable Faith

We can date these hopes for a disclosure of the commons circa mid-2010. In the midst of them, Carlyle encountered a crisis. At lunch with his closest friend, a sharp critic of the reigning order, and an even sharper critic of facile, millennial hopes, Carlyle mused enthusiastically about his expectations. He proclaimed that someday the commons, not the market, would become the prime locus of practical life. His friend retorted, "Pray tell, how will people get from here to there? Consider all the wealth and power arrayed against your happy vision." Carlyle had no ready response. To sober reflection, vast, ubiquitous institutions embedded the principle of enclosure pervasively through contemporary life. Intimations of a disclosed commons were merely that, hopeful suggestions magnified by wish fulfillment. Reflection sobered hope; market triumphalism blocked paths to a better future.

And serendipity drove the point home, for the next day a leading newspaper of the time, the *Washington Post*, started to publish a thorough survey of the top-secret intelligence establishment in the United States.[1] The series made clear the vast scale and immense funding devoted to enclosing powerful activities behind a curtain of secrecy, deeply embedding them both in the public and in the private sectors. Governments were strong enclosures, using immense resources to maintain state secrets. And a vast system of closed corporations, each a complex bureaucracy cloaked in a rhetorical fig-leaf of free enterprise, dominated economic life.[2] In

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[1]   *Digger*: Dana Priest and William M. Arkin. *Top Secret America: a Washington Post Investigation*. The *Washington Post*, July 19, 20, & 21, 2010.

[2]   *Digger*: Appalled and disheartened, critical intellectuals followed reports in the *New York Times* tracking the way reactionary corporate interests were manipulating popular anxieties in the American election campaigns of 2010. A book, reflecting such concerns, *Death of the Liberal Class* by Chris Hedges, surveyed many of the political ills that worried those hoping for a public life of communal solidarity. Even more, *Democracy, Inc.* by the distinguished political theorist, Sheldon

such a world, how could people possibly get from here to there, from the market to the commons, from enclosure to the simultaneity of place, from production to reciprocity, from alienation to solidarity, from *more* to *enough*? How could a principle of interaction in the commons supplant that of enclosure, with all its attendant alienation, so fundamental to the dominant institutions in both the public and the private sphere? That remained a question, unavoidable, still unanswered.

4.1—Possibilities, Not Predictions

Of course, the only real answer to the question was some sort of historic eventuality. But what sort of hope might a person have as a well-informed, reasonable observer that there remained a capacity in the human trajectory for a significant change of historic course? In the early twenty-first century, the world appeared to be one in which powerful bounded entities dominated all fields of action. Could a thoughtful, honest person reasonably expect their lock on initiative to even weaken, let alone to disappear? A person might describe, in a scenario of wish fulfillment, a sequence of steps that would imaginatively transform the given world into an alternative one, but would that really provide anything more than a consoling fantasy? Such a scenario of change leading to the primacy of the commons in practical life would simply link a long sequence of improbabilities together, compounding the unlikelihood of each. Circa 2010, the world of technology and venture capital oozed with such scenarios by every innovator with a gizmo to hawk. Educators too liked to laud classrooms of the future.[3] Futuristic scenarios were nothing but

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Wolin, had shown how closed corporate interests had penetrated democratic processes building up an inverted totalitarianism, a corporate state encompassing all possible forms of public power serving, not the interests of democratic citizens, but that of corporate commerce. How could people bring about civic circumstances that would become more conducive to human fulfillment than the existent order of life?

[3] *Digger*: Egan's *Future of Education* well illustrated these problems. It concentrated with excessive specificity on the future of education by showing how, over coming decades, different curricular goals and design, along with changed teaching practices, would radically alter the character of the school. It exemplified the fashion of spinning out scenarios to illustrate an expected course of development. But did not

blind guesses. Given enough of them, one or two might eventually prove to have been right in the same way that a broken clock was correct twice a day. Critics needed a more consequential way to postulate reasonable potentiality for substantial alternatives to present realities.

An observer could know and describe how something happened, only after the fact, only when he could decide what steps seemed to have caused it to have taken place. Prospectively, things were harder. One could only say why something might take place, a conditional understanding, which might or might not be causal. A person could put faith in possible causes—for instance, in the advent of some luminous leader stepping onto the plane of history, with sure command, carrying the peoples to predestined fulfillment. But such anticipations are in substance nothing but an anticipation of some *deus ex machina,* always a possibility, but one rarely satisfied. And it was not even very satisfying when one reflected that the event might not be benevolent, for it could just as well be

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really explain grounds for hoping for them. Scenarios seemed effective ways to give predictions the appearance of concrete reality, and Egan's book took this fashion to a remarkable extreme. Its latter half consisted of detailed scenarios describing how the tripartite agency of instruction—teaching, the curriculum, and the school—would change during the five decades between 2012 and 2060. Its scenarios were ludicrously improbable and near the end, the book included an amusing example, in a saddening sort of way, of how scenario details could undercut the credibility of a future vision. For the decade 2051–60, Egan described how people would start respecting the expertise with which the schools were designed and run, suggesting it would take on the authority of medical expertise. "The new schools and their organization came more to resemble health care. . . . Politicians and other interest groups did not feel they could casually speak with authority about details of health care, and now the same was felt to be the case about education." (p. 174) Perhaps in 2008 health care seemed exempt from casual opinionating by American politicians and other interest groups, but a year later, they had thoroughly shredded the premise of the prediction by casually proclaiming all sorts of half-truths and falsehoods about the details of prospective health care arrangements. The effort by Glass in *Fertilizers, Pills, and Magnetic Strips* to analyze fundamental forces shaping schools and public life over time was a much better way to think about prospective developments than to try to anticipate specific details of future arrangements through scenarios.

some terminal disaster, a collision with an asteroid of sufficient magnitude to extinguish human life, or a climactic nightmare worse than anyone feared, a new ice age, radically altering the human endeavor.[4] Hence, a *deus ex machina* offered no grounds for reasonably anticipating the advent of a significantly different human order.

Could a critic, instead, reasonably expect substantial alternatives to present realities to come about through historical emergence, a spontaneous transition from one phase of interaction to another, rapid yet incremental? In the recent past, regime changes in political life had exhibited this structure, for instance in the fall of the Soviet system in Eastern Europe and Russia and in 2011 with the democratic upwelling in Egypt and elsewhere in the Middle East. Was there a decision algorithm according to which people might stop relying on enclosure as a principle of thinking about prospective action and substitute a principle of interaction as an alternative? What principles of choice, what criteria of judgment were distinct persons using in deciding to organize their experience through strategies of enclosure? Might historical conditions arise under which different persons in various situations would change their principles of judgment in the conduct of their lives? Answers to such questions would not enable someone like Carlyle to predict how or when people might make a global commons, or some other order, primary in their conduct of life. But they might lead to a recognition that given the right conditions, economic man might shift to opting for enough in the commons rather than "more" in the market.[5]

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[4]   *Digger*: In June 2010, the Editors of *Scientific American* had published a special section on what the future held in store, "12 Events That Will Change Everything." In short articles, specialists rated each potentially big change for the likelihood it would occur by 2050. Several of the more likely ones that they anticipated have by now happened, but the editors' expectation that those developments would change everything has not come to pass. What has changed everything was the steady alteration of public expectations until they reached a tipping point, allowing people to adopt new controlling principles by which they organized their lives.

[5]   *Digger*: Diane Coyle's book, *The Economics of Enough: How to Run the Economy As If the Future Matters* (2012), drew attention to important questions of sustainable growth and intergenerational responsibility. To someone like Carlyle, her analysis appeared to be a

People were in thrall to prediction, for prediction best validated causal reasoning. To make a hope and a prayer seem creditable, cloak it in confident anticipations of what would eventuate. "Prediction is the opium of our time," Carlyle mused. He resolved to detox, to go cold turkey. Rather than attempt to predict what would happen, he could explore the conditions of possibility. Predictions weakened the historical imagination, sating it with deceptive expectations. The historical imagination gained power as people sensed opportunities in their living present to assert emergent possibilities.

4.2—Disclosing the Commons

In his *Daybook* for August 17, 2010, Carlyle recorded the gist of his resolution to these basic questions about the possibility of a different order of things. He set it down, sparely, in four short propositions, recorded as notes to himself. There are signs that he labored a bit over the phrasing of them, but he did not seem to mean that phrasing to be adequate as a public statement of his position. He talked a lot about "disclosing the commons" during this period of his work and we can best understand these propositions as an effort to clarify for himself what he meant by this phrase. Here are Carlyle's propositions:

- The commons is the unbounded plane of human interaction with respect to which there are no externalities.[6] It is the sum of what

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bit blinkered, however, by the discipline of economics and its reluctance to account for historical, non-economic change in the consideration of long-term problems. As a result, she seemed to offer a low-keyed manifesto, calling on the current economic and political system to administer to itself a range of economic and political reforms that it needed to overcome its current malfunctions. This prescription seemed to succumb to the question Horkheimer and Adorno had posed—Could instrumental reason correct the pathologies of instrumental reason?

6   *Commoner*: Much profit in market exchange arose from the supplier not having to pay for many costs. Of course, since the Stabilization, with our economics conceptualized relative to the global commons, the concept of an externality has no meaning. We need to understand "externality" according to its usage in the economics of the early twenty-first century. That great work of traditional scholarship, the *Oxford English Dictionary* (OED) then defined it as "a side-effect or

is taking place.
- Markets are bounded planes of enclosed interaction that arise as people exchange items of private wealth created by asserting exclusive management over components of the commons (real property), by claiming ownership rights to the use of rationalized techniques within enclosed sectors of the commons

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consequence (of an industrial or commercial activity) which affects other parties without this being reflected in the cost of the goods or services involved; a social cost or benefit." People conceived the categories of economics relative to the basic category of the market, an ideal-type construct bounding off an economic domain so that they could track the production, exchange, and consumption of selected goods according to principles of supply and demand. In conceptualizing any market, people gave rise to externalities as they set the market's defining boundaries by leaving significant, tangible costs and benefits outside of the market's limits. Carlyle's first bulleted proposition here simply defined the commons as the inclusive, unbounded domain of interaction in which all costs and benefits, not merely a selection of them, were to be taken into account, fully and accurately. The commons in the inclusive sense was the comprehensive account inclusive of all costs and benefits and it therefore had no externalities. Of course, real markets ignored numerous arbitrary exclusions and therefore the choices made through them were fundamentally irrational. In this view, classical economics was a structure of irrationality and Carlyle here was like the kid saying the emperor had no clothes. A rational economics would have to be rational relative to a commons with respect to which there were no externalities.

» At that time, the most portentous externality was global warming and climate change and most everyone had complex interests relative to it. Controversies over global warming largely pitted those who profited, directly or indirectly, from treating the costs of environmental degradation as externalities to their spheres of production, exchange, and activity, against those with more diffuse interests in environmental stability over extended periods . They wanted to account for the environmental costs in the costs of producing, distributing, and using the goods and services from which the environmental problems arose. Dramatic disasters such as the blowout of a deep-water well in the Gulf of Mexico raised the visibility of many externalities, but there was a remarkable reluctance to bring them systematically into account. The problem in doing so arose because each person actually had an interest on both sides, an interest both in continuing and in ending the externalities. Carlyle's last two propositions indicated when a rational actor would find it in his interest to stop free-loading on the commons.

(intellectual property), and by shifting significant costs incurred through enclosed activities out into the remainder of the commons, exempting those costs from production and distribution costs accounted for within the market (externalities).

- Economically rational actors would choose to "disclose the commons," reversing acts of enclosure into real and intellectual property, when the marginal utility of the resources required to maintain enclosure in the market falls below the utility attainable were the activity pursued as part of the unenclosed commons shared by all its members.

- Since the phase change, itself,[7] requires some energy to begin taking place, the actual change in decision principle may not become active until after a latency period has passed. The shift in marginal utility will continue to mount until it crosses a threshold of significance or a disturbance of the system triggers a cascading adoption of the new decision principle.

Carlyle did not expand or defend these propositions.[8] Although for the most part they will seem commonsensical to us, mid-way

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[7] *Digger*: Carlyle knew what he meant by "phase change" in these notes to himself. Contextual materials indicate that in his judgment changes of historical phase resulted when large numbers of people alter the way they apply certain decision algorithms in the course of their respective lives, for instance as he indicated people might in the previous bullet.

[8] *Sojourner*: Maybe Carlyle didn't expand on them, but I hope you will. First off, I'm not familiar with this concept of externalities.

» *Digger*: Naturally. There is no reason to expect subtleties of an obsolete economics to be common knowledge. Since the Stabilization, we are rather like people comfortable in an era of free trade trying to understand mercantilist concepts. We assume that all costs and benefits must be reckoned in one, comprehensive account. In the Freeloading System only costs and benefits accounted for within the market counted. People defined the equilibrium of supply and demand relative to those costs and benefits as the measure of rational action, which would indicate the optimum allocation of resources and effort. The market would fortuitously, as myriads of persons pursued their self-interest, establish both the maximum feasible welfare and the most just distribution of goods. Problems arose in practice with market theory, however. Real markets did not account for significant costs and benefits incurred in the production, exchange, and consumption of the goods for which the market equilibrated the supply and demand. Insofar as the costs and benefits external to the real market were substantial, the allocation of resources, effort, and values through the

through the twenty-second century, explaining them in his time
would have been a complicated task.

In particular, Carlyle's abstract, working definition of the
commons as the encompassing realm, inclusive of all human activ-
ity, built on clues in Marx and diverged from traditional usage prior
to the twenty-first century.[9] Late in the twentieth century, market
apologists had made an article by someone named Garrett Hardin on
"The Tragedy of the Commons" highly influential. In their
interpretation, it demonstrated that enclosure of common assets was
a necessary strategy to limit who could use those assets to what
extent for what purposes, thereby controlling the destructive
excesses of freeloaders on the commons.[10] This argument embodied

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operations of the market could be seriously deceptive, unjust, and
destructive. Indeed, as Adam Smith suggested, the market exercised an
unseen hand, but a much subtler one than he celebrated, a sly thumb on
the scale that skewed its operations to the benefit of a few and to the
detriment of the rest. Actually, Smith's invisible thumb worked to the
detriment of all, for the allocation of resources through a market's
aggregation of "rational choices" was profoundly irrational when it left
out important externalities.

[9] *Commoner*: Traditionally both markets and the commons had been
local affairs—the market a small area set apart from the town where
farmers and artisans could exchange goods and the commons was the
land and its fruits where people dwelt, which they shared according to
an economics of enough. As a work of abstraction, classical economics
was radically one-sided, developed by abstracting actual local markets
into a generalized ideal-type, while failing to abstract the phenomenon
of the local commons in a parallel, balanced way. Emergent capitalism
covered up the intellectual crime by working hard to eradicate traces of
the local commons through the systematic enclosure of it. We now
interpret the ideas of Karl Marx, starting with his early journalistic
reporting on the enclosure of common lands in the Ruhr area, as it
started to become the industrial core of Germany, as a protest, both
elegant and impassioned, at these distortions in the founding of
capitalism in both theory and practice. Marx tried to advance an
abstract idea of the commons in the same way that Adam Smith had
done for the market. Marx's revolution actually came calmly through
the Stabilization, not an overthrow of the old order, but its slow
hollowing, combined with the progressive disclosure of the commons.

[10] *Digger*: For the original article, see Hardin, "The tragedy of the
commons" (1968). In subsequent years, market economists often
pointed to Hardin's essay as having demonstrated the necessity of the

what was then called a "bait and switch," promising something extraordinary and then substituting something very ordinary for it. The article's title spoke about a tragedy in the generalized commons, the tragedy of *the* commons. But the article postulated a very limited, unrealistic commons, a bounded place, a village green on which the cows of peasants grazed, with no communal management and each peasant maximizing the size of his herd until the green was barren, to the ruin of all. The tragedy arose because each peasant was an irresponsible freeloader, adding cows to his herd to the maximum of his ability. But the historical commons was no Hobbesian state of nature. Many critics showed how, in medieval and early modern practice, villagers had managed common lands cooperatively with happier effects, without resort to enclosure.[11]

Carlyle's reaction was more radical. To speak of the commons in a genuine sense, a theorist had to conceptualize it in an inclusive way as the totality of humanly meaningful resources prior to any intrusive enclosures. By itself, a labor theory of property did not justify private property, for all labor used the commons through its tools, know-how, and organization. It was strictly private neither by logical necessity nor by historical primacy.[12] Indeed, if humanity

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market for productive innovation. Hardin's argument that the commons was inevitably tragic rested on an egregiously simplified thought experiment that satisfied neither historical precedent nor theoretical necessity. Work by Elinor Ostrom and her collaborators was far more rigorous, both theoretically and empirically, and much more optimistic about the productive power of the commons than Hardin. See, especially, Ostrom's *Governing the Commons* (1990), Ostrom and National Research Council (U.S.), *The Drama of the Commons* (2002), and Poteete, Janssen, and Ostrom, *Working Together* (2010). Other studies that were then muting the disposition towards possessive individualism and nurturing a taste for more communal rights and liberties included *The Magna Carta Manifesto: Liberties and Commons for All* by Peter Linebaugh (2008), *Common as Air: Revolution, Art, and Ownership* by Lewis Hyde (2010), *Free Culture: The Nature and Future of Creativity* by Lawrence Lessig (2005), and *The Public Domain: Enclosing the Commons of the Mind* by James Boyle (2008).

[11] *Digger*: For such a critique of Hardin, see, for instance, Peter Linebaugh's *Magna Carta Manifesto* (2008).

[12] *Commoner*: John Locke's reasoning about the commons and enclosed property in the *Second Treatise of Government* (Chapter V, ¶¶25-51) exemplified the disingenuous reasoning through early modern thinkers privileged property and the market relative to the commons. Locke was

subjected the comprehensive commons to an unending drive

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unequivocal: God gave the earth to mankind for mankind's use in common. Each person had a derivative right to the fruit of his labor that he personally produced and could enjoy for his direct support. Such property arising from a person's direct labor was the original way the commons served as the human abode. Locke then contrasted the primeval lands of America with the developed lands of Europe and argued that the latter were vastly more valuable as the source of sustenance than the former then were in their unimproved state. What was disingenuous was his shift at this point from talking about the commons, to describing it as the waste, a technical for the unimproved grazing lands within the commons. By equating the commons with the waste, Locke secured to the realm of enclosed property all human improvements in the fruitfulness of labor, despite the evident fact that most tools and practices that made primitive labor more productive were part of the common human heritage, the property of all, not of one or of some. Locke actually enumerated numerous improvements in know-how, technique, skill, knowledge, belief, and value that humans had contributed over the millennia to their culture, differentiating the developed commons from the unclaimed expanses of raw nature. But by circumscribing the commons to the waste, Locke made enclosed property the sole and sufficient locus of civilized life and production. And since, in his view, economic arrangements preceded the political, he grounded the idea that single, isolated individuals, were the lonely benefactors of mankind, the special few whose achievements thereafter merited the common protection of the state. At a more difficult level of abstraction, Hegel exposed the empty destructiveness of Locke's reasoning in a relatively short section in his *Phenomenology of Spirit* (VI: Spirit, A: The Ethical Order, c. Legal Status). "But this content [i.e., the owner of property], liberated from the negative power controlling it [i.e., protected by the state from competing claims to ownership], is the chaos of spiritual powers which, in their unfettered freedom, become elemental beings raging madly against one another in a frenzy of destructive activity. Their impotent self-consciousness is the defenseless enclosed arena of their tumult. In this knowledge of himself as the sum and substance of all actual powers, this lord and master of the world is the titanic self-consciousness that thinks of itself as being an actual living god. But since he is only the *formal* self which is unable to tame those powers, his activities and self-enjoyment are equally monstrous excesses" (Miller, trans., pp. 292-3). Hegel was an impenetrable writer, but his human sensibility was incredibly inclusive. The texture of Marx's labor theory of value (free of the absurd individualism of classical economics) acquired a humane fullness by his having studied Hegel's work with care.

towards ever-increasing use, this inclusive commons would be tragic in the way Hardin had depicted. Carlyle suspected that Hardin had not meant his thought experiment about excessive grazing on the village green to serve as an apology for enclosure, but quite the reverse, as a warning against the uncontrolled exploitation of the planet, understood as the common habitat of humanity. The drive to excessive exploitation had been hard at work in the world, evident in resource scarcities and global warming. But the chief form of freeloading on the common patrimony was not Hardin's hapless peasant grazing an added cow, but the aristocrats, the gentry, the captains of commerce and industry, the impersonal corporations— fictitious persons yet amoral entities. These were the freeloaders, who enclosed vast portions of the all-inclusive commons by asserting the prerogatives of personal property, real and intellectual. By these means, they increased their private returns by withholding benefits from those kept out and by transferring internally incurred costs off their own books to external accounts.[13] That was the

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[13] *Commoner:* Use of "freeloader" with respect to the systematic spread of enclosure in the modern era by now has become standard, replacing the old antiseptic term, free enterprise system, with the more accurate freeloading system. The freeloader profited, not only by moving internally incurred costs out onto the external accounts of the residual commons. He also benefited greatly by freely using achievements developed through the commons—the creation, maintenance, and enforcement of all sorts of material and procedural standards, productive public goods. One of the great deceptions perpetrated by apologists for the freeloading system was to credit all increases in production as benefits derived from the investment of financial capital. The freeloading system took neither negative costs for the commons nor positive benefits from the commons properly into account in assessing the costs and benefits of enclosure. What proportion of production derived from the delay of gratification by those investing financial capital and what proportion from disciplined adherence to reasoned, general standards of weights, measures, and production techniques? Entrepreneurs, like scholars, clamored up onto the shoulders of giants. Carlyle thought there was a pressing need for economists and political scientists to pay more attention to the creative, productive power of the commons in a fragmented world. A rich literature existed, but it was not seen to be particularly relevant to students of public life: for instance, studies like *Sorting Things Out: Classification and Its Consequences* by Geoffrey C. Bowker and Susan Leigh Star (1999), *Theory and Design in the First Machine Age* by

import of Carlyle's second proposition. And he was not so naïve that he expected freeloaders to desist from exploiting the commons simply from the goodness of their hearts—hence his third and fourth propositions.

Freeloading itself incurred costs to the freeloader, as well as benefits, which in the realm of economic man had to pass the cost-benefit analysis of rational choice. Do the benefits of asserting and maintaining enclosure exceed its costs? In the great era of capitalism, freeloading had appeared to pay so well that freeloaders were able to proclaim their good conscience, convincing the great majority that their freeloading was to the benefit of all. "A rising tide lifts boats large and small," as the seductive saying went. So beguiled, the null hypothesis, what people assumed to be true in the absence of strong evidence in favor of something else, had been the conviction that enclosure paid.[14] Early in the twenty-first century, however, the rich, a small but powerful class, enjoying plutocratic privilege, were getting rapidly richer while the ability of developed economies to sustain full employment, especially for the least advantaged, was weakening, profoundly straining trickle-down

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Reyner Banham (1980), *Mechanization Takes Command: A Contribution to Anonymous History* by Siegfried Giedion (1948), *Objects of Desire: Design & Society from Wedgwood to IBM* by Adrian Forty (1986), and so on.

[14] *Digger: The Moral Consequences of Economic Growth* by Benjamin Friedman (2005), seemed to be a quite persuasive history showing how Enlightenment thinkers had expected considerable extra-economic benefits from economic growth and suggesting that indeed overall those had been effectively delivered in the growth of capitalism. Friedman recognized that environmental costs might change that equation and he said little about the moral implications either of opportunity costs, for instance, engaging human effort in material production and consumption rather than cultural creation, or of unintended consequences, such as trivializing public communications in the advertisers' endless effort to induce and maintain consumption. Critics of the freeloading system, preeminently Marx, had not wanted to wish away the industrial revolution. They thought the end of history with respect to political economy had not been attained. People needed to consider what continuities and innovations made best sense in seeking, long-term, the further development of humane possibilities. In the world as it was and had been, one could reason, neither about the good nor about the best, only about the better.

theories of economics.[15] It took many decades for the freeloading system to undermine itself, but eventually it did. And of course, by now, we have inverted its null hypothesis: in all but a very few, highly specialized forms of human interaction, enclosure leads to wasteful excesses and scarcities, distortions in the intelligent allocation of resources and human effort. For the great majority of human activities, the careful tending of the commons provides an optimum sufficiency for all. But from the perspective of the early twenty-first century, unchecked freeloading, then extolled as the system of free enterprise, buttressed by the superstition that free markets optimally allocated resources, reigned supreme. Yet many had a nagging question: How long would people ignore the cost of externalities exempted from the freeloaders' accounts?

In the timescale of journalism and electoral politics, and even more in the retrospective glow of conservative mentalities, economic growth had been the preeminent public goal, pre-empting concerns for full employment or sophisticated measures of public happiness and human fulfillment. Most of the world's peoples had yet to enjoy post-industrial living standards, and economic growth was strongest in these areas of high population and high demand— what were then the countries of China, India, Brazil, Argentina, Malaysia, South Korea, Mexico, and more. But even in areas of high growth, many in positions of influence realized that the freeloading needed to stop. Freeloaders were shifting vast accumulating costs onto the commons, where they were included in no evident accounting. All the same, they were becoming inescapably evident, and subject to precise account, in the form of environmental degradation, climate warming, resource depletion, and the failure of the freeloading system to provide growing numbers with opportunities for creative, fulfilling work, not to

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[15] *Commoner*: A residual whiff of meritocracy gave the freeloading system a suggestion of legitimacy, which those most favored by it were rapidly destroying through their greed and arrogance. They were no different from innumerable peers, with whom they grew up and studied and to whom they were well known, competent but not extraordinary. Any pretense that the relative measure of their good fortune, which magnified many times the marginal differences in intelligence, charm, energy, or savvy that they shared with their peers, had been due to their extraordinary merit stood as hypocritical put-on, "Brownie, you're doing a heck of a job!"—especially when, blatant to all, the on-the-job performance had been spectacularly inept.

mention basic education, health care, and security.

Further, in areas of the world with mature economies, growing numbers of people doubted that the conditions of life were getting better and better when measured by the growth of GDP.[16] On average, perhaps. But people should realize that a nicely growing average could disguise accelerating inequalities. Critics were showing how, for every 100 persons, the 60 least advantaged had been suffering a slow, steady decline; 30, modestly favored, had been holding their own, working longer to avoid declining pay; 9, the better off, had been doing OK, thank you; and 1, the very wealthy, had been enjoying continuous engorgement. Many people, perhaps most, felt themselves on a treadmill, running harder and harder to keep their living standards advancing. Might they start asking whether they had been running up lasting debt to pay for transient satisfactions? When times worsened and the number to whom life posed the question—*"Kleiner Mann, Was Nun?"* "Little man, what now?"[17]—civic trajectories became hard to predict or

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[16] *Commoner*: Many thought that American politics had become seriously dysfunctional and feared the possibility of a lurch into right-wing totalitarianism, similar to that taken by major parts of Europe in the 1930s. But when all was said and done, the sociopolitical structures in the major countries of the world, including the United States, were considerably more resilient than they had been between the World Wars, and the social strains were neither as strong nor as sharp. Consequently, a collapse into mindless destruction as awful as the one that swept over Germany with the Nazis and Hitler seemed improbable. But the American inability to address large and important goals had been evident for at least three decades and the more recent descent into a politics of acrimony suggested an extended stasis, but given the slow-moving, inter-generational character of the big problems the peoples of the world were facing, such an extended stasis was portentous and dis-quieting. *The Politics of Cultural Despair* (1974), as Fritz Stern had famously studied it, was less to be feared than a slow descent into historical irrelevance. Would the net immigration of intellectual talent into the United States peak and shift to a steady emigration? In 2012 such an eventuality seemed improbable, but the question did not seem absurd.

[17] *Commoner*: The question came from the title of a novel by German writer of the Weimar and Hitler eras, Hans Fallada. It showed the descent into a progressively deeper sense of insecurity by ordinary lower-middle-class people during the early 1930s. Fallada's novel showed how such a loss of status and security broke people's allegiance

control. For how long would the favored few continue to persuade most Americans to bear the costs of maintaining the global freeloading system with so little benefit to show for it?

Thus, early in the twenty-first century, a minority, growing more vocal, doubted the probity of enclosure, perhaps to entertain the primacy of an inclusive commons. Developments with respect to real property, intellectual property, and externalities were each changing the prevailing conditions relative to which rational actors might judge the costs and benefits of enclosure in the commons. Hence, perhaps, the unthinkable was becoming thinkable. Were grounds plausible for thinking that rational actors would possibly recalibrate their cost-benefit calculus with respect to real property, intellectual property, and externalities? Considering it an open question seemed reasonable.

- First, *real property*: the scope and efficiency of material production was reaching a point at which basic sufficiency for all was becoming a realistic potentiality. In a world in which there was always too little, "enough" and "more" were indistinguishable, but if sufficiency were feasible, the difference

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to their traditional norms and made them susceptible to volatile, desperate measures. Early in the twenty-first century, American public life showed similar signs of an incipient decay in desperate volatility among members of the lower middle-class, manipulated by rich reactionaries to serve their self-interests, using the processes of democracy to destroy spirit, its material base, and the social safety net. The long and serious swing towards greater inequality in American life, starting around 1960, coincided with Carlyle's adulthood. It depressed and angered him. The public ability to implement and sustain a progressive tax structure was an important outward sign of a shared commitment to the commons. Incessant carping by the most advantaged had eaten it away. For some years, Carlyle had been giving his classes the schedules of income tax rates in force since WWII, adjusted to current dollars. His students, inured to the moaning about taxes by the minions of wealth, were amazed to see the contraction of brackets over the years and the disappearance of the top taxation rates.

» *Digger*: Our proportions for the material well-being of those in every 100 persons, reported above, come from *Winner-Take-All Politics* by Jacob Hacker (2010). The *New York Times* columnist, Charles M. Blow published a vivid graph of marginal tax rates back to 1913, and biting rebuke of those wanting them yet lower in 2011 ("The Pirates of Capitol Hill," April 15, 2011).

between "enough" and "more" would become a real and sig-
nificant question. Early in the twenty-first century, the question
of "enough" versus "more" was beginning to sharpen. In
assessing the quality of life, people began to apply new measures
of *happiness* and the attainment of *human capabilities* to
complement more traditional measures that charted the growth of
economic GDP.[18] To many, consumption patterns of the very
rich were appearing to be excessive and frivolous, little but a
self-destructive compulsion, harmful to all.[19]

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[18] *Digger*: Studies like *The Politics of Happiness: What Government Can
Learn from the New Research on Well-Being* by Derek Bok (2010) and
The Hidden Wealth of Nations by David Halpern (2010) might help
reorient people's public choices in more constructive ways, Carlyle
hoped. Carlyle's ideas about human capabilities drew somewhat on the
so-called "capabilities approach," then associated with two prominent
scholars, Amartya Sen and Martha Nussbaum. He was somewhat
perplexed, however, by the way Sen, and to a lesser degree Nussbaum,
had linked the problem of capabilities to issues of distributive justice.
He was aware that Sen had been shifting concern towards how justice
in the distribution of capabilities was being realized by comparing
actual polities and the degree to which persons flourished within them.
Sen's *Idea of justice* (2009) was excellent, but Carlyle wanted to go
further to recognize that the problem of justice was largely an
educational problem. To Carlyle, capabilities offered opportunities and
challenges to human self-realization, and the problem of justice with
respect to them was less a matter of distributive justice and more a
problem of formative justice as McClintock put it in *Homeless in the
House of Intellect* (2005).

[19] *Sojourner*: Were the elites so lacking in perspective that they were
unaware of their self-destructive dysfunction?

» *Commoner*: As the old moralists knew, hubris and avarice were
powerful vices, especially powerful because they not only wrought
havoc, but they also blocked the harm from the view of its perpetrators.
For instance, a few economists clearly diagnosed the economic travails
of the early twenty-first century as a failure of aggregate demand. They
pointed out that decades of squeezing most people so that a few among
them could gain vast wealth, and pass it on to their progeny virtually
untaxed, resulted in a system that could not maintain an adequate
circulation of its resources. Luxury goods had low multiplier effects,
and before long, additional expenditure by the very rich lost its
marginal utility for them. Instead, they simply hoarded their wealth,
with the resulting constrictions foisted on their less fortunate peers. A
few of the very rich understood the situation, realizing they could be

- Second, *intellectual property*: the shift from mechanical to digital means for reproducing and disseminating cultural resources radically increased the costs required to maintain the enclosure of intellectual property and diminished the comparative advantage that the holders of intellectual property could derive vis-à-vis the common stock. Getting to the leading edge of innovation had become very expensive and the benefits of it highly transient, for an innovation quickly dropped in price and achieved widespread use. Some major corporations were reducing reliance on exclusive control over their intellectual property, entering into extensive patent sharing and putting significant bodies of code into the realm of open source, preferring to compete via the quality of their services in an open intellectual commons.[20]

- Third, *externalities*: the costs of accrued externalities were

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both too rich and too thin. Their efforts to correct it had little effect, and most of the very rich lived securely in a very comfortable world. Naturally, they saw no reason to question the principles and practices that had underwritten their good fortune. If others were suffering, they did so owing to their own shortcomings. And if anyone complained, the minions of the rich loudly decried the bogey of class warfare.

[20] *Digger*: Disclosure of the commons was gaining in power and extent, through both legal and extralegal means. Wikileaks and other collaborative efforts, which pushed secret information into public view, showed the difficulty of maintaining secrets, a trend offset by powerful, low-cost encryption, which made the creation of secrets ever easier. The public domain was spontaneously expanding, at the same time as those threatened by that spontaneous expansion pushed back legally. Over the years, Carlyle had spent large sums for books, and for software as well, but he was aware that his need to do so was steadily diminishing. The digital library had been rapidly expanding and a growing spectrum of open source software was becoming available, programs like OpenOffice, maintained largely by Sun Microsystems, as a free set of tools with the functionality of Microsoft Office. Google's business plan was to give away free use of all sorts of software and services in order to create a user community to which it could deliver its advertising services. Familiar boundaries between private and public were in flux. Carlyle thought a dissertation by Matthew X. Curinga, "Social Software and the Struggle for Freedom" (2010 http://matt.curinga.com/static/thesis/), gave a good overview of many aspects of digital intellectual property and the changes with respect to it that were taking place.

steadily mounting through resource depletion, environmental pollution, and climate change. These costs were more and more visible, harder to deny without mongering mindless unreason, and susceptible to inclusion in honest and accurate accounts. Slick accounting still kept costly externalities off the books, but the defense of doing so was becoming more strident and devious, perhaps somewhat more isolated too.[21]

Neither Carlyle nor any other critic could have a detailed idea of the future, but they could foresee the possibility that the future might have characteristics significantly different from those of their present, perhaps making an inclusive commons primary in the reasoned conduct of human life.[22]

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[21] *Digger*: Legal actions were making more major companies bear a larger share of clean-up costs for past degradation of the environment, as in General Electric's dredging of PCB contamination in the Hudson River under EPA supervision. More systemic strategies such as Cap and Trade practices were beginning to come into use, despite significant resistance and real implementation difficulties along the way. Economists were increasingly finding ways to price externalities. As a result, bringing pricing mechanisms for many externalities into use was becoming a matter of developing the political will, a slow but not hopeless process.

[22] *Commoner*: As with economic externalities, circa 2012, a cost-benefit analysis of educational externalities not accounted for through schooling, might well conclude that the cost of ignoring them raised very powerful questions about the dominance of schooling in discussions of education. The list of educational externalities relative to schooling was vast, yet in discussions of educational accountability, these externalities were almost invariably left out of account.

- *Negative externalities impinging on the least advantaged:* a sense that social, economic, and judicial systems were stacked hopelessly against a person and her peers; poor housing, nutrition, and health care; etc.
- *Negative externalities impinging on all:* an entertainment and commercial culture channeling aspirations in dissipative directions, etc.
- *Positive externalities favoring the advantaged:* cultural and pedagogical enrichments via travel, tutoring, and diversity of experience; a network of influential connections.

All the *Sturm und Drang* over standards-based schooling, charter schools, voucher systems, privatization versus public schooling, and the law never to leave a child behind would amount to very little for

4.3—Emergent History

Predicting precisely when and how these possibilities might happen was not feasible. The graph of world population to 2250, which showed several more decades of very rapid growth, would not really stabilize until 2100 or thereafter. Likewise, the drives making enclosure commonsensical to most people still had considerable staying power.[23] But historical momentum, which can keep an established trend going long after the conditions for its reversal are in place, was not the same as trans-historical permanence. Carlyle did not believe in historical permanence and he was interested, less in continuities and more in the dynamics of historical and educational change. The decision algorithm sketched in his *Daybook*, was not a potential *cause* of what might happen. It simply stated an alternative: if people saw their situation in the customary way they would be disposed towards evaluating their options as they had been doing, keeping to the right, so to speak, but

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none of it effectively addressed the externalities to schooling. Switching children from one option for schooling to another—for instance, from a regular public school to a charter school—was going to leave most of the educational externalities unchanged, some of them adverse for all, some hurting particular groups, and some invidiously favorable to the most-favored few. Problematic externalities would remain the same; the problems would recapitulate themselves; and eventually people would ask why.

[23] *Digger*: The drive towards increased enclosure and privatization was still very strong circa 2012. Water was a case in point. Freeloaders were privatizing it in many ways. A discouraging example was the way commerce had turned bottled water into a common need, when tap water from municipal systems was freely available. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* by James C. Scott (1998) was an important study of programmatic state action to enclose peoples and spaces. A web clearinghouse, http://farmlandgrab.org/, documented continuing agricultural enclosure going on around the world as different nation-states and corporations jockeyed for dependable, low-cost food supplies. Continuing enclosure of this sort around the world, along with all the *foreclosures* of residential and commercial real estate then taking place (an interesting word in this context), would eventually lead to an exhausted destabilization, from which some significant alternative could emerge.

if they perceived it differently, they would be more likely to take up a new alternative, turning left, perhaps. Such decision dispositions were basic in understanding how emergent phenomena took place. These dispositions would become evident only in existential choices taking place in a great number of discrete lives, aggregating and emerging as a historic course of events. Could interpreters account both for historical change and for educational change as emergent experiences? Showing them to be emergent, not as caused results, but as changes existentially taking place, would open a wider sense of possibility, enriching the historical horizon with more than staid predictabilities.[24]

Ideas, concepts, and principles about emergent, self-organizing activity were relatively new, difficult, and divergent from familiar thinking. These concepts were means for thinking and talking about the way difficult to predict eventualities appeared in experience. Ideas about emergence were situated in human thought; they

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[24] *Digger*: John Maynard Keynes, looking one hundred years ahead from the vantage of 1930, anticipated that solution of the economic problem—enough for all at a modest cost of work by each—would "be at least within sight." As a consequence, the age old economic drive, hitherto dominant in human experience, would cease to be the primary concern arbitrating human effort and achievement. "If the economic problem is solved, mankind will be deprived of its traditional purpose." Keynes relished the possibility, sounding a humane vision not unlike that of the young Marx:

> I see us free, therefore, to return to some of the most sure and certain principles of religion and traditional virtue—that avarice is a vice, that the exaction of usury is a misdemeanour, and the love of money is detestable, that those walk most truly in the paths of virtue and sane wisdom who take least thought for the morrow. We shall once more value ends above means and prefer the good to the useful. We shall honour those who can teach us how to pluck the hour and the day virtuously and well, the delightful people who are capable of taking direct enjoyment in things, the lilies of the field who toil not, neither do they spin.

The confidence Keynes expressed that this vision would come to pass, absent irrational disasters of history and given continued economic growth for the century in prospect, was very interesting. Because the essay suggested that disclosing the commons made long-term economic sense, we include it in the Archive—Keynes, "Economic Possibilities for Our Grandchildren" (1930), the conclusion to his *Essays in Persuasion*.

enabled people to think about their experience; they were not part of its actuality, which thinking and talking never really reached. People could bring multiple conceptual constructs, both causality and reciprocity, to bear upon particular contents of experiences, with one construct effectively illuminating one aspect of it, and another a different one. None of it, whatever the principle of construction, got to the substance of existence in itself.[25]

Emergence applied to thinking about all sorts of things that took place, many of which had been difficult to account for with a causal explanation that was clear and credible. From brute events in nature to exquisite emotions and artistic expression, astonishing alterations, unexpected differences, surprising transformations: all of these *took place*, and the taking place appeared to be an emergent event— water froze solid, a babbling child began to speak, a blank canvas filled with an inspired artist's vision. How could state B follow from state A when the two were so different? Throughout history, that question had invited diverse explanations—among them, magic, divine interventions, and theories of emergence and self-organization.

At the start of the twenty-first century, neither magic nor divine intervention impressed many as having much explanatory power; emergence, self-organization, did. An explanation of how one condition emerged from another through self-organization did not exclude finding some causalities operating as the transformation was taking place, but emergent self-organization could have interpretative and explanatory implications that would be very hard to grasp by concentrating on the operative causalities alone. Self-organizing behavior usually involved a type of phase transition in which the emergent state seemed discontinuous or hard to anticipate

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[25] *Sojourner*: Why are you calling the difference between thought and lived experience to our attention here? Is it to remind us in Kantian fashion not to confuse descriptions of historical phenomena with claims about things or events themselves?

» *Commoner*: You have been paying attention. Ideas about emergence are, like causal explanations, a way of interpreting phenomena. In Carlyle's time, ideas about emergence, and how it took place, were relatively new, although the phenomena that these ideas might interpret have been taking place throughout nature and historical experience. Emergent occurrences were not new, but theories of emergence, controlled by Kant's third analogy of experience, not the second, were relatively new and coming into increasing use.

from its antecedent. A very simple physical phase change occurred as water would boil away as steam or freeze into ice. A condition of disequilibrium, a state of chaos in the interval between an initial equilibrium and the new equilibrium that follows characterized a phase transition.

Kant did not say anything about self-organizing transformations, even though his third analogy of experience, "the principle of simultaneity according to the law of reciprocity or community" would become useful in explaining them. Perhaps in his time, such transformations were hard to distinguish from the appearances of magic and divine interventions, which left the wondering curiosity not piqued. Kant was clear, however: causality did not give rise to time, but the reverse. Causality required a particular kind of relation in time—a sequential relation, in which a prior state necessarily determined the succeeding state and thereby linked the two states via cause and effect. But time permitted not only sequence, but simultaneity as well. Where and when simultaneity pertained, reciprocal interaction was the only way to interpret the actions taking place.

Presumably, in principle, an observer could give a causal account of any observable phenomenon that was taking place in time. Only, like the Ptolemaic description of the solar system, the account could get complicated. That was where principles of emergence and self-organization entered in. An example might start with a bunch of birds, randomly wandering about on a field, pecking away. One would suddenly take flight and the rest would follow and instead of continuing in flight on their random ways, they would start to swoop about, flying together as a flock, seemingly coordinated by a masterful leader—do this, not that, to the right, not the left, up, then down, loop left, and follow me! To account for all this as a sequence of causes and effects would be overwhelmingly complicated. Instead, one would do better to account for the collective behavior as a self-organizing process. Each bird adopted a course internally guided by a few simple control algorithms indicating how it should react to objects, especially other birds, that were at some particular proximity and relation to it. A flock emerged and soared because the numerous birds comprising the flock each spontaneously guided its flight according to these algorithms, with the dynamic flight patterns characteristic of their flocking self-

organizing from the sum of the moves taking place.[26]

Early in the twenty-first century, drivers still controlled their own cars, giving rise to countless self-organizing effects. Traffic ebbed and flowed, speeding along or crawling in a traffic jam, as drivers formed and used simple control algorithms factoring together speed, proximity, trajectory, road surfaces and lane widths, weather conditions, lighting, assumptions about the predictability of behavior by others, a sense of relevant reaction times, and the like.[27] More complicated activities also emerged in this way as the person integrated numerous co-existing factors into a judgment of what to do, with those different personal judgments self-organizing into complex, collective occurrences. Lots of occurrences in history and education took place through emergences of this sort, in which the pertinent networks and active algorithms were far more complicated than those enabling birds to flock or traffic to jam or flow freely. In these cases, however, and innumerable others as well, the reciprocal dynamics of self-organization would achieve results with greater simplicity, surety, and effect than could an apparatus that causally produced its effects through a sequence of determined operations, each occurring, from past to future, by some wondrous mechanism of cause and effect.[28]

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[26] *Digger*: Computer programmers, who at first assumed that some really complicated sequence of causes enabled a lead bird to direct the actions of each bird in the flock, were surprised when it turned out they could simulate flocking behaviors on graphic computers with programs consisting of a few lines of code. See the site *Boids* by Craig Reynolds (http://www.red3d.com/cwr/boids/). *Turtles, Termites, and Traffic Jams: Explorations in Massively Parallel Microworlds* by Mitchel Resnick (1994) was a useful introduction to self-organization in education in connection with pedagogical strategies for the use of Logo, the programming language widely used in school in the last third of the twentieth century.

[27] *Sojourner*: Someone once explained the term "rubber-necking" for looking at something you shouldn't as the old-time term for drivers slowing down to gawk at a wreck or police stop along the road, triggering a big traffic jam. That's the kind of decision algorithm you are describing, right?

» *Digger*: Precisely.

[28] *Sojourner*: But couldn't people explain rubbernecking as an effect on drivers caused by the wreck on the side of the road?

Instances of emergence usually occurred at what Stuart Kauffman, a turn of the twenty-first-century theorist of self-organization, called "the edge of chaos," a limit on the stability of a functioning structure or order, beyond which it must undergo an emergent change of phase.[29] Often a system that has reached such a limit will persist at the limit in a significant period of latency, seeming to absorb further stimulus to change with nothing seeming to happen until, after the lag, the phase change sets in. An emergence took place as a significant change of phase, which would occur at a systemic limit after a period of latency, in which the system absorbed the energy needed to break the controlling relationships in force in the status quo ante.[30] Hence, the freeloading system was persisting long after it had achieved its historic values by accelerating productive capacities to a point

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» *Digger*: Yes. But remember that experience is subject to multiple interpretative rationales. In this case the causal interpretation is possible, but it would be wise to ask whether the slowing down was primarily the result of a sequence of necessary connections in time or the outcome of simultaneous interactions between things co-existing in time and space. Clearly, it would be causal if the wreck suddenly happens and cars immediately behind it have to slam on their brakes, with the slowdown rippling backwards through traffic. But if the wreck is sitting there on the side of the road, surrounded by tow trucks and police cars, but not blocking traffic, we might better say that the slowdown comes from the prurient curiosity of drivers, a kind of compulsive decision algorithm, interacting with the wreck, as they want to see what happened.

[29] *Digger*: During the 2002/03 academic year, Carlyle had a sabbatical in which he studied ideas about emergence, self-organization, complexity, and chaos theory intensively, finding Stuart Kauffman's *At Home in the Universe* (1995) particularly stimulating.

[30] *Commoner*: From our vantage point of hindsight, we can see that the Stabilization was such a change of phase, dangerously delayed by historical lag until triggered by the convergence of environmental instabilities, resource depletion, mass migrations, a pandemic, and severe economic depression. We must never forget how close humankind came to catastrophic regression. No one anticipated that people would use, in the midst of chaos, the communication and transportation networks linking the cities of the world to constitute the Global City-State, as a means of managing the comprehensive commons while their national and international institutions disintegrated.

where sufficiency was feasible for all. Eventually the internal contradictions would be too much and a catalytic crisis would break its internal cohesion, and emergent change would eventuate.[31]

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[31] *Sojourner*: A while back when I asked what you meant by "critics," you explained that many shared views without being able to fully recognize or acknowledge their commonality. Wouldn't a shared awareness become more and more evident over time, allowing them to adapt basic historic structures without things having to come to a crisis?

» *Commoner*: We expect that to happen now, but are never sure. That is why we deliberate. Prior to the Stabilization, real deliberation was more difficult. Even the US Congress became useless as a deliberative body early in the twenty-first century. And even worse, the Supreme Court, where Justices seemed more and more to simply enunciate their pre-conceived opinions. A system of enclosures in enclosures entangled everyone, even people who experienced the great complexity of separate structures as deeply alienating. Each structure had its interests and perspectives, making it hard for people to understand and to deliberate effectively together. The enclosures had formative power. An insider in one place was an outsider in another place. Almost no one realized the disproportion between the little world, in which he was an insider, relative to the vast complexity of places where he was an outsider. Even media moguls had a limited power to control opinion, and in 2011 the empire of one of the biggest, most assertive, Rupert Murdoch, almost came unraveled because the mogul and his minions had failed to sense that they had limits on their power.

And sloppy standards exacerbated problems of structure and scale. Multitudes spoke, each with a miniscule public voice. Attention would rush from one hyperbole to another. Frivolous, unnecessary communications met no stigma. Many deemed deceiving the public for a cause to be a virtue, especially if it succeeded or tried to right some wrong. Distinctive patterns of interaction built up, social networks, helping people to identify their friends within the dark, anonymous noise, saving people in agreement about their ideas from the burden of struggling wastefully with anything with which they might disagree. Even natural allies in the conflict of opinions found it hard to recognize each other. For instance, theorists of the commons like Michael Hardt and Antonio Negri, who had left-wing materialist origins, had difficulty communicating clearly with academic and legal theorists whose concern for the commons began in thinking about intellectual property or about ecology and the sustainability movement. Many people would have probably been happy to restructure the organization of public life through small, incremental steps, no crisis added, but such a course was

Hopes for change, not in the least predictable, at least seemed possible. The present order, apparently so strong and rigid, so self-reinforcing, could crack and decline with a significant change in the self-organizing choices people made. A different order would emerge if economists applied a rational choice in calculating costs and benefits with heightened awareness that they could not reasonably exempt large externalities from the accounts of costs and benefits, both economic and pedagogic. The burden of existing externalities would continue to grow, and a tipping point might arrive with a transition to a new pattern of valuation emerging from the unpredictability of mounting chaos. To be sure, no one could know when or if the conditions for the transition would be at hand. It was unlikely that enlightened criticism by itself would trigger emergent change, which would take place in a real historical crisis. An actual chaotic situation would be intrinsically very dangerous and could eventuate in a terrible regression, rather than some condition of universal solidarity in a global commons. Such uncertainties were the risks of history. Prudence suggested that effective criticism prior to the chaos might increase the probability that a desperate resolution of it would be an advance, not a regress.

We know that the Stabilization, thankfully, did take place at the point of dire need, and with it, the Global City-State emerged, quickly to flourish. In retrospect, we can see how through the twenty-first century the conditions for a different way of life were slowly building up. Much was out of joint. But urbanization continued apace, the world around, and those centers of urban life became more and more fully linked together through improving networks of communication and transportation. For practical purposes, those linked cities became one complex city girdling the globe, home to most people. The global city effectively surrounded all the interstitial areas, which functioned as its arable land, providing food and raw materials for a universally urbanized way of life.

Wherever people lived, they lived in the city, or within its sway, acculturated to the great urban commons. And in living on that commons, wherever they were, increasingly they shared the same, basic urban interests. These interests naturally conduced to ecological and material efficiency and favored investment in

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impossible because voices of opinion were isolated and drawing a reasonable consensus together had become infeasible.

effective infrastructure, public amenities, and cultural and civic services. The universally shared urban interests built up and eventually became the basis for the human solidarity that all of us enjoy in common since the Stabilization.[32] Decade by decade through the twenty-first century, this urban order build up, more or less imperceptibly beneath the shouts and murmurs of national and commercial life. As persons lived, immersed in urban circumstances, they each formed a sense, both tacit and explicit, that

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[32] *Commoner*: Through the twenty-first century, more and more people were finding the urban interest to be a better basis for considering public policy and service than the national interest. The city—the place where people of diverse interests, skills, and purposes interacted with one another—could naturally integrate the heterogeneity of the world into its imagined community more effectively than could bounded nation-states, which were ideally populated by abstractly similar citizens, each of whom incarnated the nation's traditions, culture, and ethos. The city was an actual place where innumerable interactions gave rise to the vital substance of people's lives. Even those who lived in the "country" were people who shared the urban style of life and worked in the urban economy. The city was the meaningful commons alive for all, prizing diversity, the locus of common, public institutions—parks, museums, hospitals, offices, stadia, libraries, restaurants and cafes, schools and universities, theaters, exchanges, and clubs. In the city, people worked, played, shopped, and visited, interacting together; the city was a place of meaning, multiplicity, and memory, the locus of full, efficient living. It was a pedagogic place in which people learned that the character and quality of their public resources vastly surpassed the paltry things that each might own. There together people enjoyed amenities, a true commonwealth, far exceeding what the richest souls could ever gate off in a private preserve. This city girded the globe, its many locations joined by air, road, rail, and water. Each urban citizen had tangible interests substantially the same as those of all other urbanites, whether here or far, far away. Under challenge, suddenly in historic time, competing national interests and the institutions built to serve them ceased to command either attention or allegiance, as the people of the world reordered their lives within the Global City-State.

» *Sojourner*: I find my reflections in response to the Historical Commons inspiring as they bring to life this astonishing emergence of humanity's shared, inclusive interests. The cosmopolitanism of the ancients was a wonderful idea, but the story of how it slowly, unpredictably became the concrete reality of our lived experience is far more important to the effort at just self-formation that each of us pursues.

they had important interests as inhabitants of the city, citizens in a very basic sense, distinct and perhaps stronger, than their interests formed through discordant national identities. When convergent disasters snapped the old world-system into chaos, people spontaneously renounced the decision patterns that had made its institutions work and they started to act in ways that quickly made the emerging Global City-State a formal reality. No one fully, precisely predicted what took place. But the thoughtful consideration of possibilities ahead of the chaos certainly helped to prepare for its emergence.

We are older, historically speaking, for we view these upheavals in retrospect, and we can be grateful that looking at life in prospect, people felt reassured that an open culture of solidarity in the commons, in circumstances that they could not explicitly anticipate, could prove possible nonetheless. Their utopian hopes worked to inform emergent actualities.[33] Although they did not live to see those hopes come to fruition, we are the beneficiaries beholden to their having resolved their crises of confidence, striving against their time in the service of possibility. That enabled them to engage in speculating further how educational emergence might be understood and supported by people who weaned themselves from strategies of enclosure. Proudly, they provided no plans, no programs for ready implementation, but they did keep the human mind open. And when the chips were down and the unexpected prevailed, humanity needed, above all, its open minds.

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[33] *Digger*: It is interesting how, with the Stabilization, the Utopian idea has somewhat come down to earth. From its beginning, starting with the great passage at 592 and continuing to the end of Book IX of the *Republic*, Plato put the Utopian idea forward, not as a program that people could collectively put into operation, but as a principle helping to guide their personal decisions in concrete situations. "Perhaps there is a pattern of it laid up in heaven for him who wishes to contemplate it and so beholding to constitute himself its citizen. But it makes no difference whether it exists now or ever will come into being. The politics of this city only will be his and of none other." Carlyle thought that Karl Mannheim, Ernst Bloch, and Herbert Marcuse propounded significant Utopian hopes for preserving the possibility of humane initiatives under deeply alienating conditions.

5—Educational Emergence

Carlyle's papers include a compressed, formal statement of education, as he understood the term:

> Education is an ongoing emergence of vital capacities taking place as the person, from infancy on, acquires her instantiation of human culture.

Education had an emergent character. It was not a linear function of the inputs into it. This definition of education made obvious why one could not situate it uniquely in the school, for education took place through the person, wherever the person was, frequently counter to the ministrations of forces in her circumstances. This definition also showed why one should not espouse a full deschooling movement. Education, like nutrition or locomotion, pervaded human life, and circa 2012 the experience of schooling was an element in the lives taking place for all young persons, nothing more, but not less. What happened in schools, like what happened in all the rest of life, had a tangential relation to the emergence of human capacities most significant for the person and her instantiation of human culture.

Key terms in this definition—emergence, vital, capacities, acquires, instantiation, culture—had special meaning. These terms had general meanings, but some had more specific significance for Carlyle, which we should try to grasp. From the age of 20 to 30, Carlyle had pursued an all-out engagement in self-formation, concentrating on thinkers worked in the style of Kant's critical philosophizing, asking how different aspects of human activity and culture were possible. Neo-Kantians, as many thought of themselves, had wide influence in the late-nineteenth and early-twentieth centuries, particularly in Germany. Carlyle studied them, particularly philosophers of history and of life, thinkers like Wilhelm Dilthey and José Ortega y Gasset, especially the latter. He immersed himself, reading them as educators.

In this youthful engagement, Carlyle was struck by the way they accepted Kantian phenomenalism wholeheartedly by taking lived

experience—life, not as an observed object, but as the immediate actuality of one's living here and now—to be the ground for all thought and action.[1] Hence, in a phrase like the "emergence of vital capacities," the words had somewhat special meaning. By emergence, most people would think of an emergence into the world of observable things, at least some object on a computer screen, like the Logo turtle or the flocking Boids, doing something out there in the world around us. But for Carlyle it meant an emergence into life, into the immediacy and actuality of lived experience, in the thinking, feeling, doing, choosing, hoping, as it was all taking place in a person's life. And "vital capacities" were not external, observed processes, the functioning of which a researcher might analyze and describe, say digestion or sight. Vital capacities were the actuality of these capacities in the lived immediacy of life, ingesting, digesting, excreting, smelling, tasting, seeing, hearing, walking, talking,

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[1]   *Sojourner*: One more time with feeling! With phenomenalism, they were dealing only with things about which a person could say here is evidence apparent in my experience.

»   *Digger*: Of course there could be a lot of disagreement about what is and what is not evidence. It provided no boundaries, as much as a centering, relative to which there would be a horizon, which might appear quite differently from one interpreter to another. We should look at neo-Kantianism as historians—it is an intellectual development nearly a hundred years after Kant's work. The historical influence of someone like Kant would be less in a consensus that he got all the details just right and more in his exerting a focusing effect on later thinkers. One Kantian focus, a very important one for neo-Kantians, was to put *experience* at the center of reflective attention. The basic German term was *Erfahrung*—Kant's three analogies were *die Analogien der Erfahrung*. The focus on experience pulled in another term for experience as a topic of concern, *Erlebnis*, which indicates less a matter of conscious experience and more an experience one lives through, or lived experience. It was important as the neo-Kantian sensibility expanded out to encompass interpretive activities in literature, history, and the social sciences. The first major book by Hermann Cohen, one of the important neo-Kantians, was *Kants Theorie der Erfahrung* (1871), and one of the more influential works by Wilhelm Dilthey, a major thinker, loosely a neo-Kantian, was *Das Erlebnis und die Dichtung* (Erlebnis and Poetry), which brought together essays published in the 1860s and 70s. A third term, *Praxis*, professional or practical experience, also became important, particularly for thinkers who mixed Marx with their Kant.

thinking, fearing, arguing, believing, savoring, pitying, admiring, hoping, loving, valuing, aspiring, wondering, choosing, exercising, in sum, all the different capabilities that humans, fully realizing their potentialities, exercise in their lived experience.[2]

5.1—Life

Carlyle had a rather distinctive way of understanding all these vital capacities—the capabilities made manifest by the many verbs indicating what people do in living their lives.[3] Several lines of

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[2] *Commoner:* As we delve more deeply into the specific meanings of Carlyle's definition of education, we will see the grounds for an important transformation of the problem of justice, away from political economy towards education, and away from the dilemmas of distributive justice towards those of formative justice. This shift has served as a significant ground for the emergence of general solidarity on the commons. As Carlyle saw it, distributive justice tried to legitimate the results of a zero-sum game of distribution—who merited what portion of scarce goods—making solidarity between winners and losers difficult, despite the patina of justice. Formative justice had to do with the sound integration of each person's many different capacities and interests and did not put each in a zero-sum competition with others; each person or group contained relative to itself the problem of formative justice. How should a person allocate her limited energies and capacities to achieve her most meaningful potentialities? Carlyle thought that this question had been the central question in post-Kantian educational theory, especially in German educational thought in the first third of the twentieth century, work that had been cut off historically by Hitler and the destruction Nazism wrought. In Carlyle's time, rather similar ideas were developing in Anglo-American thought in the so-called "capabilities approach" to questions of distributive justice. Carlyle educational theorists could greatly strengthen this approach by paying more attention to the early twentieth century work of people like Ortega, Max Scheler, Ernst Cassirer, and Helmuth Plessner. It would help repair the damage wrought as the traumas of the mid-twentieth century had broken later humanistic educational efforts off from their most significant historical roots and resources.

[3] *Commoner:* One of Carlyle's literary quirks concerned the importance of verbs. And as we will see, he brought his concern for the importance of verbs to the fore in thinking about human capabilities and capacities. As nouns, the terms "capability" and "capacity" made him uneasy, for he feared they might discourage people from sensing their agency in thinking about their capabilities and capacities. Writers paid too little

inquiry had converged in understanding how capabilities organized themselves in lived experience—self-organization, network theory, and the neuroscience of consciousness. It was not a matter of trying to advance the frontiers of understanding in these areas, it would require many decades of further research to answer the fundamental questions about these. But some important implications for education seemed clear. Most of the work on these topics then becoming available has subsided into historical anonymity, but a few of the writers still have some resonance—Stuart Kauffman, Gerald Edelman, Jean-Pierre Changeux, Mark Newman, Duncan Watts, Francisco Valera. The ideas they and others were developing had something emergent to them, a scope and fecundity that required a basic rethinking of education. Someone like Carlyle, well versed in intellectual history, was even more emboldened because research into self-organization, networks, and neuroscience generally critiqued the behaviorist breaks with tradition and worked to extend powerful currents of historical thought. For instance, in the context of these ideas, Hegel's *Phenomenology of spirit* was a marvelous elucidation of the self-organization of mind and the concept of *Aufhebung*, central to it, still provided an illuminating

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attention to verbs, especially when thinking about various forms of acting. Nouns concentrated thinking on substantives, something that "stands of or by itself; independent, self-existent, self-sufficient" (OED). Gerunds were better. Obviously, people neither could nor should do away with abstract nouns representing different forms of acting, but given a choice between a noun and a gerund, the implications of the gerund tended to accentuate the active process over the *ex post facto* result. To instance it, think about the phrase "human thought." It conjured up an image of the accumulated body of thoughts that people had generated, while the phrase, "human thinking," associated more strongly with the process of thinking that humans characteristically engaged in. Thought, as an *ex post facto* result of thinking, would invite a causal interpretation, while thinking as an active process raised awareness of the role the thinker and the thoughts simultaneously interacting. All verbs of agency conveyed a sense of the agent controlling the process indicated by the verb: someone doing something in a relevant context. Causes could overwhelm the actor's controlling efforts and thus the acting agent did not necessarily always reach his intended result, but a verb of agency always indicated an agent engaging in working towards it. In thinking about reciprocal interactions, people should prefer verbs to nouns, and when using a noun construction, gerunds were more meaningful than substantives.

description of fundamental human capabilities emerging through the interactions with the self and circumstance, taking place in lived life.[4]

As actuators of life, vital capacities were, of course, grist for biology, but, an expanded biology. Then people generally considered the two major domains of biological thinking to be evolution and the genome. These commanded great respect, but a third domain was also important although it received much less attention—the study of form in life. Most people encountered this topic through the famous work of D'Arcy Wentworth Thompson, but by the early twenty-first century, the more obscure inquiries of Thompson's German contemporary, Jakob von Uexküll, were gaining prominence. [5] Deeply interested in how living

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[4] *Commoner*: In developing this Working Paper, we have had the work of Kant foremost in mind, but it is clear from the Archive that Carlyle had read Hegel closely as well, especially the *Phenomenology of Spirit*. We will leave it to a subsequent Working Paper to examine the interpretation of Hegel's thought fully. The Archive includes a substantial essay, which was never published, "Notes on Education and Hegel's *Phenomenology of Spirit*: the Importance *des Begriffs des Anerkennens*" (the concept of recognition), drafted in 1981. We should note that what we are explicating here—the *emergence* of human cultural capacities taking place in life—was the same human experience that Hegel described as the human spirit creating itself in the world through a series of self-transformations, which he described with a concept of an *Aufhebung*, a term hard to translate into English. If we play with verbal similarities between English and German, going back to their shared linguistic ancestry, the English cognate to the verb, *aufheben*, and the noun, *Aufhebung*, would be "to heave up" and an "upheaving" or an "upheaval." We will not belabor it here, but we find that Hegel's conception of "phenomenology" throws much light on educational emergence as it has taken place on the plane of cultural history. He presented the self-adducing of spirit through a set of ideal-types derived from human capacities in lived experience, which emerged through a series of *Aufhebungen*, or upheavals, through which one fully developed capacity would transmute itself into another, which would then develop further. Real experience would jumble up the progression, but conceptually the phenomenology was a very powerful resource for understanding the formation of human capacities.

[5] *Digger*: Carlyle had read in Thompson's *On Growth and Form* (1941) from time to time, particularly the 20 introductory pages and the late chapter on the theory of transformations, pp. 1027–95. *The Structure of*

representatives of different species experienced their lives, Uexküll was an exemplar of neo-Kantian biological research. His research concentrated on the relation of a creature to the world with which it interacted.[6] His concern for form in life went beyond schematizing

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Evolutionary Theory (2002, Chapter 11, pp. 1179–1274) by Stephen Jay Gould, brought together concerns about the relation between form and purpose, historical utility, and complexity within the context of evolutionary theory in a very interesting way. Uexküll dealt with these sorts of concerns with less attention to evolutionary explanations of development. While not a skeptic with regard to evolution, he thought that evolutionary inquiries did not optimally clarify important questions concerning the ways living creatures controlled their interactions with their circumstances. The construction of significance was not identical to the question of origins.

During the twentieth century, Uexküll had extensive influence on major European thinkers—José Ortega y Gasset, Ernst Cassirer, Martin Heidegger, Maurice Merleau-Ponty, Josef Pieper, Giles Deleuze, and Giorgio Agamben. For Agamben, see Agamben, *The Open: Man and Animal* (2004); for Heidegger, Merleau-Ponty, and Deleuze, see Buchanan, *Onto-Ethologies* (2008); for Pieper, *Leisure: The Basis of Culture* (1948), for Cassirer, *Problem of Knowledge* (1950). Alain Berthoz, a French neuroscientist of major stature, had edited *Neurobiology of "Umwelt": How Living Beings Perceive the World* (2008), showing the fruitfulness of Uexküll's ideas for contemporary neuroscience. As one of the originators of the concept of *Umwelt*, Uexküll's influence went far beyond neuroscience, but a full awareness of it had been slow to develop. Early in the twenty-first century, two scholarly journals devoted special issues to Uexküll's ideas and their influence in semiotics and related domains—*Semiotica*, Vol. 2001, No. 134, July 2001; and *Sign Systems Studies*, Vol. 32, No. 1&2, March 2004. Needless to say, in the subsequent century and a half, interest in Uexküll's work has continued to grow.

6 *Digger*: In addition to developing the concept of *Umwelt*, Uexküll took a strong methodological position, arguing that how different animals lived life was the proper study of biology. The observer had to do so with careful neo-Kantian attention to multiple sets of phenomenal interactions, *Umwelten*—the observer's own world and those of the beings he studied. Early in the twenty-first century, good translations of his work began to appear, such as Uexküll's *A Foray into the Worlds of Animals and Humans* (1934, 2010). In addition, see: *Theoretical Biology* (D. L. Mackinnon, trans., 1920, 1926), *Umwelt und Innenwelt der Tiere*, (1909) and *Leitfaden in das Studium der experimentellen Biologie der Wassertiere* (1905) by Jakob von Uexküll. *Jakob von*

the body plan of different species to studying how the affordances of that body plan gave rise to a fundamental pattern of interaction, to the living drama of each being's life. Uexküll developed his ideas early in the twentieth century, and they anticipated the cybernetic theories of Norbert Wiener and others, advanced several decades later. This connection, which Carlyle became aware of as a graduate student, stuck substantially in his mind through the next 40 years.[7] By 2012, Carlyle's interest in Uexküll's ideas and his work with educational technologies and understanding of network theory, study of chaos, emergence, and the design concept of affordances could all converge in a deeply considered, unusual synthesis of ideas that eddied here and there in the intellectual currents of the time.

What was alive when one says that life lives? What differentiated the fluttering butterfly in the field—flying, feeding, mating—from the specimen carefully pinned to the felt backing of the classification case?[8] True, the question and its answer were usually

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Uexküll, seine Welt und seine Umwelt by Gudrun von Uexküll (1964) was a limited biography, although informative about his life.

[7] *Digger*: We are including in the Archive an essay by Robert McClintock, "Machines and Vitalists," *The American Scholar* (Spring, 1966), an essay with which Carlyle was familiar. It called attention to the importance of Uexküll's ideas for understanding cybernetic thinking.

[8] *Commoner*: Carlyle initially formed his understanding of life, of living, in studying Ortega y Gasset, and Ortega's interpretation of Uexküll. It accentuated living experience as a dynamic happening, existentialist, not behaviorist: living consisted in the interacting, not the objects of the interaction. In contrast, some of Uexküll's interpreters adopted the concept of *Umwelt*, understanding it as a species-specific environment, as a descriptive conception useful in ethology, the study of animal behavior. The creature would be the thing alive in interaction with its *Umwelt*. Although Ortega did not explain living with reference to Kant's analogies of experience, his sense was that the closer thought got to understanding living through the third analogy, one in which creature and *Umwelt* are fully co-existing and in thoroughgoing interaction, the closer one was to understanding life as lived.

» *Sojourner*: Do I sense an effort on your part, or perhaps it was on Ortega's part, to practice what you were preaching a while back about using gerunds when possible, not substantive nouns?

» *Digger*: Yes, we try as much as possible to use gerunds. The case was a bit different for Ortega, writing in Spanish, which frequently used the

tacit, but whether tacit or explicit, the normal answer was that some thing, some bundle of matter and energy, was alive. Carlyle answered differently: what was alive was not the thing, the body or corpse, but the form, the ongoing interactions of an agent and its circumstances, which had the peculiar capacity to maintain themselves through a significant time and space against the predictable actions of external determinants. Life consisted of formings, self-organizing activity on the network of all things linking all things. Within that comprehensive, universal network, a living form defined a network of self-maintaining interactions, subnets of different, particular types, each of which was capable of generating and sustaining for a time a self-controlled set of interactions. Uexküll's paradigm described these vital formings, these forms of life.

A living form had three main components—a sense world, an action world, and a locus of control, mediating the two worlds with what Uexküll called "function circles," or feedback loops, to use the later cybernetic term. A living form used self-organizing feedback to maintain itself through the interactions taking place with its phenomenal world, its world of sensing and acting.[9] Living forms

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infinitive when English would use a gerund. Ortega wrote voluminously about *"la vida,"* life, which was for him the fundamental ontological ground for everything. In doing so, he penned numerous striking sentences, *"Vivir es . . ."*—"To live is . . ." Translating those sentences with the infinitive construction in English has a striking effect, but it would be a more literal translation to say, "Living is . . ."

[9] *Commoner*: Our commonsense takes this symbiotic interaction uniting creature and *Umwelt* to be bidirectional, a sensing-acting interaction incessantly linking creature and *Umwelt*. In Carlyle's time, even in his own thinking, the primacy of causal thinking, requiring a temporal direction from A to B, prompted people to think of the sensing and acting as something that the creature did relative to its surrounding environment. But understood as a simultaneous co-existence, sensing and acting would involve, as life does, the immediacy of sensing and being sensed, of being at once agent and object of action, having to mediate all sides of it in the heat of the moment. Significant aspects of human cognitive sophistication arose with the building up of mind mirroring, enabling the sensing person to grasp at a glance, her own and that of the other, that she is being sensed and how to respond. Carlyle found Michael Tomasello's work very illuminating, especially *Constructing a Language* (2003) and *Origins of Human Communication* (2008).

were self-constituting networks, systems of control mediating in self-maintaining ways, through rapid, sustained recursion, diverse interactions between co-existing inputs and outputs. The living form comprised its world-as-sensed and its world-of-action. It defined and mediated these through its characteristic repertoire of function circles, with which it used positive and negative feedback to control interacting with its surrounding world of sense and action. The living form constituted an *Umwelt*, a self and its circumstances, the whirring interactions of which were the form's life.
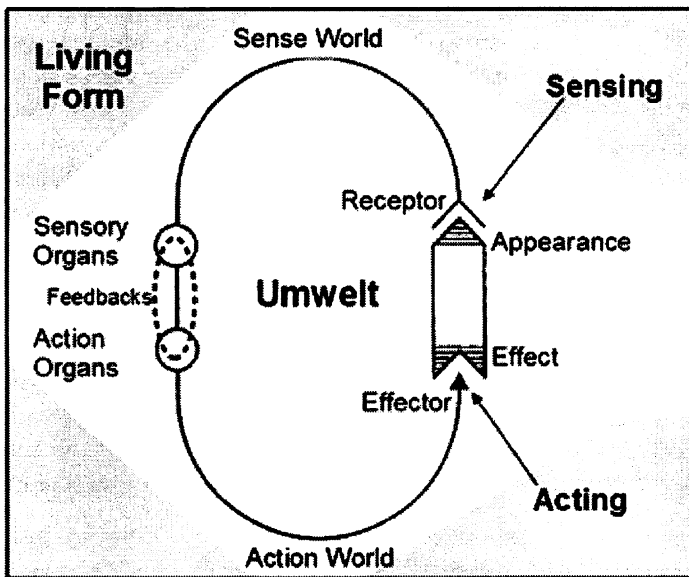
2 A schema of Uexküll's paradigm of life[10]

Living was a locus of self-maintaining control, the scope of which comprised its *Umwelt*. The life-world of any living creature, stood to the world-in-itself, whatever that might be, in the same way that the human world of experience, Kant's phenomenal world of thought and action, stood to things-in-themselves, of which, as Kant had shown, we could have no knowledge. The life of the scientist, and of the oyster whose life he studied, both took place in

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[10] *Digger*: We adapt this schema from one of the slides in a PowerPoint presentation by Torsten Rüting on "Jakob von Uexküll und sein Institut für Umweltforschung–Bedeutungsorientierte Lebenswissenschaft an der Universität Hamburg," which we have found useful in preparing this Working Paper.

distinctive *Umwelten*, each with a characteristic world-as-sensed and world-of-action mediated by a great complexity of links and feedback loops associated with the form of its life—oyster-life and human-life. Although the *Umwelten* of the human and the mollusk were similar in structure, the human life-form was far more complex. Yet both were instances of the basic form of life.[11]

What was vital in the life of any living entity was its self-created, self-developed construction of an active locus of self-maintenance and its active arena of self-maintenance, its *Umwelt*, its distinctive cosmos in interaction with which it worked to maintain itself. Life was not the creature alone, nor its *Umwelt*, but the interacting taking place through the two. What could be sensed in the world-as-sensed and what could be done in the world-of-action was mediated through self-creating, self-maintaining feedback loops, which took form in the whirr of simultaneous interactions taking place on the vital networks of the creature's life. Life as the sum of all this form-taking, and the specific lives of a particular living form, developed as possible forms of feedback, vital capacities, would emerge in simultaneous interaction with corresponding aspects to the world-as-sensed and associated moves in the world-of-action. Each instance of living form effervesced and flourished insofar as it could sustain its drama of self-control. Life was a wondrous vitalization of the world, taking place in the fullness of space and time through which life was transforming the vast, mute chaos into its cosmos.[12]

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[11]   *Commoner*: Here we must remember Carlyle's considerations about enclosure. Many will think in terms of enclosure and think of the creature as inhabiting its *Umwelt*, being enclosed by it, but that would be a mistake, a failure to take into account the function circles, the creature's feedback systems, which distinctively constitute its *Umwelt*. The creature and its *Umwelt* together are the living form and one does not inhabit the other as both co-exist and simultaneously constitute each other. The *Umwelt* is not a pre-existing condition that surrounds the subsisting creature, acting causally on it. The creature and the *Umwelt* are simultaneous and co-existing, with a continuous, unbounded process of reciprocal interaction taking place.

[12]   *Commoner*: We interject here interesting speculations that Carlyle recorded in his *Daybook* about the mind-body problem as people then identified it. He suggested that the traditional formulation of the problem—how the mind got seated in the body—was a question *mal posée*. It arose, he thought, because interpreters considered the whole matter under the principle of causality with its related issues of

5.2—The Inner-outer

Such ultimate speculations aside—they are still mysteries to us, many decades later—the schema for the form of life that Uexküll laid out helped clarify conundrums of human experience, especially cultural and educational experience. Human life was a particular version of the basic form of life, a self-developing, self-maintaining network of perceptive and active interacting from which the *Umwelt* of human life, and human lives, emerged. [13] For humans, this

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enclosure. Instead, they should deal with it under the principle of simultaneity and the idea that form lives through co-existent interactions taking place in the immediacy of the present. The problem was one of how matter/energy could become a substrate for the lives of living forms. "Mind," in an extended sense, what Hegel called *Geist*, was the advent of self-control inherent in living form, just as "body", the *in-itself*, the apparent object that lived, and *for-itself*, the presence apparent through the *Umwelt*, was the substrate through which self-control manifested itself. "In lived actuality, mind (whether mind in general or a specific person's mind) is not in anything, for it is emergent from an active network sustaining a vast complexity of simultaneous interactions. Pursuing the mind-body problem will be similar to asking how the Internet gets into my computer, when in actuality the Internet takes place on my computer when the computer is on and it is on the Internet." Carlyle suspected that matter/energy could exist as the substrate of living form, and with it of mind, because of some fundamental property of the universe, which might become apparent as scientists dug more and more deeply into the mysteries of its constituents. He speculated that the rudimentary potentiality of life emerged, perhaps, through a succession of phase changes, taking eons, from quantum indeterminacy inherent in matter and energy. Indeterminacy might be the ground of the world of deterministic forces and of self-determinate vitalities. Whatever the ultimate source of living forms, he speculated that they became a potential at a higher level as chemical valence, and then evolved through successive stages of emergence into the many forms of life. We, at a mid-twenty-second century vantage point, can neither confirm nor deny his speculation.

[13] *Commoner*: In keeping with current usage, we will primarily use the term *Umwelt*, but readers should keep in mind that it comprises all the three key structures in the basic form of life—a self-maintaining nexus of control with a repertoire of feedback capacities interacting with a world-as-sensed and a world-of-action. The *Umwelt* of life is not

network comprised linkages of many sorts using many modalities, potentially sustaining a near infinity of significant interactions in the human *Umwelt*. The networks appeared to course partially through each person's neural-somatic, internal interactions, their neural nets, broadly understood. But additionally, the interacting links stretched way out via external linkages to nodes of cultural significance, simultaneously taking place in the person's life circumstances. "I am I and my circumstance."[14] Inner and outer were one, a single, dynamic network of simultaneous, co-existing interacting taking place as lived experience. And for humans, their dynamic, cultural systems of sophisticated feedback meant that their lives and the *Umwelt* those lives constituted, their selves interacting with their circumstance, were continuously open to emergent development.

A person formed a capacity by developing an inner-outer network. The inner part consisted of a neural net—nerves and brain channels and regions adapted to setting certain types of goals and processing feedback relevant to them. The external part identified and interacted with signifiers of potential sense and activity in the surrounding world. A crucial link for the inner-outer entailed a creature self-organizing its capacities to convert sense data for inner use, to internally route it through feedback channels it has developed, and to actuate capacities for interaction with the world about it, creating through reciprocal interactions both its inner self and its outer *Umwelt*. To live was to control the ongoing flux of these self-maintaining interactions.

Human sense organs, and neuromuscular systems of action, were like—more precisely, they were—a very sophisticated, organic set

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something independent of it in which the life unfolds; rather, the life constitutes itself and is existent as the unity: Creature-*Umwelt*.

[14] *Commoner*: The phrase came from José Ortega y Gasset, a key conception in his thought. Ortega had had a significant interest in Uexküll's ideas, an influence embedded in this famous phrase from the *Meditations on Quixote* (1914). The paragraph before "*Yo soy yo y mi circunstancia*," Ortega succinctly described Uexküll's basic principles. Ortega avoided the term *Umwelt* (unlike Husserl and Heidegger) but circumstance was a central term for him, one that took on much of its meaning from the concept of *Umwelt*, especially the co-creation of a life from a self and that which stands with it. Note that Ortega used the singular, meaning circumstance in its most general, inclusive form, not a mere selection of circumstances that might at one or another instance be important in a life.

of routers, converters, and switches interfacing the inner and the outer networks, relatively fixed fleshware with largely self-organized protocols of operation. In a person's life, diverse inner-outer networks, some perhaps endowed inwardly with an initial form and structure, had to build their capacities through an extended process of self-organization—closing some channels, opening others, making hubs and distant connections, gaining an affinity for certain forms of feedback, a step here, a step there. Haltingly, the infant self-organized an ability to reach out and touch someone. Thereby meaning and substance took place for the living self and its *Umwelt*. The built environment, all the uses that constitute the human world, the amazing superstructure of mankind's cultural creativity, have taken place, as humans have worked, one person in collaboration with another, to create a cosmos in which to live their lives. All this was the coral of humanity—the slow, accumulated accomplishments of self-regulated interaction on the inner-outer networks of our lives.

In our time, we commonsensically experience many activities—speaking and listening, writing and reading—as characteristic inner-outer interactions through which our lives take place. These are emergent phenomena, which we regulate more by principles of control, less by those of cause. Should a person try to grasp the causal determination of speaking, say, in her lived experience, trying to see herself causing herself to say whatever it is she is going to utter, she will not be able to do so. Before she can find its cause, the word appears. Instead, a person experiences her speech—more properly, not speech, but speaking—as a capability emerging out of complicated network interactions, controlled dynamically through positive and negative feedback. Particular words emerge from the reciprocal interacting of all the potentials of language at the speaker's command, and all the affinities, intentions, feelings, expectations, and who-knows-what coexisting as her speaking is taking place.

5.3—Control

In Carlyle's time, people generally tried to understand such capabilities as the products of sequential causalities. Again, we meet here the primacy of causal explanation characteristic in the modern era. Like some others, Carlyle was beginning to wonder to what degree people would be able to reduce reliance on the concept of

cause in thinking about what takes place in life, and perhaps to use the concept of *control* more fully. The intellectual climate of the time was strangely hostile to the concept of control and he half-seriously wondered whether that hostility arose from a chronic preference for the passive voice so many writers had. Speaking of control in the passive voice made it appear as something that happened to a person, not something the person did. They needed a dose of Epictetus and his meditations on things-in-our-control and those that are not!

Uneasiness with the concept of control in the modern era was a symptom of the characteristic preference for causal reasoning. As a phenomenon, control took place through reciprocal interactions, not causal action, and in self-organization and self-maintenance, control had vital significance for the self, for the point of agency at the locus of control. But control, understood as a technique for use in a causal system determining the behavior of an object to be acted on, was less benign. In a civilization preoccupied with causing this and preventing that, attention gravitated, not to the locus of control, but to its inputs and outputs. What input into the control dynamic will cause its output to be the one we want?[15] People felt that control

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[15] *Sojourner*: Was this the question at the base of the various strands of twentieth-century behaviorism in psychology and social science?

» *Digger*: Yes. Behaviorism essentially privileged inputs that appeared to correlate predictably with particular outputs. As a result, a complex capacity for exercising control appeared to function as a predictable relay, a "black box," the operations of which did not matter.

» *Commoner*: Serious problems arose because highly specialized understanding of control had both deepened and broadened, with the use of control systems extending greatly through the workings of the built environment. But general public discussion of the roles control played in life, and its importance for all the many forms of human well-being, had lagged seriously behind. Many people seemed to fear the topic and repress it from consciousness. Hence, both public opinion and policy on complicated issues such as the business cycle, health care, resource management, and global warming—all in actual fact, complex issues of control—turned on simplistic conflicts over what measures not to take. *Let it be! Laissez faire! Cut taxes so governments cannot act.* Such doctrines constitute therapeutic nihilism, and they belie the faint-hearted secularist wishing for the succor of a beneficent deity. In situations that require the exercise of control, the refusal to do harm will also do no good. What happens becomes random. Sooner or later, people will pay terrible historical costs for their inattention.

would generally be something being done to them. They feared control as a conspiracy by hypostatized forces out there to control the outer and inner life of the meager self. Of course, as we are fully aware, control was not the work of hidden forces acting mysteriously on living people, but something a person did for herself and something people did collectively for themselves— coping dynamically with the play of circumstance in order to flourish in life. Nor was control something that existed only on the plane of high consciousness, personal and public: it was the basic activity of all living organisms.[16]

It is clear to us—in the living of life, most of what a being does, it does through the exercise of control processes rather than the activation of causal actions. Control seems essential with respect to what takes place in life, to living it, although control is not unique to the realm of animate life. Control processes pervade physical nature as well.

During the decades before and after the turn of the millennium, understanding of control processes in both the physical and the vital world rapidly deepened. To some degree, the digital revolution undoubtedly helped.[17] Large-scale computation aided greatly in the

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[16] *Sojourner*: The exercise of control is so basic to almost everything a person does in life! No wonder the times became chaotic if people kept trying to use control systems as causal mechanisms. Why weren't people paying more attention to problems of control?

» *Digger*: It's the old saying—a boy with a hammer only sees nails! Early sociologists and students of management, like Edward A. Ross, concentrated on how beliefs and techniques controlled the activities of other people, popularizing the idea of "social control" as a powerful set of forces determining people's behavior. The management boys took it from there. Critics and the public misconstrued control as something one did to others, or suffered at the hands of others, and consequently, in late modernity people feared and distrusted the idea. Hence, for many decades, the informed public deeply misconstrued the great classic study by James Beniger, *The Control Revolution: Technological and Economic Origins of the Information Society* (1986). It showed effectively how essential the various forms of control are to living life, yet when it appeared, reviewers strongly criticized it and the book largely faded from the attention of thoughtful readers until recent decades. As Beniger explained, control is the fundamental activity that living forms engage in as their lives take place.

[17] *Digger*: A boy with a computer only sees interactivity.

apprehending complex interactive phenomena. Theorists became
adept at using principles of recursion in explaining and designing
complex systems. Carlyle participated in these developments and he
thought carefully, in his favored Kantian framework, about how a
process of control differed from a parallel causal action. The causal
actions, properly a sequence of action from prior A to a subsequent
B, needed to anticipate pertinent contingencies prior to the fact, for
time's arrow was irreversible. The control procedure, taking place
through reciprocal interactions co-existing in time and space,
needed only to set a goal and to provide negative and positive
feedback controls relative to the goal. In an era in which people held
causal reasoning to be primary, they had found teleological
explanation to be meaningless, for with causes moving from present
to future, a future goal had no path through which to influence an
outcome by causal action. The intellectual change that was
beginning to emerge rehabilitated a teleology, not one of final
causes, but of operative goals controlling highly complicated
interactions.[18]

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[18]   *Sojourner*: OK, but could I have a little more background here. I don't
understand why sophisticated thinkers in the modern era had trouble
with talk about function and purpose in the world. What was the
problem?

»   *Digger*: The problem arose in the course of intellectual history. Pre-
modern thought largely operated, in one way or another, with the idea
of a final cause, some sort of originating deity that created the universe
and all within it and did so with some purpose, which the universe and
all within it would serve. Pre-modern reasoning would imbue the
universe and all within it with purpose usually at the point of origin as
in Judeo-Christian-Islamic monotheisms, and sometimes at the eventual
destination in conceptions in which the universe is a vehicle through
which a deity creates itself. Modern thought put constructs of a final
cause into doubt by asserting that it was moot, something beyond our
possible experience, whether at a postulated origination or a
destination.

»   *Sojourner*: I can see how reasoning like Kant's, as we have discussed
it, makes it impossible to work back through a chain of causes to one
masterful original cause that imbues all existence. Human experience
won't have a vantage point to observe that from. But what was the
problem with our being part of a self-creating deity where all kinds of
current purposes get wrapped up into an eventual, ultimate purpose?

»   *Digger*: That is where the historical part really comes into play. We
have been suggesting that during the modern era, causal reasoning had

For instance, to heat a house through causal reasoning, one needed to know the rate at which a furnace could add heat to the house, how much heat it would require to raise the temperature by a desired increment, and the rate of heat loss to the surrounding environment. Then one could instruct the furnace first to run at full capacity for the duration needed to bring the temperature up to the desired level and then at a partial capacity to compensate for heat loss. Even then, it would not work very well without some sort of control mechanism to adjust the instructions to compensate for changes in the rate of heat loss owing to changes in the surrounding temperature and the like. A control system, a thermostat, was simpler and more effective. One would set a desired temperature; if the measured temperature was that minus a minor increment, the furnace switched on, and if the temperature was above, plus the minor increment, the furnace switched off. Causality had to anticipate all contingencies and at the beginning of the causal sequence determine the operations to deal with the contingencies and issue instructions activating those operations. The alternative, control, identified an end state as a goal and used feedback, negative and positive, to approximate the arrival and maintenance of that

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inordinate prestige with even highly sophisticated people tending to assume that causal explanation was the only sound form of reasoning. If someone believed that everything that happened did so as the result of a deterministic sequence of causes, a self-creating purposefulness ran into the problem of *backward causation*. The cause precedes the effect, therefore the result cannot be determining the cause.

» *Sojourner*: So? What about what takes place through co-existent interactions? Isn't that why Kant's third analogy might have been important?

» *Digger*: Historically, yes. And especially for the post-modern sensibility. Paying attention to the third analogy pointed to an alternative to seeing all existence only through causal constructs. And important phenomena brought that alternative to the fore in science. The uncertainty principle and quantum mechanics pointed to the possibility of indeterminate characteristics in the natural order. Phenomena of valence seemed to endow chemical elements with dim precursors of preference, disposition, and choice. Scientists became cognizant of chaotic, unpredictable conditions, changes of phase, emergent transformations. All these developments opened up the possibility of a reasonable teleology, a sense that the phenomenon of life was inherently purposeful and busy over eons creating itself in the universe, on this world and perhaps on others.

goal.[19]

Going back to Kant's second and third analogies of experience, one might say that control took advantage of the third, using successive simultaneous reciprocal interactions of co-existing conditions—measured temperature and the preferred setting. Causal solutions, in contrast, had to deploy predetermined sequential actions carefully calculated to produce a desired effect. Most of what living beings did, especially persons in a complex cultural world, they did by exercising control, with an intended goal, really an overlay of many different intended goals, and swirls of negative and positive feedback guiding activities towards them.[20]

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[19] *Sojourner*: We earlier talked a bit about how we ride bikes by sensing our direction of fall and steering against it, enabling us to approximate the goal of keeping the bike upright. Are there other examples like that?

» *Digger*: Many. As researchers worked out the neurophysiology of human movement, they found that sequences of teleological anticipation and backward causation controlled almost all of it. A person touched something by anticipating where to put her finger and then letting various feedbacks control the resultant movement, guiding it to the intended destination. In this way, a caress took place, as did all other intended action. The work of Alain Berthoz, who explained the role of anticipation and prediction in successful movement in *The Brain's Sense of Movement* (Giselle Weiss, trans., 2000), greatly impressed Carlyle. As Berthoz demonstrated, the postulated endpoint of a movement coexisted with the starting point and the movement was less a sequence of causal instructions than a process of continuous corrective feedback guiding the movement to the anticipated completion. Among other things, Berthoz admired Uexküll's work.

[20] *Digger*: To our astonishment, we have found that Sunday afternoons Carlyle liked to watch professional football, a rough sport of old. Every game, it seemed, would include an instance, usually several, often at crucial junctures, in which a pass receiver dropped an easy catch, one clearly "catchable," as the announcers and their video replay would show. Carlyle recorded a brief reflection on how these muffs illustrated the difference between causal action and controlled interaction.

> A muffed catch should not occur if catching the ball is a causally predetermined act. The receiver would have seen the trajectory and velocity of the ball, sensed his own, calculated their intersection, issued instructions to his hands to assume a set position, and behold—he would make the catch, the whole sequence caused with pre-determinate rigor. But such calculations exceed human capacity. Such activities are possible

If control were central to the living of life in this way, then it would follow that one could best understand a vital capacity as the ability to form an intention, a goal, a purpose, and to use positive and negative feedback to guide oneself to the achievement of the purpose. A person self-organized her capacities through a continuous co-construction with the *Umwelt* of her life. These capacities, and the *Umwelt* integral to them, had the interesting characteristic of being both inside and outside, relative to the objectified person. But the objectified person was just that, a mere object, not the living locus. The living locus was the fusing interaction of self and circumstances taking place through an extending, enduring co-existence. Every life has this inner-outer unity.

We intuit easily how complicated cultural exchanges work through the intersection of self-organized, inner-outer control networks. The emerging understanding of interpersonal communication seemed much more complicated than the old ways of describing it, but the new gave a more intelligible understanding of interpersonal interaction. Communication arose as inner-outer constructions intersected. A speaker constructed what he said through a process of intentional, teleological control, and the hearer constructed what she heard, also through a process of teleological control. Interpersonal understanding and misunderstanding involved

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because controlled interaction radically reduces the complexity of calculation and the actual process of a catch does not require complex predetermination of all the factors relevant to the sequence of action. That is why a catch can fail, and how it often does succeed. In the actual game, the receiver intends to catch the pass: a body in motion and a ball in flight and a furious process of control—perceptions flowing into manifold feedback, positive and negative, faster-slower, higher-lower, an ongoing adjustment of gait, orientation, the extension of arms and hands and fingers, continuously, partly conscious, partly subliminal, all taking place across the duration of the play, so that finally the ball and the hands nestle together in mutual configuration—"What a catch!" And the muff? The eager receiver breaks the cycles of perception, feedback, and adjustment to see where to run when the catch has been made, and oops!—indeterminacy trumps control. Announcers have even developed a control-oriented jargon, praising a receiver's ability "to adjust to the ball."

a co-construction, one speaking and misspeaking an intended meaning and the other hearing and mishearing an intended understanding.

Successful communication was more an induced resonance than a caused transmission. In speaking, a person controlled complicated internal interactions, signals back and forth from lungs, larynx, and tongue to brain, with co-existing, external connections—sound waves in the air and light through which to manifest gestures, which enlisted other external actions and still further sets of internal interactions. What might be the goal in speaking? To utter, from an infinity of possible combinations of sounds, a set of words that approximated the intended meaning someone wanted to convey. And in listening? To construe, from all the implications of the sounds that someone might have heard, an understanding that made sense in the context of the sounds he did hear and the context of their reception, both cultural and existential.

Actual speaking happened; it took place in an immediacy with no evident preceding cause. The speaker might, after the fact, say that he said what he said because he intended to inform so-and-so of such-and-such, but he would not catch the intention in action as an efficacious cause. The closest he would come would be to catch himself in mid-sentence suddenly aware that his words did not convey what he had been intending, leading to a heavy dose of negative feedback, with the utterance stopping, revising course, and starting up anew. The sense was not predetermined in a cause. It took place out of a great network of meanings, fulfilling the intention or not, emerging through dynamic interactions of control.

As with speaking, understanding by the hearer happened, or did not, again without a clear sequence of determining causes accounting in a necessary way for the comprehension taking place. Anticipation of prospective meaning took place for the listener and he would understand what someone had said, not because the spoken words transmitted their meaning in some mysteriously causal way. Instead, the hearer would generate an understanding, as he took in the sounds he heard, judging that they made sense with respect to his controlling expectations and his ability to match the limiting sounds he heard to an intelligible diction and grammar. Saying what was being said was a continuous construction of meaning by the speaker and hearing what was being heard was a

continuous construction of understanding by the listener.[21]

Life, specifically human life, took place through interactions on these inner-outer networks. Controlling feedback loops of great diversity and power mediated co-existing worlds-as-sensed and worlds-of-action, all of it comprising a life, its nexus of self-maintenance, its *Umwelt*. In the midst of the coexistence of all things, with it all consisting in reciprocal interactions, all was contingent. To live—to organize oneself, to maintain oneself—was to achieve self-control. Vital capacities, human capabilities, were distinctive, emergent forms of interaction taking place on the input-feedback-output networks of life. Could people begin to construe their everyday lives in terms of emergent capabilities taking place in their lived lives?

In response, Carlyle mused about how earlier incarnations of humanity had believed themselves to have lived in an enchanted world, one pervaded by various spirits—benign and malevolent, some merely comical. He wondered about the future.[22] How would

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[21] *Digger*: In recent years, Carlyle's hearing had become impaired and in class or in conversation he often had to ask people to repeat themselves. He heard what another said somewhat indistinctly, slowing the pace at which he could grasp the meaning of what was being said until he lost confidence that he was construing the speaker's thought correctly. He would be controlling his anticipation of the uttered meaning, correlating it with the sounds he heard, and as he heard indistinctly, his construction of the sense would become discrepant with what he was hearing. He would become aware of this discrepancy and then have to ask someone to repeat what had been said so that he could get his construction of meaning back on track, much like a typist, who would become aware that he has typed something incorrectly, needing to go back to set the mistake aright and then resume.

[22] *Commoner*: For time to time, Carlyle mused about things he was a bit embarrassed to express. Don't we all? Here he did so in thinking back about how people in ancient times understood their conscious lives, and then thinking forward about how they might do so in the future. Perhaps, he thought, the way the problem of consciousness was being posed wasn't all that better now than the way the Homeric Greeks had done it—a lot of Olympian deities whispering suggestions, both wise and deceptive, to the receptive hero. For both the ancients and the moderns, the problem seemed to be one of accounting for how conscious thoughts got inside of us. In Homer's time and in Carlyle's, people were considering containers and causes, not simultaneous interactions. Did one need to represent the locus of consciousness

everyday life be different for people living in the commons? He
corrected himself, asking how it would differ on the commons, for
people would probably think of themselves as living on it, not in it.
He looked around his apartment, so many rooms filled with
objects—books, tables, chairs, beds, pots and pans, so many things,
even though he and his wife prided themselves on traveling light, as
they would say. He suspected in some real future, people would
concern themselves less with what they possessed and would devote
themselves more to doing those activities on the commons that gave
them a sense of fulfillment.[23]

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within the objectified person? Perhaps consciousness was an attribute
of the inner-outer networks on which our lives take place. In this
understanding, consciousness as a locus of control took place on inner-
outer networks—it consisted simultaneously of the being impressed
and of the impressing beings. It was the locus of both knower and
known; it consisted in the interactions between them that were taking
place. It did not represent an external world in an internal brain. Rather,
consciousness simply was the interactions taking place on the inner-
outer networks; consciousness was what was "on" on those networks.
Sleep, and other unconscious states, involved those networks being
"off." Consciousness did not represent the world in some field of
awareness; consciousness was a significant aspect of one's life, one's
capacity for awareness, in all its multitudinous forms, and everything
with which one interacted in endless different modes. The infant, child,
youth, and adult continually self-organized consciousness forming and
controlling the many different inner-outer interactions taking place in
the course of life.

[23] *Sojourner*: How did the rich and powerful in the modern era understand
the economies of their own efforts and activities? I've read how they
would personally own and maintain up to five, and even more, palatial
estates for their private use, each furnished with lots of fine
possessions. Didn't they realize they were enslaving themselves to a
surfeit of dead stuff? I think shared amenities—of all, by all, and for
all—support a more fulfilling life, even for people who could privately
own many so-called goods.

» *Commoner*: Yes, the real tragedy of the commons was the obstinate
flight from it into cramped and cramping enclaves. Understanding the
structure of aspiration by which people shaped themselves in past times
is one of the fascinations of work on the Historical Commons. We are
starting a major project—*On the Varieties of Formative Justice*—to
assess patterns of constraint and fulfillment cultivated by different
regimens of self-formation in force during previous pedagogic eras. Of
course, many constraints drove compulsive distortions, but the saddest

Already, perhaps some signs of changes in this direction were perceptible, at least where there was modest affluence, a range of public options, and easy personal mobility. People were out and about, trying different things, using public spaces—parks, museums, theaters, shopping centers, restaurants, street fairs, and numerous other local activities. Estimating such signs of change is a terribly tenuous matter, we recognize. But by 2012, an observer could certainly contemplate the possibility of an everyday world, an extension of the world as it is, that was closer to the many-sided humanism that the young Marx had longed for, a world "where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes."[24] That was a worthy goal for a humane education. Life on the commons, Carlyle thought, would extend our natural many-sidedness by fully supporting each person's realization of their multiple capacities for meaningful

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was the chronic failure of leadership by the most advantaged. They wasted a huge amount of effort in accumulating wealth, trying to make it permanent by ending the taxation of huge inheritances. Ironically, all that accumulation became a tremendous burden as steady-state economics took hold. The return on accumulated wealth declined to nearly nothing and the cost of maintaining vast possessions rose as most people judged they had better things to do. The richest one-tenth of one percent is a small percentage of the total population, but a large number of persons—a million on a base of one billion. As the steady state took hold, they found themselves, not dispossessed, but over-possessed, like the English aristocrats in the twentieth century who found themselves with great mansions and no income, owing to decolonization. Aristocrats in name only, they lived, hosting attractions in a democratic tourist trade.

[24] *Digger*: A researcher, Richard Florida, had become quite prominent among those concerned with the quality of urban life for a series of studies such as *The Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life* (2002). The preferred life style of the creative class as Florida described it was very much aligned to what Marx had in mind in *The German Ideology* (1845), I:A:4— Private Property and Communism). Many people were already pursuing the many-sided pattern of activity that Marx had contemplated as the eventual prospect for mid-nineteenth century laborers in agriculture and industry. An observer might well ask whether educational aspirations commonly voiced in 2012 had kept pace with real changes in the material condition of everyday life?

interaction with their peers and their world.[25]

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[25] *Commoner*: At this point, Carlyle included a note to himself in his *Daybook* about the moral psychology of control. It was highly compressed, addressed to himself, not to potential readers, probably noting connections to make in an essay. We reproduce it here because it provides some insight into what he thought about solidarity and alienation.

Control in relation to solidarity and alienation.

- Platonic justice—keeping to one's proper business or function. *Republic*, especially 441c-445e.

- The Stoic distinction, Seneca, Epictetus—things in our control and things not in our control. "Things in our control" do not necessarily work out well; but we are fully engaged in working them out as best we can— distinct from things not in our control, i.e., abandonment of self to the vagaries of fortune.

- Rousseau's distinction between *amour de soi*—a vital, authentic sense of self, one fully engaged in the immediacy of its activity— in contrast to amour propre—a self-observing, de-centered preoccupation with how one appeared to others and might therefore affect them. Immanence, not eminence! *Discourse on the origin of inequality*, note O; *Emile*, Book IV; etc.

Each person conveys an intuition that she lives a complex life. This means that a person is simultaneously exercising many centers or systems of self-maintenance, for instance—internally, a circulatory system, a digestive system, a nervous system, and on;—externally, a great variety of personal, familial, professional, social, economic, governmental, and cultural domains, and on.

Each person sees a human life as a many sided locus of control with characteristic purposes, challenges, constraints, and capacities—human life is a self-maintaining *Umwelt* of *Umwelten*. The challenge is to harmonize all of these, to pursue them all in such a way that each set of means for exercising control is working towards goals and purposes appropriate to it, and integrated together so that the person, (equally a public), can exercise coherent control in pursuit of her overall purposes, all that equals Formative Justice. We get screwed up when there is a palpable discrepancy between our controlling purposes and our means of control.

Solidarity = congruence between the means of control that a living, self-maintaining person can and does use in his activities, especially social activities, and the goals or purposes for which he uses them. Alienation = dissonance between the means of control and the guiding purposes.

Alienated politics: using the means of governance (the means of control available to the whole polity) to advance the purposes of party, faction, or interest (i.e., the purposes of an isolated part of the polity).

5.4—Self-organizing Copings

In a world in which capacities for meaningful interaction were the most important capacities in personal and public life, education would become more emergent and less sequential. Carlyle believed that the basic metaphors through which people understood education would shift fundamentally. The idea of networks would displace that of containers; self-organization—that is, study, in more traditional terms—would replace instruction. The capacity to control a mode of interaction would be more important than the quantity of information that a person contained in her ready recall. The graph of learning would be less the linear ascent of steady progress and more the S-curve of a phase transition as a capacity for control rapidly set in after a period of halting, unsuccessful effort. Chaos, complexity, phase transitions, power laws, critical points, nodes and links, hubs and weak ties, small-world effects, cascades, clustering coefficients, degrees of separation, scale-free networks, random graphs: all these and many more concepts from the study of networks would become key terms in the understanding of emergent education.[26]

Horkheimer & Adorno, *Dialectic of Enlightenment*; Bourne, *Twilight of the Idols*. Instrumental reason perfects means of control while not attending sufficiently to the choice of controlling goals. Can one avoid a hierarchy of controlling purposes? What are the grounds for establishing one?

[26] *Digger*: Carlyle based his understanding of networks on careful reading of *Linked: How Everything Is Connected to Everything Else and What It Means for Business, Science, and Everyday Life* by Albert-László Barabási (2003), *Nexus: Small Worlds and the Groundbreaking Science of Networks* by Mark Buchanan (2003), *Emergence: The Connected Lives of Ants, Brains, Cities, and Software* by Steven Johnson (2002), *Sync: How Order Emerges from the Chaos in the Universe, Nature, and Daily Life* by Steven Strogatz (2003), *Small Worlds: The Dynamics of Networks between Order and Randomness* (1999), *Six Degrees: The Science of a Connected Age* (2003) by Duncan Watts, and *Complexity: A Guided Tour* (2009) by Melanie Mitchell. In addition, he had consulted papers in Newman, Barabási, and Watts, *The structure and dynamics of networks* (2006), especially in the chapter on Models of Networks. Finally, he had been looking through, but had not yet had

Misunderstanding emergent education would occur if people asked too quickly, what its implications were for teaching and learning, the fundamental paradigm of pedagogy as practiced in the modern era. Emergent education did not deny that teaching and learning were important, but questioned whether that pairing was the best foundation for many, perhaps most educational arrangements. Teaching and learning might turn out to be fundamental to schooling and to much of education, but there might be other ways to understand what could and should happen in schools and other bases for improving education as it took place in the living of life. Learning was one aspect, an important aspect, but perhaps not the only important one in the emergence of human capacities. With a more basic, prior understanding of education, one could perhaps see the limits of teaching and learning, showing where it fit into the larger process of education, indicating what it could and could not accomplish well. To get at education prior to teaching and learning, one had to begin with the emergence of human capacities taking place in the living of life.

What was really happening in education? Dominant ways of describing education depicted those who had a body of existing ideas, skills, and values instilling them in children and youths, who lacked them and needed them. Carlyle depicted education as something radically different. It took place as a person self-organized a capacity, an inner-outer network of interaction, in order to partake in a meaningful activity. He thought this self-organizing was highly evident as infants acquired important capacities. Carlyle did not want to say things like, "Education involved teaching or learning a language." This formulation put some language—a hypostatized abstraction—at the center of the process. Instead, an infant first self-organized the capacity to construe meaning in spoken utterances it heard. And it soon self-organized its capacity to utter its meanings in ways others found intelligible. And the process went on from there—self-organizing the capacity to speak and to hear, to understand; to read and to write; over years mastering a full repertoire of meaningful modes of human interaction. With each and every capacity, the key moment would be the onset of control, the projection of a goal, and intention, and the use of relevant feedback, negative and positive, to guide the interaction towards its intended

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the time to study Mark Newman's *Networks: An Introduction* (2010), which was an excellent textbook.

fulfillment.

Ah, what could be better to forestall the programmatic pedagogue than to return to the elemental insight, this time from the parental point of view? We quote from the *Daybook*.

> As parents of an infant know, indeed shit happens! Too often, at times so inconvenient, in situations so awkward. Quickly, parents exhaust the repertoire of putative pedagogies—command, demonstration, instruction, threat, punishment, forgiving affection, eager attention to the faintest sign of a readiness to learn, and finally, silent prayer to a beneficent almighty. Some feign nonchalance, trusting to a Hippocratic determination to do no harm. Whatever. Strangely it seems, whatever the parental pedagogy, shit keeps happening, until slowly, through many trials, and much error, the toddler first gets the idea, sort of, and after plaints—'I can't do anything!'—and pleadings—'I didn't mean to'—gets the knack and masters an elemental art of self-control.

Important capacities emerged in the infant, the toddler, the newly verbal child despite their being very hard to teach. Life was an emerging bundle of capabilities, capacities for perceiving and acting in self-maintaining ways within the *Umwelt*, be it accommodating or discomfiting. Within this vital realm, human life and culture comprised a vast, hard-won network of these capabilities, which people had created for themselves—diverse ways with which to maintain themselves in their cosmos, the human *Umwelt*. Human life, public and personal, exuded and exercised a dizzying array of these capacities—big ones and little one and lots of middling ones. Instantiation of each, its manifestation and control in the living of a life, arose through an emergent re-exemplifying, taking place in the lives of persons and groups. Only the most rudimentary of these were inborn, and inborn only as potentials capable of far greater development.[27] Most were cultural, human additions to self and

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[27] *Digger*: Attention at that time turned to the way physical characteristics, which would seem to be determined by gene pools that were stable across generations, appeared to be surprisingly variable, as if subject to some sort of emergent contextual influences. *The Changing Body: Health, Nutrition, and Human Development in the Western World since 1700* by Roderick Floud, et al. (2012), documented such changes well, somewhat recalibrating nature-nurture debates. Such studies have led to our sense that nature might set an imperceptible boundary on potentialities, which nurture, to the degree

species. Whether child, youth, or grown person, you find yourself immersed in this cornucopia of human possibilities. To instantiate one of them in your life, you must self-organize the capacity, to activate and control it in the interactions taking place in your life.

Humans developed their copings,[28] not through a causal implantation from external sources, but through an emergent self-formation as a new vital form took place in the interactions coursing through the world-as-sensed, the world-of-action, and the various feedback loops mediating the two. Each person grew into her unique selection of capacities for interacting with the world from within, sensing a possibility; probing, testing, exploring it. All this obscure germinating remained slow, laborious, and at best marginally effectual until a certain point of complexity of interaction de-

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that it was sound and sufficient, would permit the person to approach, but never reach.

[28] *Digger*: We introduce the term *copings* here, recognizing that doing so is anachronistic, as this usage of the word did not become widespread until early in this century. We do so, however, emboldened by the following note included in Carlyle's papers discussing inner-outer networks.

> Can I find synonyms for "capacities" and "capabilities" that will suggest more dynamic activity than these nouns do, a word that suggests an agent controlling his perceiving and acting? Perhaps "copings," or "self-worldings," but that is awkward; or maybe even "formings," but that might bias attention towards artistic works. "Copings" would probably be the best. The OED draft for 2009 includes it in the sense of "The action or process of overcoming a problem or difficulty. In later use also: the action or process of managing or enduring a stressful situation, condition, etc.; an instance of this." One could use this sense of "copings" as a more active synonym for "capacities" because we can see all of human culture, the things we do and make, as the fruit of overcoming a problem or difficulty. But in light of the malaise of fearfulness that now has such a deep grip on the English-speaking consciousness, the connotation of "copings" might be a bit too negative. "Coping" has too much of a doomed, tragic feel—like movements by someone in a pit of quicksand. Perhaps a time will come again when people will address the process of overcoming a problem or difficulty without trepidation, experiencing it with confident anticipation as a path to their self-fulfillment. Then they will speak of their copings with a positive sense of self-realization.

veloped, both internal and external. At that point, all the different segments of the nascent capacity would begin to work together and a phase transition would occur—as the birds randomly pecking on the field would suddenly take flight and the flock would soar, so the separate parts come to cohere and to work together. The capacity emerged; its effective use would henceforth take place, becoming fuller, surer, meaningful in living a life.[29]

As a keen student of Rousseau, Carlyle thought humans turned their potentialities into working capacities through stages, each characterized by a cycle: a short, intense period of rapid emergence, preceded by a longer period of latency and followed by an indefinite one of consolidation. Writing about the capabilities themselves—the stages of their irruption into a life, and the cycle according to which their emergence took place— depicted them as ideal types, which stood at a considerable distance from lived experience, abstracted away from it. In lived experience, capabilities were like a performance of a well-conducted orchestra in which many performers played their instruments all together making a harmonious whole. In lived experience, the stages of development took place in each life with unique overlapping, jumbling, and patterning of mutual reinforcement. In lived experience, cycles of latency, emergence, and consolidation might take place in ways quite different than that

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[29] *Digger*: Carlyle seems to have had distinctions between *potentiality*, *capability*, *capacity*, and *coping* in mind, although he did not always stick to the distinctions as if he was using technical terms. *Potentiality* was the most general, often simply denoting a future state or condition that might take place. *Capability* indicated a vital potentiality for exercising a form of control in living life. It was especially a human potentiality for control, physical or cultural, and a potentiality of either a person or a group, which they could have either as a latent potentiality or as an achieved actuality. A *capacity* denoted an actualized capability, one that had emerged into use to some degree by a person or group. It was a manifest capability, not merely a potential one. A *coping*, as we have suggested, was a synonym for capacity, one that put a little more emphasis on the agency employed in it. In addition, a coping was a little more restricted than a capacity in the sense that a coping was integral to the characteristic ways a person or group conducted life, whereas a capacity could additionally indicate a skill or the like that a person or group had but rarely used. These nuances were potentials in the terms although ordinary usage did not always conform to them.

depicted in the ideal-type, yet the functional achievement of the
cycle would become evident in what was taking place. The task of
formative justice was that of the conductor, cueing the part of each
capacity, orchestrating all into a life of chosen sense and meaning.

Human capabilities were self-organizing capacities emerging
into our lives in the course of our recursively exercising them.
Education primarily involved cultural capabilities, the uses of which
were evident in the great record of civilized achievements evident in
historical life. Acquiring and developing the ability to control these
capabilities took place through emergent interaction with distinctive
cultural achievements potentially available to each living person.[30]
A person's essential educational self-development took place as her
cultural capacities emerged through interacting in her expanding
cultural *Umwelt*. Each person dwelt in a cultural *Umwelt*, her
particular construction, a subset of larger, more complicated cultural
worlds, the *Umwelt* of a person's family, community, and beyond,
out to one of all humanity. These surrounding cultural worlds had in
them all sorts of potentialities, or *affordances*, as theorists were
beginning to call them.

5.5—From Merit to Fulfillment

Educational self-development took place as a capacity to use and
control new affordances as they emerged in the life a person lived.
A person could start to extend herself when something sparked an
intuition of possibility—a chance remark, a teacher's instruction, a
friend's enthusiasm, a glimpse of something perplexing, something

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[30]   *Digger*: Early in his career, Carlyle had made common cause with
Robbie McClintock, arguing that educators were too preoccupied with
instruction and were paying too little attention to study, the generic
activity that students engaged in during their educational work, the one
that led to their being called "students." In a substantial essay,
"Towards a Place for Study in a World of Instruction" (*Teachers
College Record*, December 1971, Vol. 73, No. 2, pp. 161–205),
McClintock had shown how the promotion of study had been the
central concern in Western education theory well into the nineteenth
century. Then, a pairing of teaching with learning had come to supplant
the prior attention to study. What civic changes would lead to a re-
emergence of study as the primary controlling capacity in education?
How could people achieve a fuller understanding of how study in its
many forms took place in a person's lived experience?

read, heard, tasted, admired, a ride through a new part of town, some big event moving everyone around her.[31] Possible triggers were endless in their variety and intensity—a person quivered with new interest, anticipation, curiosity, a drive to develop. Humans were ferocious imitators. A fundamental capacity, not unique to humans but very strong in them, crucial to the human capacity to acquire culture, was the ability to mirror other minds, to sense what others were looking at, seeing, hearing, touching, smelling; planning, intending, meaning, thinking, doing.[32] The infant started to mirror the behaviors of other persons around it—emulating, trying out, resisting, practicing, copying. Thus, educational emergence began. Once attention towards a potential capability became active in a child, the child would develop it by building up a new network of control. Slowly, cumulatively, the child—the youth or the adult, for that matter—would link initial elements together, some newly acquired and others adapted from existing skills, until a sufficient basis for initiating and controlling the interactions with circumstance had taken place. At that point, the new capacity would emerge into the person's repertoire of capacities through a kind of change of phase. A person acquired her instantiation of culture by mirroring, emulating, exercising, mastering, and using human possibilities she perceives in her circumstance to be both potential

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[31] *Digger*: A brief, yet powerful essay by Simone Weil, a French thinker of great moral rigor, writing in the midst of World War II, shortly before her death—"Reflections on the Right Use of School Studies with a View to the Love of God" (*Waiting for God*, Emma Craufurd, trans., 1951). "Although people seem to be unaware of it today," Weil declared, "the development of the faculty of attention forms the real object and almost the sole interest of studies." For her prayer was the surest path to fixing attention on the things that matter in life. One way to assess the character and effect of externalities to schooling would be to examine how and towards what objects significant communicators try to direct, and to distract, the attention of young persons. At every level, from the somatic to willed consciousness to the expressed concerns of complex groups, paying attention is fundamental to all self-formation.

[32] *Digger*: Studies by Michael Tomasello were especially valuable in understanding how reading the intentions of others affected the acquisition of language and culture, especially *The Cultural Origins of Human Cognition* (1999) and *Constructing a Language: A Usage-Based Theory of Language Acquisition* (2003).

and desirable. Once a person self-organized her control of a capacity, a long period of its expanding, deepening use could follow.

An ideal-typical cycle of latency, emergence, and consolidation described how acquiring capacities took place in people's lives. Some of these acquisitions involved relatively self-contained skills that a person alone could do for herself, beginning to stand and then walk. Others resulted in complex, inter-personal capacities, interacting with others, specific persons in the immediate milieu— family, friends, neighbors with whom one shared activity, memories, and hopes. Many interpersonal capabilities drew from, and contributed to, hugely complicated collective capacities, the great disciplines of intellect, artistic traditions, and fields of economic, political, and social activity.[33] Although complicated— taking place through countless persons and their circumstances, stretching back across numerous generations and projecting indefinitely into the future of one and all—these collective capacities existed as an active part of a person's life only insofar as the capacity to control what took place within it had emerged in the life she lived. However complicated, these collective capacities were like the flocking of birds, for the continuing emergence of them into human life took place as many different persons each acquired and activated an instantiation of them, one by one.[34]

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[33] *Commoner*: Any body of thought or tradition of activity gained its resiliency and creativity as it continually re-emerged in history through multiple, partial instances. Different persons each imperfectly and incompletely took control of a cultural resource in her life. Consequently, cultural capacities continually changed, developing and sometimes decaying, because persons could not completely instantiate them. These gaps, confusions, and errors were the mutations of cultural evolution, some benign, some destructive, and a few highly creative.

[34] *Sojourner*: I'm beginning to get a clearer picture why, despite a huge effort at formal education in late modernity, people seemed dumbly incapable of thinking clearly about their world. When educators primarily instruct large cohorts of children, imparting abstract summaries of important subjects, and test all of them in unison for the mere recall of items in the denatured subjects, they were neither stimulating nor assisting each child to acquire self-organized control of the capabilities in question. People got information about all sorts of things without gaining much control of important inner-outer networks of interaction in their world.

This instantiation of complex collective capacities through the inner-outer networks of each person complicated problems of political economy and sound civic pedagogy. These collective capacities were achievements and components of the commons, built up over countless generations with all persons making their contributions, large and small. But people could experience their instantiation of these collective capacities as personal accomplishments and feel their own capacity to control a powerful mode of interaction was not an aspect of the commons, but a sign of their personal merit and superior privilege. This experience was a prime premise of political thought in the modern era. [35] Unfortunately, the fact that persons had to master a personal instantiation of a complex collective system of interaction in the world gave them a greatly exaggerated sense of their personal merit, making it very hard to sustain a sense of equity and solidarity in social policy. The Stabilization followed as people recognized that significant accomplishment in the human community arose through the interactive capacities of the commons as a whole, with various favored persons and groups fluxing to the fore as its apparent agents.[36]

» *Digger*: I think you are correct. And informal educators—entertainment, popular culture, sports, advertising—may have seduced and encouraged many young people to misallocate their attention and effort.

[35] *Digger*: An important study by C. B. Macpherson, *The Political Theory of Possessive Individualism* (1962) critiqued the idea that capital, cultural or economic, belonged to persons as the fruits of their unaided labor. Theorists from Hobbes to Locke had worked these ideas out and they had become the groundwork of modern political economy, especially in Anglo-American liberalism.

[36] *Sojourner*: Are you suggesting that in modernity people were so arrogant to believe that apparent eminence, greater wealth, power, accomplishment, resulted from their superior personal merit?

» *Digger*: Exactly. Macpherson gave seven characteristics of "possessive individualism." The third held "the individual is essentially the proprietor of his own person and capacities, for which he owes nothing to society" (p. 263). Few really questioned that underlying idea. Not until much later, did radical thinkers question the idea that persons created and could rightly dispose their capacities and property as they saw fit. The German word for "property," "*die Eigenschaft*," has the etymological sense of "self-creation." Modern class conflict largely preserved the concept of personal property, pitting different ideas about

For the person, the particular set of collective capacities that might emerge in her life was essentially fortuitous, a set of possibilities inherent in the circumstances into which the accidents of birth had thrust her.[37] A person's worth depended on her actual

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how to distribute its fruits within society against each other. Since the Stabilization, we attribute the fruits of human interaction to the commons; property as a personal possession was a useless fiction.

» *Commoner*: The various collective capacities built up through the sum of history vastly amplified a person's inborn capabilities and potential agency. Slowly people recognized that relative to any particular person, the distribution of these capacities was essentially fortuitous, a set of possibilities inherent in the circumstances into which the accidents of birth had thrust one. Merit had nothing to do with any appearance of comparative attainment or stature, measuring one person against another. It had to do with how well one realized the possibilities inherent in the fortuitous situation in which one's life took place. Whether great or small, achievements were part of the commons. Self-realization was the prerogative of each and every person, the essence of human dignity, but realization of the human self took place through and on the commons—by closing oneself off from the commons, one was choosing to live apart, to deny real bonds with others across time and space

[37] *Sojourner*: What would most people in the era of high modernity think about this statement here—that the set of capacities that a person might come to control was essentially fortuitous?

» *Digger*: Interesting question. A lot would scoff. Some who realized they enjoyed many privileges that they in no way earned would say with self-irony things like, "I chose my parents well." But they would often feel that despite having had a head start, they had worked hard and earned a lot of the merit they felt they had achieved. What they would fail to realize is that their accomplishments did not yield a basis for judging relative merit. Each person's life is an effort at self-organization and self-maintenance within circumstances of incredible specificity and mind-boggling complexity. Each life is unique and there is no metric of comparison.

This impossibility of meaningful comparison was beginning to become clear. Intrinsically each person differed from every other person, but those differences were marginal. Decoding the genome showed that each had a unique genetic endowment, but the genetic difference between one person and another was very small, at its extreme numerically expressed by a very low percentage. When persons were fully developed, the differences in their stature, strength, intelligence, natural longevity, and so on were distinct, perhaps on a

achievements relative to her unique circumstantial possibilities. Achieved collective capacities were the historic substance of the commons—the sum, at any particular time, of what humans had achieved through the great historical effort, through countless lives across innumerable generations, to imbue a meaningless universe with sense and value. The world people inhabited, the human *Umwelt*, given in their lives they knew not how, and fashioned for them through the accrued efforts of prior human lives, was the commons. By right, each shared, and bore fully its benefits, tribulations, and responsibilities.

Through the Stabilization, people did not do away with these differences. But they came to see them as fortuitous and essentially irrelevant to the challenge of self-fulfillment on the commons, the vital challenge that constituted the human dignity of each. How could a person sense her optimal potentialities and bring these to full realization? To Carlyle that seemed to be the crucial question educators faced. What would enable a person to acquire the different skills and capacities that she would employ in living a full cultural life? In practice circa 2012, school programs up through the fourth grade or so were` much more appropriately aligned to each child's lived experience than they were from then on, extending through the highest levels of education, when they seemed to impede educational emergence more than they supported it. In the modern era, given the limitations of print-based communications, at all ages instructional programs had substantial value, albeit circumscribed, in helping students in the initial, latent formation of powerful cultural networks. Starting late in the twentieth century, new information technologies were changing the constraints by making all cultural resources accessible to all persons from any place at any time. What previously the school could uniquely do, could take place wherever and whenever people made use of appropriate digital networks. In due course, these changed constraints would be the context for radical transformation of

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ratio of 1 to 2, though usually much lower. Accidents of time and place arising from each person's fortuitous circumstances, uniquely situating each within the commons, gave each distinctive opportunities to select and control particular capabilities from the whole human repertoire. The outcome vastly amplified the apparent differences, one person to another. Original sin, in a manner of speaking, arose as people took these accidents of Fortuna as signs of personal merit or shame.

educational practices.

During graduate school, the concept of a "spiral curriculum," advanced by Jerome Bruner, a prominent psychologist at Harvard, had impressed Carlyle. Any child could learn any subject in some intellectually honest form were its structure and substance framed appropriately. A person would spiral through the full curriculum over the years, returning multiple times at ascending levels of sophistication to the most important subjects and issues of learning.[38]

Carlyle transmuted this concept of the spiral curriculum into what he called a "cumulative curriculum" around 1990 as a means to configure more ubiquitous cultural resources in ways that students could engage, guided by well-put questions. "The curriculum becomes a cosmos of questions to be asked, not a compendium of lessons to be learned." Life challenged each person to pursue a full, expanding spectrum of questions, and the main limiting factors in educational emergence was first, the diversity and intensity of questions that engaged a person's interest, and second, the scope and quality of intellectual resources she could draw on in her pursuit of her engaged interest.[39]

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[38] *Digger*: For Bruner, see *The Process of Education* (1960) esp. pp. 52–4.

[39] *Digger*: Through the 1990s, Carlyle had actively promoted what he called the *cumulative curriculum*, starting when he participated in a technology project, advanced for its time, at the Dalton School, a progressive K-12 private school, enrolling children of elite families in New York City. The cumulative curriculum would consist of a comprehensive assemblage of knowledge and information, well-structured and presented in ways suited for study by novices, general readers, and experts, along with a structure of well-put questions, ones that had driven the historical development of that comprehensive body of knowledge and information. Children, youths, and adults could then study in it all, pursuing questions that piqued their interests, *cumulatively*, without working on enclosed segments according to grade and subject. For a project description, see Institute for Learning Technologies, "The Cumulative Curriculum: Multi-media and the Making of a New Educational System" (1991).

A computer program for group exploration, *Archaeotype*, originated by Frank Moretti, then head of the Dalton New Lab, characterized the kind of question-raising online resource, which would in due course lead to the transformation of educational constraints, but it was very difficult to develop and deploy such programs pervasively

Educators had, as their first task, to configure cultural resources for a person to use as life put questions to her and she then launched herself into the three main stages of educational emergence.

- *Latency*. At first, a person used existing capacities to acquire information and experience that she would incorporate into the emerging capacity in due course. Latency was a long, often frustrating period in self-development. In it, a person took in a lot leading towards a new capacity but could grasp and do little with it. How long the latency period would last was never evident, but after a sufficient build up, prospects would begin to pick up and then . . . .
- *Emergence*. Activation and control of a new capacity took place in a shorter, intense period of self-development. Suddenly, the person would get control of a capacity and would start to use it with effect, as when a child would suddenly get the hang of riding a bike. Depending on several complicated factors—the complexity of the capacity, the range and depth of the latent development leading to it, the centrality of the capacity for what would then take place in the person's life—the duration and intensity of the emergence would vary. Nevertheless, it ended

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in existing school curricula. They imposed an irrational segmentation by age and subject. However stimulating and instructive, programs like *Archaeotype* clashed with entrenched scope and sequence, along with the sanctioned coverage of materials, which the system required. An article about the Dalton project appeared in 1995 in *Time Magazine*, a leading news weekly, "The Learning Revolution: What Wondrous Things Occur When a School Is Wired to the Max" by Claudia Wallis. The quotation in the text about a cosmos of question comes from another revealing document, "Smart Cities: New York—Electronic Education for the New Millennium," developed by the Institute for Learning Technologies. It provided the pedagogical rationale for a vast, visionary project the New York City Board of Education in 2000, which the Board authorized but was unable to implement. This document for the NYC Board of Education, a strangely communicative Power Point presentation, which broke all of that system's constraints and conventions, provided a full adumbration of the cumulative curriculum. The demise of the project was over-determined by multiple causes—political, pedagogical, and commercial. It became apparent that good technological innovations in schools were not feasible given the reigning obsessions with curriculum standards, high-stakes testing, budgetary parsimony, and privatization.

with the capacity having become a self-maintaining, productive one in the person's lived experience, which led then into . . . .

- *Consolidation.* The person could then use the capacity in a self-maintaining way, making it ground for the emergence of yet further capacities and choosing how, when, and why to use the capacity, integrating it with all the others in shaping what took place in the person's life. Consolidation could only go so far, for any capacity had limits on what could take place in life through it. To advance further, a person had to turn her attention to other possibilities, starting the cycle anew. . . .

In lived experience, this basic cycle of educational emergence could vary in how it unfolded. Latency might usually be slow and labored, but in some situations, it might seem very short, for a capacity could emerge through a sudden creative leap taking place as a person put its elements together, finding them at hand so to speak, in other capacities that she had already acquired. Sometimes, the emergence of a capacity might not be dramatic. It might instead occur through a hidden, invisible maturation, apparent only much later. For instance, a person may have labored long to acquire a second language through formal study with no chance to use it. Later in life, taking the language up again, she will be surprised how command of it had actually consolidated, as if real skill with it had previously emerged. However various the path in life, a person acquired her capabilities through educational emergence, which would take its course in her life. She formed an intention, exerted latent effort to achieve it, experienced its self-organization in a period of disequilibrium, and followed through with its consolidation. This was educational emergence, taking place through the lived experience of a student.

This understanding of educational emergence could serve as a powerful framework for criticizing the current conflation of education and schooling. It might accomplish two things. First, it might help people understand how, given a more basic understanding of education, schools as they had historically developed had been able to facilitate, up to a point, the education of vast numbers of people. Second, it might help to clarify what was the point beyond which it was unreasonable to expect schools to function as effective sites of education. The two together would constitute a critique of education through schooling, one showing what was possible through instruction and the other establishing its limits.

6—A Place for Study

Schools worked as if education consisted in accumulating large stocks of homogeneous knowledge, information, and skill through an arithmetical progression, one lesson after another. In actuality, when a person experienced education taking place, it was never evident through steady, sequential additions from ignorance to mastery, increment by increment. There was, instead, the period of latency in which instructional input, steady or sporadic, seemed to correlate with little or no emergence of significant capacity. Then a critical period would occur in which the capability seemed to emerge suddenly, rapidly gaining in scope and effectiveness, some instances of which in a different time might have been experienced as inspiration, perhaps even revelation. After a time, that rapid acceleration in competence would taper off and the student would employ the capacity, through fits and starts gaining further skill and scope in its use. This pattern was the typical S-curve according to which theorists were making sense of how small-world networks and self-organizing systems develop their efficiency.[1]

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[1] *Commoner*: We have noted in studying teachers' accounts of their experience, a recurrence of two related observations. The one—a sense of futility would overwhelm a teacher on reading student papers and grading exams. After a semester of classes, covering so much material, students would seem to have learned little of substance and nothing of interest. All they could do was regurgitate, often garbled, what they had heard or read. Thinking about a matter at hand seemed for them out of the question, even when that had been precisely the point of the question. In the other—an inverse exhilaration would take hold as that vacant face and font of wooden prose would come in one day, excited, with a draft that unexpectedly showed serious inquiry, clarity of thought, and vigor in expression. Yesterday, the student induced despair in his teachers; today he would awaken their hopes. The difference resulted, not from another lesson, but from an educational emergence that was taking place through the student. Experiences such as these made teachers skeptical of the accountability efforts in schooling. It harbored absurd presumptions about the degree to which

6.1—Effects of Schooling

In modern history, emergent educational processes would usually have taken place in association with schooling even though schooling would not have been their necessary source. Could Carlyle account for the association as a contingent, accidental linkage? As a historian of education, he liked to reflect on an intriguing question. If schools had actually been causally effective educative agents, which of their real historical results would seem anomalous? Two related, very basic concomitants to schooling seemed historically evident yet highly inconsistent with the idea that schools had been the effective causal agents of those results.

- First, across time, lots of people had learned important, difficult skills and capacities, whether the strategies for teaching them had been good or bad, as understood by the prevailing school pedagogy. For instance, pre-modern methods for reading instruction had been execrable, yet people learned to read, many of them very well. One could multiply that example many times.
- Second, as great numbers of students passed through schools—good schools, bad ones, and the merely mediocre—substantial differences in outcome within the cohorts attending each school became manifest. Many students, who acquired learning under favorable pedagogical conditions, managed scant results, while some, who labored under adversity, nevertheless blossomed. Thus, great teachers, like poor ones, instructed lousy students, who were smart and advantaged, yet bored and lazy, complacent under-performers, and even awful schools and incompetent teachers not infrequently "produced" a star.

To gloss the first observation, it would suggest that something in schooling per se, independent of the pedagogy used in the schooling, had to do with the educational results. Education happened in the school; but the school did not necessarily produce or cause it. Association was not causality. That education had happened primarily in schools over recent centuries might simply have been an accident of modern history, indicating where education had been happening, not how and why. The school might

testing could reveal significant effects and link them with confidence to decisive causes.

well have been an accidental educator, not a causal one.

To unpack the second, it indicated that students themselves, across all ages and domains of interest, had key roles in determining the character and quality of the education taking place in the lives they lived. This role seemed to be significantly independent of the school in which each studied. And to attribute a student's role in his education to his intelligence, effort, or docility was to name it, not explain it.[2] What was happening as the education of each student was taking place?

These phenomena seemed to have been occurring in the schools but apparently independent of them or tangentially associated with activities going on there. They were not surprising given the pattern of educational self-development taking place in the lives of persons. To activate the process of self-development, something had to catch the attention of the person, cueing her to the existence of a potential capability and its attendant affordances. While in school, a new interest might get aroused for a person, quite possibly by what a teacher said or what the student read in a text, or by something else. And the new interest might just as well start outside of schools in a myriad of other ways. Children spent much time in schools doing different things, but schools were not uniquely structured to excel at arousing curiosities and many people, then and over prior centuries, complained that schools were adept at deadening curiosity and the play of attention. And in all probability, different life situations

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[2] *Commoner*: Intelligence, effort, and docility, as well as other such characteristics, were largely fictions that had been devised as observers compared the behavior of numbers of students without drawing on any substantive knowledge, from the inside, of what was determining the behavior within each. Intelligence, effort, or docility might be concepts useful in describing what took place in trying to teach the "same thing" at the "same time" to a group of "similar" students. It was pure presumption, however, to think that researchers could so rigorously control the similarity of the students, each to the others, that the time of instruction would be equivalent in the life of each and the significance of the thing taught identical for each. Persons differed from each other in the lives each lived, and consequently comparisons of one with another were suspect. What would help each actualize her potential was much more significant. Relative to herself, a person would at times be smart and at other times she might be dumb, sometimes she would be energetic and at others lazy. How could a person control and best manage these inward variations?

were variably helpful to the potentially curious child, enlivening, discouraging, stimulating, distracting, and on and on as the case might be.

Where the school per se might help would be in the laborious stage of latent development, plugging away increment by increment, seeding at least some capabilities with formative content. Even here, however, the school seemed to have severe limitations. The educators' longstanding interest in the importance of interest itself seemed very pertinent to what was likely to be happening in this period. The school was strong on system, with its scope and sequence, but it was not well adapted to supporting the development of interests. Interests were a subtle combination of yes and no. To develop an interest, a person had to ignore many other possible ones, either leaving them in the background, perhaps for future development, or suppressing them as a considered dislike. As these self-denials brought the chosen interest to the fore, it gained more and more significance in the person's life valuations. The process negated possibilities and strengthened working connections.[3] This

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[3]   *Digger:* The push-pull of interests was then becoming clearer in studies of how the brain worked. Some possible objects of interest would be closed down by isolating relevant nodes from the network and others cued up by imbuing links among them with affective prominence. Work, starting with *The Organization of Behavior: A Neuropsychological Theory* by D. O. Hebb (1949), dealing with these processes on the neuronal level, was important, yet it was enough to think about it in a simple way on the level of substantive interests—to do this one could not do that (the mirage of multitasking, not-withstanding). More generally, Carlyle thought that research into the somatic working of the brain, like the work of Hebb or the more recent flourishing of brain scan research, could be very useful in giving physical correlates to observed intellectual phenomena and characteristics. But he worried that technologies for brain scanning might be pushing research in an overly empirical direction, one that paid too much attention to what was going on "inside the brain." Certainly better understanding of how the brain processed was necessary in making sense of the inner-outer networks of living, but network theory was also an essential component of such an inquiry. The skull invited the enclosing mentality to look obsessively within, ignoring the complexity of interactions coexisting and taking place together with what was happening inside the bone-bounded brain. In some ways, understanding what was taking place on the inner-outer networks was both more difficult and more important than looking only

process did not need to follow a set sequence and timetable. Educators could invent ways to support activity in the latency phases of educational emergence that would respond to the play of interest more effectively than the curriculum of any school.

Network theory suggested that the interactions, neuronal and cultural, that comprised active capacities were small-world systems, which would maintain remarkable efficiencies in operation while encompassing a vast range of internal complexity. Efficiency meant the number of steps needed to complete an interaction between any two points co-existing on a network relative to the total number of points on it. Small-world linkages could vastly expand the number of points on them while keeping the number of steps needed for an interaction between any pair of points very low and almost constant. The emergence of a small-world network into effective operation depended, not on the particular sequence of connections initially made within it, but on the initial connections reaching a critical proportion of those potentially on it. When links reached the critical density, small-world capacities became active through a phase transition, and the network could then rapidly extend while maintaining the efficiency of interactions within it. First, a particular pattern of linkages among potential nodes of interaction and the order of their linking was insignificant compared to the density of linked nodes, relative to the full range of possibilities. Second, whether the links included this particular node or that one mattered little, provided the network included among its nodes and connections, some highly linked nodes, hubs, and a few outliers, weak ties, for these were key to the scope and efficiency of a network. When the density of linked nodes reached a critical point, the rapid emergence of a small-world network took place, and the effectiveness of the result depended substantially on inclusion of suitable hubs and weak ties.[4]

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at the brain itself, especially under the reigning fashion of research in early twenty-first century academe.

[4] *Digger*: Carlyle did not apply particular theorems from network and graph theory in an explicit way. Rather, these theories stimulated his thinking about what was probably taking place in educational emergence and he thought that a general understanding of network theory raised important doubts about core scholastic practices. For instance, he thought that the importance attached to the scope and sequence of curricula might be justified on grounds of practical convenience in providing a standardized schooling to very large numbers of children,

These principles suggested that the scope and sequence of activities in schools was far too regimented to respond optimally when the rapid emergence of a capability was taking place in the life of a student. Predicting either when a small-world network would start taking place, or what course it would take in the full working consciousness of one or another person, was difficult. As a student entered the flux of awareness and exhilaration that he was really gaining control of a capacity of meaning and power, it would perhaps be wisest to observe and do little beyond trying to ensure that the resources suitable for sustaining the emergence would be at hand, available for the student to grasp. Efforts to promote cultural literacy, as well as cultural identity, were simultaneously helpful and nonsensical—helpful because they seeded a person's sphere of awareness with lots of possible connections and nonsensical because they made a fetish of which connections were the right connections. The actual cultural acquirements of a person were far more important than the Procrustean bed of a particular identity. And cultural acquirements had many more sides to them than the highly enclosed program of schooling admitted. The scope and sequence of the curriculum was a Procrustean bed into which child after child, despite the glorious individuality of each, had to fit. The cutting youthful curiosity down to size, fitting the mind of each student to the particulars of the curriculum, had long been the struc-

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but he thought it had little intellectual rationale relative to the way small-world networks worked. Innumerable sequences for developing working control of complex skills and knowledge would each work as well as any other, for the key to working control was in the density of internal linkages, not the existence of a canonical pattern of connections. For instance, it was much easier to learn a new language by immersion than by following a textbook. Immersion worked not because the order of presentation through it was optimal or the presentation of the language more correct. It worked because it enabled the student to use his existing command of the new language to extend opportunistically his command of diction and usage, either by inference (this must mean that) or by inquiry (*wie sagt mann das?*). With immersion, the scope and sequence of the learning was both random and unique, and the emergence of a working capacity to use the language more rapid and confident. If the right scope and sequence was in fact the key to learning, then immersion would be far less effective in acquiring a language than instruction from a grammar book in the classroom.

tural source by which schooling deadened the intellectual excitement of those passing through it.

Schooling, concentration on causally effective instruction, wherever one might deploy it, used a limited pedagogical paradigm—teaching and learning. Most educational research started with the idea that teachers taught and students learned, a causal transmission from the former to the latter, and the educational researcher sought knowledge about the methods and techniques that would make the teaching-learning transmission more effective. In most inquiries, the researcher selected an instructional intervention that teachers might use and then followed protocols of inquiry of one sort or another to establish whether the effects of it on the amount of learning by the student had been good or bad. These fundamental assumptions distorted the lived realities of education in at least three major ways, with the result that researchers found small, itty-bitty truths about how teachers evoke learning in students. Educational emergence was not in view.

Distortion 1: The teaching-learning paradigm desiccated the living interactions that took place between a teacher and his students. In any real situation, a teacher and his students alike were doing innumerable different things all jumbled together, each within a stream of consciousness, not to mention what was going on beneath the level of consciousness. All these different interactions among all, the students and the teacher, had potential relevance for educational emergence. The relevance involved, not only its discrete elements as one might tease them apart, as William James demonstrated in his wonderful *Principles of Psychology*, but everything together comprising a continuous, moving ensemble, uniquely meaningful for each. The art of real teaching, even within the confines of the standard paradigm, lay in the teacher's capacity to use his whole presence to orchestrate the full involvement of each student in a class. Too much happens: the researcher cannot sufficiently limit what the teacher and his students are doing to test a selected instructional intervention.[5]

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[5] *Digger: The Art of Teaching* by Gilbert Highet (1950, 1989), was noteworthy as a work full of wisdom about humane teaching in schools and other situations of life. Carlyle excerpted from the "Preface":

> Of course it is necessary for any teacher to be orderly in planning his work and precise in dealing with facts. But that does not make his teaching 'scientific.' Teaching involves

Distortion 2: The teaching-learning paradigm vastly over-simplified the process of education. Casting the essence of education to be the transfer of defined quantities of cultural material from older to younger minds, whatever minds might be, posed the pedagogical problem wrongly. "Teacher"—the living person, textbooks, curricular materials, standards, and assignments—was one container, a cornucopia of cultural resources. "Student" was another container, one fraught with portentous emptiness. "Education" occurred with the transfer of selected skills, facts, and ideas from the teacher's cornucopia, diminishing the void in the student, who became a "learner" thereby. In contrast, real education took place as complicated inner-outer networks emerged in a person's lived experience and as she constructed and controlled her interactions with her circumstances through the use of them. To be sure, significant acquisition of cultural resources by the person was essential to the process. That was why the teacher-learner paradigm was not wholly irrelevant, but to rely on it alone radically oversimplified the resulting educational research.

Distortion 3: The paradigm in force put the relationship between teacher and learner the wrong way round. Students did not receive; they took. Carlyle believed the verbs of human agency identified the networks, physiological and cultural, by which a person lived and controlled what took place in her life. Each verb indicated a mode of perception and action, which a student actively acquired and developed, forming the ability to control it, through educational emergence. Carlyle developed a long list of such modes of control, observing that most people developed the capacity for most of them (see the word cloud here and the Carlyle's list included below on page 255). How did all these capacities—the capacity to control so many, many verbs—emerge and fit together in working minds? That was a question educational researchers had barely begun to

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emotions, which cannot be systematically appraised and employed, and human values, which are quite outside the grasp of science. . . . 'Scientific' teaching, even of scientific subjects, will be inadequate as long as both teachers and pupils are human beings. Teaching is not like inducing a chemical reaction: it is much more like painting a picture or making a piece of music, or on a lower level like planting a garden or writing a friendly letter. You must throw your heart into it, you must realize that it cannot all be done by formulas, or you will spoil your work, and your pupils, and yourself.
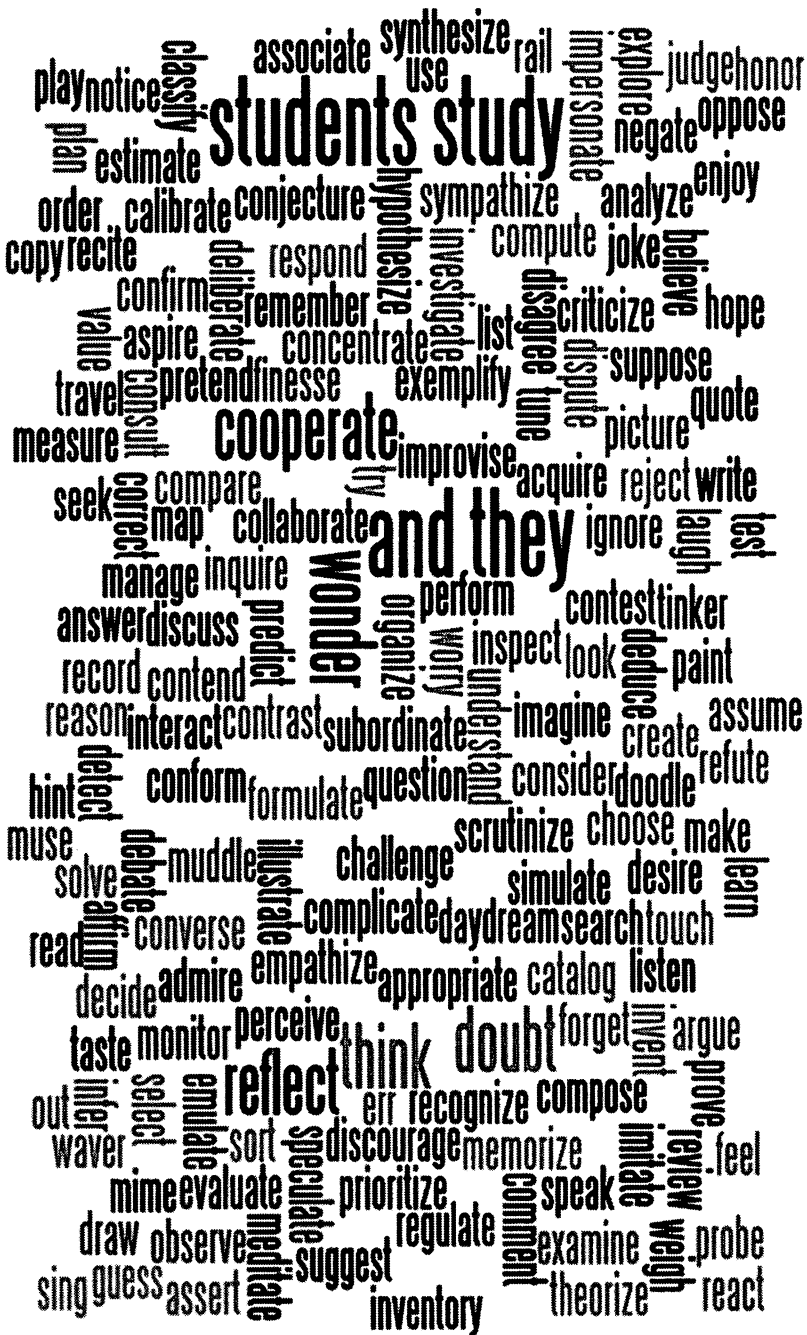
3—Selection of verbs signifying what students do (see p. 255)

address and the teaching-learning paradigm would not facilitate their doing so. Students were the active subjects of education; teachers the passive, indirect objects. Life centered education on the child. All education was child-centered, not as the result of some pedagogical norm foisted by hapless theorists on innocent children and anxious parents. Education took place through the lived experience of the child.

Education was the process through which the child acquired and exercised control over its instantiation of human culture. The teaching-learning paradigm started at the wrong place, then, with the selection of a potential instructional intervention. The infant, the child, the youth, and the adult student too—the person studying defined her learning tasks; she determined the pedagogical problem at hand and set the agenda for working on it. The child continually interacted with the world, making judgments about itself and its world, directing its attention, allocating its effort, setting its purposes, exploring its possibilities, forming its skills, acquiring its knowledge. The infant suckled because it felt hungry, a desire for satisfaction activating its entire alimentary system, and the mother's teat, the nipple on a bottle, or someone's little finger proved to be an available resource, more or less. The child worked hard, with sustained intent, at walking, at talking, at controlling its bowels, at interacting with other people across the spectrum of emotional responses, and it did so by generating an educational emergence largely on its own by forming inner-outer networks for perception and action in a cycle of latency, emergence, and consolidation. These were difficult achievements that all children acquired, each striving under very different conditions. In them, researchers would find the proper paradigm for the study of educational emergence, not only for infants and children, but for youths and adults as well.[6]

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[6] *Commoner*: Carlyle had criticized the teaching-learning paradigm in educational research and practice throughout his career, but he had become much more deeply concerned about the exclusive attention to the teaching-learning relation in recent years. The interaction between this paradigm and recruitment, promotion, and retention within graduate schools of education was increasingly problematic. Carlyle thought Thomas Kuhn in *The Structure of Scientific Revolutions* (1970, 1996) and Stephen Toulmin in *Human Understanding* (1972) had clarified the authority of scientific and scholarly knowledge well. He also found the work of Peter Galison on the influence of instrumentation in studies such as *Image and Logic: A Material Culture*

For most children and youths, schools offered some helpful resources and experience to support their educational efforts. What curricular content and methods of instruction were most appropriate for use in any particular school depended on the needs, interests, and situations of the children each school served: there was not one abstract best way suitable for all. Carlyle thought core curricula and the standards movement fetishized stock learning. The range of important, meaningful knowledge far exceeded what conventional curricula comprised. But given well-suited content, what was really

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of Microphysics (1997) very significant for understanding the construction of scientific knowledge. The upshot of these and parallel works was to recognize that researchers could not effectively use their favored research methods to adduce the validity of those methods. Consequently, claims to scientific and scholarly validity depended on acceptance or rejection of them through the best collective judgment of the relevant community of recognized scholars. "OK, *c'est la vie.*" Unfortunately, the dynamics of specialization and the processes of promotion and tenure were steadily narrowing the relevant communities of recognized scholars and imbuing their members with a shared orthodoxy that could become both imperious and blinkered. These dynamics were becoming especially dysfunctional in educational research. Carlyle agreed with efforts to criticize them in work such as *Homeless in the House of Intellect* (2005) by Robbie McClintock and in the same author's bitter, online essay, "Educational Research" (2007). Would highly talented young scholars, starting careers in educational research and scholarship, begin pulling out in excessive numbers in reaction to what they thought were the debilitating constraints in over-specialized, conventionalized research? The authority of scientific knowledge would weaken seriously if peer review panels did not reflect a much broader spectrum of scholars. They needed to include scholars with differentiated competencies and interests, each participating fully as the peer of the others. The plaint— "I can't judge because it is not my specialty"—was undercutting the competence and integrity of the system. That competence and integrity rested on the collective judgment of the scholarly community, and their pretension to authoritative knowledge could not stand if their collective judgment was that they were unable to make a judgment. This pathology was driven home in an article on "How to Improve your Impact Factor: Questioning the Quantification of Academic Quality" by Paul Smeyers and Nicholas C. Burbules in the *Journal of Philosophy of Education* (45:1, Feb. 2012). As in so much else, the automatic construction of impersonal weightings was displacing human judgment.

taking place in a good school as students interacted with it? If the school and teachers were not imparting the content in a causal transmission from them to the students, what was happening? Teachers did not cause learning; they modeled it; they were examples for emulation; they demonstrated what there was for students to take. They pointed out a path, and they did so both consciously and inadvertently.[7] In their modeling capacity, teachers could have immense importance, both positive and negative. Hence, they, and all those responsible for the program of the school, needed to remember that the teacher and the school itself modeled, not only what they chose to think they modeled, but what their students actually took them to be modeling. Each student decided what his teacher exemplified. That was the lesson a teacher imparted, one he could try to anticipate but could not control.[8]

6.2—Beyond Schooling

But even assuming educators intelligently adapted the program of the school to the children it served, and they modeled all that it

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[7] *Digger*: In *The Good Life of Teaching: An Ethics of Professional Practice* (2011), Christopher Higgins decried the short-sightedness of policies that routinized the work and lives of teachers, showing how their continuous self-development and fullness of character was essential to their exercising real effect in their status as humane models for the young.

[8] *Digger*: Maxine McClintock, a highly experienced teacher, had put it well in an unpublished essay, "A Return Engagement":

> Students, particularly adolescents, identify with this arduous effort [by the teacher to craft her own self] because they are beginning to do the same. Most importantly, students respect the teacher committed to using what she knows as the grounding for who she is, and how she acts. Integrity is the unity between thought, self, and action that the young seek. Adolescents need to find adults who demonstrate integrity as much as they need sleep, and their need to find models of integrity is much more difficult to satisfy. If their search for adult exemplars comes up empty, the young can easily fall prey to nihilism, a terrifying state of mind where anything is possible. . . . A young person, steeped in this ethos, will imagine that becoming an adult requires no more than using any means necessary to get what he wants and marshaling enough cunning to evade responsibility when his machinations turn sour.

stood for positively to the students there, that would still fall far short. For children and youths pursued their educational efforts in a continuous, ubiquitous, and many-sided engagement with the entirety of their circumstances, not in the school alone. Advertisers, entertainers, artists and writers, athletes, business leaders, politicians, everyone all around modeled ideas, standards, and possibilities to the young, and to everyone else for that matter. Adults had a responsibility to look at the entire spectrum of civilized life to understand how it facilitated and complicated educational emergence in the lives of all, especially children and youths.

It was not the best which has been thought and said that educates; it was *all* that was thought, said, and done. The human power to emulate, to disregard, and to scorn—voracious in the young—did not start up only when someone entered a school. Through its myriad representatives, a culture modeled itself, continuously and ubiquitously, to all its members all of the time. Each person had an interest in the quality and character of the emulatory interactions she invited, and a responsibility to be attentive, not to what she chose to think she was modeling, but to what others really took from her example. And this responsibility rested particularly on those in privileged positions, who stood in prominence as potential models of whatever it was that others would behold in them. There lay the seeds of systemic educational failure.[9]

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[9] *Commoner*: Ellen Lagemann had recently published an article, "Doing Time, With a Degree to Show for It," *Chronicle of Higher Education* (2010), about a program enabling prison inmates to earn degrees run by a top college in which she taught. She pointed out inspiring examples and a depressing situation, for the program was exceptional and miniscule relative to the total prison population. In the late 1980s Carlyle had briefly taught about computers in Sing Sing, a large maximum-security prison. The experience made him realize that prisoners were persons, complex human beings like himself or anyone else. Yet he did not think much about the problem of imprisonment in contemporary American life until more recently, as he began to become aware of the exceptional frequency of incarceration in the United States. Its per capita rate was ten or more times that of many other highly developed countries, one of the few genuine signs of American exceptionalism. And the percentage of black male dropouts in jail or prison signaled a serious weakening in the civic commitment to education and the equality of human persons. How was contemporary

Where would people find opportunities to configure their lives to support emergent education more effectively? In Carlyle's view, one opportunity, newly available in his time, involved digital technologies. Whether deployed in schools or the world at large, those were on the one hand stupefying distractions, but on the other, unprecedented tools for the student, through latency, emergence, and consolidation. They could provide intellectual resources of extraordinary depth and breadth on demand, allowing students to follow their interests in the course of study. Might designers develop systems that students could use to control their inquiries with real-time feedback, something like the feel of the road a driver uses? Most feedback in schooling was much too slow and not useful with respect to educational emergence taking place in students' lives. Right-wrong, good-bad, do it this way, not that way—all those endless instructions simply help a student conform to the mandated rituals of the school. Real advice, information about how things work, suggestions about what to look for in the flux of experience, tips on how to anticipate, recognize, and maneuver in the endlessly various situations of life, in contrast, spoke to a student's working intelligence. Thoughtful feedback informed thoughtful response, suggesting unanticipated possibilities, evoking the awareness of a confusion, exciting an eagerness to extend a skill. Emergence took place at the edge of chaos, as Stuart Kauffman put it, and feedback that helped sustain a student's confronting difficulty, disorientation, and uncertainty—holding steady at the edge of chaos—would be particularly helpful.[10]

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incarceration as a formative experience affecting both those incarcerated and those doing the incarcerating? Already there were numerous disturbing reports—David Kaiser and Lovisa Stannow on prison rape; Bruce Western and his colleagues on issues of inequality and incarceration; Bushway, Stoll, and Weiman on the economic and social barriers that people suffer after incarceration—but the public seemed not to care about the human degradation tolerated in its name. What were current imprisonment practices modeling to different members of the human community? What humane values were the members of a community modeling to themselves in constructing an ethos that locked such a large proportion of its members away in a stark and meaningless isolation?

[10] *Sojourner*: We structure almost all educational resources as games, giving immediate, relevant feedback to users studying with them. Did educators 150 years ago pay much attention to video and digital games?

By itself, ipso facto, use of neither new media nor old media was good or bad. Both had limits and addressed publics that were highly distracted. Discussion about both the new and the old too often became categorical—one or the other was wholly good or wholly bad. Uncovering the constructive uses of each was more important than bemoaning their possible abuses.[11] In due course, as we know,

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» *Digger*: Around 2000, a great flourishing of game design began and some educators paid a lot of attention to it. Powerful games, however, did not integrate easily into the school curriculum and for many years, the main influence of games was in popular culture. In a sense, it has remained there as decade-by-decade popular culture has become a more pedagogic culture. A journalist, Steven Johnson, started making this case for the educational effectiveness of popular culture in *Everything Bad Is Good for You: How Today's Popular Culture Is Actually Making Us Smarter* (2006). The leading academic researcher on the educational uses of games was James Paul Gee, whose *What video games have to teach us about learning and literacy* (2007) was highly influential. For a long time, commercial imperatives impeded efforts to design games all-out for educational purposes and entrepreneurs did a lot under the banner of *edutainment*. Entertainment could be educative and education entertaining, a reasonable hope. But there was a tension in it— successful entertainment, especially when produced at expensive production values, put a premium in those days on getting people to come back repeatedly for more of the same. In contrast, good education facilitated a person's effort to change, altering her tastes and capacities. A good educational production could be a commercial success, but making it a stable product line with expanding returns, drawing capital investment within the freeloading system proved hard to do.

[11] *Digger*: Journalistic accounts concerning technology and education linked particular vignettes with general problems in ways that left out a huge amount, falsely contextualizing the general and reducing the particular to a slivered snapshot. Carlyle objected to a typical instance that he had read in the *New York Times*, "Growing Up Digital, Wired for Distraction" by Matt Richtel (2010), for it had received considerable play in the paper. A picture of three teenyboppers madly texting in a school yard accompanied the story, which along with the headline suggested digital technologies were leaving kids incapable of concentrating. But the picture and headline were merely subtexts. The story itself featured a young man, 17 years old, who illustrated a very different problem: creating digital video fascinated him to the point of neglecting the formal curriculum at school. He could concentrate and was very bright. It pained him to put aside his creative interest and commitment so that he could plug away at his school assignments. The

digital networks would parse the interests and ideas a student was pursuing and nudging him towards helpful hubs and weak ties that might open unexpected connections, raising questions and pointing to possibilities. Within a formal curriculum, students often had to pursue their emerging capacities in its interstices, making choices between what it required and what they found illuminating. In contrast, networks supporting the student's open-ended study would provide usable tools of advanced scholarship, real intellectual resources, and immediate feedback, positive and negative, helping him go wherever he was leading, informing what the student decided should next take place.[12]

Socratic education was the great pedagogy addressed to the third stage of educational emergence, that of sustained maturation towards mastery, consolidation. The objective of a capability, the purpose for which one could and should use it, was not fully evident in a person's lived experience until the ability to control it had

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story implied that he was shirking his studies. But did those peddling the official curriculum really know best how he should have been spending his time and energy?

[12] *Commoner*: A person—as a child, a youth, or an adult—often had poorly developed capacities of self-management, manifest all-too-often as having insufficient self-discipline to form and carry through a complex purpose. Such an observation would often become the ground for a no-nonsense, disciplinary pedagogy in contrast to a child-centered, inquiry-based pedagogy. Carlyle responded that under some circumstances, discipline was the appropriate feedback; and under others, something else. Each person, by virtue of her humanity as a person and her vitality as a living being, had fundamental capacities for self-management. Various life circumstances could complicate the exercise of this capacity, however, by degrading the quality of feedback the person received in the exercise of self-organizing effort. For instance, the spoiled child, for whom others did everything, would never get the opportunity to use and assess real-world feedback. The impoverished child would lack the means and energy to try many forms of self-development. The child in the midst of crisis—environmental, military, economic, social, familial—would struggle with too many random circumstances outside its possible control. The abused child would be forced into degrading, self-destructive adaptions; and so on. A sound educational environment would give informative, constructive, immediate feedback relevant to the cultural capacities taking form in the child's actual sphere of life, helping the child realize those to the fullest of its potential.

emerged and taken place. By that time, a great deal of confusion about purpose might well have accumulated. Here schooling was egregious. It conditioned multitudes of students to believe that the purpose of learning, whether this, that, or the other thing, was to get a good grade and other badges of success. In actuality, getting a good grade had nearly nothing to do with educative purposes. Whether in schools or out, by the time control of a capability had emerged in the life of a person, she was likely to associate it with all sorts of inappropriate purposes. Rousseau's ideas about negative education had been an astute effort to help the educator avoid projecting inappropriate purposes onto the acquisition of skills that would take place in the lives of students. And the Socratic examination of life was a powerful form of consolidation, effectively bringing a self-empowered student, the person for whom the emergence of a capability had taken place, to an awareness that she was ignorant of the proper uses of that capability, drawing her into an examination of what those ought to be.[13]

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[13] *Commoner*: In multiple works, especially *Corrupting Youth: Political Education, Democratic Culture, and Political Theory* (1997), J. Peter Euben had made a powerful case for the importance of Socratic education for maintaining the quality of democratic public life. In doing so, Euben had made clear the deep cost an education for sound public participation had—factually, and perhaps by legitimate law, it cost Socrates his life. In recent decades institutions of American higher education had been paying more attention to professional ethics in medicine, law, business, and education. But as Socrates had shown, and Euben had powerfully reiterated, that was not fully sufficient, for it was not enough that the educator lead a person, who would exercise power through a profession, to do so ethically. In addition, the educator should do what Socrates had done: lead the student to take responsibility for ensuring that the exercise of power through the profession was ethical. That could lead the student into conflict with the profession, and when the profession was that of politics, it could lead the student into conflict with the polity, precisely the accusation that Athenians brought against Socrates. No matter how many courses in professional ethics it taught, the university of late modernity had been bought off. It was not serving its critical responsibilities in the polity. It was too dependent on the largess of philanthropy and public power. It has shown that it could not stand, any more than the press could, as an independent check to extreme political pressure. Unlike a heroic person, it could not do so at the cost of martyrdom. For the university to become fully effective as a historical influence, the guiding principles of the polity somehow

Schooling was a deficient educator. It hindered the rapid emergence and steady consolidation of capabilities taking place in the lives of students. But was it, for all its limitations, nevertheless an optimum resource for seeding the acquisition of capacities through the initial period of educational latency? Was schooling, despite its limitations as an educative environment, nevertheless a constructive civic resource, a bulwark of civic inclusion? Carlyle was not sure how to answer such questions. Schools were massive components of the world in which he lived. They would not quickly disappear and both their uses and abuses were extensive and diverse. Well-schooled parents were generally good at passing their success in schools to their children and this success helped greatly to perpetuate privileges of status, wealth, and power. Whether all that indicated a superior education, one for which some merit might rightly accrue, Carlyle doubted. But an optimal education would be manifest with respect to what each person did with enough, measured somehow relative to herself, not comparatively as many people jostled for more. Perhaps it would be manifest in a time, far distant, when the freeloading has stopped. For now, one could only work towards it.

With that in mind, we should concentrate on what Carlyle thought could and should happen in the educational future, introducing it with a few general propositions about educational actualities, circa 2012, as he saw them.

- Schooling was the dominant educational activity the world around and contrary to the view of many critics, schooling was a mature technology in the sense that it was functioning near its optimal effectiveness, both for the typical student and for the population at large. To be sure, there were marginal improvements feasible, but they were limited in scope and difficult to achieve.
- If adopted in a thoroughgoing, systemic way, educational arrangements were conceivable that could function more

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would have to shift from maximizing power to preserving a stable equilibrium, one in which Socratic educators could work in solidarity with their circumstances. The great dilemma of political and educational philosophy, suggested by Euben, had animated thinkers from Plato on, and still stood unsolved. What political education would enable people to construct a polity where they could engage, safely and soundly, in their political education?

effectively for persons and groups than schools could, but displacing a large-scale social system such as schooling was slow, costly, and difficult. Such a change was most likely if the key resources of the new system developed within the structures of the old and if substantial pressures for change impinged upon the old system.

- For a cultural critic, the structure of values used to maintain the hegemony of enclosure and its unchecked freeloading by the most advantaged was a major debilitating externality on current education and schooling. It turned attention to over-consumption and trivial entertainments and cultivated a manipulative politics of fear and resentment, imposing prolonged stasis as conditions implacably mounted towards a crisis.

In a substantial future, one different from an extension of the present, the educational role of schools would become highly contingent. It would depend significantly on whether people judged schooling inimical or supportive to the emergence of important capabilities in their lives. Carlyle thought that the three books he had set out to review, like the vast bulk of educational discussion, missed the possibility that schooling, and with schooling all other pretenses to educate others with causal efficacy, would slowly fade into disuse. He was skeptical about the pretension to conduct education through programs of activity affecting students *en masse*, however such programs might be diversified in one way or another. Schooling had had accidental, tangential benefits to educational emergence in the lives of students, along with its costs, in historical experience through the era of enclosure. But in times to come, mandated programs of instruction for implementation through the school or through the home might very possibly fade into disuse.

If an alternative system of education were to emerge, it would provide persons of all ages with sophisticated resources to support the self-organization of human capacities taking place in their lives. What sort of mandate, if any, should come with the provisions of those resources through the commons? Owing to group instruction and a fixed curriculum, the design of existing schools made it difficult to give real-time, relevant feedback to specific students about the interests each found engaging. To what degree, Carlyle wondered, had people found it necessary to make schooling compulsory because it had continually been in tension with the lived experience of its students? Was schooling a privilege for persons to

use in whatever way they saw fit? Or was it a duty to which a person was subject as part of her responsibility to self, to others, and to the state?

As we see it in 2162, the educative impetus is constitutive of all life and so strong among humans that its greatest power and achievements emerges as each person harkens to it, without external command, as he or she sees fit. In late modernity, a few had begun to suspect that legally compulsory education simply complicated in inimical ways each person's self-development, which was already the vitally necessary concern continually taking place in the living of human life. Could provisions for education be voluntary, if educational feedback through them was steadily consistent, immediate, pertinent, and helpful? [14] Was self-motivation an adequate basis for education?

Certain educative tools and a significant role for teachers would continue to have importance in helping education take place in people's lives. Whether for use in schools or elsewhere, Carlyle

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[14] *Sojourner*: It seems very odd that people feared developing intellectual tools and resources that would empower their conduct of life while they bowed to the legal compulsion to schooling for a major portion of their lives.

» *Digger*: Early in his career, Robbie McClintock had given a lecture at the Center for the Study of Democratic Institutions exploring an idea of "Universal Voluntary Study" as an alternative to compulsory schooling (*Center Magazine*, Vol. 6, No. 1, Jan. 1973, pp. 24–30). Though he probably advanced it as a trial balloon, McClintock stipulated that the institutional effort that societies devoted to supporting voluntary study should exceed what they put into providing compulsory schooling. They had to organize it to be effectively and equitably universal relative to the whole population. In reaction, Carlyle insisted to his friend that the political realities of the world then were such that a scheme for voluntary study would undoubtedly have led to calls for economy and a reduction of educational effort. This warning anticipated worry a few decades later that charter schools, vouchers, and home schooling would break up public school systems and legitimate public parsimony with a patina of pedagogical enlightenment. In our commons, a pedagogical solidarity is in effect, permitting all to recognize that they had a shared interest in the fullest potential of each, and robust provisions for universal voluntary study support a person's aspirations for fulfillment. But these arrangements rest on a profound change in values as a result of which the universal commons has supplanted the selfish norms of the freeloading system.

anticipated that computer-mediated educational tools for persons of many ages and interests would support educative emergence taking place in their lives. These tools would speed up and fill out the period of latency. They would be non-directive, responding to the diverse interests of students with immediate, informative feedback, allowing the student to stagger upward, like the slapstick character, carrying a heavy trunk up a flight of stairs—"I got it! I don't got it! I got it! I don't got it!" Such tools would support the self-seeding of different capacities, harnessing the play of interest through stages of latency. Ideally, a student's tools would be such that he could break himself out of self-seeding activities as the rapid emergence of a capability started taking place, enabling him to work voraciously with the emerging capability, trying to use it for some purpose of substantial meaning to him. Such activity would then open an important role for teachers as critical resources in the consolidation and mastery of an acquired capability, interacting with the student as a peer, helping him examine to what end he should put his newly developed skills and capacities to use. Rather than prime the pump, teachers should be helping students to test the waters.[15]

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[15] *Sojourner*: It is hard to conceive of intellectual resources without such capacities built into them. Weren't people clamoring for the inclusion of intelligent feedback systems in all their resources of communication?

» *Commoner*: These systems require tracking much information about their users and about their activities. We now see that such information enhances our autonomous action. It has not always been that way. As we have mentioned, during modernity people feared control as something that those more powerful would do to them, rather than seeing it as something they did for themselves in their pursuit of fulfillment. They also used extensive strategies of enclosure—the protection of privacy and of negative freedoms—to secure their autonomy. As he did for so much of the period, Dr. Johnson summed it up well for Boswell: "There [London], and there alone, a man's own house is truly his *castle*, in which he can be in perfect safety from intrusion whenever he pleases." James Boswell, *The Life of Johnson*, (Hill ed., 1891. Vol. 3). The wide and dynamic collection of information about what is taking place, which makes informative, empowering feedback possible, was deeply feared as intrusive surveillance, tolerable only in efforts to repress threatening deviance. It took until long after the modern era for people to embrace the broad benefits of full self-transparency and self-disclosure.

6.3—The Pedagogical Problem

Testing the waters is a fine idea. Educators have long recognized its importance and power. It is the pedagogical rationale for play. "Sow your wild oats, young man!" Travel. Try things out. Goethe had the pedagogical voice in *Wilhelm Meister*, the wise Abbé, propound it: "To guard from error is not the instructor's duty, but to lead the erring pupil; nay, to let him quaff his error in deep, satiating draughts, this is the instructor's wisdom. He who only tastes his error, will long dwell with it, will take delight in it as in a singular felicity; while he who drains it to the dregs will, if he be not crazy, find it out."[16]

In the history of educational thought, educators have often asserted that a student needed, in diverse ways, to develop and to assert control over the course of his education. They have not so well illuminated what it is that a student does in order to develop and exercise that pedagogical control in the flux of life. What does someone do in order to manage the process of self-formation? Several times in our study of Carlyle's work, we have reflected on what it is that a rider does in controlling a bicycle, keeping it upright, observing how he uses forward motion to steer against the direction of fall. What is the equivalent explanation for how a person actually controls her education, her self-formation? Surely in the process of self-formation, the person must steer and chart a course. How does she do it? As an educational historian Carlyle worked to recover what had been thought and said about it, for it was not a question to which educational researchers in his time were paying significant attention.

In Goethe's *Wilhelm Meister*, the Abbé and his confreres suggested rules of thumb like the one we have just sampled—a student should exhaust his liking for an error in order then to be able to steer against it effectively. This rule of thumb had perhaps been one of the grounds for a patient pedagogy, often called progressive. And Goethe included many more educational apothegms to the point of having Wilhelm complain how difficult they were in application, a complaint that Goethe finessed with the wonderful

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[16] *Digger*: We quote from Thomas Carlyle's translation of Goethe's *Wilhelm Meister's Apprenticeship* (1959), p. 514. In all editions, of which there are many on the Web, see Book VII, Chapter IX for Wilhelm's Indenture, and towards the end of Book VIII, Chapter IX, for this quotation and related pedagogical observation.

observation—"He in whom there is much to be developed will be later in acquiring true perceptions of himself and of the world. There are few who at once have Thought and the capacity of Action. Thought expands, but lames: Action animates, but narrows"—itself another maxim, true but obscure in application. As a work of educational theory, Goethe's *Wilhelm Meister* depicted a youth gaining control of his self-formation. But giving an example, however full and engaging, fell short of an adequate explanation of how control took place. Understanding how the student exercised control in the course of his education presented an important pedagogical problem. Many asserted the importance and possibility of such control, but its working was difficult to elucidate.[17] For Carlyle—really for all educators at all times—the pedagogical problem consisted in grasping how the person could soundly control her own self-formation.

In *Emile*, Rousseau had addressed the problem of pedagogical control by the child and youth.[18] But like Goethe after him, he

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[17] *Digger*: Carlyle had long admired a book by a little known German historian of education, Hermann Leser, on *Das pädagogisches Problem in der Geisteswissenschafte der Neuzeit* (2 vols., 1925, 1928). Leser explored major developments in European cultural history from the Renaissance and Reformation through the Enlightenment, showing how those developments affected what he called "the pedagogical problem." The pedagogical problem, a Diltheyian concept, denoted the key formative challenge that educators needed to meet in any historical juncture in order to cope effectively with the contingencies at hand and realize the humane possibilities of the time. As it always pertained, in any given present, to an emergent future, the pedagogical problem was never a clearly given imperative, but a prognosis that the thinkers of a time had to make to the best of their ability. How they did that, along with the consequences of their efforts, for better and for worse, was the historical drama that Leser tried to recount.

[18] *Digger*: It is important to note that in interpreting *Emile*, Carlyle was an early exponent of the now standard assumption that Rousseau introduced the Tutor as a literary artifice allowing him to externalize developmental inferences that would naturally be forming in Emile as he interacted with his circumstances. The Tutor represented Emile's inner voice, endowed with adult diction, drawing sound inferences about his self-formation, not an objective, external teacher. With this interpretative assumption, the easy contradictions between a manipulative tutor and the child's natural development, which marred the reading of *Emile* by many students, disappeared.

largely stated its importance. In doing so, he took a person's capacity to control her educative development as a given. Rather than explain how the capacity for control itself worked, he was astute about what would distort and deflect what he took to be an inborn capacity for self-control. His profound ideas about negative education concentrated on doing no harm. Parents and educators should be careful to refrain from forcing growth and development in order to avoid converting a child's natural capacity for exercising a sound self-control into a distorting urge for controlling others. Self-directed control of oneself was inherently good. The inversion of that capacity into the urge to control and manipulate others was the root of all evil. But Rousseau, the romantic naturalist, really did not say much about the child's capacity for sound self-control beyond giving it a name—*amour de soi*, love of self. He rightly sensed that it was an inborn, natural capacity of life and had a wise confidence that if it were not distorted by overly positive pedagogies, each person would find how to exercise effective self-control by responding to its urgings. But how the inborn capacity for self-control worked was not fully explained.

Carlyle worked hard to address this question. He did so as a creative historian. He did so by assuming that a perception of how self-formation worked was embedded in the thought of educational theorists of stature. The task was to find and extract it much as a miner might find and extract a seam of coal from surrounding rock. Carlyle worked to interpret and elucidate their perceptions, perhaps thereby helping others to control how self-formation was taking place, in turn in the the lives they were leading.

7—Formative Justice

How did people control their self-formation, both as autonomous persons and as collaborative members of groups? This question, as Carlyle understood it, was the pedagogical problem.

To address how people controlled their self-formation, one did not examine the goal of education, the purposes that it should serve. Nor did one propound a program of instruction—a body of skills, knowledge, and values—that authorities judged to be of most worth for the educated person and therefore fit to be instilled into the young. Rather, one had to explain how a person could and should exercise control, steering a course through self-formation. What was taking place as an infant struggled to assert control of its vision, to correlate what it saw and heard with what it could reach out and touch? How did the toddler manage efforts to stand and teeter forward, to learn to walk? How did the child, beginning to play in the company of other children, control, and fail to control, its sense of the game, its skill at the sport? How did the youth discriminate among the myriad of emotional and intellectual possibilities besieging his attention, rejecting many, trying some, committing to a few? What in all this, and in much else, was taking place?

In Carlyle's time, most educators would think these questions invited responses from an observer's point of view. But for Carlyle, to understand how someone exercised control, the point of view in a response had to be that of the actor, not the observer—whether the actor was the infant, toddler, child, youth, adult, or even a collectivity. Carlyle once noted his belief, without being certain that he could sustain it in close examination, that the effort to exercise control in any form of action had an essential dimension of justice inherent in it. To control oneself in the course of an action was to try to do oneself justice, to perform the action in a manner worthy of one's abilities, to do justice to it. Doing so was a matter of finding the right measure appropriate to the purpose—neither too little nor too much. From the point of view of the actor, all action had a normative aspect to it, to accomplish the action in a way commensurate with its worth. A casual, sloppy effort did not deny the normative aspect of action; it instead expressed the normative

judgment that the matter was of little worth. And becoming obsessively perfectionist over a matter of limited significance would fail to to do oneself justice by according other matters less than their due worth. To look at action from the perspective of a mere observer would miss exactly what was meaningful for the actor in his acting.

7.1—The Work of Justice

From the point of view of the actor, all acting was imbued with the intent to act justly, to act as one intended in a way commensurate with one's purpose and ability. Justice pertained, not to the outcome of an act, but to the spirit and character of the acting. As we now say, justice is an adverbial, not an adjectival virtue. One seeks to act justly whether the deeds done turned out to be just or not—this was the Socratic conviction that no one willingly did evil. Carlyle believed that justice was a vital concern in the activities of life because people had to judge, in the continuous, many-sided acting that living comprises, what was enough, what was fit and appropriate to the matter at hand—the right purpose, the effective means, the appropriate effort. A problem of justice arose in every activity requiring adjustment between desires or needs and the capacities to fulfill them. In those situations, people had to make choices about how they would conduct themselves and they sought decision rules by which to do so. Those rules were the principles of justice, often simply implicit in the flux of acting, sometimes made explicit in reflective detachment.

Justice, as a noun, existed only in the realm of abstraction, a concept. As an actuality, people did things, justly or unjustly, and they subsequently abstracted out concepts of kinds of justice because they engaged in acting in diverse ways. Acting justly in various situations presented distinctive challenges to human judgment. For instance, distributive justice became a vital concern in life because people often had to distribute goods and opportunities among members of a group when the stock of these was insufficient to meet the expectations of each. Distributive justice had been of paramount importance in a world in which goods and opportunities were too scarce and desire for them too strong and diverse. Carlyle recognized that distributing goods and opportunities was and would remain an activity of great importance in the public world. People would therefore pay close attention to doing so justly, appropriately, regulating rightly how people distributed limited goods, opportunities, and offices among an excess of claimants. How

people, individually and collectively, would decide to balance the competing claims of poverty and luxury, and how they would reconcile the few, seeking to get more, with the many, stunted by too little, would remain important shaping influences in the conduct of life, both personal and public.

Distributing goods and opportunities was by no means the only activity in life, however. Hence, other forms of acting justly, Carlyle believed, were vital concerns as well. For one, when someone transgressed the ruling norms within a community, it triggered actions for revenge and retribution, which could escalate and exceed the communal capacity to sustain effectively the resulting tensions and reactions. As that happened, people developed principles of retributive justice—what punishment fits the crime?—to manage who would punish transgressions, how and why. For another, people collectively exercised multiple rights and accepted complex responsibilities as members of the group. When these conflicted or when they could not fulfill all of them, all the time, to the satisfaction of all parties, difficult issues of social justice arose as conflicts over excessive privilege and the deprivation of due dignity. Problems of social justice often intertwined with those of distributive justice, and even retributive justice. Consequently, principles of justice had not only to guide imperative choices within their specific spheres of action, they had to do so harmoniously, as vital concerns, with each judgment of fit action integrating with others across the full range of activities that took place among a people.[1]

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[1] *Sojourner*: I get the gist of these different forms of justice, but crime and even the distribution of public goods aren't big deals now. Can you give us some examples of how these concerns played out in the early twenty-first century?

» *Digger*: Well, very briefly here are key examples: tax policies and the provision of human services for distributive justice, the death penalty for retributive justice, and numerous rights issues—civil rights, abortion rights, gun rights, etc.—for social justice. In an unfortunate way, Americans had a weak capacity to deal intelligently with these, and many further problems of justice, because they widely believed that they were singularly free of such problems. Americans complacently thought of their life and society as naturally just—that was the essence of ideas about American exceptionalism. Convinced they had no problems of justice, they had hammered out no general framework for working through all the particular issues of justice that were arising in their public life. Each was *sui generis*, a political flashpoint. With no basic consensus about the principles of justice that might help the public work

Constrained acting, bringing with it the imperative of seeking to act justly, was a vital concern, not only for groups, but for persons too, as they conducted their lives. Here was the problem of acting justly in its most general sense. All persons, individually and in many combinations, had to choose among numerous potentialities and possibilities for action at any moment.[2] People always faced numerous possibilities, not all of which they could satisfactorily pursue. Determining their controlling purposes, large and small, personal and collective, and selecting the means with which to pursue them, was clearly the most basic, unavoidable problem of acting justly that people confronted as living beings. People formed their lives by making these determinations, doing this and not that, becoming this and not that as their patterns of chosen activity built up. This very basic challenge of choosing between competing alternatives was what was taking place as people tried to act justly and as they worked to control their self-formation.

As sometimes happens in the history of thought, the most basic form of a concept does not get a distinctive name. Then, as people abstract out and name derivative forms, the most basic, general

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through the particulars of each conflict, the sum of the particular issues slowly induced stasis.

[2] *Sojourner*: Are you being redundant in speaking of potentialities and possibilities, or do you see a difference between them?

» *Digger*: To some degree we are being redundant, for there is much overlap between them. However, in places Carlyle thought that possibilities were significantly differentiated as a subset of potentials. A potential described a somewhat passive state to indicate a capacity that something, particularly a person or group, a living form, actually possessed. A possibility was a potential, but often with the implication added that the possessor of the potential had committed an element of intentional will to it, intending to some degree to make the potential actual. A potential would simply remain an abstract potential until its possessor saw that he could work to control what took place to make the potential actual, and with that recognition the potential became a possibility for him. A possibility was a potential with respect to which some effort at control by its possessor took place. As with the distinction between capacity and capability, few people, certainly not Carlyle, always have the distinction clearly in mind in using the terms. Sometimes, however, he used the distinction to clarify a point. These distinctions would be subtly present, Carlyle believed, in saying something like, "The young artist worked to realize his potentials by grasping the possibilities of his art."

problem recedes from the forefront of attention. Carlyle thought this lack of a name was leading people to pay too little attention to the most basic imperative with respect to acting justly. There was an extensive literature on distributive justice and social justice, and a substantial one on retributive justice, and growing ones on ecological justice and intergenerational justice, without sufficient attention to the most basic difficulty in acting justly. Hence he thought the basic problem of acting justly, controlling the activities of self-formation, deciding how to conduct one's life, needed a name—*formative justice.*[3]

Principles of formative justice regulated, implicitly or explicitly, actions through which people determined their controlling purposes, intentions, potentials, and possibilities, and deployed their capacities in seeking to achieve them. Through formative justice, a person, or group of persons, allocated attention and feasible effort among their multiple potential purposes whenever they could not fully achieve all of them at once, a condition each person and group faced virtually all of the time. Human attention, intelligence, and energy were finite, while human urges, desires, needs, and aspirations exceeded a person's capacity to bring them to fulfillment. Hence, all people all the time had to exercise formative justice in the course of self-organizing their lives. Formative justice was the name Carlyle used to denote the way persons controlled their self-formation. But a name was not itself an explanation of how the named process actually worked.

7.2—Situating Formative Activity

Although some forms of justice appeared primarily as collective

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[3] *Commoner*: We should note that English-speaking educators were then becoming more interested in German traditions of *Bildung*, a development that greatly encouraged Carlyle. Over an extended period, his papers include numerous reflections on the difficulties and value of translating the concept of *Bildung* into English. He was cautious about the tendency in German usage to connect *Bildung* to a privileged body of learning, exemplified, among many instances, by *Bildung: Alles, was man wissen muß* by Dietrich Schwanitz (2002). Carlyle had started translating *Bildung* as "formative education" and he thought the adjective "formative" to translate the many compound uses in German of *Bildungs*. Ironically, one of the few compounds that does not exist in German would be the translation for "formative justice"— *Bildungsgerechtigkeit.*

concerns, all problems of justice had both personal and collective manifestations. Distributive justice seemed paradigmatically to be a collective problem but it operated on the personal level as someone had to budget limited economic means in purchasing desired goods and services. All-too-often each of us, Carlyle observed, regretted having skimped on important things while splurging on what later seemed frivolous and inessential. Likewise, retributive justice came into action at the personal level whenever one wanted to get back at another who had slighted one, or when one felt the need for some corrective penance, some self-punishment—sustained anguish or passing regret. Even social justice had a personal dimension when one felt anger on witnessing how a superior mistreated a subordinate. Equally, a personal social justice could be at work when one had to consider how to balance conflicting responsibilities. With formative justice, the personal aspect, channeling attention and energy to a few possibilities selected from many, was always evident. But groups, organizations, and whole polities had to do that too, thereby setting their priorities for effort and action. Thus, formative justice addressed both the way persons controlled their own self-formation, and the way groups sought to aggregate formative effort to bring shared desires, beliefs, and purposes to fruition.

Carlyle believed that distinguishing as clearly as possible between distributive justice and formative justice was important.[4] For that purpose, he found a trivial, but widely documented matter— the doings of professional sport—to be helpful. The sports pages of

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[4]   *Digger*: Through the modern period, theories of distributive justice had been most fruitful in thinking about justice. This trend reached a highpoint in *A Theory of Justice* (1971, 1999) by the political philosopher, John Rawls, which framed the discussion of justice in the last third of the twentieth century. Carlyle sensed that the preoccupation with distributive justice was diminishing among leading theorists. This shift was ambiguous in the work of Amartya Sen, who paid extensive homage to John Rawls in *The Idea of Justice* (2009) while centering his concern on the challenges inherent in actually realizing human capacities within and across complex societies. The shift in concern seemed clearest, and very impressive, in *Justice for Hedgehogs* by Ronald Dworkin (2011) in which the imperative of living well was central. At this stage of his career, Carlyle did not presume to advance his own theory of justice in any developed form. Working as an intellectual historian, he wanted simply to suggest a name, *formative justice*, for a basic concern in the intellectual tradition that merited more attention from historians, philosophers, and the general public.

newspapers in his time reported extensively, not only on the games themselves, but on the activities of home teams and their opponents. It fascinated Carlyle how team coverage tacitly used basic concepts from distributive and formative justice in their analyses. Coverage of teams that played on a weekly schedule such as football, either the global or American game, was especially revealing as writers had ample space to fill on the days between games. Their stories tended to rely either on principles of distributive justice, discussing how well the front office used the financial resources at its disposal to field an excellent team, or on principles of formative justice, explaining how coaches and players tried to improve their level of performance on the field.

At least within the tiny universe of the team, the front office dealt with distributive justice, negotiating salaries and other terms of player contracts. Carlyle did not dwell on the justice of his salary or those typical in the general public, compared to the players' take. Instead he simply observed that in the tiny world of the team, distributive justice had to set and justify differentials in compensation. The front office worked with players and their agents to achieve agreement through judgments about the market, putative skill, star drawing-power, and other signs of worth, whereby some players would make millions and others would labor at a mere minimum, several hundred-thousand. If the front office mismanaged the valuation of worth and the distribution of resources, with too much here leaving too little there, jealousies and resentments would wrack the team and the stable of players would fall short on talent, leading fans to rail at the front office, or far worse, to demand less than the full supply of tickets. If the distribution was astute, the team, its officials, players, and fans all might thrive. But would they do so? That question led to the analyses based on formative justice.

Given a stable of talent, how well would it actually perform? That question raised the issue of formative justice. By itself, a great collection of talent, richly remunerated, might achieve consistent success—damn those Yankees—but it did not guarantee it. Team members, working with a coaching staff, had to use principles of formative justice to help each player reach his full potential and to integrate them all into a resourceful, winning team. Trainers and coaches had to get each player into optimum condition for the roles he would perform. With discipline, swagger, and guile coaches would build the determination and élan of the group so that each played with full intensity. Coaches and players studied and schemed,

prepared and practiced, with the team as a whole and with each constituent player mastering an astute game-plan that took into account the vulnerabilities of opponents and the unique capacities of key personnel. Finally, formative justice here consisted in putting all these activities together, each in its proper measure, so that on the day of the crucial game, the whole team was strong, intense, and shrewd together, winning in a commanding performance. Here Carlyle saw the classic components of formative justice, direct from Plato—appetite, honor, and reason—each keeping to its proper business, integrated in pursuit of the good: a weekly win leading to triumph on Superbowl Sunday.

As each form of justice was both personal and collective, in each the person or group both exercised and received it. Here Carlyle harkened back to his attention with Kant's analogies of experience to both sequence and simultaneity. The exercise of justice involved many causal actions, for instance apprehending, trying, and imprisoning a criminal. But the causal sequence was certainly not the whole of the matter. Usually the causal part was in part merely the means of it. Acting justly was not simply an instrumental issue, for reciprocities among co-existing elements were always taking place and what was fit and appropriate in the acting depended on how all aspects of the action interrelated. One was not acting justly if the reciprocal interactions taking place through a causally effective action culminated in unstable situations. Just action created a virtuous cycle in which people accomplished their immediate purposes in ways that provided more propitious grounds for further activity. Unjust action might accomplish immediate purposes, but would weaken or complicate opportunities for subsequent effort. Pragmatism too easily lost sight of the fact that action had to be both effective and sustainable.[5]

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[5] *Digger*: A Canadian economic historian, Harold A. Innis, had written a book, *The Bias of Communication* (1951), which had much impressed Carlyle. Innis argued that different forms of communication were biased in different ways towards time and space, with carved stone capable of perpetuating a message for centuries but proving awkward in disseminating it over extensive spaces, whereas communication via cheap, unstable papyrus could be spread over wide areas even though it tended temporally to fragment and disintegrate. Networked, electronic communications were transforming established biases, making everything spatially all encompassing and temporally instantaneous. Carlyle thought that this change was influencing the balance between

In Carlyle's view, thought about justice in his time seemed overly preoccupied with aspects of distributive justice. In addition, during the modern era, in which people had concentrated their historical effort on shaping the material conditions of their lives, formative justice had received less attention in serious thought than perhaps it had in prior times—not all was progress. Maximizing power and wealth had by no means been a negligible goal in ancient Greek political life, but it had become more central in the political life of modern nation-states. Thinkers had turned more instrumental and utilitarian about the material goods of life. They had reflected creatively on distributive justice and had made various versions of it the central principle of political economy. In the process, they had largely sidelined issues of formative justice. Self-formation had become an elite privilege and access to educational institutions came to appear to be a public good managed according to principles of distributive justice.

Concomitantly, as educators, parents, and the public had excessively equated education with the work of schools and other instructional institutions, education had come to appear to them as something done to students. Education came to be experienced less as a set of formative actions that each person had to engage in and more as a component in the stock of public goods that were to be distributed in one pattern or another among claimants, numerous and needy. Education became a service received, a good distributed—

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effectiveness and sustainability, putting a premium on the latter, beginning to privilege what would prove sustainable through ongoing reciprocal interaction over what might be effective in a series of causal actions. Thus, during the decades before and after the year 2000, it became clear that substantial causal force deployed in attempts by authorities could backfire, radicalizing whole populations through instantaneous communications about what was taking place, mobilizing multitudes in demonstrations that would prove to be impervious to further repression. Sustainability was, curiously, appearing to be an important measure of simultaneous interaction. What was and was not sustainable could be disclosed very rapidly in some things, as with the power of demonstrating crowds, or it could also work very slowly as the exploitation of externalities through freeloading cumulatively built up distortions in the environment that the most favored could in due course no longer sustain without giving up their privileges. In many ways, the difference between modernity and postmodernity had to do with the shift from the pursuit of effectiveness in the former era to the prizing of sustainability in the latter.

fairly or unfairly. As the work of costly, formal institutions, the rational for its provision had become largely instrumental, providing trained workers and prepared citizens for the good of the dominant authorities. Students submitted to their instrumental schooling in part as a legal obligation, in part as a conventional expectation, and in part as a hope and a fear about its derivative results—the promise of secure, well-paying jobs and the threat of deficient skills in a competitive marketplace. In a world where social mobility had become low and was declining further, these were not rousing motivators for the pursuit of education, of self-formation. Kids would note their origins, and would quickly conclude whether they had won or lost, either way, leaving them to go through with the motions.

These were false appearances, Carlyle believed. Education was not a service to be received; it could not be distributed. As a matter of both right and prudence, people short-changed themselves by treating justice in education solely as a problem of distribution. Instead, people should be striving to strengthen attention to formative justice, a justice that each had to exercise himself in addition to developing strong institutions of social democracy.[6]

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[6] *Sojourner*: You make Carlyle's commitment to social democratic policies clear. But I wonder. In his time, was it difficult and risky to advance complex, nuanced positions in its cacophonous public discourse? Was Carlyle vulnerable to criticism for this conviction? Taken simplistically, it could have had a "let them eat cake" quality to it.

» *Commoner*: Yes, it was a difficult position to articulate in a time of increasing poverty and widening inequality. Carlyle recognized that good schools had an important social value, especially for children born into adverse circumstances. Schools could be invaluable, stabilizing factors in environments that children experienced as essentially chaotic and unpredictable. But he objected strongly to the idea that schools could alone provide the grounding for meaningful equality in the society and that persisting inequalities were either the fault of incompetent teachers or poorly run schools or of the inadequacies of poor children and their families. Those who were favored by good fortune meted out too much blame to schools for the poor and to the children of the poor. Differences in school attainments seemed to correlate with differences in out-of-school living conditions. But this merely recognized that in a freeloading system people who collectively lacked capital, financial and social, had difficulty improving the material conditions of their lives. Carlyle saw two serious problems associated with thinking that schools

Formative justice seemed crucial to Carlyle, for it could explain what people did as they controlled their self-formation.

7.3—Plato and Formative Justice

To develop a full understanding of formative justice, Carlyle went back to its historical sources in the intellectual life of the ancient Greeks.[7] They had laid the foundations for serious thought

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could be the major agencies of distributive justice in modern societies. First, trying to ameliorate socioeconomic inequalities through school reform risked diminishing the urgency associated with social-democratic investments designed to guarantee each person, without stigma, the provision of material and social resources sufficient for them to realize their full human potentials. Why equalize the conditions for self-improvement if schools could obviate the adverse effects of inequalities in those conditions? Second, making the attainment of social goals paramount in educational institutions deflected their work from their real educative function, supporting the self-formational activities of all children, youth, and adults. It is important that Carlyle did not advocate attention to formative justice as an alternative or substitute for distributive justice. Substantial attention to formative justice was essential *in addition* to efforts to achieve distributive justice, primarily across the general conditions of life enjoyed by the whole population. Without that balance, the pursuit of distributive justice alone, especially through educational institutions, would be at best an empty gesture, at worst a perverse means to legitimate egregious inequalities.

7   *Commoner*: Carlyle considered himself a keen student of the classics and of the classical scholarship available to him. But he did not think of himself as a contributor to that scholarship, for he lacked the necessary mastery of classical Greek and Latin for doing original scholarship of interest to specialists. But without claiming scholarly authority, he dealt with the classics in both his teaching and his writing. He thought that what he had to say about the ancients might evoke some disagreements from specialists at the margins, while it would fall without controversy within the range of their accepted interpretations. He often reflected on what seemed to him to have been a regrettable development in the history of modern education. Although the scope and quality of classical scholarship available in late modernity was greatly superior to what had existed two or three centuries earlier, the classics as a creative cultural resource had significantly declined in comparison to earlier periods. This decline had come about, he thought, because scholarly expertize was cowing the creative imagination of well-informed, reflective thinkers, leading them to set the classics aside—who am I to say what

about acting justly and about the many forms of justice. To begin, they had consciously replaced practices of revenge with reasoned ideas and practices of retributive justice, a process dramatized in the great trilogy, the *Oresteia*. The social, economic, and political dynamics within variously organized city-states had provided the experiential groundwork for ideas about social justice and about distributive justice. An unusually vivid sense of self-determination on the part of both the person and the polity had culminated among the ancients in a strong interest in formative justice, on forming a life consistent with chosen characteristics and values. When Aristotle described the *polis* as an association for the pursuit of the good life, he had recognized the centrality of formative justice, for the "good life" was not some *prima facie* given, but an open purpose to be deliberated over and determined together as the formative purpose that the city chose to pursue.

In his *Daybook*, Carlyle entered a basic proposition, which set him somewhat apart from many writing about justice in his time. They would situate the roots of their discussions of justice with Aristotle. In contrast, Carlyle went back to Plato whose ideas about justice seemed much more fruitful for understanding of education and grasping the pedagogical problem that each person faced in developing her capacities. Carlyle's proposition was succinct.

> Formative justice stands to education, as distributive justice stands to political economy. As Aristotle provided the first full conception of distributive justice, so Plato initiated and gave a first full conception of formative justice.

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they mean? He felt that reflective non-specialists had a responsibility to use the tradition as fully as they could, drawing on it as non-specialists nevertheless to shape and communicate their ideas. Carlyle regretted this reticence about using the classics by non-specialists because he thought it affected thinkers of liberal temper far more than it did conservative and reactionary writers. In the Enlightenment, classical thought had been a progressive resource, while in late modernity far too often it had become a tool of reaction.

» *Digger*: In doing that, Carlyle found the texts, in various translations, of Homer; Heraclitus; certain tragedies by Aeschylus, Sophocles, and Euripides; Thucydides, Plato, and Aristotle most valuable. Among the authorities available to him, he profited most from numerous studies, ranging from Jaeger, Snell, and Havelock to Nehamas, Nussbaum, Ober, and Euben. Many of these scholars are still worth consulting and for those interested we include his favorites in the bibliography below.

To develop this proposition, especially the part about education and formative justice, Carlyle again reiterated that education took place as persons and groups self-organized their capacities, physical, emotional, and cultural, through their incessant interaction with circumstance. People could pretend that formal instruction was causally effective, a means to impart desired characteristics to the young, but in reality the student—from infancy until death—was the one in control. People could pretend that they could predict what a good student should know, or would know as a result of instruction, but the outcome was far beyond the instructors' control. People could pretend, as the peoples of the world careened towards chaotic instability, that well-trained cadres of workers, suggestible consumers, predictable citizens, and self-satisfied elites were optimally adapted to the needs of their future. But in truth, when people conformed to predetermined specifications, they limited their ability to adapt. To find their way in an indeterminate future, they needed to become more capable of sound and vigorous self-determination. Real education did not involve conforming to predictabilities; it took place through a self-forming, through an emergence of open possibilities as a person controlled her choices by attending to formative justice.[8]

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[8] *Sojourner*: Do you think that the instrumental rationales given to schooling and post-secondary instruction during late modernity had anything to do with public moods of anxiety? Both personal and public life always has a lot of uncertainty and contingency to it. Telling people that they must be schooled well in order to be able to get a good job, or more grandly to ensure that the national economy is strong, would seem to have set them up for a lot of doubts as the promised advantages failed to materialize as job markets shifted and the economic cycle turned downward. I wonder whether pragmatic pedagogical rationales disposed people to fear their freedom and the changing circumstances that come with an autonomous life?

» *Commoner*: That is an important concern, complicated and difficult. It was central to much reflection triggered by fascist and Nazi movements such as *The Fear of Freedom* by Erich Fromm (1942) or *the Dialectic of Enlightenment* by Max Horkheimer and Theodor Adorno (1944, 1947), among many others. Highly educated publics, particularly the American, became susceptible to similar reactions, luckily not as extreme, early in the twenty-first century. Since the Stabilization, life circumstances have not been free of unexpected problems, and in the face of the unexpected, people are now better at agreeing on how to understand the problems and to ground efforts to deal with them. Prior

People could reinvigorate their sense of formative justice, and understand how they controlled their self-formation, by going back to Plato with it in mind, advancing an interpretation of Plato's work, especially the *Republic*, reactivating the *locus classicus* of the concept. Carlyle did not publish a full interpretation of Plato, but his extensive notes and discussions in his papers show that he had, through an extended, recurrent engagement with Plato, developed his own interpretation of Plato's work and significance. Several times he noted how the interpretations characteristic of his time, would often introduce the political themes of the *Republic* by indicating how Plato set the dialogue in the Piraeus—the democratic, commercial port area, some miles apart from Athens proper. There, these interpreters asserted, Socrates descended, all the better to deliver his vision of an ideal state deeply critical of democratic power.[9] Instead,

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to the Stabilization, the distinction between predictions and possibilities was blurred, and as a result, people often confused public policy with pedagogical effort. A key principle in the Stabilization has so far proved very sound: political economy and public action should address probabilities, not possibilities; pedagogy and educative work should address possibilities, not probabilities. Education shaped by probability narrows with Procrustean limits being imposed on developing minds. But when possibilities, as distinct from probabilities, determine public policy, people abdicate reasoned prediction and cast their lot in favor of *Fortuna's* foibles. Neither policy nor education can deal with certainties, but policies, causal programs, should attend to probabilities as well as reason can predict them, but education should address possibilities, uncertainties worth striving to bring to actuality. People who are merely trained in anticipation of what authorities deem to be highly probable are prepared very poorly to deal with unexpected contingencies. They have been prepared to deal passively with what does not take place and they have not been prepared to deal creatively with the unexpected actualities that do take place.

[9] *Digger*: Carlyle had in mind the way Leo Strauss introduced his discussion of the *Republic* in *the City and Man* (1964), especially pp. 62-68. Stanley Rosen essentially expanded Strauss's opening in his extended treatise, *Plato's* Republic: *A Study* (2005), pp. 19-37. Other commentators (A. E. Taylor, Werner Jaeger, W. K. C. Guthrie) dealt with the opening of the *Republic* quite differently. Carlyle thought that the dramatic setting of Platonic dialogues was a good device for introducing the assumptions an interpreter brought to the text. It seemed a serious stretch, however, to conclude from the beginning of the *Republic* that it was to be a work about realistic political practices and preferences.

Carlyle noted that the opening scenes could just as well be taken to actually celebrate the power of places, showing how the city supported random access and the spontaneous exchange between people of different interests, backgrounds and estates, an open, urbane bonhomie. A new festival in the Piraeus was taking place, to which numerous Athenians from all parts of the city had flocked. A local resident spotted a friend from a different district, Socrates, and insisted on bringing him home, where a few others—family, friends, and clients—had gathered to talk. The beginning displayed an urban network of complex linkages without plan bringing diverse persons together in open interaction. Carlyle even noted that the initial banter recognized the importance of maintaining weak ties between distant parts of a network in order to keep the interactions on it fully vital.

And then the conversation recorded in the *Republic* began in earnest, not about anything political, but about what younger people could learn from their elders in order to help them chart their course in life. Almost immediately, Cephalus, the genial host, ripe in age, endowed with wealth and wisdom, succinctly stated the upshot of the entire *Republic*—the source of tribulations in living, even for the elderly was "not old age but a person's character. If one is well-ordered and content, even old age is but a moderate burden; if not, Socrates, then age and youth for such a person are both in consequence difficult." (329d, Allen, trans.) Socrates declared his delight with that formulation, and all that followed, Carlyle thought, unpacked its meanings and implications. All the portentous ideological implications were willed projections by modern dogmatists of what they knew, of course, the text must be all about.

How should one conduct one's life? What sort of life was most worth living and how could one shape oneself accordingly? These were in fact the central questions addressed through the *Republic*. These matters were fundamental to formative justice. How could a person or group properly control its self-formation?[10]

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10 *Sojourner*: Am I correct that generally in Carlyle's time scholars interpreted the *Republic* as a work of political theory? If that was the case, how did Carlyle counter those views and make a case for reading it as a reflection on the control of self-formation?

» *Digger*: Basically, he did not seem to think that it was necessary to do so. He thought Plato had designed the work to be radically aporetic in that it was full of intentional, internal contradictions that would force thoughtful readers to reconcile the contradictions through thoughtful choices, discounting some assertions and taking others seriously.

In reading the *Republic* as a study in the control of self-formation, the task throughout Book I was to examine in a variety of hypothetical situations how a just person would decide to act, a topic to which the text spoke at length. Even Thrasymachus, who argued that justice was the interest of the stronger, primarily sought to show that the person who could compel others to serve his interests would lead the life most worth living. Occasionally, the discussions turned to examine the conduct of a just or unjust city, primarily to facilitate examination of justice in the life of the autonomous person. Personal fulfillment, not the good of the polity, was the subject of inquiry in the opening discussion. Socrates essentially silenced Thrasymachus by showing that the strong man, in pursuing his interest unchecked by forcing others to do his unexamined will, simply amplified his capacity for self-harm.

In Book II Glaucon and Adeimantus stated more rigorously what Socrates was to address: ". . . please then praise this very thing about justice: how justice in and of itself benefits him who has it, and injustice harms. . . . Do not show us only that justice is stronger than injustice, but also what each of the two does in and of itself to him who has it. . . ." (367d–e, Allen, trans.) Socrates addressed this task through the whole of the *Republic*, and all the various byways of his

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Consequently, the work had no definitive meaning, but many different ones depending on different readers' constructions of it. Political interpretations would decline as readers saw there were more beneficial ways to interpret the text.

» *Commoner*: Carlyle's theory of interpretation took the meaning of any work that was subject to interpretation to be open in this way. He thought that interpreting a work was much like deciding on a route to take in going to some destination. There was no one best way to get to a place—where one started from and what one wanted to accomplish in going to the destination made a big difference. The best route for an ambulance would differ from that for a sightseer, even if they started from the same place. An interpretation could be better or worse relative to the situation and purposes of the interpreter. And sharing full and careful interpretations was useful because one interpreter's effort and assumptions could inform the interpretative experience of others. But where starting points and assumptions differed, it made no sense to argue which interpretation was "correct." They were simply different, each perhaps better or worse relative to its own potentialities. As part of clarifying his preferred assumptions for himself, Carlyle sometime compared his view to others in the literature, not because he thought he had to demonstrate their error, but to contextualize his decisions.

discourse contributed to his answer to it, including the famous *city-of-words*, the ideal state that he created in discourse. Socrates introduced the search for justice in the city-of-words as an expedient to help in the search for justice in the living of a life. The *Republic* aimed to explain the formative principle that the just person should follow in living life. And Plato had Socrates stick carefully to that agenda and rationale throughout the text.

Carlyle recorded in his notes that even when describing the city-of-words, the *Republic* said astonishingly little about the normal concerns of political theory.[11] The text said nearly nothing about

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[11] *Sojourner:* You mentioned above that Carlyle never published a full interpretation of Plato. Can you explain why? It seems a bit odd, given that he had read Plato so extensively and closely.

» *Digger:* It is not quite correct to say that Carlyle did not publish his views about Plato. He did not do so in a single, extended treatise, but his published essays over a long career frequently referred to Plato and the particulars of various dialogues in ways that show a close, rather consistent reading of Plato. Carlyle showed his engagement with Plato in the way it affected all he wrote.

» *Commoner:* Carlyle took Nietzsche's untimely meditation on *Schopenhauer as Educator* seriously. As a historian of educational thought, he attached a methodological significance to Nietzsche's stipulation that a philosopher was worthy to the degree that he could serve as an example, not through his words, but through his evident life. To this effect, Carlyle liked to quote a passage by Walter Kaufmann on "Plato as educator":

> Plato's central importance for a humanistic education—and "humanistic education" is really tautological—is due to the fact that a prolonged encounter with Plato changes a man. It will not change every reader in the same way, but on the whole it is likely to make a man less dogmatic, more cautious and critical in his thinking, aware of endless possibilities, and alive to the delights of sustained reflection. (Critique of Religion and Philosophy, 1958, p. 409)

In interpreting a figure such as Plato, really any figure of historical importance, Carlyle tried to pay paramount attention to how the person could serve readers "as educator." A pedagogical interpretation was, of course, not the only one possible. But to Carlyle, it was the one of greatest importance to readers, especially in times like late modernity when many people of prominence were devoid of exemplarity. This purpose would become problematic, of course, whenever an eager pedagogue glossed over the complexity of a potential exemplar, reducing him to an empty simulacra. To avoid that possibility, Kaufmann's stipulation of a "prolonged encounter" was important. To

how institutions of the state should organize the exercise of power, whether legislative, judicial, or executive. In examining who should rule, Plato concentrated on issues of educational preparation. At the end of Book IV, the discussion finally reached the constitutional questions, linking them to five patterns of the soul. But that immediately led to Book V and "a necessary digression," propounding the equality of women, advocating abolition of the family, and praising communal solidarity. From there the conversation circled slowly back towards the five constitutions, via Plato's famous discussion of advanced education, the structural forms of knowledge, and the Myth of the Cave. Finally, Socrates returned in Book VIII to the five constitutions, which turned out to be four, followed by a fifth state of lawless desires. Indeed, in this section, Plato wrote about the discernible forms of ancient Greek political organization, but his main interest accounted for the changing patterns of character formation in them. Anxieties associated with life under one constitution would alter the controlling principles of self-formation among typical citizens, building up to the point where they imposed their new character structure as the governing principle of the city. Thus, aristocracy gave way to timocracy, timocracy to oligarchy, oligarchy to democracy, and finally democracy to tyranny. Plato described these transformations, not as acts of law-giving, but as emerging changes taking place through the dynamics of personal character-formation.

At key points, Plato posed the question whether the city-of-words could ever become a reality where people actually lived. Towards the end of Book V, as a prelude to his discussion of the theory of forms, he asked whether the city-in-speech would ever become actual. He responded with his well-known stipulation: the city-of-words could become a factual reality on the unlikely condition that philosophers became kings, and kings philosophers. However, he added, something depicted in discourse as a possibility, as something thinkable, was itself something, something both meaningful and

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experience someone "as educator," a person needed to engage in a prolonged encounter. Such an engagement could often culminate, not in an interpretative treatise, but in a pervasive presence in the person's thinking, as Plato had for Carlyle. From course notes and student reports, we know that Carlyle found troubling the challenge of keeping large, difficult works of thought and literature active as educators. The academic year, semesters, multiple courses limited how students and teachers could engage in a prolonged encounter with another thinker.

actual as a concept. With that addition, Carlyle suggested, Plato invented counter-factual ideal-types. And the outcome of his counter-factual ideal type was the principle of formative justice.

At the end of Book IX, after explaining his understanding of an ideal-type with his theory of forms, and after showing it in operation in tracing character degradation from aristocracy to tyranny, Plato again discussed the question whether the city-in-speech could or should exist in actuality. The just person would not care whether it did or did not, for "he will look to the constitution within himself, . . . and guard against any disturbance there. . . ." (591e–592b, Allen, trans.) The dynamics of civic control set forth in the city-of-words were not important to Plato as a blueprint for political practice, but as an illustration of the internal modes of self-control, the "constitution within himself," that someone forming himself to live a just life would establish. As contingencies then emerged, a person, who had so prepared himself, could more confidently realize the better possibilities and avoid the worse. The operations of the city-in-words illustrated how each person could autonomously engage in controlling her self-formation.

Through and through, Carlyle interpreted the *Republic* as a work about formative justice—the principles guiding the self-formation of character by which persons and groups allocate their attention and effort as they cope with the situations taking place in the concrete circumstances of their lives. Carlyle scorned the idea that Plato's notorious Myth of the Metals had advocated a rigorous caste system (*Republic*, 414c–415d). Plato designed the Myth that different persons were by birth suited to perform one function, and only one function, to suggest how the parts in a complex whole needed to be integrated effectively in the service of the whole. Plato did not construct the city-of-words to advance social norms that people should institutionalize in real civic arrangements. He constructed it to clarify problems of character formation that each person had to solve in the course of self-organizing their capacities. The problem of effectively subordinating and coordinating the various capabilities that a person formed in life, integrating them into a coherent whole, was a pre-eminently educational problem, one central to formative justice.

Accordingly, Plato's Myth of the Metals helped a reader think about his various, different capabilities. It suggested that the reader think about each capability as both fixed and distinct, not in scope but in its function, for one capability was not transmutable into

another.[12] In that way, we do not try to have one capability do the work of another. Appetites were appetites, emotions, emotions; rationality, rationality. Each performed functions central in the living of life. But the function of each differed in character, import, and use; they needed to serve the person, each keeping to its proper function. Each had its place and in every situation, each had an appropriate part to play. As a human capacity, formative justice had to judge rightly the character and function of desires, feelings, and thoughts and to integrate the fit claims of each into a sound rationale for personal interaction in the midst of actual circumstances. Thus, we should not try to draw reasoned conclusions through the exercise of appetitive desires or to bond emotionally through closely reasoned argument.

Understood as part of a heuristic model helping to clarify how persons can control their self-formation, the Platonic Myth of the Metals did not deserve the scorn it often received from readers who saw it calling for a society founded on a rigid caste system. Can one make sense of how the complex components of self-control work and interrelate without thinking about them as relatively fixed, each performing an important function appropriate to it? By perceiving the inherent differences setting distinct capacities apart from one another, a person would deploy those capacities each for its appropriate purpose and integrate her activities into a sustainable life-project.[13] How to harness appetite, emotion, and reason to their

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12 *Digger*: Judging from lecture notes for his courses, Carlyle interpreted the advent of ancient Greek philosophizing as one of a most fecund period of concept formation, and he particularly celebrated Socrates and Plato as initiators of important concepts in the history of Western thought. Carlyle interpreted Socratic/Platonic thinking largely as a sustained effort to develop the idea that various modes of action served discernible functions and, by clarifying the relation between action and function, to improve both the formation and the pursuit of human intentions.

13 *Sojourner*: Would people really then justify letting their appetites and emotions control their reasoning, or some cold calculation determine their affections? I don't see how anyone could disagree with Plato about ensuring that distinct capacities worked only for the purposes appropriate to them.

» *Commoner*: It is difficult for us to understand. Keep in mind that before the Stabilization and the full disclosure of the commons, people in all strata of society were deeply alienated. Being alienated meant that the different sides of a person's character were at odds with each other. It

fit functions, situation by situation, and to be able to draw appropriately, as occasion merits, on each together within the human enterprise is by no means a dead issue, existing only as history.

Formative justice was for Carlyle the lynch pin in the life-long formative education that each and all persons undertook. Carlyle imagined in his *Daybook* how Plato, reincarnated early in the twenty-first century, might confront educators, asking them, in a challenging tone, to give an account of their nonchalance about formative justice: "Who voices strong concern for formative justice in the educational discourse of your time? Who speaks to the young with sufficient, compelling power about formative justice?" In response, Carlyle reflected: "How might we answer?— Deborah Meier? Diane Ravitch? Arne Duncan? The drafters of *No Child Left Behind* or the Race to the Top? The National Commission on Excellence in Education? Derek Bok? Derek Jeter? Howard Gardner? The American Educational Research Association? The Educational Testing Service? Angelina Jolie? Kaplan Test Prep? John Sayles? KIPP Schools? The New York City Department of Education? Bruce Springsteen? Lloyd Blankfein? The Harvard University Admissions Office? Fox News? Pixar? Robert Coles? Perhaps a few of them. None use the term. But might we say that some of them say some things to some people about the concept, at least in substance?" Plato would continue the exchange. "Perhaps a few have inklings about formative justice. But on the whole people seem far more preoccupied with the gratification of raw appetite. Consider this, one small datum—Circa 9:00 p.m. Eastern time, August 3, 2011, the query on Google Search for 'formative justice' yielded 563 results, and one for 'xxx' produced 1,090,000,000 hits, starting with 'Free Porn, Sex Videos, Pussy Movies, Porn Tube, Free XXX Porno.' What's going on? 'xxx' pointed to almost 194-million

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meant that people were torn internally, their interests at odds with their principles and their drives. Alienation set up a powerful tension between immediate self-interest and a person's sense of principle and hope. This alienation was the basic characteristic of the unjust life as Plato described it, the angst that even the very powerful felt, knowing deep down that neither by ability nor by right did they merit what they enjoyed. Even the most powerful stood on the brink of downfall if they miscalculated or suddenly faced something wholly unexpected. For such persons wish-fulfillment and willful reasoning could be hard to resist. From Destutt de Tracy on, that was what the critique of ideology had been all about.

times as many web sites than 'formative justice' did. Does a datum like this reflect a real judgment of relative value, or perhaps the prevalence of a virtualized sex drive?"

But let us not digress. Before commending Plato's understanding of formative justice as a most fruitful way to think about educative choices in his time, Carlyle needed to grasp how Plato's concept worked, using more contemporary language. The Platonic schema, the famous tripartite depiction of the human soul, actually described the complex control system that persons used in managing key interactions with circumstance that took place in the living of life. Plato's language was highly metaphorical, an early language in the ever-unfinished history of thought. It was insufficient to express the lived complexities fully. But with unforgettable beauty, it was sufficient to enable the willing understanding to attend, to grasp clearly, the actualities of experience. If he could imagine Plato reincarnated, speaking sternly about the deficiencies of American culture, Carlyle could also let Plato voice his ideas in more contemporary ways, still the ancient Greek philosopher, but one able to speak, with a beguiling accent, in the language of a much later time.

In this language, Plato's great image of the human soul—the splendid chariot of life, pulled by two steeds, appetite and emotion, guided by intelligence, by rational thinking—symbolized the *psuché*, the breath of life, the psyche, which differentiated a living person from a dead corpse. Carlyle sensed that understanding the difference between the living person and the dead body was key to understanding how a person controlled her vital self-maintenance, and the modern secular mentality paid perhaps too little attention to the difference. What was the *psuché*?

Carlyle had witnessed only one death, that of his mother, who after a massive stroke had struggled for several hours, no longer sentient, heart pumping blood and lungs gasping breath—until they stopped. At that instant, her *psuché* left her body; her features immobilized and her color changed subtly as her living presence, the self-maintenance of her breathing, vanished. Even in those last hours, so terribly reduced, there was a drive to self-organize, a capacity for self-control, however somatic and labored, which we should recognize, however wounded, as the fullness of the human spirit.

For Plato, this self-maintaining spirit with which a person lived, the capabilities with which she self-organized and interacted with the

world, had three components—appetites, emotions, and reason. At a basic level, appetites expressed the somatic needs of the animate body in order to maintain itself in a sound state of vitality—hunger, motility, excretion, metabolism, reproduction. The appetites expressed the human qua animal and they were essential in living life, the point of reference in constructing the first city-in-speech, the city of pigs. Plato then evoked the city of man from this more primitive city by letting the appetites attach to more complicated, more cultural purposes. A Hegelian might say it happened through an *Aufhebung*, or a Freudian through sublimation. In Carlyle's time, when the digital revolution was coding the vast complexity of human culture through the recursive manipulation of simple binary digits, people should certainly appreciate how a few brute drives might recurrently combine and interact so that aspirations of infinite nuance and extent would powerfully emerge. The grand narrative of emergence reverses the reductionist compression by showing how simplicities recursively combine and interact, effervescing into the variety and complexity of life. Humanity, in all its inexhaustible possibilities, rose out of and above the appetites, at base purely vital, animalistic and vegetative, drawn out by *eros*. *Eros* was an urge for procreation, by sexual or any other means, combatting mortality through offspring. But *eros*, an appetite for what we lack, could sublimate its goal by feeling many forms of longing, drawing people towards many forms of procreation, social and cultural. From all these urgings, a human city rose above the city of pigs, for people interacted with their world, steering their appetites with emotion and reason, to create a complex cultural achievement.

Here, Carlyle noted that language was not a supra-historical given. The expressive powers of language instead developed over time, changing from before to after, even though the underlying experience, which language expressed, remained stable from one time to another. And at any time, the available language was never sufficient to convey experience fully. Thus, early thinkers might have described and thought about experience in a way quite different from the way people would later describe and think about essentially the same experience. Despite talking often about human emotions and rationality, Plato was trying to say something more precise while not yet having the language at hand necessary for its expression. In this sense, what Plato said about emotion—that it strengthened the drive to its object—Carlyle understood as a description of positive feedback as it worked in living life. In the same way, Plato's reason,

which reined in appetites and redirected emotions, Carlyle took to be the exercise of negative feedback in the processes of self-control.

Positive feedback was not always seeing the bright side of things. It was rather the capacity to heighten or strengthen a response, to turn the volume up. Thus violent disgust at the sight and smell of something foul and putrid exemplified positive feedback as much as would a declaration of impassioned commitment to a cause. In both cases, emotion intensified the response. On the other side, rationality generated negative feedback, the ability to limit or check a response. Thus, the biologist coolly checked his emotions of recoil at the sight of organic decay and examined it with care to understand the degenerative processes taking place. Living forms, by virtue of being living forms, had drives urging self-maintenance. And to the degree that they could self-organize capacities for positive and negative feedback, they used those capacities to form and direct their drives in order to achieve self-maintenance in the world in which they found themselves living. Hence, humans built their cities for people, not for pigs.[14]

In the *Republic* and in other texts as well, Plato paid close attention to what oriented all this living effort, this human drama of self-organization and control. It was what Carlyle worked to grasp clearly. In Platonic language, orienting it all was the good, more precisely the idea of the good, its form. But Plato had been coy, perhaps not ignorant, but silent, about what the good was in substance. The whole concept of philosopher-kings and the description of their education struck Carlyle as playfully ironic, encumbered with impossible conditions. Clearly Plato had ideas about the form and substance of advanced education. But did the *Republic* stipulate that the mastery of these attainments was a

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[14] *Digger*: Unfortunately, the terms—positive and negative feedback— oversimplify in ways that we should not completely overlook. Feedback, both positive and negative, had great spatial and temporal complexities. The spatial arose because the feedback loops could have topologies that were highly differentiated, each having distinctive constraints and functionalities operating through it. In addition feedback had a temporal complexity, for it could operate with an extreme variety of gaits, varying from the nanoseconds by which a computer chip kept its clock, to the decades needed to push major legal controversies through the Supreme Court, and finally to whole eons by which geologic changes occasioned shifts in the global distribution of various animals and plants.

necessary condition for gaining knowledge of the good itself and using it to manage the judgments necessary to live justly? Carlyle thought Plato had linked such a stipulation with too many expressions of doubt and improbable conditions to be taken at face value.[15]

What did Plato mean by the form of the good? Was it an esoteric culmination of a lifelong inquiry that only a very few, if any person, could undertake? Or was it a capacity deeply characteristic of all life, a capacity of great significance for the human dignity of each and every person? Carlyle believed that the Platonic *telos*, the form of the good, was universal to all life and fully accessible to every person. In the contribution by Socrates in the *Symposium,* Plato had come closest to describing the good in substance. Here, recounting what a

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[15] *Sojourner*: Don't the risks Plato took advising the rulers in Syracuse suggest that he must have been serious about real-world desirability of philosopher-kings?

» *Digger*: We can be sure that both Plato and Carlyle wanted real political leadership to be as wise in exercising sound judgment as possible. Plato tried to further that as both counselor and as founder of the Academy. But Carlyle thought that Plato gave many hints and nudges that readers should not take the education of the guardians too literally as a precondition for living life justly. The discussion of higher education in Book VII outlined the program of studies pursued in Plato's Academy. In addition, it could have a more general, metaphorical meaning relative to the educational formation of any person who would live justly. It could have this meaning, not only for the few persons who actually studied in the Academy, but also for any person—not someone who might possibly become a philosopher-king in some extraordinary situation, but all persons who recognized the city-of-words as describing the actualities of their autonomous control of their own conduct. The key to that more general meaning was the passage saying that all persons possessed the capacity to see the good (518c–d).

» *Commoner*: Carlyle was loath to impute to Plato, who so memorably depicted the Socratic capacity to extract deep knowledge from the flux of lived situations in everyday life, the idea that people could gain important knowledge only by formal study of a set curriculum. Carlyle thought that the higher education of the guardians could simply formalize what a reflective person could learn in the course of the thoughtful examination of their lives. Carlyle's son-in-law, a thoughtful carpenter who had not gone to college, had built up an impressive equipoise by middle age by an openness to life and quiet reflection on his experience and work. All could learn to live well, justly, by attending thoughtfully to the form of the good that each possessed.

wise priestess, Diotema, told him, Socrates suggested that the object—for which *eros*, love, the most animating of the human appetites longed—was not some positive quality activating the lover, alluring him in one way or another. The object of *eros* was a sensed deficiency, a lack or incompletion that the lover felt. And what was that? Beauty—the good—happiness. But these words were all still a bit ineffable as Diotema ended her oration, for these words would confuse us, mere mortals, who attached transient particulars to the words—an alluring face and body, fine objects, a succulent feast, and even more, arts of great sophistication and studies of scope and wisdom. But all these particulars were but rungs on the ladder up to contemplating the beautiful itself. "What then do we suppose it would be like, she said, if it were possible for someone to see the Beautiful itself, pure, unalloyed, unmixed, not full of human flesh and colors, and the many other kinds of nonsense that attach to mortality, but if he could behold the divine Beauty itself, single in nature?" (212e, Allen, trans.)

Carlyle wanted to try to go behind such words to what they meant, not in the sense of knowing the meaning that attached to each word, but in sensing what took place in living life that occasioned the discourse, that provided the mute actuality the discourse tried to utter.[16] What was the intuition of beauty itself that prompted Plato to

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[16] *Commoner*: Carlyle sought meaning through interpretation, but he thought meaning was an attribute, not of words, but of the lived experience that occasioned the words, of which they were clues several times removed. It may be implicitly self-evident by now, but Carlyle assumed and worked from a very unusual starting point that was central to how he engaged the work of interpretation. We can point towards it, recognizing that he never developed it systematically, but signs of it keep appearing in his work, rather as Heraclitus had said of the Delphic oracle, which "neither speaks out nor conceals, but gives a sign." (Fr. 93, Kirk, Raven, Schofield, trans.) And the Delphic oracle's great injunction, "know thyself," was, in many ways, the basic sign to heed in interpretation as Carlyle tried to practice it. He took Kantian phenomenal limitations very seriously as his grounding. Carlyle's study of neo-Kantian thinkers, especially José Ortega y Gasset, disposed him to think of lived life as the locus and situation of everything— phenomenal experience took place in life, not the world. It was not that thinking was about life, but that the actuality of living was in significant part one of thinking. Thinking was one among many modes of interacting continuously taking place for a living form and its *Umwelt*. Consciousness was not a general capacity that could represent what it

speak of it? An interpreter needed to form an idea of the lived experience that elicited the words. Carlyle estimated that with the concept of *eros* a thinker like Plato grasped something vast and primeval, a recursive energy, the life force of living forms. *Eros* began, a chance swirl of self-maintaining desire, animating the form. Once active, *eros*, and the form of life, spawned and spawned countless erotic forms, each and all continuously seeking self-maintenance, each interacting with its world. Through the churn of life, each part mortal, ever unstable, *eros* would animate itself with the longing for stability, for self-maintenance. With self-made capacities for self-control, each self-maintaining swirl would challenge whatever threatened to destabilize it, correcting and countering instabilities, however it could. In this living pageant, the beautiful was the achievement of self-maintenance, however transitory, a pleased sigh of satisfaction. Each state of vital equilibrium added to the self-maintaining cosmos of living form, which would then tip anew into instability. Slowly over eons, the recursive interactions of this self-maintaining form, urged by *eros* towards the beauty of stable existence, appropriated more and more of the meaningless stuff of the universe, imbued it with self-organized function and meaning, and crafted it into a cosmos of many parts, each alone a mortal part, yet all together potentially an

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attended to in the world around one. Consciousness was an element of life in which living form—a self and its circumstances—took place. Consciousness happened; it was one modality in which a life, every life, took place. Consciousness, and thinking, did not represent anything; they were significant elements of living life. They could never be more than very partial elements of living life, in which the whole of it was essential, but however partial they were important and integral to the life lived. Carlyle wanted to stop talk about a *living being*, which objectified the life, cutting it down and enclosing it in the mere body. Actual experience took place in a *living life*. Being locked in a phenomenal world was being locked in the immediacy and actuality of a person's life and *meaning* was a key part of that lived life. Our ability to grasp the reality of other lived lives through communication about their consciousness and their thinking was subject to significant degrees of separation from their lived reality, much as Plato described it in his critiques of representation. The challenge of interpretation was to grasp as fully and surely as possible the reality of a different living life, with its meanings embedded in it, which the sequence of words and images, presentations in the interpreter's consciousness, his thought then sketched.

immortal, all-encompassing whole, life itself.

Eros, in Carlyle's understanding of Plato, was the recursive, self-maintaining vital force of life. Beauty was the stable equilibrium that the vital force of life would always lack and would always seek, incessantly using its organizing arts to overcome each successive instability, each threat to its ongoing self-maintenance. Self-maintenance was such that each equilibrium, as it teetered, became the starting point for the next, and the process, ever pursuing what it lacked, encompassed more and more into itself, becoming a self-organizing *telos* of life. Beauty in itself? Plato always left it to the reader to see it for himself. How did Plato perceive it? Perhaps it was the self-maintaining process, in due course, after eons yet to come, having encompassed all of chaos, integrating it in the completed, self-created cosmos—fulfilled, complete. *Eros*, living form questing a secure self-maintenance, might anticipate its complete satisfaction. It might contemplate the possibility of life itself, living form, not merely having clawed out a niche where it was at home in the universe, but having fulfilled its creative potentialities to the point at which it was, finally and fully, at one with the entire universe, imbuing it all with the vitality of meaning. Was this vision of the good itself, the eventual *telos* of formative justice?[17]

Plato's *psuché*, that which animated mere matter with life, had three components—appetites, emotions, and reason. The first was a set of needs and drives, which sought self-maintenance, which blossomed into the wondrous harmony of meaningful aspiration. The other two were the basic forms of feedback, adapting themselves to ever-diversifying goals, which allowed the living form to control its needy longing in life—emotions intensifying drives through positive feedback and rationality checking and controlling them with negative feedback.

Everything that took place as the *psuché* interacted with its world aspired to the good, to continuous, stable self-maintenance. Self-maintaining was life's activity, in its entirety, and on the human plane, the whole effort by *psuché*, as it pursued its self-maintaining, generated the cosmos of human achievement, and through its errors in this effort—excessive or deficient drives, inappropriate emotions, errors of judgment—it gave rise to all the follies of mortality as well. Alone and in groups, persons self-organized their capacities and their

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[17] *Digger*: In addition to reading and rereading the *Symposium*, Carlyle had found the Ph.D. dissertation by James Stillwaggon, "Educing Eros: Desire, distance, and the educational relation" (2006), very illuminating.

world as they formed their inner-outer networks and controlled the interactions taking place through them, using the three components of their souls—their appetites and their capacities for positive and negative feedback—to seek full self-maintenance through the course of their lives. Formative justice guided these components of human character in self-organizing and controlling a sustainable pursuit of self-maintenance in the interactions taking place in life.

Plato ended the *Republic* with the beautiful, depicting the situation in which each person chooses her life. Carlyle noted its importance, especially for dealing with key issues in the twenty-first century. Carlyle thought the sense of potential well-being had become imbalanced with too much attention to causal conditions and too little to self-organizing interaction in the world. The habit of seeing everything as an issue of political economy had become incorrigible, he feared, and it propagated a belief that people had little opportunity for self-determination. Material goods and services, public and private, had become the obsessive objects of choice, even the vehicles of self-definition as people chose their clothing, cars, and furnishings to present a crafted image to the world. The more people saw the politics of distributive justice as the primary path to their well-being or adversity, the more public life congealed into a stalemate of countervailing opposition. Thus, reciprocal resentment was desiccating the lush garden of personal self-affirmation.

Plato's Myth of Er affirmed the reality of significant opportunities for each person, exalted or humble, to control the course of her life by managing well a continuous flow of self-formation. Choosing how to live life was not a problem of distributive justice, but a sound exercise of formative justice. No one was so wretched, the Myth affirmed, that he faced no formative options; there were always choices, some better and some worse, and even in the most extreme situations there was the agony of choosing the bad, not the worst. No one was so exalted that he did not have to weigh the better course against the worse. As people had to make significant choices in the flux of circumstances taking place in their lives, the differential advantages between one life and another could be wiped away—in effect, some chose first and others later. Each life took place in its specific circumstances, not in some abstract homogenization of them all. Each person, in living life, did so in interaction with those specific circumstances distinctive to each, and each person lived a better or worse life depending on how well or badly the person organized herself and controlled herself in the vital

interactions that uniquely comprised her life and its circumstance.

Of course, politically Carlyle was a social democrat and the politics of public parsimony, which during his adult life had attained increasing hegemony, chagrined him. Collective improvements in general circumstances would be a boon to everyone, both to those who directly benefitted from them and to those who indirectly benefitted, despite the costs, from participating in a more humane, fulfilling community. *In addition*, no matter how extensive the collective improvements might be, even if the collectivity fully achieved progress, as its nineteenth-century acolytes praised it, each person would still necessarily engage in leading her particular life, controlling her interactions with her specific world. Achieving a more just distribution of goods was an important goal of political economy, but political economy was not the whole of life, for most persons not even the primary aspect of life.

A more just distribution of goods was not a surrogate or substitute for formative justice in the lives of persons and groups. For Plato, formative justice was an act of agency exercised by persons and groups to order their appetites, emotions, and mind so that they could judge their options well and control their interactions with their circumstances in pursuing the fulfillment of their possibilities. A soul out of tune with itself—its appetites determining its sense of honor; its passions running roughshod over its intelligence; its rationality coldly denying real needs and the bonds of fellow feeling—suffered formative injustice, degrading the capacities for self-organization and self-direction possessed by the person or group. Formative justice built them up. But how each person could control this process of formative justice for herself, moving it in a direction she deemed meaningful, was not yet clear.

8—Fulfillment

From our vantage point, Carlyle's affirmation of the Platonic idea of formative justice might seem almost complete. But there is still some important work to do, which will reveal much about the difference between our postmodern ethos and that dominant in Carlyle's modernity.

Plato understood that each person made innumerable choices, each of which could result in better and worse eventualities. To make these well a person had to use emotion and reason to modulate, direct, and harmonize her drives and appetites. In this effort to direct her drives and appetites wisely, a person's judgment was no sure thing. It could err. Understanding how each person can minimize, identify, and correct errors of judgment in controlling her appetites and drives was a key and difficult part of Plato's ideas about formative justice. These corrective capacities were essential to self-formation.

Carlyle felt he had to reflect at some length on this concern for self-correction in the exercise of formative justice. Doing so drew him into one more matter in the *Republic*, one that often vexed Plato's readers—the critique of poetry and music, even of *mimetic* art in general. We can learn much about what sets our own ways of thinking apart from those dominant in late modernity by noting the relevance for his own time that Carlyle saw in Plato's critique of *mimesis*. Now, in our post-Stabilization ethos, readers are rarely vexed by Plato's criticisms because the criticisms seem rather self-evident and uncontroversial. A hundred and fifty years ago, it was different.

Three times in the *Republic*, Plato harped at length on the problem of words, sounds, and images that manipulated and deceived those harkening to them. Plato first examined the problem at length through the discussion of education in the city-of-words, which started late in Book II and continued through III into Book IV. He memorably depicted it a second time describing deceptions of mimetic art through the image of the chained populace in the Myth of the Cave. And he enunciated a last critique of poetic

distortion through his sophisticated examination of imitation in the first half of Book X. Carlyle noted with some pleasure the Platonic irony, for these criticisms of poetic fiction were themselves poetic fictions. The first instance was key to constructing the city-of-words, one of the great flights of theoretical fancy in our tradition. The second was the heart of Plato's most renowned mythopœic construction, the one most universally associated with his work. And the third immediately preceded and in a sense introduced the other great poetic construction, the Myth of Er, as if to say "Look, here I am showing you how poetry can create an engaging *mimesis*, a fiction that imitates realities in life, that at the same time expresses an important philosophic truth."

8.1—The Platonic Regimen

In criticizing poetic falsification, Plato was neither a blue-nosed prig nor a Fascist censor. What, then, was Plato trying to accomplish in critiquing the poets, for he certainly devoted significant attention to it? In devoting so much attention to the wiles of *mimesis*, Plato had two concerns. In Carlyle's time, one was not very controversial. The other was, and under the conditions of late modernity, it would require people to think both critically and creatively about their common practices, and perhaps entertain the desirability of a change.

Keep in mind, Carlyle stipulated, that each person, qua person, was the basic agent and recipient of formative justice. A significant engagement with formative justice came naturally to each person as commonsensical and conventional elements in the care of the self. In the course of interacting with the world, people developed habits, interests, skills, tastes, friendships, preferences, and much else, and they were aware that some of these conduced to the sound conduct of life better than others did. And with some, people were even uncertain, ambivalent—they liked the action now but not the morning after.

People could and did think about this unavoidable question of whether their appetites, emotions, and ideas were in a sound, constructive order, and they would become vexed with themselves when they felt an excessive desire, an unchecked emotion, or a false idea had undercut their pursuit of meaningful fulfillment. People were aware further that their circumstances, whatever those may have been, were replete with all sorts of stimuli arousing and

dampening desires, provoking emotions, and proffering principles. It behooved them to take care for how all these stimuli, a specific constellation unique to each person, affected their ability to control what was taking place in their lives. The critiques of poetry, of rhetoric, and public leadership gave sophisticated insights into how these arts could become dicey, upsetting a person's sound exercise of self-organization and control.

At its first, uncontroversial level, the critique of the poets called simply on the members of their audience to serve as critical auditors, being selective to what they turned their attention. As Plato ended the *Republic* with his Myth of Er, he had Socrates declare to Glaucon the import of the work as a whole. Referring to those moment when a person deliberated and chose how to live in the flux of living circumstances, Socrates declared that each person must reflect "on all that has now been said, separately and in combination, about how things stand relative to excellence of life." Socrates continued, concisely, to summarize what enabled a person "to distinguish the good life from the bad," to judge rightly what to do, how to live, by being able to take into account the effects of beauty, poverty, wealth, birth, citizenship, social position, physique, cleverness and wit, education, and raw ability, and finally by integrating all these together into the person's ability to choose well between "the worse and better life."[1]

Clarity of judgment in making choices of vital importance to the person, in deciding matters of consequence for a person's self-maintenance, was the object of formative justice. In this sense, the *Republic* was a great enchiridion, a handbook or concise treatise, to the point as a kind of dagger, serving as a guide for developing formative justice and exercising it with care throughout a person's life. And it indicated that a major task in exercising formative justice would be to maintain self-awareness and self-control in the

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[1] *Digger*: We draw in here, and generally in discussing Plato, on papers in the Carlyle Archive. The material quoted in this paragraph all comes from the *Republic*, 618c–e. Carlyle seems to have been consulting multiple translations, however, as some of the quoted text comes from R. E. Allen and Some from Sterling-Scott. Carlyle would reiterate to students that it was fine to have favorite translations of important texts, but if possible it was important to consult multiple translations in an effort to understand a text fully, and to puzzle out what one could from the original, even if one's command of the original language was minimal.

face of powerful external stimuli.[2]

Plato was advising that each person set and care for a regimen of self-formation. Life was a continuous flux of concrete situations in which a living locus of control interacted with circumstance—a locus of desire seeking self-maintenance exerting control through the modulating powers of emotion and reason. The complexity of events easily compromised the plans of instrumental reason—"For want of a nail. . . ." Real reform came through the cumulative weight of innumerable discrete acts, not through a complex chain of causalities. Care for how one should live did not simply involve planning this or that future state and implementing means to achieve it. The living person, animated by soul, interacted with a world so full of contingent possibilities that plans and programs would prove far too simplistic. Care for how one should live meant taking care for the condition of soul, for the ordering of one's desires, emotions, and thoughts so that one could respond to innumerable contingencies with full, consistent powers. With a regimen of self-discipline, one tried to keep one's various capacities in a fit order. At its simplest level, Plato's critique of the poets basically advised a person to consider a regimen in which one avoided or minimized circumstances that might dissipate desires, distort emotions, and deceive thought.

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[2] *Sojourner*: Hey, neat word—were there other enchiridions?

» *Digger*: Lots. It was an old word and an old genre, and in the modern era key examples stopped being called enchiridions. Among the most famous handbooks, each generally published as an enchiridion, were short works by Epictetus, Augustine, and Erasmus. A few years after Erasmus wrote his, the *Handbook for a Christian Prince*, several famous examples were written, although the term "enchiridion" was not used for them—Machiavelli's *The Prince*, Castiglione's *Book of the Courtier*, and Ignatius of Loyola's *Spiritual Exercises*. For a long time it was a perennial genre, and one might count Ben Franklin's *Autobiography* as an example. Through the modern era, the enchiridion slowly declined into a rather banal self-help literature. Through Carlyle's career perhaps the most famous example of that would have been *How to Win Friends and Influence People* by Dale Carnegie (1936, 1981), which had extraordinary sales while engendering much mocking parody. When he was young, Carlyle mused about writing a history about the self-formation of the autonomous person, which he was going to call *From Plato to Dale Carnegie*. He desisted, fearing he would fall into irreversible depression.

In our time, after the Stabilization, with the Global City-State having fully disclosed the commons, personal care for formative justice has taken on, without controversy, a more public, collective dimension, of which Plato would have heartily approved. We distinguish easily between "regime" and "regimen." The commons, now, depends far less on the actions of the ruling political order than it did before, as the peoples of the world muddled into the times of chaos. Then the reigning governments struggled with diminishing success to adjudicate conflicts over distributive justice within the freeloading system as it pulled itself apart. Our commons self-regulates, not through a market, but through less formal, public discipline—norms and procedures of maintenance and usage facilitating interaction with unenclosed resources serving shared purposes. These procedures are important, we recognize, and looking back, we inevitably feel impatience with the inability in late modernity to appreciate their constructive public power.[3]

Why, we ask, did people in late modernity preoccupy themselves with governmental *regimes*, when in the fullness of life, what mattered were the *regimens* according to which people chose to

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[3]   How true! The other day I read an essay about the difficulties major cities had through the twenty-first century in establishing strong programs of bicycle sharing. Lots of people agreed it made sense, but it was nevertheless really slow getting people to go with the program.

»   *Digger*: When we dig into what had to happen to establish a new regimen, it begins to seem surprising that they were able to do so at all. Established procedures are complicated and ramify into many different aspects of ordinary life. They have so many internal self-reinforcements that long after they have become thoroughly dilapidated and clearly useless, they hang on because people have trouble actually making a change. Reliance on cars that people owned and used for almost all their transportation needs was itself a set of routines built up slowly over a hundred years through the twentieth century and beyond. It was manifestly expensive, wasteful, dangerous, and destructive, yet it took many decades to change perceptibly the primary reliance on the car. So many things interrelated and interacted—where people lived and worked, how they shopped and what they did. But slowly, yet cumulatively, people discovered that they had options. Eventually the balance of activity reached a tipping point, favoring an alternative means of travel—walking, biking, using buses and subways, traveling light on trains and planes, and before long these changes accelerated markedly. A book that Carlyle liked called *The Tipping Point*, by Malcolm Gladwell (2000), described the general process well.

live? The challenge was not to cut back on the work of formal institutions, for effective governance was essential to the commonweal. The challenge in late modernity was to balance an effective regime with a formative regimen, public and private, one that enabled people to act, singly and together, with full effect. Great human efforts have worked, not because a powerful government directed and managed them, but because sound routines of conduct controlled the actions of countless persons over many generations. For instance, science as a human endeavor had been much more than a method; it had been a discipline of conduct for those who would count themselves as potential contributors to its work. A regime was an external, controlling agent; a regimen was an internal, formative discipline that persons adopted for themselves, often after considerable deliberation and with much social pressure.[4]

Carlyle believed this distinction between regime and regimen to be very important. People seemed to ignore or fail to recognize the

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[4]   *Sojourner*: I get the sense that in the politics of late modernity, many people thought regulations were dysfunctional and largely illegitimate intrusions on rightful autonomy. It seems so evident that sound standards and regulations facilitate and expand autonomous action. Why were people blind to these uses?

»   *Digger*: Negative theories of freedom were particularly strong in the Anglo-American political traditions, which held that an absence of restraint, consistent with the protection of property and the national defense, maximized freedom and autonomy. Of course, people there accepted many restraints, often after a period of initial resistance recognizing them to be valuable, but doing so had little effect on their basic views because standards and regulations, once establish, tended to drop from awareness and become invisible. By the end of the twentieth century, spittoons were curious antiques. No one remembered or cared about the campaigns in the late-nineteenth-century to improve public hygiene by getting people to spit in them, or those following World War I to do away with them—prohibiting spitting all together, for the same hygienic reasons. Establishing or changing all sorts of codes, standards, and regulations would evoke strong resistance until once in force they disappeared from view, having come to appear almost as part of the natural order. It took decades to establish non-smoking regimens as public health measures, and over a century to adopt the metric system fully in Anglo-American economies that had developed using the British system[sic] of weights and measures. Driving on the left is still the norm in many places long after the Stabilization.

power of a regimen in shaping life. For instance, for several decades after its appearance, commentaries about Wikipedia paid little attention its procedures. What made this huge, complicated self-organizing effort possible was its public self-management, its enunciated rules and procedures, adapted and adopted by common consent, enforced through communal self-regulation. Carlyle thought such regimens were a major contribution to the processes of collective action and its advent. Examples like the Internet and WorldWideWeb revealed the power that could be unleashed by enunciating public standards of collaboration in an open medium.

As people joined together to craft and adopt shared principles for spontaneously working together on a common enterprise of meaning and value to each, the commons was disclosing itself. Even modern markets exemplified the power of these procedures, for markets matched myriads of buyers with sellers and transparently settled a vast volume of transactions because they had established, shared expectations for effecting and clearing every exchange. What *regimes* had been to modernity, Carlyle thought, *regimens* would be to post-modernity. In his view, the modern inability to see the importance of these, as they set standards, shared procedures, and common practices, impeded the emergence of the world as it could come to be.

Plato's critique of the poets called for engagement in the education of the public through the shared construction of standards for cultural creation and collective judgment. Here was what made Plato's critique of poetry very controversial. To begin, we should note that Carlyle wanted to be carefully precise about what public standards should address. Polities, like persons, needed to care for their capacities for self-formation. As soul, that is, the capacity to seek self-maintenance by controlling circumstances as best one could, differentiated a living person from a dead corpse, it also differentiated the living city from a dead one—its buildings, monuments, fields, mines, quarries, harbor; its stock of arms and ships, its granaries; in sum, the mere material city. The living city had soul, its capacity for self-maintenance, expressed through the capacity of its peoples to form and express desires, to concert emotions, and to deliberate reasonably together. And like the living person, the living city needed to take care for the condition of its soul. It might have one or another regime of governance, which would structure the three capacities of soul in a characteristic way. But in addition to its political form, a living city needed to take care

for its regimens, its disciplines ensuring that each of its three capacities stuck to their proper functions and worked harmoniously with the others. Political institutions specified the formal organization of a polity's powers of self-maintenance; its practical routines cared for the strength, discipline, and acuity of those powers.

Without taking care, without a regimen, standards of self-expectation, the capacity for self-maintenance would degrade and the authentic regime, whichever that might be, would transmute into a tyranny. At its public level, formative justice worked to prevent that decay. Formative justice was not political in the sense of prescribing one governing system or another. Formative justice at the public level was an informal mode of civic self-discipline and self-expectation serving the education of the public, a civic pedagogy, ensuring that the ruling officials, whoever they were, would function in the interest of the whole polity, not to the aggrandizement of one or another part. But the steady increase of inequality over several decades in societies like the United States revealed how public policy had been systematically working in favor of the most advantaged. Further aggrandizement of power and wealth risked becoming irresistible, and unchecked, the freeloading system of the world was converting itself into a global system of plutocratic tyranny. Crass magnates were usurping the media of communication and using them to render democratic publics helpless by systematically debasing the standards of public truth, honesty, and taste. In order to resist, people needed to assert much higher standards of public discourse or their power to form sound public opinion and to act effectively on it would be destroyed.

Plato had addressed a similar situation. In his critique of the poets, he had called for collective standards and Carlyle thought readers should have been giving this call a much more open-minded hearing than they did. As in Plato's time, in modern life, deceptive and manipulative communication clouded personal and public judgment. Interpreters did not know what Plato had specifically wanted to do, if anything, to correct the situation in Athens 2,500 years earlier—interpreters had wildly divergent views. But it was not hard to know what problem troubled Plato. The capacity for the polity's self-harm was high, as it was in Carlyle's time. He thought members of the public were harming themselves, excessively tolerating manipulation and deception in civic life, paralyzed by the conviction that doing anything about it would violate the most

cherished principles of democratic constitutions.

Freedom of speech and assembly were deeply rooted in the modern political consciousness. A wide spectrum of the populace believed strongly that these freedoms were the bedrock of human rights. The First Amendment to the American Constitution clearly stipulated: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances." The language seemed to impose a categorical construction on the issue—Congress shall pass no law pertaining to it. One might agree with that and pass no law, but one could nevertheless say at the same time that as a people, members of the polity had been lax in exploring the ground between no law and law. Standards, regulations, procedures, norms, and expectations had been a complicated middle ground that had immense influence in the modern world.

Standard setting, its adjudication and enforcement, had had immense power in shaping the material world in which people lived throughout modernity. Most of what each did most of the time in the concrete activities of their lives was doable only because people had worked out and established extra-legal standards and norms that guided and structured their know-how. One could not write a URL any way one liked and expect it to have a use. In 2012, in advanced societies, food was graded to official standards, which were essential to orderly marketing—it was hard to purchase an egg or a potato of random size. People lived in a built environment, zoned and certified, and it was very hard to find much that was truly wild within it.[5] Carlyle thought that the vast repertoire of operating

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5   *Sojourner*: I was reading how in late modernity many people strongly opposed governmental regulations. Why did proponents of the freeloading system take this position.

»   *Digger*: Well, in any time, there are a few—in actuality a very, very few—who really want to live free in a fully unregulated environment. Most, however, want the benefit of some civilization. During the modern era, with its reliance on enclosure, the opposition to regulation was not really opposed to regulation as such, but to the broadening of existing regulations, which had established externalities profitable to the freeloader. Broadening the scope of those regulations would draw the old externalities, profitable to the freeloader, into the new sphere of internal accounting, in effect profits from externalities to the public at

standards embodied in the world where people lived their lives actually constituted an essential component of the commons.

Codes and standards, norms and regulations, pervaded the world of human creation and construction. They were fully as essential to everything in cultural and material life as was the sum of financial capital, yet people generally treated them as an economic externality, irrelevant to the accounts of the freeloaders. Most people knew nothing about what standard-setting organizations like the ISO (International Organization for Standardization) did or how they did it. While leaving much to be desired, the work of these organizations was as important, Carlyle estimated, to the creation and distribution of our material environment as that of all our financial institutions, about which everyone was then obsessing. Very few productive standards had been owned by any person or organization, and then only temporarily. In the vast majority of cases, conformity to controlling standards was not by virtue of law, but of common consent. Even the great bulk of law itself was not the work of legislation, but the work of the commons, of common law built up through precedents and established procedures.[6]

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large. The principle of regulation was not in the least at stake. The whole rational for the enclosure of common lands in England had turned on the drive to better regulate agricultural production. Historically enclosure had been a strategy for establishing the more efficient regulation of production and distribution. Whether under the freeloading system or on the commons, management has always had as its responsibility the effective regulation of production and distribution. Freeloaders never opposed regulation as such, and they did not even oppose regulation by governments as long as those protected their profitable externalities. For instance, the political theory of possessive individualism assigned government with the primary function of protecting the integrity of contracts, a very fundamental form of regulation. The opposition was to the extension of regulations to include externalities from which the freeloader previously derived profit.

» *Commoner*: Needless to say, Plato was railing against this sort of distortion that made an interest appear as a principle. Formative justice at the collective level had to effectively discourage such abuses of the public discourse.

[6] *Commoner*: Carlyle thought it interesting and important that with law pertaining to trade secrets, patents, and copyrights, the null hypothesis in each case was actually that the intellectual creation belonged to the human commons. In all cases, intellectual property, so-called, arose

Among Carlyle's notes, we have found a draft call to arms, so to speak. The American descent into partisan stalemate appalled him, like so many others. He imagined an impassioned manifesto—

People, Wake up! Your public discourse is suffering from unchecked mendacity! From manipulative rapacity! Why do you tolerate mindless distraction? Why do you glory in the excesses of the few? Why reward the heedless, the ruthless? Stop. You have power. You are permitted to assemble, to join together to consider what standards of truth you require from would-be leaders, from privileged communicators, from entertainers, those pitching commodities and prestige. Enunciate those standards. Argue them out. Evaluate who lives up to them, and who does not, and respond accordingly. It may take time, effort, and perseverance, but we can do it. That is what the commons is. Pass no law, but deliberate together and establish common standards about the character of speech consistent with the sound exercise of formative justice in the personal and in the public sphere!

But Carlyle held back. In brackets, he added, "Absurdly

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through limited, temporary restrictions on the commons. Trade-secret law permitted keeping something that ultimately belonged to the commons private, providing that one could in fact keep it so. The property was the fact of the secret, not the idea that the secret contained, and others were welcome to acquire the idea on their own through reverse engineering, if they could, effectively breaking it open. But if someone did so, not by acquiring the idea themselves, but by illegal means of stealing the secret, they would be liable for significant damages. The case with both patents and copyrights was the reverse of that with trade secrets, and the primacy of the commons was even clearer. The patent and copyright granted a temporary proprietary right to the creator as an incentive for such creative effort, but only for a limited time and only if the creator actually put the creation into the commons by making it public. In late modernity, a serious problem developed, especially with copyright and to a lesser degree with patents, as corporations with considerable power to sway legislation managed to prolong inordinately the temporary period of their proprietary rights. Over all, ideologues of the freeloading system had proved excessively adept at manipulating intellectual property discussions to obscure the actual prerogatives of the commons. With the Stabilization, people clarified the controlling principles—there is no "intellectual property," for the creative achievements of thought belong to the intellectual commons, with the creators receiving only temporary proprietary rights, now strictly limited.

quixotic!" Such a call could not command attention in the general state of distraction. And if it did, it would only get people tutting and tscking about the dangers of such a course. Although it was thoroughly improbable, it was what might possibly reverse the slide into chaos. It would incur risks, but so did the current drift. And his call did not really ask anything unprecedented or outlandish. For those who wanted to live in a world strongly leavened by the common pursuit of formative justice, joining to set their standards for public discourse and deliberation was essential, however dangerous. But quailing and not discussing the issue would be equally dangerous, perhaps more so.

Common law currently recognized community standards as the source of norms clarifying the meaning in laws that depended on poorly defined legal terms, as in the instance of obscenity. But without care and attention to them, community standards became whatever the inertia of the time happened to bring, again as in the instance of obscenity. People needed to set controlling standards through the probity and prudence of democratic deliberation. In the absence of a sophisticated engagement with formative justice, norms formed on behalf of the group would swing unpredictably, back and forth, between conformist complacency and willful license. Formative justice consisted in the principles of self-governance and a self-governing people needed to attend with a clear head and a firm will to formative justice by taking responsibility for the standards controlling their public deliberation.[7]

Justice, in all its forms, was a difficult, demanding virtue, one

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[7] *Commoner*: Carlyle thought that formative justice should provide the criterion according to which the community should set its standards through careful deliberation. He realized, however, that at the time there would be no agreement about what that criterion of formative justice would be, nor much possibility for a coherent public deliberation about what it could and should be. He hoped ultimately to be able to clarify to some degree how formative justice enabled persons, under the right conditions, to control their self-formation. The great weight of opinion held in late modernity that something like self-formation was simply not a possibility in a world in which all realities were determined to the play of objective forces. If autonomous choice was imaginary, then talk about self-formation was frivolous as was any concern for consequential public deliberation. It would all be a question of who could mobilize the most powerful determinants passively shaping the flux of public opinion.

that required will, effort, and ceaseless vigilance to achieve. That was the case, whether for persons or for publics, and especially the case with formative justice. But the common reaction that formative justice, as introduced in the *Republic*, called for an authoritarian political regime, missed what formative justice entailed. Whether for a person or a public, formative justice culminated, not in a regime imposed on others, but in a regimen adopted for oneself. Common standards, where no law had been passed, could come into force only as a shared regimen that people put into practice, their own practice, because they saw that it worked for them. Formative justice was an effort to control through positive and negative feedback the vital longing for self-maintenance in a contingent world, recursively working to pull persons and their polities towards fulfillment through the incessant interaction that would take place with the circumstances of their lives. As something self-imposed, people needed to see the benefits of formative justice. As a demanding virtue, a difficult regimen, formative justice required investment, not merely financial, but effortful—a concentration of will and exertion that would bear the burden of a rigorous, self-imposed striving and discipline.

Costs without benefits were an unlikely choice. One had to ask, what benefits could clear community regimens bring? Pursuit of formative justice activated the sense of fulfillment, which was what a living being used to perceive and correct the instabilities that challenged its self-maintenance. Whatever the domain of experience, formative justice engaged a person in bringing her diversity of potential capacities to a combined fulfillment. Life took place out of a given, random, meaningless chaos, a counter-entropic capacity for self-maintenance coping continually with the instabilities of its existence. Each stabilization carries with it the seeds of a new instability. The bike of life tips anew, engendering further effort at self-control. Hence, life's self-maintaining urge recursively elaborates its endless possibilities through its acts of self-creation. Life ironically surprises the universe with meaning as its urge for fulfilled stability leads it to disclose ever-fuller, creative possibility.

Fulfillment, achieving self-maintenance in the face of contingency, however fleetingly, is the worth of living.[8] It is the

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[8] *Sojourner*: This is an unusual phrase. More often one encounters the formulation that this or that makes life worthwhile, it gives life value.

radical source, the root of all benefit. And these cosmic considerations, Carlyle thought, had concrete meaning relative to his immediate historic time on the large collective scale, for late modernity. With respect to distributive justice, the conceptual *telos* was equity in one sense or another. For formative justice, *fulfillment*, self-realization through recursive self-maintenance, was the controlling goal. Formative justice worked towards the actualization of desired potentiality relative to a chosen purpose. Growth might have been a useful purpose in the pursuit of equity and distributive justice, if—a big if—the increments of additional goods, which growth had produced, actually improved the lot of those who had too little. Usually more of the added increments seemed to accrue to those who already had more than their fair share, adding more to too much. The strategy with formative justice was more universalistic and democratic. Not growth, too often stoking the ever insatiable few, but full employment was the goal, the right of each person to a life of substantive, creative work, which meant the full employment of his or her unique mix of potentialities for the benefit of self and others.

Full employment required more than a job for each, more than any job and more than only a job. It required both a good job, one in which a person could work creatively, commensurate with her potentialities, as well as a set of encompassing interactions through

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Do you put it this way simply as a turn of phrase, restating the old thought in a somewhat novel way, or do you mean something different?

» *Commoner*: We encountered the phrase in Carlyle's papers, and we think he meant something significantly different. He was not trying to uncover some value that would make life meaningful or worthwhile. In his time, and still in ours, one finds thoughtful people asking—What is the meaning of life? What gives it value? This construction implies that life itself lacks meaning and needs something transcendent to it in order to acquire meaning. Carlyle was suggesting that life consists in making meaning; to live is to affirm value; life is that which maintains itself against the dumb forces of chaos by affirming itself and by valuing what it does as it maintains itself in the midst of all that takes place. To live is to value, to intend, and to mean. Life can do no other, for to stop valuing, intending, and meaning would be to die. Life does not get its value from outside itself, but rather precisely the reverse—the meaningless chaos gains value only insofar as life has drawn chaos into participation in life's construction of its vital cosmos, its self-maintaining realm of meaning and value.

which she could pursue the range of aspirations characteristic of a
fully realized, humane life. Full employment enabled persons and
groups to exercise subtle, many-sided control, integrating diverse
purposes as they sought self-maintenance in a complexity of
interactions taking place simultaneously across all the different
sides of their lived existence.[9] With respect to public life, full
employment in its fullest sense constituted a truly challenging,
worthwhile goal of public policy. With respect to formative justice,
the legitimacy of a regimen—a regimen being something educators
would not confuse with the regime that ruled a state—turned on
judgments of whether or not it rightly brought potentials to full
realization, whether or not it respected and nurtured the conditions
of fulfillment.

And those making these judgments were not those proffering the
regimen, but those adopting it and using it to maintain their pursuit
of a purposeful life. Each, as a person, had an inner sense of her
own fulfillment. Sometimes circumstance would cloud it, which
brought on a condition of formative injustice in our self-directed
activities. But unless corrupted by untoward influence, it was
remarkably acute, a more comprehensive analogue to the sense of
balance and kinetic judgment by which people walked, or rode a

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[9] *Sojourner*: If you ask me, Carlyle's ideas about formative justice are
beginning to sound like a theory of distributive justice here.

» *Digger*: Interesting comment. Carlyle's contemporary, Amartya Sen,
particularly in *The Idea of Justice* (2009), pushed the discourse of
distributive justice far in the direction of theorizing about formative
justice. But a difference between the two remains. Distributive justice
culminates in a principle of equality or equity, whereas formative
justice works towards a condition and principle of fulfillment. A theory
of distributive justice may take aspects of fulfillment into account—
most do to one or another extent. But it aims at equity in the
distribution of goods, among them those that are fulfilling. Formative
justice, as we seen here, can generate strong arguments on the personal
and the public level for opposing significant inequalities in the
distribution of energies and resources, but ultimately it works towards
the fulfilling self-maintenance of the living form.

» *Commoner*: As a practical matter, principles of formative justice can be
an important complement to ideas of distributive justice. Since the
Stabilization, the peoples of the world have realized that the allocation
of resources for optimal formative fulfillment lead to the creation and
sharing of human goods that is both more fulfilling and more equitable
than concern for equity in distribution alone would achieve.

bike, or coordinated all sorts of actions. And as Plato said, all persons possessed this inner sense of their own fulfillment, a capacity to see and seek the good. To orient it well, to steer their lives wisely, people needed to be active, productive, to manage themselves intentionally according to their sense of fulfillment. And by exercising formative justice in the midst of activity, people made their reciprocal interactions taking place with their circumstances into a virtuous cycle of positive self-maintenance.

Forced and excessive inactivity or subjection to alien purposes could make this virtuous cycle turn vicious. Much in Carlyle's current public circumstances seemed to be doing that. Public parsimony had gained command. Many people were pressed into a narrowed sphere of activity, not only in impoverished slums. Routinized work, insecure employment, mounting debt, the erosion of public services, in-your-face luxuries, and duplicitous leadership combined to commandeer a large portion of the population into serving slavishly the pretense and prerogatives of a very, very few. The system was full of slack, biased against the weak—visit the prisons; consult the labor statistics, watch the narcotic entertainments, listen to the vacuous chatter of the rich and famous. How could proponents of unfettered capital markets proclaim that those markets, and those alone, efficiently allocated productive resources in the face of such blatant failure to employ human potentials fully?

Formative justice suggested that the self-determined fulfillment of living potentiality was the reason-for-being of each person, any group, every polity, of the whole of life. Did people feel fulfilled in their world, personal and public, even those most favored? Were they uselessly letting the fulfillment of many atrophy and turn against itself in depression, degradation, and despair? With respect to fulfillment, was a person's life, and were the lives of all, taking place with the fullest sense of possible purpose?

8.2—From Prediction to Possibility

As Carlyle saw it, late capitalism had been systematically thwarting the aspiration to fulfillment by many of its citizens in its most developed regions. Even in a base economic sense, advanced societies were leaving more and more people unemployed and underemployed. Many jobs were dumbed down, and income became inflated for the few at the top and deflated for large

numbers—at the bottom, in the middle, and even near the top.[10]
Long before, Thorstein Veblen had exposed the vacuity of a luxury
economy. Conspicuous consumption might nurture fastidious
artisans, but it was a lousy source of jobs and skill in an economy of
service to all. A vicious cycle of polarization and internal conflict
was rendering the most important polities ungovernable, incapable
of addressing the great common problems of the time with effective
foresight. This vicious cycle was becoming a major threat to
collective self-maintenance. And as Carlyle saw it, a historic

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[10] *Sojourner*: Can you explain a bit more fully why the outrage here
should not be understood as a revulsion at inequities in the distribution
of public goods?

» *Commoner*: Surely much of the outrage, which came to a head with
protests upholding the interests of "the other 99%" and the Occupy
Wall Street movement, opposed distributive inequities. But the protests
were further raising a deeply moral issue, one about the dignity of all
persons. Apologists for the inequitable status quo treated the movement
as an expression of envy, complained that it had no agenda, and
completely failed to understand the critique leveled at the absurdly rich.
They thought it was merely an accusation of excessive greed, which
they thought they could rationalize away with specious reasoning about
trickle-down economics. But neither denunciations of human vices, nor
their rationalizations, define the substantive character of human virtue.
The vices of modernity—greed for wealth and lust for power—were
highly fetishistic, tending to treat means to achieve humane
potentialities as ends, making amassing material commodities and their
substitutes, mere money, or election to office into the goals of elite
effort. Outrage against these fetishes certainly rejected excessive
inequality in the distribution of income. But beyond that, it rebuked the
displacement of common purpose that resulted when a few used their
privileges to horde the material and cultural means requisite for human
fulfillment. Their excess diminished the humane fulfillment of others
by both omission and commission. Those who pushed their income far
above the level at which they could use it for meaningful fulfillment
were forcing others to stunt development of their potentials. The person
who successfully got elected to office without commitment or talent for
governing the civic whole in its own best interest perverted the function
of the office as a means to an important end. Carlyle believed that
formative justice provided a strong, very tangible rationale for the
relative equalization of resources in a society. What was at stake was
not some abstract principle of equity, but how humanity used its
common assets to achieve the fullest realization of its humane
potentials.

reversal of the degradation would come about only through an emergent advent of alternative principles to the enclosing, causal drives of modernity.

Yet, however pressing the need for it might be, people could not cause emergent change to happen. No person, group, or party had such power. Efforts to save the situation with this or that, "the one thing needful," would only strengthen the stasis. Rome took centuries to decline and fall, and the West took centuries more before hope and renewal again emerged. Would the decline and fall of modernity be any faster? Would the emergence of new possibilities prove to be more decisive and stirring? Perhaps. Perhaps not. The historic course would emerge, when and how it could, from the infinite complexity of lived experience, as myriads of aspiring persons sought fulfillment as best they could. People could not program these changes, implementing as a matter of policy the foundations of a new era. Emergent change took place; people could not cause it. But they could prepare themselves for it. They could live open, self-directed lives, each attending to formative justice in his or her way, judging for themselves what brought fulfillment and surer self-maintenance. People could not cause historic emergence, but they could perhaps anticipate it, readying themselves to facilitate and modulate it, should it take place in their midst. Here was the pragmatic value of that pattern in the heavens of which Plato so eloquently spoke.

Recall the passage at the end of Book IX. It concluded the whole discussion, throughout the *Republic*, of living life justly. Socrates and Glaucon agreed that acting justly led to a greatly more satisfying, fulfilling life than doing injustice. In one of those playful Platonic twists, Socrates showed that living justly led to a life of authentic pleasure precisely to 3 to the 6th power times as great as doing injustice. Socrates and Glaucon then went on to describe the benefits that formative justice would bring to the person who lived by its measure. Someone leading a just life would preserve the integrity of his character, integrating all his capacities and virtues in the service of his life as a whole. Someone living justly would accept various goods—health, wealth, honor—only insofar as those, in proper measure, served to maintain the clarity of judgment through which a person maintained her life. Someone leading a just life, they agreed, would not try to found such an order in the political realm. He would adopt it as a regimen of conduct. "You mean in the city established in reasoning which we are founding and

have now described, though I think it does not exist anywhere on earth," Glaucon observed. "But perhaps it is laid up as a standard or pattern in heaven," Socrates replied, "for him who wishes to see and, seeing, to found a colony of it within himself. It makes no difference whether it exists somewhere, or ever will: he acts for this city alone, and for no other." (592a–b)

Here, Carlyle thought, the *Republic* definitively stood as the source of the Utopian tradition in Western thought. That Utopian tradition, he believed, was the essential step towards understanding the capacity for autonomous action, which each person, at all times, used to pursue self-maintenance in the flux of life.[11] The city-of-words, created in the *Republic*, did not and would not exist anywhere on earth—it was no place. By late modernity, this tradition of Utopian thought had fallen into desuetude, sapping the power of formative education in the world at large. In the vast complexity of life, historical experience—what took place— emerged from the infinitely complex interactions of co-existing, self-maintaining, reciprocally influencing, living beings. Each lived in a world in which future indeterminacies disclosed their determinacy with relentless unpredictability in the experiential present. Each day's news was *new*, however hackneyed it might seem, another increment of actualities precipitated out of the indefinite potentialities the future bore within it. Causal action in the ever-new immediacy of the present depended on prediction, an anticipation now, as one triggered the act, predicting what would probably be the case as the act took effect. Hence the marksman had always to lead a moving target. The prestige of causal action had risen to extremes, and we have seen how the rise of instrumentalism in schooling and the higher learning through the twentieth century and beyond had so troubled Carlyle.

With the Utopian tradition, probability, a likely future state, was

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[11]   *Sojourner*: This is a big claim. How does it relate to what you were saying earlier in explaining how *eros* was an urge for what life lacks and always seeks, a secure self-maintenance?

»   *Commoner*: Basically, it is another way to say the same thing. The city-of-words was essentially the city fulfilled, the city capable of full, secure self-maintenance. It can only exist in thought, in concept or idea, a Utopian possibility. But as a concept, people can use it to control their interaction with circumstance. In what follows, we will try to clarify how that can happen more fully—it is the core of formative justice.

not the issue: "it makes no difference whether it exists somewhere, or ever will." What the Utopian tradition offered people was not probability, but a sense of possibility. Whether at the personal or the public level, in the historic world actualities took place, emerging from the flux of complexity. Consequently, it struck Carlyle as arrogant and hubristic to structure education instrumentally through a set of predictions about probable situations. Education was not a causal means to produce effects, either in the lives of students or in the sociopolitical landscape they would inhabit. Trying to do so was imprudent. Could the National Commission on Excellence in Education, or any other sagacious body, predict what millions of children would need to know forty or more years hence? In late modernity prediction had a dangerous, inflated role in educational effort.

Educators had lost their sense of possibility. To regain it, people needed to understand more clearly what possibility was, for they could easily confuse images of possibility with pretenses and the objects of wish-fulfillment. [12] How should one understand

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[12]   *Sojourner*: My kids and their friends love role-playing and fantasy and their sense of who they are seems completely plastic—cops or robbers, space aliens, doctors, knights, pirates, queens; it's endless. Was Carlyle trying to suggest that fantasy differed from possibility in a significant way?

»   *Digger*: Yes. Carlyle thought fantasy and possibility were very different yet related. And he thought grasping the difference was difficult and important. He would probably hold that the sort of role playing you allude to was part of the way that children grasp the concept of possibility with respect to important matters in life. The difference between fantasy and possibility had to do with a sense of potential agency essential to recognizing something as a possibility. People, particularly children and the young, observe and see others doing all sorts of things, and we all imagine further great, wondrous feats that we might do in our dreams of glory. All that, in very loose usage, might be described as a realm of possibilities, but only in a fantastic, external sense. What those observations and imaginings lack that makes them mere fantasies, not possibilities, is the recognition of one's own potential agency—sensing what accomplishing the possibility would require and feeling that one had the will and capacities needed to in order to try making the possibility actual. Possibility has an *I can do that* recognition associated with it. Perhaps we should say that possibilities emerge from fantasies as a person draws a distinction between make-believe and actuality and sets about

possibility and how should it enter into the conduct of life?

Historical possibility involved the unpredictable, and it began with the capacity of each person to determine the substantial particulars of her own life. The possible and the probable were different and stood in significant tension with one another, especially in relation to formative justice and the dynamics of education in the living of life. Would be educators—parents, teachers, adults, public leaders—far too often misconstrued the educative value of probabilities and overlooked the value of possibility. Indeed, far too often they discounted possibility, understanding it merely as a highly uncertain probability. Possibility differed radically from probability. A probability clearly rested within the realm of sequential time. A probability anticipated now what would likely happen then, in some future, near or distant. Possibility, Carlyle thought, pertained instead to the domain of reciprocal coexistence within time and space. Possibility had to do with simultaneous interactions, not with respect to their outcome, but with respect to the agency at work through them. The probable and the predictable existed in the conjunction of mute forces in the meaningless world of externalities. Possibilities arose as an active self sought to exercise some control on the complexity of interactions taking place in the life the self was living.[13]

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to gain control of what will make the actuality take place. Then the external observation becomes an internalized, felt possibility and the sentient self proceeds to work out, quickly or slowly as they case may be, how to convert the possible mode of action into an actual capacity.

» *Commoner*: Digger has it right. What one merely observes, or fantasizes, has either an actual or potential "it happens that" quality. This "it happens that" becomes a possibility when one recognizes that "it happens that and I can do it if I or we can do such and such."

[13] *Sojourner*: A bit earlier, you distinguished between potentiality and possibility. Is there a similar distinction between the probable and the predictable?

» *Digger*: Yes, but it is not very pertinent. A probability is a passive state whereas a prediction seems to have an aspect of agency attached to it. But with respect to self-formation, overt or implied predictions based on probabilities are almost always inappropriate, mere superstitions. Carlyle thought it would be a good thing for people to reminded themselves that probabilities always had to do with the relative frequency of this or that in sets that included large numbers of instances. With respect to single instances, say a young black male

To begin differentiating possibility and probability, Carlyle reflected on the pedagogical dysfunctions that probabilities often induced. He grasped his concern by reflecting, as Sojourner did above, on how a boy learned to ride a bicycle. It disclosed the educational problem with probabilities. By observation, sometimes strengthened by instruction, the boy would begin trying to ride the bike aware of a significant likelihood: if he let the bike lean too much one side or the other he very would lose balance and fall. With this in mind, perhaps only as a feeling in his gut, he would try to get the bike balanced upright, the front wheel pointed straight ahead, and he would then try to hold everything rigid while he was pushed or he peddled forward. The more he sensed he was beginning to fall to one side or the other, the more he would tense up and rigidly hold everything as straight as he could. And naturally, unless an obliging parent was there to catch the fall, he would plop to the ground, perplexed or angry, perhaps scared or a little hurt. What the boy needed, Carlyle would say, was not to know the probability, but to grasp the relevant possibility. When he sensed himself falling to one side, his movement forward made it possible to steer the bike against the direction of his fall, catching himself, and then when he again sensed himself falling, now the other way, to reverse how he steered. With that possibility— Zoom!—the boy and his bike were off on their own.

How did the probability of an imbalanced bike falling differ from the possibility of steering the bike to counter the direction of fall? What was the difference between the two? The probability had

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taking the SATs or anyone else for that matter, the probabilities carried no predictive significance. Keeping that in mind would enable the youth to switch the whole mode of consideration more readily into thinking about his potential for changing the probabilities and by making that potential an active possibility through the way he controlled the relevant interactions taking place—seeking out test-taking smarts, keeping cool when he felt uncertain, guessing if he could narrow the odds or moving on if he could not. Probabilities can change, for instance in morbidity rates from heart disease, but the changes do not come about through changing predictions, but rather they come about as significant numbers of persons perceive that it is possible for each to alter what takes place in his life, exercising a bit more, eating somewhat different foods, taking helpful medications, and so on. As people act on their possibilities, not on supposed predictions, they can change the probabilities.

to do with the operation of external forces; the possibility concerned how one could act to negate the probability in operation. Holding the handlebars steady was causal and even if the boy started off with the bike balanced upright at first, he could not anticipate ahead of time all the contingencies that would destabilize it. Falling was passive, externally determined, and holding tight his grip was a useless act to counter it. The key to successfully riding the bike was not the many external causes making it fall. It was the boy's grasping the possibility of controlling the situation by using his own sense of balance and his capacity to steer the bike, compensating for the inevitability that the unstable bike would continually fall to one side or the other. The boy needed to use his inner sense, not to avoid falling, but to take control of the falling, to use it to negate it. Usually, all this happened spontaneously after a few tries. An experienced bicycle rider would almost never think how to steer to keep the bike upright, unless going very slowly, when effective steering was nearly impossible, or when trying to corner at a high speed or on a poor surface, when the sense of balance had to process an unusual divergence of strong, interacting forces. The probability addressed how the world, the bike, would passively act; the possibility involved how the boy, himself, could act, using his sense of balance, his movement forward, and his ability to steer to prevent the probability from happening. A possibility was not a probability about what was going to happen in the external world; it was a recognition that one could use an inner sense as a point of reference for dynamically controlling complicated interactions taking place in the flow of experience.

A probability concerned the anticipation of externals; a possibility turned on use of an internal sense to exert dynamic control for oneself. Grasping for oneself the possible purposes that enabled mastery and control of complex capabilities was essential in educational emergence. For such purpose, the voice of experience was often an ineffective teacher. It was full of probabilities, usually cautionary—if you did this, bad things would happen to you; if you did as I said you should, you would get ahead.[14]

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[14] *Sojourner*: I understand how adverse probabilities could become self-confirming prophecies. The inner-city kid who knows that students like himself perform poorly on standardized tests would tense up, especially as he started encountering questions he didn't know how to answer. Anyone taking those tests would be stymied at some point, but if you

Children and young people were suffocating from predictions. Some worked as carrots, others as sticks. There were ethnic, class, and status variants. They impinged on large choices and small, matters of basic self-definition and of passing preference. Despite all the variations, they all fixed a person's attention on an external behavior—hold those handle bars steady or you'll fall over. Learn the math they teach you, or you will end up unemployed. Build houses in Guatemala, or you won't get into the college of your choice. Probabilities were poor motivators because lived experience was more complex and variable than they indicated. Probabilities had deceptive effects; they inflated expectations and deflated aspirations, while offering little real understanding how different skills made it possible to control various kinds of purposive interaction with circumstances. Probabilities induced rote behavior and their cultural consequence created dangerous programs of instrumental reason, blind to the subtleties of wise self-control.

Probabilities adversely affected not only the least advantaged. They could mess up those on top as well. When people used probabilities to shape their actions, they could sometimes gain great power to effect results, blindly churning on with little capacity for

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though doing badly might be probable, the difficulty would be more upsetting that if you thought it was just a matter of course. But how would probabilities adversely affect those the probabilities favored?

» *Digger*: Carlyle had gone to a highly selective college from a top prep school where most of the students knew that the probabilities had favored them from the start. Freshman year, as a group, they did miserably in comparison to their public school peers, who were much less confident about their prospects. By the time both groups graduated, they were confident they merited inclusion among the leaders of their chosen walks and professions. The whole system was one of predictive selection that built up stronger and stronger probabilities of nominal success for those it favored. Carlyle suspected that predictive selection had a great deal to do with inculcating a dangerous proclivity to over-confidence in the elites of late modernity. Success at nearly any stage of predictive selection seemed to guarantee success independent of performance at later stages, with the result that the power elites included numerous incompetents, who were oblivious to their incompetence—a recipe for significant disasters. We include in the Archive a copy of the film *Margin Call*, for it powerfully depicted the stupidity of risk assessment as it induced people who believed they were very smart to lock themselves into a disastrous situation with no ability to control by relying on erroneous calculations of probability.

control, for adaptation as things started to go awry. They were powerful with few possibilities for effective control of their power. Captains of finance used complex algorithms to predict probabilities that would produce billions blindly, with only a vague understanding, at best, how those transactions both affected and were affected by actual activities possible in the world. Eventually the improbable would happen, threatening the whole financial system with unexpected collapse. Elite colleges were filling up with students who had carefully consulted about the indicators for probable success and groomed themselves accordingly. Yet these students often had minimal understanding of what they wanted to study, how or why. Then they went off, primed with the trappings requisite for predicted promotion and election, after which, eventually, they found themselves in positions of great responsibility with scant idea how to govern, even themselves, let alone an industry or a nation. And when probabilities worked against people, as they did for those struggling with poverty, discrimination, and inner troubles, they inflated prisoner populations and added legions to the ranks of the unemployed and to the many marking time through life.

Children and youths, all people for that matter, actually had a sharp sense about their own self-maintenance. It is like the sense of balance, the coordination of hand and eye, the ability to manage the flow of attention. All complex forms of activity, even very simple ones, require the use of feedbacks to control movement towards an intended result. Possibility, exercise of autonomous, intentional interaction, arises when someone recognizes his capacity to sense soundly what is happening and uses the ability to control the course of those interactions by reference to what he senses is taking place. As people develop such judgment, the sense of balance writ large, and the ability to control how they interact with circumstance based on this judgment, they manifest their vital capacity for autonomous action, their independent participation in the community of life.

Probabilities lack life, for they chart the behavior of external objects. Possibilities sustain life, as the inner sense of self enables a subject to try to negate the probabilities by steering, by turning against them to the degree it can through all that is taking place. "That which is wise is one, to steer all things through all things," Heraclitus said. This wise power of judgment, this sense of balance writ large, is the sense of formative justice, and the form of control that it makes possible is self-fulfilling, self-maintaining, taking into

account the entirety of what is taking place in the life being lived. All persons possess this inner sense and it is the actuality in life of our human dignity, our vital autonomy.[15] An informed sense of possibility, an inwardly formed sense for how a person can use her self-knowledge, her sense of formative justice, to control her interactions in the *Umwelt* of her life, is the real fruition of emergent education—not something implanted from without, but a life lived freely, in the community of other lives, as a self-maintained fulfillment of its vital possibilities.

8.3—Life's Potentials

Before closing, let us note one further aspect about possibility and the way possibility enabled people to exercise control in life. When someone recognized a possibility, a possible mode of interaction in the world, he became aware of an inner sense and

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[15] *Sojourner*: So, let me go back briefly to Plato's critique of the poets, who were really the mass communicators of their time. Am I correct that he was cautioning at bottom that poetic art could become very dangerous when its misuse distorted the inner sense of judgment that a person used in trying to control what takes place in her life?

» *Digger*: Exactly. For Plato, whether this good or that good served as the object of effort was not the important matter. Rather Plato wanted each person, and everyone together, to care for the sense of the good, the ability each person possessed to discriminate in all sorts of situations between the better and the worse with reference to what Plato called the idea of the good. The idea of the good was not some conclusion to a long, demanding line of reasoning that only a few could follow. The idea of the good was a sensibility that everyone possessed and used, akin to the sense of balance. This sensibility allowed a person to turn against the direction of degradation in the kinesthetic of personal and public life. Just as the sense of balance could become confused, so could this sense of the good; it was easily distracted, distorted, and deceived. The random power that accidents in our circumstances have to discombobulate the sense of the good are bad enough. To a Platonist like Carlyle, conscious efforts by some to distort and deceive this sense of judgment in others was a crime more despicable than a premeditated effort to maim or lame another. Efforts to deceive and confuse the public, to manipulate peoples' wants and desires, to paralyze the public will with self-serving disinformation were no different than pouring acid in the eyes of innocent passers-by. It unjustly wounded and destroyed the power of judgment by which each person steered their course through life.

using that inner sense, he could work to control what took place by reference to it. The possibility was the possibility of a mode of interaction in the world. It enabled someone to conduct himself autonomously; it did not determine what he would do through his autonomous conduct. The boy grasped how he could keep the bike upright by using his inner sense, his sense of balance, as he steered the bike, and off he went. Where? That was up to him to decide. Formative justice, Carlyle thought, was a powerful sense that people could use to live autonomous, well integrated lives sustaining many different meanings in a world of great vital complexity. But like the boy on the bike, the formative sense of justice did not determine what purposes a person should pursue.

Possibility was the actuality of control in life. Possibility comprised those rare and wonderful vital phenomena, counter-entropic, mortal eddies in the vast churn of deterministic forces, which were slowly winding down throughout the universe. How far could living possibility imbue the universe with meaning? No one knew, for people, all living beings, were life's agents deep in the middle of the vital effort. All life, and human life within it, sensed its instabilities and needs and steered itself as best it could to catch its falls, to meet its needs. To steer well, to maintain itself, all life, and human life within it, needed to be in movement. And, of course, at any moment, the destinations to which life would move itself could never be externals given to it, destinations chosen for it by the non-living, meaningless void. To move, a living being had to postulate its own purposes; it had to choose a destination to where it would try to steer, allowing the living, along the way, to catch its falls, to meet its needs, by exercising its powers of control.

Possibility arises from life's inner sense, its feel for what it needs to maintain itself, perhaps to flourish, in the cosmos it carves into the chaos. The inner sense of need makes possible the exercise of control, the self-directed effort to maintain its self in the midst of all that is taking place. To exercise its possibilities, to use its powers of control, life needs to give itself a direction and to use its energies to move towards that goal. Life has no *telos* given to it from without, but life is *teleological*, the source of its *telos*, necessarily given from within.

Particular lives are mortal because each exhausts itself, in one way or another, ending its power to move purposely yet further. Thus the mother, wounded by a failed artery deep within her controlling brain, struggling still to maintain her breathing, her

remaining *psuché*, coming to her end. At its end, each life can no longer steer itself, its inner sensibilities give out; and unable to steer, it has no further possibility; it cannot catch its fall, and it becomes a corpse, a dead part of the chaos of externally determined things. And those still living, grieve, not the corpse, but the life, once loved, now lost.

Life, human life, was far from such a point of exhaustion. But Carlyle worried that the sense of historical purpose was weak; stasis was high. He reflected on paradigmatic situations of education—the child learning to walk, to talk, or the boy learning to ride his bike. He was sure the sense of purpose preceded the possibility of control, the recognition of the inner sense that allowed one to act on ones own. The child wanted to say something, even though he might not be sure what. With that intention, he could stumble on the relevant inner senses enabling him to take control, to form the words, and to utter the speech. Possibility followed purpose. That was the educator's truth. Purpose led to inner sense, and inner sense led to possibility, and possibility led to control, to autonomous effort. These were the conditions to which educators were failing to pay sufficient heed. Carlyle felt drawn to address the problem of historic purpose in his time.

Throughout his career, Carlyle had been aware that a very basic division separated responses to questions about educational motivation. He had always considered the dominant educational practices very paternal because a belief that learning required an external cause seemed to inform them. He believed that the capacity and motivation to learn and to develop potentialities was an inherent characteristic of living beings, especially humans—not a consequence of education, but its starting point. He thought that sometime in a far off future, educational arrangements would take the self-motivation of students as their starting point, and with that educational resources would become omnipresent, less didactic and more supportive of the diversity of intentions that people naturally experienced.

Leading up to such pedagogical possibilities, Carlyle foresaw a prolonged extension of the present-day public life. The world would muddle further along on its present course. The highly satisfied would procrastinate on matters that required their making some sacrifice. The United States and other highly developed nations would slowly devolve their relative power, as an increase accrued to more rapidly growing nations. Eventually, a time of troubles would

set in—no single problem would be overwhelming, but their untimely convergence would upset the equilibrium of the existing order. That global disequilibrium, palpable and undeniable, would initiate the emergence of some alternative, one that would be either a highly destructive regression in the condition of humanity, or the attainment of a new stability, disclosing the global commons in which people would work as peers to manage it as a stable, sustainable patrimony. From our vantage point, 150 years later, this prognosis was sound, although it took until the last third of the twenty-first century for the time of troubles to take full hold and until early in the twenty-second for a new equilibrium to emerge.

In contemplating this future, seeing it as an alternative between a disastrous regression, or a move to a global commons, Carlyle was optimistic. It turned, he thought, on the character of human motivation. Apologists for the era of enclosure argued that the quest for endless growth was the natural, healthy state of the human spirit—a person's drive to improve her condition, to excel, to win repute as the best, as the person of preeminent worth. In this view, to want more was natural and good, and a system of economic competition between persons and between populations was the best system, the just system, the system people had and the one they should preserve. This conviction was an error, a misjudgment of the human good. In actuality, human life, like all life, involved innumerable judgments of sufficiency, recognizing when something is neither too much nor too little.

Anything worth learning had a crucial element of control essential in its exercise, and to grasp and exercise any form of control, a person had to do it for and through herself. Whatever the form, control required a person to sense and manage both positive and negative feedback—one to amplify, the other to reduce. And life required every person to exercise control, continuously judging well what was enough, neither too little nor too much, and adjusting effort on the basis of those judgments deftly towards her intended goal. Such a process could take place in schools, a happy side effect of what they did. The conflation of education with schooling had resulted in a vast system of instruction largely irrelevant, often inimical, to the educational emergence through which each person actually acquired control of her cultural capacities.

Control was the fundamental principle of self-maintenance. Control arose by using diverse forms of positive and negative feedback to guide activity towards an intended destination. A

system that responded only to positive feedback, the incessant quest for more, would be fundamentally unstable. A thermostat that signaled only "MORE HEAT" would be a lousy thermostat. To tune a guitar, the strings must be neither too taut nor too slack. To pick up an egg, or any other delicate object, the grasp must be just right, neither too lax, dropping it, nor too firm, breaking it. And to fry the egg well, the pan must be neither too cool nor too hot. Control required judgments of what was sufficient, enough, suitable, neither too much nor too little. In the course of living, persons continually made such judgments in large matters and small. To sense in all things what was enough, that was the ground of human excellence.

As long as the material condition of humanity had been one of general insufficiency, a system of enclosure that drove steady increases in production and productivity had made sense, for then there had been too little. But as humanity began reaching sufficiency, the blind perpetuation of that system, ever striving for more, risked producing too much; the system in control must signal the furnace to stop. That signal would emerge as persons around the world judged that the net cost-benefit of pursuing more through enclosure had become less than the net by maintaining enough in the commons. But that signal would probably not register without a significant historical prod. Ultimately, education was historically compulsory.

A time would come, when each person would control her own education, but the timing was contingent, and still distant. Educators could model and exemplify different capacities for control in action. They could describe these, explain them, demonstrate their use, and incarnate their value. Yet educators could not impart these capacities for control to another person. Each person gained a capacity for controlling a significant dimension of her circumstances, through a relatively sudden emergence, after a period of struggling incapacity, and then using it, engaging her circumstances with the newly emergent capability. And each emergent capacity was not isolated and set apart, but was orchestrated into the whole of a person's life that was taking place. This orchestration, too, was an emergent capacity, an adult sense of sustained purposefulness, evincing goals and coordinating many interests and abilities towards their fulfillment, their adjustment, their achievement in the living of life. This

orchestrating was formative justice.[16]

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[16] *Sojourner*: As I've been reading about Carlyle and his time, I've been thinking how fortunate we now are, able to think about what is *enough* in all the innumerable things taking place in our everyday lives. I worried about your image of the birds randomly pecking on the field and their suddenly soaring off, swooping away like dancers in unison. It exaggerates the value of the soaring, compared to the pecking. Since the Stabilization, our lives involve capabilities and things taking place—metaphorically speaking—like the random pecking of the birds, more than their soaring in unison. Don't both—the pecking and the soaring—represent the same essential, vital value?

» *Commoner*: Yes, I believe they do. Everything that people, even all living beings, do for themselves has value, and the standard of *enough* is the measure of that value. Life takes place as a center of self-control maintains itself within the little habitat it carves from the vast, mute universe. Each must juggle a myriad of concerns, great and small, and achieve that balance, that harmony—what is enough throughout it all— so that what takes place best fulfills life's possibilities, given the unique conditions taking place through the life of each. Self-maintenance requires much more skill, intelligence, determination, and taste than self-aggrandizement. Both the random pecking and the soaring are fundamental expressions of value creation taking place in the living of life. And what is life but the creation of value of meaning to itself?

» *Digger*: From someone pecking in the archives—Carlyle valued the commencement address at Kenyon College by David Foster Wallace for its recognition that the living of everyday life disclosed real educational achievement. Respect for everyday living and the achievement of value through it was a constant for Carlyle. His early essay, published under the pseudonym of Robert Oliver, "In Praise of Humble Heroes" (1968), expressed the value of maintaining the quality of life in mundane work, in all that takes place around us. He quoted George Elliot's conclusion of *Middlemarch*—"the growing good of the world is partly dependent on unhistoric acts; and that things are not so ill with you and me as they might have been, is half owing to the number who lived faithfully a hidden life, and rest in unvisited tombs." Years later, Carlyle used this quotation to memorialize his teacher, Martin S. Dworkin, a man of great intellect and moral conviction, who never received recognition commensurate with his merit.

And might I, before leaving, conclude with a reflection. We must always remember this sense of humility, the simplicity of enough, in discussing *emergence*, an end of the freeloading system, or the Stabilization resulting in the Global City-State. Great departures, the end of one era and the start of another, take place only as the capabilities involved, and their consequent possibilities, take concrete

An idea of formative justice would lead to a world in which each person might live according to the rule of *enough*. At all moments, each would enjoy numerous potentialities among which she would choose and integrate into a coherent, well-controlled life. Each would make these choices and integrate them well by doing justice to oneself, dealing with the fundamental problem of allocating effort and attention appropriately in the course of what was taking place in life. Living according to the rule of *enough* might be feasible on a commons that people had finally, fully disclosed. They would outgrow and discard the ubiquitous competing enclosures, which in the modern era they had projected onto the commons in their struggle to secure more for themselves, an ever-larger share.

In the world of competing enclosures, two justices had been all-too-often at odds with one another: a formative justice that a person exercised for and through herself and an imperative, distributive justice, the controlling needs that possessive enclosures projected upon the person, rationalizing or rebuking someone's privileged share. Rousseau had been right: a distorting alienation arose when a person had to force herself to adopt the necessities of enclosure as the controlling principles of her life. In an attempt to rationalize acquiescence to those imperatives of enclosure, people invented distributive justice: whether too much or too little, your lot is what you deserve. Living in enclosures puts each person at odds with herself, estranged from the formative choice, that is, from judging actively what is neither too little nor too much as she controls the vital interactions taking place. Perhaps an alternative was within human reach—a comprehensive commons, the Global City-State, where people lived committed to sustaining, for each and all, the pursuit of self-formation by judging, *for* oneself, *with* others, and *through* the commons, what was *enough* with respect to all the possibilities of life. Perhaps, but Carlyle recognized that the underlying ideas needed further clarification, and he resolved in his continuing work to do his best to contribute to that, starting with the principle of formative justice.

For now, however, Carlyle was at an ending, hopeful yet a bit

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form in the everyday activities of ordinary people, however great and however small. The random pecking of each and every bird expresses the fundamental value of life, self-maintenance, and when the flock soars, for whatever the reason that moves it, the whole flock soars together, each soaring-self flying according to its inner urging.

disconsolate, perhaps exhausted. He would put the future of education aside. There was so much he had not said, so much he could not say. What he was trying to say, he reminded himself, was not novel, but would always need saying. It was one more attempt in a series, with many before and yet many to come, each trying to understand the living of life. It was hard, trying to depict something while gloriously entangled within it. Little wonder that it seemed short of what it could and should be. Self-organization and the exercise of control would always be there, as long as life was lived. Others had sensed and spoken of it, as would others in the future, too. Each would sense life taking place, controlling itself by aspiring to a good, neither over-reaching nor falling short, maintaining and fulfilling the effort as best he could. Carlyle thought he now could understand Plato's wonderful passage a little better, inspired anew by the good, by that pervasive intentionality through which each continually judges—neither too much nor too little

> Education is not what it is said to be by some, who profess to put knowledge into a soul which does not possess it, as if they could put sight into blind eyes. On the contrary, our own account signifies that the soul of every man does possess the power of learning the truth and the organ to see it with; and that, just as one might have to turn the whole body round in order that the eye should see light instead of darkness, so the entire soul must be turned away from this changing world, until its eye can bear to contemplate reality and that supreme splendour which we have called the Good.
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> *Republic*, 518b–d, Cornford, trans.

Which is to say, "Enough."

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Glossary of Key Concepts

Capability, Capabilities_____

Capabilities are modes of exercising control that persons and groups can exercise in seeking self-maintenance in life. Capabilities are both physical and cultural. They are numerous and diverse. Nearly every verb of agency describes a capability.

Capacity, Capacities_____

A capacity is an actualized capability. A capability becomes an actual capacity when control of it has emerged and use of it takes place as a person or group interacts with circumstances.

Cause, Causality_____

Causality is a mode of thinking by which the mind postulates necessary connections between observed phenomena describing a determinative sequence of action in time. A cause appears to determine an outcome or result according to its action in sequential time. Causal explanation indicates necessary connections between successive states in a temporal order, the cause preceding and the result following. Causes appear as existential phenomena in the experience of a living form, and they are moot within the absolute realm of things-in-themselves.

Circumstance, Circumstances_____

All that co-exists in time and space through a living form. Circumstance comprises all that takes place through the interactions a living form occasions in the course of its self-maintaining. Circumstance has a phenomenal presence at one or another level of sentience in the existential experience of a living form.

Co-existence (also, Simultaneity and Reciprocity)_____

Co-existence is to control, as sequence is to cause. What co-exists is existentially simultaneous in time and space for a living form, and all that co-exists reciprocally interacts through it, out of which emergent states take place. Co-existence does not pertain to the moot realm of things-in-themselves, but to the existential condition of a living form. The time scale for co-existence can vary from the instantaneous to an extended period of reciprocal interaction.

Commons _____

The physical and cultural resources built up through the sum of human efforts at self-maintenance that have taken place through historical time. The commons is prior to and inclusive of all enclosures. It may be thought of as the unbounded plane of human interaction, with respect to which there are no externalities. The commons is the net of human activity.

Complexity _____

Complexity arises because the scope, density, and variety of reciprocal interactions making accounting for each specific action taking place impossible. Hence, complex phenomena appear in experience as aggregates. Vital significance emerges from the complexity of innumerable reciprocal interactions taking place among countless centers of control over sustained periods. This complexity defies clear-cut causal analysis. It is important to understand it as the existential field out of which education and all of human experience emerges.

Control_____

The effort by a living form to use positive and negative feedback to modulate reciprocal interactions of significance for its self-maintenance. The possibility of control arises as a living form postulates a *telos*, relative to which it judges negative and positive feedback. Control takes place. An agent seeks to exercise it. Its success or failure is contingent on the capacities of the agent and the particulars of the circumstances impinging on the effort.

Disclosing the commons _____

As enclosure has privatized more and more vital resources and distributed their benefits more inequitably, pressure increases to disclose the commons, to reassert the prerogatives of humanity, in common, over its accumulated achievements. As enclosing private property has been the driving endeavor in the modern era, disclosing the commons is becoming the essential concern in the postmodern era. Disclosing the commons is taking place in large part as communal activities emerge through self-organizing interactions over information networks and prove far more useful relative to their enclosed counterparts, quickly displacing them. Thus, Wikipedia has wrenched the encyclopedia out of the privatized realm and put it into the commons, disclosing anew the status of accumulated knowledge as an essential component of the human commons.

Education _____

Education is not to be enclosed in the work of special institutions. Education takes place ubiquitously and continuously throughout all of

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life. Education is an ongoing emergence of vital capacities taking place as the person, from infancy on, acquires her instantiation of human culture. Persons and groups are the agents of their own education, not the recipients of it.

Emergence

Emergence indicates a new or different state taking place through a critical transition, or change of phase, evident in a pattern of complex reciprocal interactions. Numerous forms of emergence take place in the material world as changes of phase occur in the ways reciprocal interactions take place in response to ambient conditions, as when a liquid freezes solid as the surrounding temperature drops. Emergence in life, in the vital cosmos, includes an aspect of control that the agent of the emergence exercises. As a result, the vital changes of phase take place relative to a self-maintaining intentionality, as when a bike rider shifts his direction of fall by steering against the one he senses taking place. And in a universe capable of endless recursion, intentionality, itself, manifests its multifarious forms as successive states of an elemental indeterminacy take place through emergence.

Enclosure

Enclosure is the operational principle defining the modern era. It results when people privilege the category of causality. Enclosure involves projecting postulated boundaries on selected portions of the material and cultural world, differentiating what is inside from what is outside, which makes it easier to simplify and normalize random complexities within the enclosed area, reducing them to a simplified, causal action of one matter on another through a temporal sequence within the enclosed space. As a mode of thinking and acting, enclosure has proved enormously productive (think internal combustion engine, etc.). It has limits, however, especially as it produces potentially disruptive side-effects by ignoring externalities left out of account in attending only through an exclusive reduction to selected elements of what has been enclosed.

Enough

Enough is the balance of negative and positive feedback relative to the purposes that a living form postulates in the quest for self-maintenance. All forms of control exercised in living life require the judgment of what is *enough*—neither too much nor too little. Enough is never precisely evident; it is approximated through continuous use of positive and negative feedback. Inability to judge rightly what is enough complicates or overwhelms a living form's capacity for self-maintenance.

Externality

Externalities are matters not taken into account as a result of the simplifications introduced in thinking and acting on what has been enclosed. Externalities are side-effects not taken into account within enclosure. As a result of leaving externalities out of account, the apparent costs and benefits arising from enclosed activities may differ greatly from those that would be evident were the externalities (e.g., air pollution, resource depletion, climate change, etc.) taken into account.

Feedback, positive and negative

In the exercise of control, through *feedback*, an agent recursively senses what is taking place within reciprocal interactions relative to its postulated goal and uses what it senses to amplify or modulate what is taking place in order to more closely approximate realization of its goal. Feedback enables living forms to engage in self-maintenance, to conduct their lives purposively. And again, the universe being infinitely recursive, feedback serves living forms, not only in their efforts to approximate their purposes, but also to evince new, more suitable, sustainable purposes, as complications with established ones become evident.

Formative justice

Problems of justice arise whenever people cannot have it all, that is, whenever they must choose between competing "goods," positive and negative. Different types of justice arise because people find themselves constrained to choose between different types of goods—public goods with distributive justice, human rights with social justice, enforcement of norms with retributive justice, and the pursuit of potentials with formative justice. Problems of formative justice arise because persons and groups always face the future and find more potentialities confronting them than they have the energy, time, ability, and wherewithal to fulfill. They must choose among these and in doing so they form their unfolding lives. Conceptions of formative justice advance principles for choosing controlling aspirations allocating effort towards their fulfillment as persons and publics face an indeterminate future. Formative justice is difficult because people must make these formative choices in ways that will prove for them both successful and sustainable, and it is important because they suffer or enjoy, as the case may be, the lives they thus form.

Freeloading

Freeloading is the proper name for profit, which arises from economic exchanges in which the calculation of costs and benefits does not accurately account for significant externalities.

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Fulfillment

Persons and publics pursue fulfillment, seeking to self-maintain the greatest meaning and significance possible in their lived experience. Fulfillment is never an attained condition; it is always a sought objective. Persons and publics seek it as the goal or telos, something not presently secured, of their living effort. Seeking fulfillment, they maintain themselves by postulating objectives and using their inner senses of control to attain those in the flux of their lived experience. Fulfillment denotes a utilitarian norm for living in which attainment of the goal can never be simply measured. Fulfillment is the present pursuit of future possibilities, which continues until death. Throughout life, persons and publics must continually interpret and adapt their pursuit of fulfillment in the midst of the ever-changing experience taking place. Fulfillment is always a dynamic prospect.

Full employment

Full employment indicates the optimum development and use of the capacities with which persons and publics can pursue their fulfillment, seeking the greatest possible meaning or significance in their lived experience. As with fulfillment, full employment is a utilitarian concept subject to interpretation, not simple measurement, for the full use stands relative to ongoing processes that are at once real and indeterminate. That these utilitarian matters are ones of interpretation makes them no less real and no less objective than they would be were they subject to measurement. It simply redefines the way reasonable people must examine their reality and objectivity, namely in deciding how to live, making potential capacities actual, pursuing fulfillment with them, and suffering or enjoying the consequences in the actualities of their lives.

Instruction, Instructional

Instruction causes groups of students to learn pre-selected skills, values, and information as a result of actions by teachers using specially designed materials in enclosed times and places for schooling. Instruction has been the basic method of education developed and used during the modern era. Used in standard ways with almost all children in every part of the world, instruction has become one of the most successful and representative examples of modernity's strategy of enclosure. Instruction creates numerous, extensive educational externalities that impinge on different children in different ways, some highly inimically.

Interaction

Interaction takes place between things, states, ideas, and the like that co-exist in time and space in some way. Co-existence means that it is

not possible to confine the action of one thing on another with a direction defined by a temporal sequence (time's arrow), for the co-existence entails simultaneity and reciprocity. With co-existence, action dissolves into interaction. Rather than a state appearing as the caused outcome of something prior, with attention to interactions, it becomes evident simply as something that has taken place in the course of complex interactions through processes of emergence.

Life, living form

Life, a term used throughout *Enough*, denotes a counter-entropic, emergent capacity for self-maintenance in nature. Taking place through primordial indeterminacy, as something that maintains itself by controlling the mechanisms of matter and energy, living form thereafter works to maintain itself by converting matter and energy into meaningful resources that serve its self-postulated, self-sustaining purposes. Life creates itself through its living forms, each instance of which is mortal, but which together interact continuously with themselves and with the material chaos, cumulatively bringing more and more of it within the cosmos of vital experience. Owing to death, life is profoundly recursive and through the recursive work of life, the universe is becoming alive. And in doing so, life imbues the senseless universe with sentience, meaning, and value.

Lived experience

Experience as lived in an immediate present as our life takes place both bodily through somatic interactions and mentally through interactions involving subliminal and conscious awareness. Our lives take place through lived experience, which is the seat of judging, thinking, feeling, doing. "Lived experience" is a redundant term, but it is useful and perhaps necessary, nevertheless, because much of what people call "experience" merely grasps the afterglow of lived experience in ex post facto thought. Lived experience takes place in a vital present facing an indeterminate future, but most discourse about experience pertains to what happened in a determinate past. Education takes place as important capacities emerge in lived experience, with respect to which even the breathless "Ah ha!" is after the fact.

Person, Persons

Enough: A Pedagogic Speculation refers to *persons* throughout the text. "Person" stands for the human being whose life consists in lived experience, which is immediate, unique, and integral to the person. A person is a human agent seeking continuously to exercise diverse forms of control while interacting with circumstance. The person is prior to and independent of "the individual," who is an abstraction relative to various forms of "the society," and other collective abstractions. *Enough* has been written with conscious effort to confine use of "the

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individual" to mean, not a person, but a single member of an abstract class, the characteristics of whom are not those of a living person, but those of the abstract class.

Pupil (also Infant, Child, Student, Adult, Citizen, and many more) _____

These specialized nouns appear throughout the text. They refer to a person, a human being—an infant, child, pupil, student, adult, citizen, and many more. In doing so, they *usually* refer to a person engaging immediate, unique, and integral lived experience, who happens to share an accidental characteristic such as infancy with other persons. In actuality, the integral person is prior to any class to which she may belong. Thus the person who is a pupil is prior the abstract class of "pupils." Within the text, maintaining the primacy of the person consistently in using these specialized nouns proves unfortunately impossible, for common usage often hypostatizes abstract classes, treating them as prior to and definitive of the people belonging to the abstract class. For instance, in common usage there are beings, pupils, who exist on numerous days of the year from about 8:15 a.m. to 3:10 p.m. and whose lived experience consists only of that much reduced set of behaviors recognized as characteristics of the class, pupil—generally various good and bad learning behaviors, along with some quirks of comportment that facilitate and impede their basic learning behaviors. Readers need to attend to the context to tell whether discussions using terms such as "pupils," concern the lived experience of the persons sharing a characteristic or the stereotypical actions of hypostatized abstractions. Usually if the term is the subject of an active verb, it refers to a living, integral person. However, if the term is in the predicate, particularly of a verb in the passive voice, or an indirect object of prepositional phrases, it is likely to refer to an abstract member of a reified class.

School, Schooling (also College, University, Higher education, etc.) _____

Schools, etc., are institutions constructed through techniques of enclosure in order to impart a privileged set of skills, values, and ideas to a class of abstract individuals—pupils, students, youths, undergraduates, etc. Properly speaking, *education* takes place as capacities for control emerge through the reciprocal interactions integral to a person's lived experience. Common usage, however, abstracts education away from the lived experience of persons and attributes it to the program of causal actions that institutions such as schools carry out with the individuals attending them—most concretely in institutional rhetoric "the whole person," an abstraction perhaps best visualized by Al Capp's lovable shmoos (http://en.wikipedia.org/ wiki/Shmoo). With the

enclosure of education, it becomes what schools do—schooling. And people need education in order to become good or bad, a condition which eventuates, depending on whether their schooling did what schools do well or poorly. Such ways of thinking are excellent examples of superstition, attributing non-existent causal power to abstractions of the mind.

Self-maintaining

Self-maintaining is the essential activity of all living forms. For a living form, death occurs when self-maintaining activity stops. To live is to maintain oneself against the entropic forces of the mechanistic universe by projecting goals that seem conducive to the maintenance of self and by exerting control in an effort to approximate the purpose. As objective phenomena, capacities for self-maintaining must emerge from some constitutive indeterminacy of the universe, and all of life's vast and complicated purposive efforts emerge from innumerable, recursive, and specific activities of self-maintenance that have been taking place over eons through the lives of living forms.

Self-organizing / Phase changes

Self-organizing takes place in the process of emergence. *Self-organization* properly takes place with living forms, for they have a self capable of organizing. But the term often loosely indicates a mechanical transition in the organization of matter and energy taking place in a phase change determined by external causes. Self-organization often refers to the over-all outcome of an emergent process—the self-organization of a flock in flight. Phase change often refers to the specific transformations undergone as some emergent state self-organizes. Thus, an emergent whole self-organizes as its components each go through a change of phase.

Sequence, Sequential

Kant's second analogy was the principle of temporal sequence according to the law of causality. In a temporal sequence, a necessary connection between one state and another must be in the form of a causal action in which what comes before determines what follows after. An observer can give a true account of a temporal sequence only ex post facto. With respect to any future state, an observer can only give a probability based on predictions involving a starkly limited number of potential causes.

Students, Study

Students are persons actively engaged in the many forms of *study* in their lived experience. We call them "students" because they study, not because they are "learners." Students are persons; learners are abstractions which mysteriously respond positively to all that teachers

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try to impart. *Study*, in its most general sense, comprises the diverse efforts by students to control the educative interactions taking place in their lives. Through these interactions, the student forms her basic capabilities and capacities that facilitate self-maintenance and self-organizing. The many verbs denoting the forms of interaction that take place as a person engages her cultural circumstances indicate the educative capabilities emerging through study. The word-cloud on page 151 depicts a selection of verbs indicating what persons do as studying takes place in their lives. Here it appears as a partial listing of capacities that emerge in the course of study:

acquire, admire, affirm, analyze, answer, appropriate, argue, aspire, assert, associate, assume, calibrate, catalog, challenge, choose, classify, collaborate, comment, compare, complicate, compose, compute, concentrate, confirm, conform, conjecture, consider, consult, contend, contest, contrast, converse, cooperate, copy, correct, create, criticize, daydream, debate, decide, deduce, deliberate, desire, detect, disagree, discourage, discuss, dispute, doodle, doubt, draw, empathize, emulate, enjoy, err, estimate, evaluate, examine, exemplify, experiment, explore, fantasize, feel, finesse, forget, formulate, guess, hint, honor, hope, hypothesize, ignore, illustrate, imagine, imitate, impersonate, improvise, infer, inquire, inspect, interact, invent, inventory, investigate, joke, judge, laugh, learn, list, listen, look, make believe, manage, map, measure, meditate, memorize, mime, monitor, muddle, muse, negate, notice, observe, oppose, order, organize, paint, perceive, perform, picture, plan, play, predict, pretend, prioritize, probe, prove, question, quote, rail, react, read, reason, recite, recognize, record, reflect, refute, regulate, reject, remember, respond, review, scrutinize, search, seek, select, simulate, sing, solve, sort, speak, speculate, study, subordinate, suggest, suppose, sympathize, synthesize, taste, test, theorize, think, tinker, touch, travel, try, tune out, understand, use, value, waver, weigh, wonder, worry, write, and so on.

To keep in touch with the real activity of study, we should daily compose sentences using each of these verbs in the active voice, with "the student" as subject. Double credit for each verb added to the list!

Nota Bene: In some educational research, the rhetoric of which sometimes affects the text, "students," often in the plural, denotes abstract members of a class, selected characteristics of which are counted and classified, and then subjected to mathematical analyses that reveal the proximate causes making some members of the class effective learners and others hopeless dolts. Generally, we should avoid such usage.

Taking place _____

Philosophizing would be clearer were thinkers to pay more attention to the meaning of verbs. They are the tools of thought defined by action. Specific verbs fit well with each of Kant's three analogies of

experience. The verb "to be" has a special relation to Kant's first analogy of experience, the principle of the persistence of substance, something Parmenides long ago observed. "To become," along with verbs such as "to result from" or "to be caused by," work well with the second analogy on the principle of causality, the prepositional component indicating the relation of causality. The verb construction, "to take place," describes especially well matters considered with the third analogy, the principle of reciprocity. Something emerges, it *takes place*, it *happens*, meaning that it manifests its unique temporal and spatial presence in all that co-exists. "To happen" has the element of unexpected emergence embedded in it, for it is derived from the old English word, *hap*, meaning chance, fortune, or luck—a use still alive in "happy," "happiness," and on the other side of the ledger, in "mishap." Throughout the text, the future authors describe states or conditions as taking place in order to indicate that readers should think about how such a state is emerging from reciprocal interactions between a self, aspiring to achieve control of some sort, and the self's circumstances.

Teachers, Teaching

The person who serves the office of teacher, who is often reduced to an abstraction. In conventional speech, an abstract teacher delivers instruction, imparting specific skills, values, and knowledge, to collections of abstract students—learners, who are ideally receptive unless limited by one or more well-documented psychological, ethnic, economic, and social impairment. The results of work by these abstract teachers are judged good, bad, or indifferent, according to how well some set of indicators reveal whether their abstract students can subsequently manifest traces of the material in which they have been instructed. Any similarity between these abstract teachers and flesh and blood teachers, whose lived experience comprises the whole of their lives, 24/7, 365 days, year in and year out, is purely coincidental. Real teachers, in and out of schools, are ubiquitous in the realm of human interaction. The actual accomplishment of real teachers is not to cause learning; it is to model human capacities for self-maintenance in ways that students can emulate, adapt, or reject. Together, all of us, through the sum of our reciprocal interactions, exemplify the full range of what can take place should our control of emergent capacities be excellent or inept—excellent or inept, not merely in the subjective view of the real teacher, but in the view of those who absorb what the teachers exemplify through interactions with them, experienced as emblematic of human possibilities, good, bad, or indifferent. Everyone on many occasions serves as a real teacher and some persons make it their life calling.

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Umwelt, or life-world, has been an important concept in twentieth-century thought. Its usage in *Enough* resists the tendency to think of an *Umwelt* as the environment peculiar to a particular being. It is more than an environment abstracted away from a living form. It is existential unity of the living being and the world the being interacts with in its living.

"Vital" is an adjective qualifying whatever pertains to the initiation and control of activity by living forms, as distinct from what the external operation of material causes initiates and determines. The familiar contrast between the natural sciences and the human sciences, with the former relying on causal explanation and the latter on cycles of interpretation, is closely related to the distinction advanced here between the mechanical and the vital. In both cases, the contrast illuminates the difference between the causal determination of factual states and the meaningful interpretation of significant happenings. The distinction drawn by the polarity of the mechanical and the vital may be less problematic than that between the natural and the human, however.

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Commoner _____

Author Biography

Robbie McClintock now works as a writer, concentrating on educational and cultural criticism.

From 1967 to 2011, McClintock taught at Teachers College, Columbia University, where he is now the John L. and Sue Ann Weinberg Professor Emeritus in the Historical and Philosophical Foundations of Education.

McClintock earned his BA, *magna cum laude*, at Princeton University in 1961 and his PhD in 1968 from Columbia University. Before joining the Teachers College faculty, he served for two years as assistant professor at the Johns Hopkins University. In 1974 he studied and taught at the Goethe-Universität in Frankfurt.

McClintock's publications include an intellectual biography of the Spanish thinker, José Ortega y Gasset; books, articles, and proposals on technology and education; and essays on diverse themes, especially the student as the agent of education, the liberality of the liberal arts, and the interrelations between educational and political theory.

In 1985, McClintock started the Institute for Learning Technologies at Teachers College and directed it until 2003, mobilizing over $20 million in grants and gifts for projects advancing the educational uses of networked information systems in schools and universities.

In addition to writing, he is now organizing the Collaboratory for Liberal Learning, a working group to advance scholarship and criticism in education, public affairs, and historical thought. It will support efforts by scholars and critics to envision a world in which the humanities matter and to evoke a desire, will, and understanding from the public at large to bring that world to its fruition.

McClintock is available to speak on the challenge of cultivating personal and public autonomy through education. He lives in New York City and welcomes email sent to robbie@liberallearning.org.