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EDUCATION, PHILOSOPHY AND POLITICAL ECONOMY: THE RECLAMATION OF THE IMAGINATION

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Education, philosophy and political economy are all old-fashioned words, and I will use them in an old-fashioned manner. They have deep roots in European life leading back to Greek antiquity even though the Greeks clearly separated politics and economics (Murphy, 2001). Education and philosophy, as forms of inquiry, had their beginnings in Ancient Greece. They were a central part of a world that was reflective. The philosopher reflected on the nature of things. Education ultimately led to philosophy. It was a type of preparation for systematic reflection. Politics had an ambiguous relation to both philosophy and education. Aristotle wondered aloud whether the good life was the theoretical life of the mind or whether it was the public life of the polis. The philosopher engaged in the life of the mind. The citizen pursued the life of the city. Philosophers were citizens but not all citizens were philosophers and not all philosophers were citizens. Neither the citizens nor the philosophers had a high opinion of economics. Economics was a function of the household. The domain of the household was dominated by the activities of freemen, women and slaves.

It was the modern Enlightenment and the denizens of the nineteenth century who combined politics and economics into political economy. This laid the foundation for the world that we know and inhabit. The creative merger of economics and politics into the juggernaut of political economy re-shaped so much of modern social life and in doing so separated us in certain crucial ways from antiquity. Thus when the denizens of the West look at Greek antiquity today they see something that is both familiar and unfamiliar. Likely this is also true of Chinese and Indians who increasingly have to negotiate between their own variants of capitalism and their philosophical heritage in the past. This is no easy negotiation.

Westerners recognise in classical Greek antiquity the life of the mind and the life of the citizen. These are not alien to us. We also have no difficulty understanding a world in which education was a systematic preparation for philosophy and also at times a useful preparation for citizenship. Today we still have citizens and thinkers. Yet much separates us from the antique ethos. In 1800 this was less so. Two centuries later, the separation has grown. The Victorians could pretend to be Greeks. We can't. We can't do this convincingly because of what the Victorians did. They embraced political economy whole-heartedly. Along with political economy came the twin forces of industrialism and capitalism. And with modern capitalism came the emancipation of economics from the household. This emancipation took time. Once it had happened political economy emerged ascendant.

When economic wealth stopped being the concern alone of the household, it became the concern of the nation. Today two things matter most in politics: economic growth and warfare. Everything else is secondary. As political economy developed and matured, economic growth became an object of politics. Successful polities were increasingly defined by economic growth. The Victorians at least reconciled the propulsive invention of political economy with a profound fascination with classical antiquity. Britain's industry co-existed in interesting ways with the classics. But those who came afterwards could not manage the same artful reconciliation. It faded away.

As a consequence, education, philosophy and politics gradually began to lose their old-fashioned meaning. The words remained in use but their significance changed. Education eventually became a species of learning. The person who learnt acquired useful skills and knowledge for show. Education became less and less a discipline in thinking. Thinking requires a pause in acting. "Think before you act" had been the clarion call. The sculptor Rodin captured the spirit of the thinker well. The thinker is detached from action. He sits in communion with his own thoughts. Others avoid disturbing him. It is not that the thinker is disinterested in the world. Rather in thought the world is re-presented. It lives a double life in thought (Murphy, 2009). This provides an advantage. In our mind, to a degree, we can play with the world. We can try out possibilities, project consequences, and re-play the past in different ways. Above all, we can engage in the act of imagination. We do this by super-imposing one aspect of the world on another. We look at a tree and in our mind we see a family's genealogy.

The outcome of the Korean War is a classic story of the imagination at work. In December 1950, American forces in Korea were in retreat. The rapidly advancing Chinese army was driving the American Eighth Army from the Korean Peninsula. Matthew Ridgway was then given command of

the American forces. The Communist military feat had been rapid. Ridgway recognized that China's success however could also prove to be the eventual cause of its failure. He was a military thinker. The rapidity of the Chinese advance meant that the Chinese army supply lines were over-extended. Ridgway chose to exploit this with a vigorous counter-attack. He drove the Chinese army back to the 38th parallel.

Everyone looks but the thinker observes. The *theoria* of the classical philosopher derived from the word for observing. The thinker sees what others do not. In thinking, the world is duplicated in the mind. It is replicated so that it may be experimented with. Many of the most powerful science experiments have been thought experiments. Witness the case of Newton. Knowledge tells us *what is*. Thought tells us *what if*. The most powerful thought tells us *what if* we treat one thing (x) *as if* it was another thing (y).

Let us begin with a simple observation. A viewer observes that the velocity of a falling apple increases as it drops towards the earth. There must be a force that causes this acceleration. Let us call this force "gravity". So far we have observed and reasoned. But let us up-the-ante and introduce a metaphor. This profoundly changes the nature of observation. What if we treat the apple as if it was an orb. Metaphor is the basis of thinking. The thinker (Newton in this case) draws an analogy between the farmyard apple and a heavenly body. This then allows reason to suppose that the force of "gravity" affects the motion of planets and moons. Gravity pulls the falling apple-orb (the moon) toward the earth. But as it happens, in the case of the moon, this fall is equal to the curvature of the earth, so the moon remains in orbit around the earth. Newton worked this out using a thought experiment that compared the moon with a cannon ball shot from the earth. A cannon ball that gained sufficient velocity, he reasoned, would orbit the earth rather than fall to earth.

That is great science. It requires thinking. The core of thinking is metaphor. The metaphors of the imagination are followed by reasoning that draws out the implications of the metaphors. A child may be taught all sorts of things about gravitation. A contemporary child who learns about gravitation acquires subject knowledge. That is a key part of any education. However the same child is not necessarily being pushed to think. Thinking is what Newton did. He was armed with knowledge but that knowledge was not a sufficient condition to generate new and enduring knowledge. This applies not just to the commanding heights of science. It also applies in everyday life. Every-time we successfully solve a tricky everyday life problem or we confront some testing work issue, we are forced to think. We are forced outside of the bounds of what is already known into unknown terrain where we have to think analogically.

There are the dreamy kids in class who drift off into thought. The teacher's voice recedes into the distance. Their mind wanders. The thinking process meanders from idea to idea, wondering, playing, imagining, trying to figure out problems by thinking *what if A was X*. The teacher looks impatiently at the child. The child is not learning. The dreamy child is annoying. The child who thinks reminds us of the philosopher. The philosopher falls into potholes because he is too preoccupied with thinking—poor Thales. “Pay attention philosopher” we say. “Pay attention child” demands the modern teacher in the class-room. Not so the old-fashioned educator. The educator happily educates thinkers. The teacher in the modern sense tests children for knowledge—not for thinking. Knowledge and thinking are not the same.

Knowledge is acquired. It is uploaded and downloaded, filed and retrieved. Its model is the Library of Alexandria. In contrast thinking is a kind of work. It is what the Greeks called an *energeia*, ἐνέργεια, a working or activity. Thinking is an energetic, tiring activity. Often it is very physical. Sometimes we sweat when we think. This is because thinking is difficult. We think with our whole being. It pushes us to our limits. It is tough. Because thinking is strenuous, it requires character. Thinkers, creators and problem-solvers are people who are persistent and who work very hard.

Hard work and persistence is a function of character. Traditional education forms character (Lipman, 2013). Such education is demanding and unsentimental. It requires practice and drill. This begins in subjects and ends in thinking. The very long hours spent mastering a subject in high school is the preparation for the very long hours spent creatively mastering problems in higher domains. Creation requires the psychological capacity to try, try and try again. It is a slow and painful process. It unfolds over the medium and long term as thinkers experiment with this, that and another solution to a problem until one is found. This usually takes a long time, and creators need the wherewithal to cope with disappointment, failure and rebuttal. Contemporary schooling offers virtually no character training.

Today's high school students are addicted to social media that encourages in them massive anxieties. They are terrified that their peers will not respond to them instantly or “like” them. These anxieties will eventually crush creation, because creation is a process that is gruelling, tiring and testing. Contemporary schools provide almost no character formation. It is old-fashioned. It has been replaced by a sentimental regime that is hostile to the toughness, demandingness, courage, resilience, and intense work ethics required for success. It encourages instead obsessive communication about vacuous matters and collaboration that is driven by

narcissistic urges to be liked by everyone. This is the outcome of a long historical shift that begins in the late nineteenth century with the appearance of various progressive-liberal movements and that accelerates after 1970 as these movements hit their stride.

The defenestration of the traditional approach to education has had serious implications not just for education but also for political economy. Education proper is an education in thinking. It intensifies the human capacity to intuit, reason, and imagine. Just as over the long run politics and economics combined into political economy, education turned its focus toward learning and away from thinking. This did not happen over-night. It was a slow process. This process though began to accelerate after 1970. As industrial societies became post-industrial societies, learning was boosted. Learning became a major industry in the post-industrial era. This looked at first glance like a recipe for growth in societies in which classic manufacturing industries were shrinking. But in fact over the course of the forty years of the post-industrial era, this shift detracted from (rather than advanced) economic growth, the great measure of the modern age of political economy.

Learning often offers less than it appears to. A learner can learn to think but today much more likely a learner learns by acquiring knowledge. We all need knowledge. It is a good thing. But knowledge is not thinking. It is perfectly possible for a knowledge society or an information society to be awash with knowledge and data—and yet for there to be very little thinking going on in that society. Indeed in the post-modern age, after the 1970s, a whole social class emerged that defined itself by its knowledge qualifications. It thought itself to be very smart. But smartness defined by knowledge is shallow. Smartness gave itself a bad reputation in the age of qualifications.

Learning involves acquiring not producing. That is its Achilles heel. In contrast, thinking is productive. It is the root of all high-level making. Thinking produces knowledge and much else besides including techniques, designs, actions, plans, and so on. Thinking is the intersection of reason and imagination. It begins in intuition and imagination, and it is aided and extrapolated by reason. The great flaw of the post-industrial knowledge age was that its productive edge declined. The zenith of modern productive power was the period between 1945 and 1965. Human per capita productivity, economic growth and real income growth reached a high at that historic point. After 1970, it ebbed. The political economy of post-industrial societies was a relative failure (Murphy, 2012). It promised more than it delivered.

The combining of politics and economics to create political economy was the work of the Enlightenment. This creative combination took-off after the Industrial Revolution. Following 1820 it set in train cycles of economic growth that have no parallel in human history. This happened because the fruit of human ingenuity began to be rapidly translated into economic wealth and social prosperity. Science was translated into technology, art into design, and social science into industrial organisation. Education on the other hand was translated into learning. This hindered rather than helped political economy. The political economy of modern capitalism relies on ingenuity. It cannot be economical if it cannot translate more into less—more energy use into less energy use, more physical labour into less physical labour. The crux of the matter is that ingenuity relies on thinking. Yet modern education encourages learning not thinking. It lionizes the acquisition of knowledge rather than its production. It is not a cradle of thought experiments. It does not induce analogical power. It does little for analogical reasoning. It contributes little to problem solving.

We see the outward symptoms of this identified by Kyung Hee Kim (2010) in a re-analysis of some 300,000 Torrance test scores administered by the US-based Scholastic Testing Service over five decades. The research revealed these creativity test scores, which previously had risen, stopped rising in 1990. They experienced a statistically-significant decline after that turning-point. Twenty years into the post-modern era, creativity scores had fallen off and some of the components of creativity tested for by the Torrance battery had begun to decline as far back as 1984. The post-industrial knowledge society did manage to increase performance on IQ tests. But strikingly this occurred only in the low-performing IQ bands, only on visual tests, and not on logical or mathematical tests. In other words this was solely an effect of the repeated exposure of low-intelligence cohorts to the tsunami of post-modern visual intensity and visual-kinetic screen culture (Bauerlin, 2008).

The destruction of thinking due to the focus on learning is evident across the board. The great thinking disciplines of philosophy, physics and mathematics shrank to tiny sizes in contemporary universities after 1970. These were the traditional power-houses of intellectual creation. Yet they were dwarfed by the explosion of business studies and media studies and innumerable other “studies” that offered the acquisition of knowledge in place of the challenge of thinking. Today knowledge is so easily available on the Internet that people now talk about replacing universities with various online learning options. Universities still have a trump card. They offer formal qualifications. These require an institutionalised course of study. But the troubling aspect of the mass university forged by the knowledge society is that a typical student undertaking a typical degree

learns very little (Arum & Roska, 2011). The learning obsession of the larger society in fact has led to minimal learning in practice and often a lot of ignorance. Qualifications are mostly now meaningless. In 1970, 1-in-100 taxi drivers and 2-in-100 fire fighters in the United States had a college degree; now 15-in-100 does (Vedder, Denhart & Robe, 2013).

The cumulative result of all of this is a slow downward slide of human discovery and ingenuity (Murphy, 2010, 2013). At the same time we have seen the equal and opposite bureaucratisation of society. The qualification fetish of post-industrial societies was a symptom of societies that created employment by expanding private and public bureaucracies. This was the answer to the underlying weakness of their political economy. Knowledge equated qualifications equated a bureaucratic process of hiring that judged applicants' suitability for employment in terms of their formal qualifications. In principle qualifications signify knowledge that signifies expertise. In truth, the average contemporary qualification signifies virtually no knowledge and is a parody of expertise. The median university graduate today struggles to write a business letter that a fourteen year-old in high school in 1950 would have done competently. But this is not the worst of it. For it is not knowledge per se but thinking—and all the aspects of creation, originality, initiative, and reason that accompany thinking—that education has deserted.

Until 1970, the philosophy of education was a prominent stream in faculties of education in universities. From its crucible came works like Stanley I. Benn and Richard Stanley Peters' *Social principles and the democratic state* (1959). Today the philosophy of education has been marginalised. This is indicative of a larger trend that has ostracised philosophical thinking in the broadest sense in favour of "studies" that at best produce an archival mind but at worst produce outright ignorance. The old relation between education, politics and philosophy has been shattered. The consequence of this is that the newer relation of politics and economics, in which the two were combined into political economy, is now under pressure.

A successful modern political economy is not a knowledge economy. It is a thinking economy. It is driven by the innovation and creation that is a product of thinking. The French political economist J-B Say (1803) made the immortal observation that supply creates demand. In a modern economy, demand will eventually dip and will only rise again when ingenious entrepreneurs bring an interesting new generation of goods or services to market. That requires a chain of creation that is propelled by thinking.

J.M. Keynes premised his own economic theory on denying Say's postulate and inverting it. For Keynes, demand creates supply. The post-

industrial society drew heavily on Keynesian inspiration. The typical Keynesian *modus operandi* is to spend money on bureaucracies and subsidies so as to stimulate demand for goods and services in order to generate economic activity. This doesn't work. Without Say's supply, that is without the adventive goods and services that inspire consumers anew, demand that has declined will remain sluggish. The inspiration for supply comes from thought. When it worked, old-fashioned education prodded, stirred and stimulated thinking. This is the idea of education as it percolated its way down from Plato. This is not to say that only philosophy can inspire thinking. Art does it also. Cosmology, physics, mathematics, history—each of these does it as well. They do it because they force us to address mysteries, enigmas, puzzles and problems. No one today has a good explanation of the Cambrian explosion in natural history. All existing explanations are wanting. That suggests the need for a powerful analogy to be put on the table like Newton's apple-orb. Political economies are not so different.

The mathematician Alan Turing's 1937 metaphors of the computing machine, symbols, memory, 0-1, instructions, writing, scanning, storage tape, printing, state of mind, and so on, provided the conceptual design of the intelligent machine—the modern stored-program computer. 1997, sixty years later, was the high-point of the economy that computing spawned. The computer proved to be the supply that created the demand that drove the post-industrial economy in its most ebullient moments. Yet it never did so to the degree that the passenger-train or the automobile had done. Perhaps this was because the metaphor of the knowledge society was misleading in a crucial way. The computer processed information and stored knowledge. The computer's archival and retrieval capacities (in a way) exceeded its computational capacity in the end. The storage of knowledge is not however knowledge, no matter how effective the storage system is. In turn, knowledge does not capture adequately what a figure like Turing does. Knowledge is acquired, disseminated, and distributed. Someone like Turing in contrast creates this knowledge. The act of creation is a function of thinking. In the wake of the thinker, the knowledge that has been created is replicated, amended, conveyed, disputed, and communicated. But it is the relatively rare act of creation that sets all of this in motion. Creation is the unmoved mover of the dissemination-imperative of knowledge.

What makes or breaks political economies is the rate of creation. The creation of ideas is always relatively rare but it also varies across time. Some eras are more productive than others. Great political economies require fertile crucibles of creation. In its own collective mind, the post-industrial age was a great political economy. Its self-image was one of

ceaseless creation. But that self-image was false. The great economic downturn that began in 2008 showed effectively that the political economy of the post-industrial age lacked the vigour that it thought it had.

The judgement of the entrepreneur and the co-founder of Pay Pal, Peter Theil, is correct.¹ The innovative power of the forty years of the post-industrial era was poor, computers aside. The era proclaimed itself a great success many times over. History now is beginning to judge it to have been a failure in many respects. Lack of innovation was the outward face of an inward lack of thinking that the era imposed upon itself. It confused thinking with learning, and learning with bureaucratised universities and programmed school curriculums. More often than not it confused innovation with the massive expansion of regulation.

It is a good time now to reverse this. It is a good time to be old-fashioned again. It is time to bring back the timeless. It is time to step out of the time stream of our own time and reinvent education. At the primary and secondary level, we need education (once again) to form character. We need students who are tough, persistent, and hard working. At the tertiary level, we need (once again) an education that turns its gaze away from the anaemic world of “studies” and back to the grandeur of philosophy, politics and economics, and to the beauties of physics and mathematics.

NOTE

1. Peter Theil, Co-founder of Pay Pal. Interviewer Peter Robinson/Uncommon Knowledge, Hoover Institute, Stanford University, September 13, 2003.

Peter Robinson: “Peter Theil, in remarks to the International Students for Liberty, I quote you:

‘How much technological progress is actually happening? Is it getting faster and faster or is it actually decelerating and in some ways slowing down a great deal? The basic conclusion that I’ve reached is that outside a few areas we’ve had very little innovation in 40 years.’ Peter, forty years has taken us from the Ford Pinto to the Google Driverless vehicle, explain yourself.

Peter Theil: “Well, if you look at the last forty years we have had tremendous progress in computers and very little progress just about everywhere else. ... The most straightforward way to measure how fast we are moving is literally how fast are we moving? And travel speed has gotten faster century after century, decade after decade; we had faster sail boats in the nineteenth century, faster trains, then faster cars, faster airplanes. It culminated with the Concorde which was decommissioned in 2003 and today if you include low-tech airport security systems we are back to travel speeds circa 1960. In energy, there has been a massive failure of innovation which is reflected by the fact that oil prices and energy costs still have not recovered from the oil shocks of the 1970s. In inflation-adjusted dollars it costs as much as it did at the end of the Carter years today.

Peter Robinson: Despite fracking...

Peter Theil: Despite fracking. Without fracking it would be even worse. But despite fracking we are basically in a Carter-age energy crisis. You look at biotechnology. We probably have about as third as many drugs being approved by the FDA per year as were being approved twenty years ago. You can go through sector after sector and say the technology has not lived up to its hopes. We can certainly hope that it is going to accelerate and we are on the cusp of a new golden age which is what we are constantly being promised but I think after forty years of hype and failed expectations, the burden of proof has shifted very much towards those who claim that we are about to see a lot more happen. And I think that this slow-down of course is reflected in the economic data. We have had generally stagnant wages since 1973. Median wages have been stagnant and mean wages are up maybe 22%, and it is reflected in the sense that things are not getting better for a lot of people.
<http://live.wsj.com/video/uncommon-knowledge-is-innovation-slowing-down/BCAC2809-600A-42CA-A06D-D30702F0C598.html#!BCAC2809-600A-42CA-A06D-D30702F0C598>

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