

Introduction to the Sixth Issue

Not for the first time we missed our deadline, but luckily we have a fall-back date — December 2nd is the anniversary of ~~our publisher~~, the Sri Aurobindo International Centre of Education, founded by the Mother in 1943.

This issue kicks off with a topical piece by **Charles Eisenstein** on money and the present financial crisis. He writes that

Any time money is created through debt, a need to create even more money in the future is also created. The amount of money must grow over time, which means that the volume of goods and services must grow over time as well.

This of course is impossible with only one Earth at our disposal.

The crisis we are facing today arises from the fact that there is almost no more social, cultural, natural, and spiritual capital left to convert into money. Centuries, millennia of near-continuous money creation has left us so destitute that we have nothing left to sell.

Consider:

While a forest is still standing and inaccessible, it is not a good. It only becomes good when I build a logging road, hire labor, cut it down, and transport it to a buyer. I convert a forest to timber, a commodity, and GDP goes up. Similarly, if I create a new song and share it for free, GDP does not go up and society is not considered wealthier, but if I copyright it and sell it, it becomes a good. Or I can find a traditional society that uses herbs for healing, destroy their culture and make them dependent on pharmaceutical medicine which they must purchase, evict them from their land so they cannot be subsistence farmers and must buy food, clear the land and hire them on a banana plantation — and I have made the world richer.... Thirty years ago most meals were prepared at home; today some two-thirds are prepared outside, in restaurants or supermarket delis. A once unpaid function, cooking, has become a “service”. And we are the richer for it. Right?

The current efforts of the political elites to fix the crisis at this level will only reveal its deeper dimensions. In fact, the crisis arises from the very nature of money and property in the world today, and it will persist and continue to intensify until money itself is transformed.

How can money be transformed? Here is what Sri Aurobindo had to say on the subject:

Money is the visible sign of a universal force, and this force in its manifestation on earth works on the vital and physical planes and is indispensable to the fullness of the outer life. In its origin and its true action it belongs to the Divine. But like other powers of the Divine it is delegated here and in the ignorance of the lower Nature can be usurped for the uses of the ego or held by Asuric influences and perverted to their purpose.... The seekers or keepers of wealth are more often possessed rather than its possessors; few escape entirely a certain distorting influence stamped on it by its long seizure and perversion by the Asura. For this reason most spiritual disciplines insist on a complete self-control, detachment and renunciation of all

bondage to wealth and of all personal and egoistic desire for its possession. Some even put a ban on money and riches and proclaim poverty and bareness of life as the only spiritual condition. But this is an error; it leaves the power in the hands of the hostile forces. To reconquer it for the Divine to whom it belongs and use it divinely for the divine life is the supramental way for the Sadhaka....

All wealth belongs to the Divine and those who hold it are trustees, not possessors. It is with them today, tomorrow it may be elsewhere. All depends on the way they discharge their trust while it is with them, in what spirit, with what consciousness in their use of it, to what purpose....

In the supramental creation the money-force has to be restored to the Divine Power and used for a true and beautiful and harmonious equipment and ordering of a new divinised vital and physical existence in whatever way the Divine Mother herself decides in her creative vision. But first it must be conquered back for her and those will be strongest for the conquest who are in this part of their nature strong and large and free from ego and surrendered without any claim or withholding or hesitation, pure and powerful channels for the Supreme Puissance.*

* Sri Aurobindo, *The Mother*,
Sri Aurobindo Birth Centenary
Library Vol. 25, 1971, pp. 11–14.
Originally published in 1928.

The following two articles are by **Arthur J. Deikman**. In “‘I’ = AWARENESS” he warns against confusing awareness with the content of awareness:

when we use introspection to search for the origin of our subjectivity, we find that the search for ‘I’ leaves the customary aspects of personhood behind and takes us closer and closer to awareness, *per se*.... We know the internal observer not by observing it but by *being* it.

In his second contribution, Deikman offers criteria for evaluating spiritual and/or utopian groups.

Paul C. Vitz next examines the psychology of atheism. There seems to be a widespread assumption throughout much of the Western intellectual community that belief in God is based on all kinds of irrational immature needs and wishes, but atheism or skepticism is derived from a rational, no-nonsense appraisal of the way things really are. Nothing could be further from the truth. What holds for belief in God holds as much if not more for atheism. “Sauce for the believer is equally sauce for the unbeliever.”

Paul Lockhart, a first-class research mathematician who elected to devote his teaching career to K-12 education, then laments the way mathematics is being taught:

if I had to design a mechanism for the express purpose of destroying a child’s natural curiosity and love of pattern-making, I couldn’t possibly do as good a job as is currently being done — I simply wouldn’t have the imagination to come up with the kind of senseless, soul-crushing ideas that constitute contemporary mathematics education.... The truly painful thing about the way mathematics is taught in school is not what is missing — the fact that there is no actual mathematics being done in our mathematics classes — but what is there in its place: the confused heap of destructive disinformation known as “the mathematics curriculum.”

The student-victim is first stunned and paralyzed by an onslaught of pointless definitions, propositions, and notations, and is then slowly and painstakingly weaned away from any natural curiosity or intuition about shapes and their patterns by a systematic indoctrination into the stilted language and artificial format of so-called “formal geometric proof”.... A proof should be an epiphany from the Gods, not a coded message from the Pentagon.... Nothing is more

mystifying than a proof of the obvious.... Clumsy and distracting notation will be introduced, and no pains will be spared to make the simple seem complicated.... Students learn that mathematics is not something you do, but something that is done to you.

As a physics teacher in the habit of complaining about the way physics is generally taught, I sympathize with Lockhart, but the main reason why this article is reproduced here is that it puts the finger on a sore spot in our culture:

The first thing to understand is that mathematics is an art. The difference between math and the other arts, such as music and painting, is that our culture does not recognize it as such.... [N]obody has the faintest idea what it is that mathematicians do.... School boards do not understand what math is, neither do educators, textbook authors, publishing companies, and sadly, neither do most of our math teachers.

The cultural problem is a self-perpetuating monster: students learn about math from their teachers, and teachers learn about it from their teachers, so this lack of understanding and appreciation for mathematics in our culture replicates itself indefinitely. Worse, the perpetuation of this “pseudo-mathematics,” this emphasis on the accurate yet mindless manipulation of symbols, creates its own culture and its own set of values. Those who have become adept at it derive a great deal of self-esteem from their success. The last thing they want to hear is that math is really about raw creativity and aesthetic sensitivity. Many a graduate student has come to grief when they discover, after a decade of being told they were “good at math,” that in fact they have no real mathematical talent and are just very good at following directions.* Math is not about following directions, it’s about making new directions.

It would be bad enough if the culture were merely ignorant of mathematics, but what is far worse is that people actually think they *do* know what math is about — and are apparently under the gross misconception that mathematics is somehow useful to society!... Mathematics is viewed by the culture as some sort of tool for science and technology. Everyone knows that poetry and music are for pure enjoyment and for uplifting and ennobling the human spirit (hence their virtual elimination from the public school curriculum) but no, math is *important*.

At no time are students let in on the secret that mathematics, like any literature, is created by human beings for their own amusement; that works of mathematics are subject to critical appraisal; that one can have and develop mathematical *taste*.... There is really nothing else quite like this realm of pure idea; it’s fascinating, it’s fun, and it’s free!... [T]here is nothing as dreamy and poetic, nothing as radical, subversive, and psychedelic, as mathematics. It is every bit as mind blowing as cosmology or physics (mathematicians *conceived* of black holes long before astronomers actually found any), and allows more freedom of expression than poetry, art, or music (which depend heavily on properties of the physical universe). Mathematics is the purest of the arts, as well as the most misunderstood.

Lockhart’s lament first appeared in “Devlin’s Angle,” a monthly web column of the Mathematical Association of America. Subsequent to its publication, Lockhart and Devlin both received a large number of comments. While most were congratulatory, some of course were critical. In the first part of “Lockhart’s Lament — the Sequel” **Keith Devlin** presents some of the critical comments, including his own; in the second part Lockhart responds. The following passage will strike a chord with those who are familiar with Sri

* In the *Sequel* (see below) Lockhart worries “that the most talented mathematician of our time may be a waitress in Tulsa, Oklahoma who considers herself bad at math.”

* See Ernst von Glasersfeld, "An introduction to radical constructivism" ↗ *AntiMatters* 2 (3), 5–20; "Learning as a constructive activity" ↗ *AntiMatters* 2 (3), 33–49.

† *Early Cultural Writings*, Sri Aurobindo Ashram Publication Department, 2003, p. 384.

Aurobindo's views on teaching or the views held by radical constructivists:*

A child will have only one real teacher in her life: herself! I see my role as not to train, but to inspire and to expose my students to a wide range of ideas and possibilities; to open up new windows. It is up to each of us to be students — to have zeal and interest, to practice, and to set and reach our own personal artistic and scientific goals. Children already know how to learn: you play around and have fun and struggle and figure it out for yourself. Grown-ups don't need to hold infants up and move their legs for them to teach them to walk; kids walk when there is something interesting in the room that they want to get to. So a good teacher is someone who "puts interesting things in the room," so to speak.

In an essay first published in 1910 Sri Aurobindo wrote:†

The first principle of true teaching is that nothing can be taught. The teacher is not an instructor or taskmaster, he is a helper and guide. His business is to suggest and not to impose. He does not actually train the pupil's mind, he only shows him how to perfect his instruments of knowledge and helps and encourages him in the process. He does not impart knowledge to him, he shows him how to acquire knowledge for himself.

Bill Joy, cofounder and Chief Scientist of Sun Microsystems, is next with an abridged version of his unsettling article "Why the future doesn't need us":

The 21st-century technologies — genetics, nanotechnology, and robotics — are so powerful that they can spawn whole new classes of accidents and abuses. Most dangerously, for the first time, these accidents and abuses are widely within the reach of individuals or small groups. They will not require large facilities or rare raw materials. Knowledge alone will enable the use of them.

The only realistic alternative I see is relinquishment: to limit development of the technologies that are too dangerous, by limiting our pursuit of certain kinds of knowledge.... The last chance to assert control — the fail-safe point — is rapidly approaching.... Many people who know about the dangers still seem strangely silent.

In the end Joy nevertheless raises a glimmer of hope:

it is because of our great capacity for caring that I remain optimistic we will confront the dangerous issues now before us.

While I share his optimism, I believe that our capacity for caring will be sufficient only if, by an inner, spiritual growth, we discover our true selves and, along with them, our essential oneness.

In the final article **Steve Taylor** develops a hypothesis that goes back to William James, F.W.H. Myers, and Henry Bergson, according to which the brain acts as a "filter" receiving and "canalizing" consciousness, rather than creating it. One piece of evidence for this view is the ubiquity of concepts of an all-pervading universal force amongst almost all — if not actually all — of the world's tribal or indigenous peoples. Taylor illustrates this with an impressive array of examples from anthropological and religious sources. He concludes:

If the canalization hypothesis is correct, higher states of consciousness cannot be explained in terms of neurological malfunctions or as a regression to a pre-egoic state of mind. Rather, they are direct and simple experiences of the reality of the universe.

We have, next, extracts from an interview with **Charles Birch**, one of the world's leading geneticists. Birch illustrates what we are doing to the environment with the help of an image due to his friend Paul Ehrlich:

he says it's as though you're going to [board an] aircraft and you see that there are some people on the wings of the aircraft and they're pulling out rivets. And you say, 'But that's a plane I want to fly in.' And the people who are pulling out the rivets are saying, 'Oh, we can get a dollar a rivet and this few won't matter.' 'Well, how many are you going to keep on doing?' 'Oh, the wing hasn't fallen off yet.' Well, Paul Ehrlich's image is that that's the world, you see. I mean, the world of nature, we're pulling rivets out, the species that are disappearing. But we don't know how many will disappear before the wings fall off.

Finally we have three book reviews and two book excerpts.

In *The Knowledge Society: A Breakthrough Toward Genuine Sustainability*, **Marc Luycks Ghisi** heralds the good news that we have at our disposal the tools needed to shift our economies and our politics toward genuine sustainability and a positive footprint. For nearly 10 years, Ghisi has worked directly for Jacques Delors and Jacques Santer, Presidents of the European Commission, as a member of the Commission's Forward Studies Unit. His arguments are convincing and his theses deserve close scrutiny. They resonate with several other pieces in this issue, notably the interview with Charles Birch, whose book *On purpose: A new way of thinking for a new millennium* had a profound influence on Ghisi, and Eisenstein's thoughts on the monetization of culture.

Lockhart's piece also comes to mind. Ghisi projects a job situation for the EU where at most 8% are employed in agriculture, 10% in industrial production, 30% in services — as for the rest (52%), nobody knows. But here is a possibility:

In the present society, culture is, unfortunately, often considered by political groups like the "cherry on the cake," a luxury rather than a central value. In the future, this central place might be offered to culture in a society dedicated to favour creativity at all costs.... [W]e are also possibly on the verge of a repositioning of culture as it comes back to the heart of the knowledge society. In this new vision, culture becomes one of the main ingredients of the production tool.

52% employed in the creation of culture — including the art of mathematics? Not a bad prospect.

The two other books reviewed are *The Near-Death Experiences of Hospitalized Intensive Care Patients: A Five Year Clinical Study* by **Penny Sartori** and *Parapsychology and the Skeptics: A Scientific Argument for the Existence of ESP* by **Chris Carter**.

The book excerpted in "Will Will the Real Charles Darwin Please Stand Up?" is *Darwin's Lost Theory: Who We Really Are and Where We're Going* by **David Loye**. This book, Loye writes,

is about what I found out about the real Darwin. It is about the rest of the "fully human" theory of evolution he set out to construct, in effect lost to us now for over 100 years. But most crucially and urgently, it is about the immense consequences of this loss, and how by learning the truth about Darwin — and about ourselves — we have been given what may be our last chance to ring out the old centuries of unrelenting bad news....

It is about the post-modern second Darwinian revolution rising out of Darwin's long unpublished early notebooks, the real message of *The Descent of Man*, and the literally thousands of modern works of science that corroborate the long buried Darwin similarly excluded from mainstream mind.

The final piece in this issue, "Intuition and Human Knowledge," contains excerpts from two books by **Sri Aurobindo**, *The Life Divine* and *The Synthesis of Yoga*.