

Energy, exergy, people, the economy and money

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This is the third in a series of essays on the importance of potential in the politics of care and economics of hope. The others are listed at the end of this essay.

As with the other essays, I acknowledge the input of my wife, Jacqueline, into this essay.

Energy

Imagine you wake up one morning, and someone tells you that you own enough energy to power your home for the next hundred years.

You would probably think you were rich.

But then they explain. Most of your energy is in a bucket of lukewarm water. The rest is spread through the air around you.

Not a single joule is missing, but you cannot cook with it.

You cannot drive your car.

You cannot charge your phone.

You cannot light your house.

You possess plenty of energy, but you have almost no power.

That is the difference between energy and exergy.

Exergy

Energy never disappears.

Physics insists on this. It changes form. It moves from place to place. But the total amount stays the same.

Exergy is different. Exergy measures how much of that energy can actually do something useful.

A lump of coal has high exergy.

A charged battery has high exergy.

A tank of petrol has high exergy.

The warm air drifting from your radiator does not.

The energy is still there. It has simply become too dispersed to be directed toward any purpose.

Every time we do useful work, we do not destroy energy. We degrade it. We transform concentrated, directable energy into diffuse heat that cannot be gathered back up.

A car engine does not make energy vanish.

A power station does not conjure it away.

They turn what was ordered into what is scattered.

The energy survives. The usefulness does not. And unlike spilt water, dispersed heat cannot simply be mopped up and poured back into the bucket.

That matters far beyond physics.

Potential

Think about people.

A child has enormous potential. So does an adult. So does a whole society.

But potential alone achieves nothing. It has to be organised, educated, supported, and given real opportunity.

Without those things, the potential remains exactly what it was. Present, but inert.

Human potential is rather like energy. It does not disappear when it goes unrealised. But unrealised is precisely what it stays.

Importantly, wasted potential is not simply waiting to be recovered. The child who never learned to read, the adult who never found work that matched their ability, the

community stripped of its institutions; something in each of those cases is permanently lost. Like dispersed heat, it cannot be reassembled.

The politics of care is not, then, about creating people. It is about ensuring that what already exists can become something real. It is about preventing the irreversible.

Economies

The same is true of economies.

A country does not succeed because it possesses resources. Many countries possess enormous resources.

However, an economy only succeeds because it can transform those resources into lives worth living. Success depends on high exergy, not the quantity of energy that exists.

The required capacity is to turn possibility into something.

Money

This is important. People often think money creates wealth. It does not.

Money is better understood as a claim on exergy. It is a token that allows its holder to direct effort, mobilise labour, and bring together skills, ideas, and materials towards a purpose.

However, the existence of money is not enough.

Imagine £1,000 in your bank account. You can buy food. Pay your rent. Heat your home. That money has real organising power.

Now imagine the same £1,000 divided into a million pennies, each locked in a separate dormant bank account, inaccessible without spending more to retrieve it than it contains.

The money still exists. Every penny is accounted for. But it cannot, in effect, bring a single thing into being.

That is not quite the same as exergy. Those accounts could, in principle, be consolidated. Dispersed heat cannot be reassembled. But it points toward the same truth.

Money is not valuable because it exists. It is valuable because it can organise. Money that cannot move cannot do that.

Money that is hoarded far beyond any possibility of spending drifts toward the condition

of that lukewarm water. Still there. No longer useful.

Conclusion

The universe is full of energy.

Human beings are full of potential.

Societies can create as much money as they need.

None of that, though, is enough on its own.

What has always mattered, in physics and in life, is not what exists.

It is what can still be turned into something.

Other essays in this series

* [***Potential***](#)

* [***Becoming***](#)