Section 3 of Robin Wall Kimmerer's "The Service Berry: An Economy of Abundance", Emergence Magazine

Let's ask the Saskatoons. These ten-foot-tall trees are the producers in this economy. Using the free raw materials of light, water, and air, they transmute these gifts into leaves and flowers and fruits. They store some energy as sugars in the making of their own bodies, but much of it is shared. Some of the abundance of spring rain and sun manifests in the form of flowers, which offer a feast for insects when it's cold and rainy. The insects return the favor by carrying pollen. Food is rarely in short supply for Saskatoons, but mobility is rare. Movement is a gift of the pollinators, but the energy needed to support buzzing around is scarce. So they create a relationship of exchange that benefits both.

In summer, when the boughs are laden, Serviceberry produces an abundance of sugar. Does it hoard that energy for itself? No, it invites the birds to a feast. Come my relatives, fill your bellies, say the Serviceberries. Are they not storing their meat in the bellies of their brothers and sisters—the Jays, the Thrashers, and the Robins?

Isn't this an economy? A system of distribution of goods and services that meets the needs of the community? The currency of this economic system is energy, which flows through it, and materials, which cycle among the producers and the consumers. It is a system for redistribution of wealth, an exchange of goods and services. Each member has an abundance of something, which they offer to others. The abundance of berries goes to the birds—for, what use does the tree have of berries other than as a way to make relationships with birds?

Eating too many berries has the same effect on birds as it does on people. Fuchsia splats decorate the fence posts. This of course is the whole point of berries—to make themselves so irresistible and plentiful that birds will come and feast, as we are doing this evening, and then distribute the seeds far and wide. Feasting has another benefit. Passage through a bird gut scarifies the seeds to stimulate germination. The birds provide services to the Serviceberries, who provide for them in return. The relationships created by the gift weave myriad relations between insects and microbes and root systems. The gift is multiplied with every giving, until it returns so rich and sweet that it burbles forth as the birdsong that wakes me in the morning. If the abundance had been hoarded, if Juneberries acted solely for their own benefit, the forest would be diminished.

Charles Eisenstein expresses that we have created a grotesque economy that grinds what is beautiful and unique into money, a currency that enables us to purchase things we don't really need while destroying what we do.

I think that the Serviceberries show us another model, one based upon reciprocity rather than accumulation, where wealth and security come from the quality of your relationships, not from

the illusion of self-sufficiency. Without gift relationships with bees and birds, Serviceberries would disappear from the planet. Even if they hoarded abundance, perching atop the wealth ladder, they would not save themselves from the fate of extinction if their partners did not share in that abundance. Hoarding won't save us either. All flourishing is mutual.

As I watch the Robins and Cedar Waxwings fill their bellies, I see a gift economy in which abundance is stored "in the belly of my brother." Supporting a thriving bird community is essential to the well-being of the Serviceberry and everyone else up the food chain. That seems especially important to an immobile, long-lived being like a tree, who can't run away from ruptured relationships. Thriving is possible only if you have nurtured strong bonds with your community.

This system of exchanges looks like an economy to me; but I'm a plant ecologist. I wonder whether an economist like Valerie would see a gift economy in the Serviceberry's distribution of goods and services. I want to know if natural systems could be understood as analogs to economic systems? Could we engage in a kind of economic biomimicry to design systems of exchange which benefit human people and more-than-human people at the same time?

"Yes!" Valerie says, as if she'd been waiting a long time to be asked this question. "Natural systems can surely be understood as analogs to economic systems."

Imagining human economies which are modeled after ecological systems is the realm of ecological economists like Valerie. This is quite distinct from environmental economics, which tallies up the costs and tradeoffs of choosing to wreck or restore ecosystems. Ecological economists ask how we might build economic systems that meet citizens needs while aligning with ecological principles that allow long-term sustainability for people and for planet. Valerie says that "ecological economics emerged after observing [how the] neoclassical economic approach fails to provide for everyone and does not adequately consider the ecosystems that are our life support." From a strictly utilitarian view, we've created a system such that we self-identify as consumers first before understanding ourselves as ecosystem citizens. In ecological economics, the focus is on creating an economy that provides for a just and sustainable future in which both human life and nonhuman life can flourish."

What might Serviceberry teach us here? She replies, "Serviceberry, or shadbush as I learned it, provides a model of interdependence and coevolution that is the heart of ecological economics. Serviceberry teaches us another way to understand relationship and exchange. With a serviceberry economy as our model, it prompts the opportunity for articulation of the value of gratitude and reciprocity as essential foundations for an economy." Reciprocity—not scarcity.

As a participant in a traditional culture of gratitude, with a bucket full of berries in my hand, there's something I've never quite understood about human economics, and that is the primacy

of scarcity as an organizing principle. Capitalist market economies depend on the motive force of scarcity in order to regulate markets with supply and demand.

As a person schooled by plants, my fingers stained with berry juice, I'm not willing to give scarcity such a prominent role. Gift economies arise from an understanding of earthly abundance and the gratitude it generates. A perception of abundance, based on the notion that there is enough if we share it, underlies economies of mutual support.

There is no question but that all living beings experience some level of scarcity at various points, and therefore that competition for limited resources, like light or water or soil nitrogen, will occur. But since competition reduces the carrying capacity for all concerned, natural selection favors those who can avoid competition. Oftentimes this is achieved by shifting one's needs away from whatever is in short supply, as though evolution were suggesting "if there's not enough of what you want, then want something else." This specialization to avoid scarcity has led to a dazzling array of biodiversity, each avoiding competition by being different. Diversity in ways of being is an antidote to scarcity-induced competition.

Evolutionary biologists would perhaps reject this notion, framing the lifeways of Serviceberry as maximizing self-interest through natural selection, which is the same sort of argument made by market economists: maximizing self-interest in economic behavior through competition for scarce resources. Competition between individuals for success is seen as the driving force.

Valerie points out that even ecologists are reevaluating the assumption that intense competition is the primary force regulating evolutionary success. Evolutionary biologist David Sloan Wilson has found that competition makes sense only when we consider the unit of evolution to be the individual. When the focus shifts to the level of a group, cooperation is a better model, not only for surviving, but for thriving. In a recent interview, author Richard Powers comments, "There is symbiosis at every single level of living things, and you cannot compete in a zero-sum game with creatures upon whom your existence depends." And yet, we continue to operate our economic systems from the foundation of competition. I think the Serviceberries discovered this long ago, and we humans need to catch up.

What if scarcity is just a cultural construct, a fiction that fences us off from gift economies? When I examine Serviceberry economics, I don't see scarcity, I see abundance shared: photosynthate is usually not in short supply, since sun and air are perpetually renewable resources. Of course, sometimes there's not enough rain, and then the scarcity ripples through the web of relationships, for sure. That is real scarcity: when the rains don't come. A physical limitation with repercussions that are shared, just as abundance is shared. That kind of scarcity is not what troubles me.

It is manufactured scarcity that I cannot accept. In order for capitalist market economies to function, there must be scarcity, and the system is designed to create scarcity where it does not

actually exist. Because I have not thought much about economics since my introduction to it in high school decades ago, I realize that I had just been accepting the principle of scarcity as if it were a natural fact, not an economic assumption.

I try and lay out the understanding for myself, to think like an economist, not an ecologist. In order for money to be made, there must be commodities to be bought and sold. The scarcer those commodities, the greater the revenue. So, I guess I do understand this: market economics demands that abundant, freely available, earthly gifts be converted to commodities and made scarce by privatization and a high price. This seems crazy, so let me test my understanding with the example of pure, beautiful water, a gift from the skies. It was previously unthinkable that one would pay for a drink of water; but as careless economic expansion pollutes fresh water, we now incentivize privatization of springs and aquifers. Sweet water, a free gift of the earth, is pirated by faceless corporations who encase it in plastic shells to sell. And now many can't afford what was previously free, and we incentivize wrecking public waters to create demand for the privatized.

In contrast, in Indigenous societies all over the world, where remnants of gift economies endure, water is sacred and people have a moral responsibility to care for it, to keep it flowing as the lifeblood of Mother Earth. It is a gift, to be shared by all, and the notion of owning water is an ecological and ethical travesty.

The Indigenous philosophy of the gift economy, based in our responsibility to pass on those gifts, has no tolerance for creating artificial scarcity through hoarding. In fact, the "monster" in Potawatomi culture is the Windigo, who suffers from the illness of taking too much and sharing too little.