economics
business
entertainment
politico-religious
education
mathematics
social science
sqale
ecosquared

Volume 3

Ecosquared is an alternative economic which is accessible through the **Sqale** platform. It combines vector-money with gratitude-tracking to create social accountability through high trust networks. By stripping money of the illusion that it goes backwards (for the supply chain who provided product, service or experience), our collaborative intentions are made transparent, our relationships are enlivened and we prevent our children becoming cogs in the machine.

Learn how the politics of rapid, positive social change is empowered with this 'value', ‘gift’, ‘network’, ‘instant’, ‘collaborative’ , 'organic', or ‘experience’ economic.

ECOSQUARED

Ecosquared as Ecological Economic

SQALE

Sqale as Trust Metric Platform

Ecosquared as Ecological Economic

The Fundamental

"At the bottom of the uncertainty problem in economics is the forward-looking character of the economic process itself." Frank Knight 1921

Uncertainty can be dealt with by treating money as a vector. The market loses its volatility (and becomes obsolete) when we know where the money is going.

When tracking any dynamic system (fluid, water, air), mathematicians use vectors to map the direction of movement. Traditional money is a scalar, and hence does not accurately track its movement as a currency.

Vector contains two aspects: a number, and a direction. Vector-money has direction and is only ever owned by people (can not be owned by organisations). Vector-money (or living, clean, or positive money) is a future-orientated vector in psycho-social reality, mapping future objectives as intention and relational responsibility.

Ecosquared is an 'ecological economic' system which emerges from the use of 1) vector-money to track inter-individual and intra-social activity, and 2) number-value for intra-individual or subjective enumeration.

A working beta version of this 'ecological economic' was developed between 2019-2021, Sqale, with beta testing between 2021-2023. Users buy credits (the Sqale version of vector-money) in order to share content and generate revenue for content-creators. Credits are distributed fairly amongst content-creators according to the number-values attributed between themselves. Content-creators are rewarded with money for the experience their content provides Sqale users. A subsequent version of 'Sqale codes a secure irreducible fundamental for vector-money and number-value using a combination of web3 blockchain, Berners-Lee's Solid or tech not yet created or fully deployed in the early 2020's.

Comparing Economic Operating Systems

The traditional economic system operates with money as a scalar tracking the point of exchange. Money for thing (product, service,

Sqale as Trust Metric Platform

Fastball

Viral distribution & fair revenue distribution for any digital content, without advertising.

To raise funds for the first build of the Sqale platform, I stood before 1000 delegates at EIEE, Scotland's premiere investment summit. I slowly held my hand out to the side, cupped, as if holding something.

"This is the most valuable commodity in the world," looking at my hand, pausing. It is empty.

I address the far audience who are watching the giant screen behind me on stage: "Don't worry at the back, there's nothing wrong with your eyesight." Then reassure those at the front, "And you haven't misheard me either."

"We are spending north of £500 billion a year for it, for digital advertising and marketing alone," returning my gaze to the empty hand.

"Lighter than air, lighter than a single photon of light... Your attention."

I let the truth of it sink in, simultaneously turning to the audience and opening my hand as if releasing a bird into the air: "Sqale offers an alternative: viral distribution and revenue distribution for any digital content — without advertising."

Pitches

Startups have adopted methods and practices which evolved in Silicon Valley, west coast America, global home to the digital age of the internet and social media. Apple, Microsoft, Amazon, started up in garages with a few founders, and because they were small and agile, they were able to iterate their products faster than traditional established companies like Xerox, IBM, and retail giants. The software cycle and subsequent social-media cycle were even faster. With so much tech innovation vying for attention, investors needed a way to evaluate the significance of a digital startup. Pitches evolved: a new tech founder has to describe their product in the time it takes an elevator to move floors. In minutes, seconds even.

Most investors want a pitch they can quickly get their head around.

experience). Money is treated as a thing. It has location, as a coin or note in your pocket, as a number in your bank account. The economic operating system based on the technology of money is inherently unstable: the technology of scalar-money does not contain where it is going. This uncertainty is compensated with contracts, promissory notes, insurance and all manner of language-coded scripts supported by a professional legal system and executed by state officers empowered to detain and imprison citizens.

The alternative economic operating system of Ecosquared operates with money as a vector tracking a relational intention/responsibility social contract. Vector-money (or credits) accompany a thing when it is shared: a thing is given with credits. The contract is of faith and trust. Once accepted, the money and the thing is accepted, and there is an implicit responsibility to share it forward. If the thing shared is a future objective, then accepting the intention and the credits indicate a responsibility to realise the objective and share it forward. By making the direction of intent transparent by default, collective trust is made visible and thereby generates a stable economic operating system.

Since the 18th century, the accounting of money has adopted the mathematical operation of negative number which has led to the depersonalisation of debt. Before this time, debt was personal, relational. With the decoupling of money and gold or silver standard, the creation of fiat currency, banks have been been able to create money as debt. As a result, more than 99% of money in circulation in the world is negative. In 1980, the US government was operating with a debt of $3.2t, 33% of GDP, rising to $31.4t by 2023, 120% of the nation's GDP. Servicing the debt is about $700b in 2023 which may extend to $1t-$1.7t by 2030, stressing 12.5% to 20% of expected budget expenditures.

Ecosquared does not use negative number since money is not used at the point of exchange. Vector-money is temporal in nature, and as such is imbued with the unidirectionality of time's arrow. Traditional money also works in this future-oriented way, however because it is used to concatenate accumulated points of exchange, it supports the illusion that 'money is for the people who produced a thing' when those people have already been paid for its production. There is no debt, nor any illusion that it is being used to pay for something in the past. This undercuts the mechanics and reasoning for all ownership including real estate.

It's like a jukebox in your pocket (Apple's iPod and iTunes), your personalised radio (Spotify), a place to keep in touch with friends (MySpace, Facebook, Instagram, etc), global message board (Twitter), a collaborative online whiteboard (Mural, etc). Sqale was different. Very different. It did not suit the format of an elevator pitch. Or at least its simple description, 'an alternative economic', just didn't do it. Neither did 'network' or 'experience' or 'value' or 'gift' or 'instant' economic.

Let's backup a little. If I had grown up in the US, I'm sure I'd have played baseball as a kid. I'd have learned through experience the different kinds of pitches, and I'd be able to make the conceptual blend of 'elevator pitch' and 'fastball'. But, as a Scottish civilian from Portuguese descent, the pitch was tagged to football pitch. Baseball was an alien game, only distantly related to cricket, an English game. Back to business: was my objective to pitch the investor and get a strike – they swing and miss completely? Or was my aim to throw the ball so they connect and hit it out of the park? Or was a bat not involved and we're just playing 'catch'?

With this in mind, I came up with a few variations and trialled them at the Global Summit in Lisbon. With more than 24,000 tech delegates over a week, I was sure to find a player. I did. A couple of players in fact. One guy ran his own open-source coding company, and after subsequent discussions he costed a global version of Sqale at $500,000. He tried hooking me up with his investor contacts, but he didn't get off first base. Another was a panel speaker, a popular I-blow-things-up kind of guy, but after several conversations it was clear he was looking for a job. My business strategy was to put the money into building the Sqale app, not talk. The concept, the tool, could easily get bogged down in talk. Little did I know that even with the tool built, people still need talk.

Reflections of Our Psycho-Social Condition

We have different perspectives on the problem. Age is a factor, as are education, socio-economic background, current income, local social comfort. We are not objective and therefore we will not agree on any common cultural association, reference to facts or argument of logic. We can not fully escape from our psycho-social situation and corresponding perspectual relativity. We think the things we think because of our parents, our schooling, our friends, who is paying us. Whatever each of

In the traditional economic, money is a thing to be owned. Ownership can be held by an organisation, company or legally-bounded entity. Which brings into question agency. Is the purpose of a corporation to serve stakeholders of employees, customers, communities, or to maximise shareholder value? Although the stakeholder model has increased over the last few decades, the underpinning environmental, social and governance principles can be abandoned when market conditions are tough, and triple bottom lines can collapse to a single bottom line: profit.

In Ecosquared, ownership of money is replaced with moneyflow of vector-money. The more responsibly shared, the more rewarded. Legacy of ownership is replaced with contingent relationships. Ongoing behaviour of paying-it-forward leading to greater collective moneyflow, increases trust and more moneyflow. Since vector-money is tagged to time, the more moneyflow the longer projects are enabled. Only people can own vector-money. Expansion of ownership of linear supply chains, is replaced with expansion of stewardship of ecological meshworks.

Money works because when it is accepted, there is faith that it can be exchanged elsewhere for something; this is the future-orientation of money. Money thereby facilitates trade. In Ecosquared, vector-money works because when it is accepted, there is faith that a person will share it forward. With traditional economics, trust is placed in the thing, money, which can buy anything irrespective of relationality. Ecosquared puts the faith in people, who have full control in their ability to share forward what was given to them, both the thing and the credits. In traditional economics, the movement of money between people creates a currency, with emergent markets and supply chains based on points of exchange. In Ecosquared, the currency of vector-money is replaced with distribution according to number-values which are derived relationally, creating meshworks of sharing like an extended family and interweaving organic supply chains of person-to-person trust.

In traditional economics different denominations of money can be exchanged and bet on future events. $-Billions are traded daily on exchange and future markets without any actual real-world effect; it is a pure number game based on ‘ownership’ of numbers as things. Investment speculation generates ‘bubbles’: total market capitalization of Bitcoin hit $1.198 trillion on 14 April 2021; barely two years later in

us is doing in our mind, as compared to others younger and older than us, is the psycho-social relativity we can not escape from. It is something we must operate within, yet something we look to transform with Fulcrum (V1).

In order to forgo the social complicatedness of our organisations and the hall of mirrors of our self-identification and political positioning, there are five primary means of reflecting on our condition: the non-human environment (V3), the stories we tell ourselves about our reality (V-3), our direct experience of our psycho-social validation (V1), mathematical and scientific modelling (V-1), and finally facing Artificial General Intelligence (AGI) (V0).

Although the entirety of this book may be described as a 'story we tell ourselves' (V-3), Fulcrum contains many practices which rely on enactment and social validation. How can we tell if our current social practices are actually working? How do we determine our 'social health'? Let's begin with the environment.

Environmental Stats & . . .

Can the natural environment be a good reflection of our social health? Whatever our personal and local preferences and measures, how healthy is the natural environment around our houses, our towns and cities? However we identify ourselves and our social groupings, it is in the non-human mirror of nature where we may find an unbiased reflection of our social health.

The National Academy of Sciences predict 'biological annihilation', an unprecedented loss in wildlife, a third of land vertebrate species lost by 2050; as evidence, mammal habitats have been reduced to 20% from 1900 to 2015. The WWF's Living Planet Report in 2022 revealed a global diversity decline of 69% since 1970.

Overall global temperature has risen 1°C from 1900 to 2020. Antarctic and Greenland ice mass is melting at a rate of 420 billion tons per year, 1.2 trillion tons globally a year, increasingly contributing to the 10cm rise in seawater levels since 1993. A 2°C seawater increase will directly impact coastal populations globally, 20% of the human population.

Temperature rise is caused by CO_2 increase, the highest in 4 million years, the fastest increase in 66 million years, with 310ppm in 1960 to

May 2023, an estimated $1.2 trillion bubble has formed around Artificial Intelligence. In Ecosquared, vector-money is owned only by people and direction is built in. There is no point of exchange, therefore no trade. Nevertheless, the history of sharing implies a balance of account between giving and receiving relationally, and a compound multi-relational social average can be calculated (SQ). Gaming the system means gaming known people personally, who in return have the power to withhold sharing, invitations and vector-money in the future. In this way, people become relationally accountable to one another.

Money creates a market based on competition. Charities spend on average 10-20% of their budget on securing commissions, equivalent to what private companies spend on advertising and marketing to locate new customers, over $600 billion spent on digital advertising alone in 2021. Anything from 15-79% of bandwidth of the internet is taken up delivering advertising, which accounts for nearly 2% of total global energy consumption: of the 25,000 TWh (tera-watt hours) electricity in 2019, computer technology amounted to roughly 2,000 TWh, of which 500 TWh was consumed by end-users. Further, 300 TWh is annually devoted to cybersecurity, distrust manifest on the internet, which will only increase in the drive towards zero-trust.

Sharing intent, and viewing transparently other people's intent, provides a view of the future. People may indicate their faith in future objectives and commit to achieving them by voting with their vector-money and time and effort. The hierarchy of salaries turns into an arrowhead of purpose. Competition in a network is collaborative, rewarding the winners as well as all the participants, like ecological redundancy in nature. A networked 'audience' grows with moneyflow simultaneously. It is the economic which 'lean business' has been missing, at all scales: people can align to future objectives which have a completion period of a day, a year or a millennia if they so choose. Longer term projects can only become viable through iterative social validation: the results of shorter term contracts validate real-world trust which extend into longer term projects. Viable growth.

Academic Triangulation

Money-exchange hasn't changed since its first widespread use around

420ppm in 2020. CO_2 is mostly from fossil fuels emissions, from near zero in 1800, through 9 billion tonnes CO_2 per year in 1960, to 35 billion in 2020. Methane, which is 80 times more powerful than CO_2 as a greenhouse gas, is approaching 1% increase per year from farming, cattle and warming wetlands.

Meanwhile widespread forest destruction is removing the world's natural means of CO_2 extract. 15.3 billion trees are felled annually for timber and to make way for cattle or soy and palm plantations.

What was your experience reading these facts? How much of this do you know? How does it affect you? How much do you agree or disagree with these statistics? You can check the current stats at the time of your reading. If not the hard facts of temperature change, what do you think of the chain of causality? Could the temperature change be natural, and not the effect of human activity in the form of fossil fuel use? Can new technologies of carbon capture mitigate against worsening conditions?

Age is a factor. A twenty year old has only recently been aware of the scale of the disorder, whereas a fifty year old has had decades of figures and reasoning. The facts and implicit reasoning may be crude for a 50 year old, not detailed or logically defined. Whereas a 20 year old may skip over the numbers and acknowledge the existent problem as 'given'.

For me, I remember looking through the Reader's Digest Encyclopedia and coming across the rate of deforestation of the Amazon. This was the late 80's, the first home-computers of Spectrum and Commodore 64, before the internet. I had noticed the problems of famines in the world and homelessness closer to home, while history seemed to be a sequence of wars. Things were self-evidently unfair, at home and at school and clearly in the world, but I had never objected. Like the kids at school who had been racially abusive, I didn't take it personally. My parents weren't to blame, nor teachers, nor politicians or business folk. Whatever the problem was, it was social, and the evidence of deforestation was an obvious non-human effect. With this in mind, I resolved to switch subjects and study the social issue from the widest possible angle. I had done fine with maths and sciences at school, but there was little provision for sociological education. Accepted to study pure maths at Oxford, instead I attended Edinburgh University to study Social Anthropology, providing access to study non-western and

1000 BC in Phrygia, in what is now Turkey, regardless of the evolution of interest, formation of promissory notes, legitimisation of banks and interest, invention of stock markets, legal formation of companies as agencies, fiat currency decoupling from gold and sterling standard, blockchain cryptocurrency and divestment of national, political denominations. It is important to establish that Ecosquared forks the economic operating system at source, changing money from an exchange-based economic begun 3000 years ago to a relational intention-responsibility economic. It constitutes a new starting point.

Frank's Uncertainty Problem & Systemic Volatility

> "We are faced at every turn with the problems of Organic Unity, of Discreteness, of Discontinuity — the whole is not equal to the sum of the parts, comparisons of quantity fail us, small changes produce large effects, and the assumptions of a uniform and homogeneous continuum are not satisfied." John Maynard Keynes 1933

Since 1933, mathematics has developed initially-sensitive conditions, popularly known as Chaos Theory and Catastrophy Theory. Initially-sensitive maths deals with levels of complexity Keynes is referring to, namely 'small changes produce large effects', where results can be fully determined yet unpredictable. A mathematics of emergence, quality, autopoiesis, that the whole is greater than the parts, remains elusive; this is approached directly in V-1 and expanded upon in the negative volumes.

> "By 'uncertain' knowledge... I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty... The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention... About these matters, there is no scientific basis on which to form any calculable probability whatever. We simply do not know!" Keynes, 1937

Keynes is referring to the limits of mathematical knowledge, even 'perfect' probability math, as applied to human behaviour. The flipping of a coin is perfectly modelled with fractions, i.e. ½ chance of heads. Yet

non-modern cultures. The course was doubly attractive because it contained fieldwork so I wouldn't be stuck in a library. It was a big decision, and in retrospect, perhaps premature. I would have garnered more respect had I attained a maths degree. As it was, social anthropology laid the postmodern groundwork for the discovery of ABC State as 'fieldwork' in education (V-2), and returning to first principles in mathematics led to the cognitive maths of XQ (V-1). The problem was social, and its roots permeate every aspect of civilised behaviour and psychology. The environment problems were just effects, symptoms of our social problem.

. . . & Our Evaluations

When reading the following extension of environmental projections, consider your age as a factor in how you read and make meaning of these numbers, and consider how your friends or family members who are older or younger by a generation may interpret them. By doing so, we begin to appreciate the psycho-social aspect of the problem.

When all the Greenland icecaps melt, the sea level will rise 10 inches. The melting west Antarctic, 2 feet. It may take hundreds of years for the entire west Antarctic to melt completely, but rates are accelerating because of positively reinforcing feedback loops.

A 2°C increase in global air temperature will cause a permafrost thaw. Biomass releases CO_2 and methane, destabilising foundations and causing widespread subsidence, with lakes drained overnight as the impermeable layer of permafrost melts.

Coral reefs which support 25% of all species on earth, with repeated bleaching, risk whole ecosystem collapse and increase seawater acidity. An estimated sea temperature increase of 2°C will lead to 99% seawater species loss which 2 billion people depend on for livelihood.

Water scarcity is expected to increase to between 1.7 to 2.4 billion people by 2050.

Clearly, our global environmental conditions are not healthy. Which implies that our global social health is not healthy.

In order to consider global scales of environmental and social health, we must also expand our temporal scale. Until recently, the acceleration of change has been near-invisible. Things are 'as it always has been'. And

the entire industry of stochastic calculation has limited worth when applied to mathematically unpredictable processes, let alone the human source of 'invention'. Keynes appears to sigh with exasperation as most calculating mentalities might express, however there are alternative ways of dealing sensibly with situations where 'uncertainty' — and its subjective mentality 'not-knowing' — is a major factor: namely, mutual acknowledgement of not knowing as a prerequisite for trust.

> "Keynes and his followers focused on money and contracts to demonstrate that uncertainty rather than mathematical probability is the ruling paradigm in the real world. The desire for liquidity and the urge to cement culture arrangements by legally enforceable agreements testify to the dominance of uncertainty in our decision-making." Peter L Bernstein 1996

That is, money is socially reinforced by relational agreements, i.e. legal contracts provide stability. The math of money requires extensive 'word games', be they legal, academic, political or philosophical. Further:

> "The volatility of stock and bond prices is evidence of the frequency with which the expected fails to happen and investors turn out to be wrong. Volatility is a proxy for uncertainty and must be accommodated in measuring investment risk." Bernstein 1996

Plug into any financial stream, and hear about the 'volatility' of the market. Sometimes it is steady and at other times it is volatile, like the weather. The physics of weather modelling has been applied to financial patterns. In the end it still suffers from the same problem of unpredictability. Uncertainty is inherent to the traditional economic of money use: the emergent number game generated by our behaviour of exchanging money for things.

Here's a word of warning from Frank Knight, regarding the mis-application of science to the human condition:

> "the near pre-emption of [economics] by people who take a point of view which seems to me untenable, and in fact shallow, namely the transfer into the human sciences of the concepts and products of the sciences of nature." Frank Knight 1927

Knight pre-dated Keynes by focussing blame on the mis-application

this is true if your life is similar to your parents life, as their parents were, and so on into antiquity; most of our forefathers were farmers for generations. However, the rates of change have encroached on the lifespan of a single adult. 10,000 years of civilisation, 1,000's of years of empires, 400 years of science, 200 years of industry, 60 years of information technology, and arguably we are now living within the first decades of Artificial Intelligence (AI). From a non-literate hunter-gatherer's perspective, the world has changed rapidly because of the white man encroachment over the last few centuries. From a child's perspective, the world is the way it is because of what adults do day to day.

The question becomes less about the global scale of events, a physical thing, and more our temporal interpretation of events. A 20 year-old and a 50 year-old have different *temporal* references to make sense of 'current' and 'global' scale events. We bring different amounts of experience to the table. It is unsurprising that most mature adults think significant social change is unfeasible either because of their own experience in trying to change things, or because the increasingly rapid rate of change is outwith their control. Or that 20 year-olds think change is possible precisely because of their lack of experience, flushed with the amount of change they have personally undergone in their transformative adolescence or because the sheer scale of social inertia requires rapid interventions.

This book sets change within the scope of a generation, twenty to twenty-five years: the maximum horizon a young person is likely to conceive, set against the absolute minimum an elder might agree upon. An environmentally motivated twenty-five year-old activist might be able willing to accept global change by the time they are fifty, and a seventy-five year elder might acknowledge their potential for change when they were a fifty year. Anything more will inescapably trap us in our relative perspectives, bound as we are within our social institutions and our experience of what we think is feasible.

Our Experience of Money

Our wide-spread social existence relies on an underlying economic operating system. We will therefore focus on economics. However,

of probability mathematics to economic behaviour. The mathematical methods we have learned in statistical analysis in science may not apply to human behaviour. The bedlam created around GPT3 and GTP4 at the beginning of the 2020's demonstrate not only the social volatility of the $1.2t investment bubble and speculation regarding impact on jobs, but also the core mathematics of AI: as stochastic language machines, Large-Language-Models (LLM's) are successful at predicting the next word but as black boxes suffer from dealing with various forms of negation and other aspects which contribute to human understanding. We explore this in V-1 suffice to say we determine the future, and if we understand the impact of our behaviour we need less probabilistic application.

Knight also opined on the moral nature of economics, specifically capitalism:

> "Knight... despised the self-interest that motivates both buyers and sellers in the marketplace, even though he believed that only self-interest explains how the system works. Yet he stuck with capitalism, because he considered the alternatives unacceptable." Bernstein, 1996

Whether Knight was referring to alternatives like socialism or despotism or any other alternative of the time (or we include alternatives since then such as timebanks or extended barter of the 'sharing economy'), there was nothing in his frame of reference quite like Ecosquared.

Polyani's 'Great Transformation'

Of the many economists who have pointed out the failings of the traditional economic, Karl Polyani deserves special attention. Written in 1944, 'Great Transformation' argues that labour, land, and money are 'fictitious commodities' and should not be treated as regular commodities.

Labour is a 'fiction' because it is not truly a commodity that can be bought and sold: 'Labour is not a commodity, but a necessary factor of human existence' (p. 57) Doing so legitimates slavery and wage-slavery, turning human experience into objects to be bought and sold. Similarly, land is not a genuine commodity because it is a finite resource that

because we propose a root alternative, we can bypass the traditional economics found at school at university (check V3 verso, for some pertinent definitions). All that is needed here (in V3 recto) is our everyday experience of money.

Let us consider gifts and trust, dead and living money, the root of all evil and its counterpart, and challenge ourselves by considering an alternative interpretation of laundering dirty into clean money.

The first thing to be done is to consider what it is, and thereby consider the potential for an alternative that it is *not*.

Curveball

You can't buy or sell anything on Sqale, and nothing is free either.

Try your hand at this Curveball. Enjoy what comes to mind.
It's not barter either. It is a numerical system, accountable.

We All Grew Up In A Gift Economy

When we grew up from babies to children, everything was provided for us. Food, shelter, love. Money wasn't necessary, since everything was given to us. We learned to take the coin from our parents and give it to the shopkeeper or the teller so that we could get our ice-cream or toy. Money was an in-between thing with no intrinsic value. What we valued was the taste in our mouth, the joy in playing with our toys and figurines. We knew what we valued. As children, we grew up in a world without money.

For an alternative to money to work, it must be as simple or simpler than money. It must operate across the boundaries of a home or any organisation. It must work as easily between any two of us where-ever and who-ever we are in the world. Ideally, children find it natural. A system which might extend our sense of innocence into adulthood? To trust until proven otherwise? So that a teacher might be able to go to any corner of the world and be welcomed by a school to teach their students, a nurse invited to care for patients; a world unadulterated by sales and the suspicion of being sold to, where any one of us, a stranger, may be welcomed at whatever door we find ourselves at.

I was a teacher, and this is what motivated me to produce the Sqale platform. I wanted my students-grown-to-adults to live in a world of high trust, as members of an extended family, the human species.

cannot be created or destroyed: 'In relation to land, the market cannot dictate the conditions of labour utilization without vast and unprecedented misery' (p. 47). The exploitation of nature and the malady of its degradation testify to this failing. Finally, money is a social creation not a natural one: 'Money is not a "commodity" at all, but an institution' (p. 29). Instead of an intermediary between things we value, money itself becomes the most valuable commodity regardless of the commodities of trade: money to more money through the business mechanism.

Polanyi's argument is that the commodification of these essential elements of society creates social and economic problems that cannot be solved by simply relying on the market system. We should not be paying for labour or land, nor subordinating money itself to economic logic. In 1944, Polyani called for a 'great transformation', for an axiological requalification of the traditional economic system, yet little has changed.

Social Coordination Problem & Democratised Leadership

The problem appears to be about knowledge, but a far greater problem awaits us *once* we are informed. That is, how do we organise ourselves, often misunderstood as the problem of leadership? Polyani is one amongst many historic figures who point out problematics in our traditional economic. Whatever our respective response, agreeing or disagreeing philosophically or ethically or fiscally, we are immersed within the current social condition operating the traditional economic. The river is in flow and it has direction.

The social coordination problem is fundamentally an informational, epistemic and communicational problem at the social level (Clower 1984). It concerns how society can 'accurately create, mobilize, and operationalize hard-to-codify knowledge that is relevant for market decision-making (Lavoie 1985)' (Paniagua 2018, p95). Although dangerously close to reification of society, Paniagua's attribution to Polyani (1951) describes institutions as 'the spontaneous formation of a complex polycentric order produced by the multiple responses, mutual adjustments and relations of the individuals interacting (or competing) and responding to their respective institutional surrounding' (Paniagua 2018, p104). Social output is inextricably related to institutional structure, whether new knowledge in university structures or new trade in market structures; expanding the 'social mind' as Paniagua puts it.

The Root of All Evil...?

My cousin told me a story about an interaction between a shopkeeper and a child. "The only thing you need to know about money is," the shopkeeper confided with the child, "give the brown ones away and keep the silver ones for yourself." The gentle smiling eyes, the wink to the parent, the complicity in adults sharing the story. What happens if this was not the lesson we gave our children? Where shopkeepers might be loved as extended family members, dispensing gifts *and* money…?

Money has been described as "the root of all evil". It is a compression the apostle Paul's account in the Bible: "the love of money is the root cause of many evils (Timothy 6:10). So if we replace money with something else, will we unroot evil? Will humanity realise its more social, cooperative, compassionate qualities? A form of good-money, perhaps, where the use of good-money tracks our better qualities? Instead of something one has, it is something given, like respect?

Living Money

Traditional money is dead money. It does nothing in your wallet, or sitting in a bank vault. Or as the evaluation of a house, or the price of a tube of toothpaste. It is static. It doesn't do anything in and of itself. Traditional money is only useful when it is used. That is, when it is given to someone for something. It is its movement that is important. However, the actual money amount does not track this movement. The $10 remains $10 no matter how useful it has been, however many times it has changed hands. It's a dead number. The moving, living part goes untracked.

When selling tickets, for example, a performer advertises in the market. A fan is attracted and pays the ticket price. The performer has to advertise further to reach other fans. As soon as the transaction is over, the ticket is bought, the relationship is dead. The performer has to move on to the next person, and the next, and the next.

When buying a beer at a local pub, it costs the same amount whether you are a local or a stranger. You may set up meetings at a favourite coffee shop, introduce new paying customers, but the money does not reflect this. You pay your money for the coffee, the transaction is over, there is no relationship. The money deadens the relationship.

Might 'living money' *enhance* the relationship? Introducing people to

The co-ordination problem of society is grounded in 'market decision-making', rather than resource sharing (Paniagua 2018, p95). The base constructs of 'social complexity' assumes 'markets'; equally 'knowledge' is understood in terms of 'rational calculation' and 'market cognition'; and 'money' as 'exchange' and 'essential for modernity'. That is, these descriptions are operating at a certain level of organisational complexity, of composite constructs which self-support one another. Such academic discourse is also propped up conveniently by a system operating money (paid positions of tenure), thereby supporting complex rational accounts with positional authority. Because we question the central axioms of money (using vector-money and thereby replacing exchange with sharing) and realise it as an operational social tool (ie Sqale platform), we can expand our concepts beyond the limited set of terms operating within the traditional economic: 'money' is subsumed as 'accounting system' or 'number', 'social complexity' is mapped to the network of 'informal, authentic, dynamic, embodied relations', and 'knowledge' is understood as 'wisdom, awareness, attention'. By doing so, we can enable a contiguity of 'economic behaviour' within non-financial environments which operate with knowledge, complexity, and accounting, whether school, university or business. Put simply, there is no market. It also avoids the mis-comparison between the institutions of education with money itself; the relations brought about through money exchange, is comparable to the relations brought about through knowledge exchange in academia; the institutions themselves are universities or banks or businesses, altogether the power relations of hierarchies of people, objectified rules, textual machinery.

To navigate this complex social coordination problem, we may adopt heavy-duty post-postmodern philosophy. The flexibility of Bhaskar's Critical Realism's framework of real causal powers operating with tendencies as generative mechanism for actuality, enables a possibility space of alternatives from which we may project three possible futures: ‘business as usual’ where the environment collapses, ‘eco-fascism’ where social and individual liberties are severally curtailed and benefit privileged sectors of society, or ‘ecotopia’ (Gansmo 2018). The projected futures operate on Bhaskar’s principles of metaReality: the principle of universal solidarity (empathy, compassion), and the axiom of axial rationality (logic, reasoning). Through the duality of accurate appraisal

the cafe, inviting friends to appreciate the coffee is evaluated. As a frequenter to a coffee shop, you are investing in it, the people who work there. Through personal recommendation, new fans are attracted to a performer. Living money reflects our living relationships.

Forkball

Ecosquared changes the axioms of money itself.
That's 3000 years of disruption.

By comparison, distributed ledgers like blockchain and crypto-currencies like bitcoin, introduce 400 years of disruption.

Clean, or Natural or Organic, Money

Money is like oil. Useful, but with unintentionally negative side effects.

New fans finding performers or frequenting your favourite coffee shop are the 'positive' cycle. The same force lies behind the 'negative' cycle for salespeople: knock on a hundred doors before a single sale is made. People are paid a lot of money to go into the frontlines, the battle that is the marketplace; roughly 9-12% of revenue in a midsized company is spent on sales efforts. That's a lot of selling. The escalation of advertising and marketing, the forceful push of a salesforce, the cunning guile of social marketing, the permeating undercurrent of AI, all have contributed to numbing the relationship between strangers to the point of distrust; the fear of being sold to.

The pollution of money is social. The unintentional side-effects of using money for three thousand years has resulted in our current global state of social ill-health. We have made a market of the corners of the world, and it is much depleted and exhausted. "Zero Trust" is advertised as a positive goal for business, not collaboration and trust. Meanwhile "Non-growth" is lauded by environmentalists, rather than de-mechanisation. The newspeak envisaged by Well's 1984 pervades our culture: "non-growth" may be described as "sick", "wicked", or "good shit".

We may mitigate against the worst side-effects of physical pollution, make our internal combustion engines cleaner or replace them altogether with electric motors, but the mass use of cars and centralised power stations is causing greater CO_2 contamination of our atmosphere.

of the real combined with the intention and will of the participant(s), Gansmo puts forward a moral position for the strategic alignment across disciplines which respects participants and is responsive for learning and transformative change. 'We must avoid education that considers knowledge to be objectivized, centralized, homogenized, standardized, technologized, and industrialized [and commercialised]' (Gansmo 2018, p295).

A 'post-productist' philosophy may underwrite an overal strategy by empowering individual agency with principle, but what might this mean practically? First, we need to appreciate our immersed nature: each of us is an active agent or leader in the social coordination problem. Doing so makes us receptive to good news, rather than traditional 'news' which reports on tragedies befalling others stoking anxiety and fear. The telling of good news is mutually beneficial for participants (increased positive emotions, subjective well-being, self- esteem, reduced loneliness) and their relationship (satisfaction, intimacy, commitment, trust, liking, closeness, stability) *only if* the recipient is actively constructive in response (Gable 2010; cf Feeney). Secondly, what if we are supported by the non-institutionalised behaviour of gifting which binds people in reciprocal relations, most notably examined by Marcel Mauss' The Gift (1925)? A system where moneyflow increases for those who give rather than take? Such non-centralised networks of cooperative relationships may contextualise highly cooperative and collaborative fellows, interpreted in traditional hierarchies as leadership. Thirdly, what kind of leadership? There are many models, though we are interested in a democratised form of leadership to resolve the social coordination problem, a cooperative fellowship (V2).

The Underlying Economic Problem

Historically, conflict and war centre around who owns the money, and the charging of percentage interest on borrowing. All religions denounce war for financial gain. Many counter usury as unethical: Jews as early as 200BC, Christians legalising it in the 16th century to make way for banking, Muslims continue to outlaw the practice as Riba. Mathematically, as a quantity of a thing, money makes more money. Capital aggregates thus increasing inequality and polarising the rich from the poor, such that Marx in 1867 predicted its collapse fommenting

The oil derivatives of plastic are finding their way into every part of the water cycle, polluting our oceans, collecting in our guts, and interfering with cellular biological activity of all life-forms. Attempts at reform are ongoing, but the business of oil and plastics and profligate energy consumption keep the wheels of commerce rolling. The pollution is psycho-social, in the way we do business and its underlying traditional economic engine based on exchange.

We attempt to ensure that companies comply with government sanctions, governments attempt to protect themselves from corruption, catch the laundering of money sourced in illegal ways, and we declare human rights for all humankind. Nevertheless wars persist, hunger and most of the population of the world live in poverty *despite* the abundance of our declarations, food production or more generally resource extraction, industrial production, and precise logistics for global distribution.

If the value-metrics of Ecosquared work better than money, with no advertising or marketing, creating a stable trust-metric, why would anyone want to convert back into traditional money? If over the decades we phase from dirty money, will the alternative be clean, with less side-effects? Organic, or natural? Aligned to our collective human nature? An economic based on our evaluations, rooted in our values. Good, clean money...? Not laundering dirty money made through illegal means into normal money, but converting traditional money altogether into a value-economic. A world with no money, just comparative value.

Changeup

Organic Sharing combines sales and marketing into a single user action.

The Sqale platform provides a method of distribution which is more efficient than advertising and marketing.

Negative Money: A Real Mess

As the applied system pioneer Ackoff once said, scientists and mathematicians deal with problems, while everyone else deals with messes. The real world is messy. Unpicking the knotty problem that is money in our psycho-social reality is not trivial. One of these is the knotty problem of 'negatives', debt, mortgages, loans, overdrafts, and more subtle aspects which depend less on knowledge and more on your

Communist revolutions in the 20th century. To avoid discontinuous and violent revolution, an alternative economic must exist concurrently with traditional economics thereby helping validate the many alternative proposals put forward for human behaviour by both thought and spiritual leaders, from both western and non-western as well as non-civilised cultures. Words however charming, leaders however charismatic, cultures however authorative, are caught in the same magnetic domain: the traditional exchange-based economic with its polarising effect.

The financial world is more volatile than it has ever been with the emergence of flight capital, the multi-billion-dollar exchanges conducted every pico-second of every day by evolutionary-algorithms. Most stock, trade, and business remain a guessing game, whether international markets or the shop-owner down the street who doesn't know if they are going to get enough money to survive the month. We return to the same problem: uncertainty. Specifically:

> "At the bottom of the uncertainty problem in economics is the *forward-looking character* of the economic process itself." Frank Knight, 1921

Ecosquared resolves uncertainty by treating money's *forward-looking character* as a vector. Money has direction, not just magnitude. And instead of merely simulating traditional economics using vectors, we may ask: if we can treat money as a vector, what are its most efficient functions? Answering this question, opens up a new world of possibilities.

Ecological Economic System

Changing the Axioms of Money

There are three principle mechanisms attributed to money:

- money as a form of exchange
- money as a store of value
- money as unit of account

Firstly, exchange as a social application, when people swap money for a thing like an apple (or service or experience packaged as things).

psychology, awareness and self-identification (V1-1). Suffice to say 1) there is an implied negative at the point of exchange, 2) income is considered positive to the individual/company and outgoing as negative, and 3) the mathematics of negatives was only stabilised 200 years ago.

Firstly, at the point of exchange, money is given for a thing with the delusion that the money is going to go back to the people who produced the thing; however, if you pay a shopkeeper for an apple, the money is not going back to the farmer because their job is done and they have been paid. Instead the money goes forwards with the shopkeeper who later that evening pays for a trombone lesson for their child. Money actually moves forward. Reversing the arrow of time creates a 'negative' within the psychology of the individual and cashflow problems in finance.

Secondly, people work for money so that they can pay for housing, food and entertainment. They *need* money, it is a positive or good thing, and are reluctant to depart with it, the act of giving is bad or negative. They are willing to sell their time whether they feel up to it or not, regardless of the purpose of their work or their contribution to the world, or even if there is a moral question to what they are being asked to do. People become locked into work because of their responsibilities to dependents, the fear of losing incoming. There are multiple negative states involved.

Thirdly, before negative numbers became stabilised in the west, money was owed between people: it was personal, relational, to pay up one's debt was considered rude because it indicated a closure of relationship. Although debts and so on have been recorded since ancient times in India and China, only once the maths of negative numbers became stabilised in the 18th century, were personal debts added together thereby *impersonalising* debt. Owing Xavier $10 and Yolanda $10, meant one owed $20, impersonally. It also meant that it was possible for banks to issue loans as a negative number, without actual money being in the bank. This opened up the weakness of a bank run: when enough people withdraw their funds from a bank at the same time, there is not enough money to pay out. Bankruptcy. As a cumulative effect of these processes over hundreds of years, 99% of the money in circulation in the world is negative.

As a result, the world runs on debt (negative 3), where people are

Secondly, we sell the apple for money and then use the money to buy a ticket which we also value; money has stored our psychological value in some way between the exchanges. Thirdly, we can enumerate all our values along the same measure or scale which operates arithmetically: we know that 10 units of money is double 5 units of money.

The number of money is thereby treated as a thing: it is swapped for things, is considered valuable, and has become a global measure of value. Despite being called a 'currency', implying movement, money itself does not contain information on its direction of flow. A $10 note remains the same whether it has been used once or a thousand times in a year.

Instead of tracking the moment of exchange, Ecosquared marks a period of intent, thereby deriving a completely different social contract.

- vector-money as an indicator of intent
- vector-money as a store of value or responsibility
- vector-money as unit of account

Early implementations of Ecosquared operate the transference of vector-money as if it were a thing, in order to leverage the traditional understanding that money has value and it can be moved. However, once number-value SQ is trusted, number-value will replace 'store' of value and there will be no need to transfer vector-money directly.

Money as On-Going Mathematical Experiment

A mathematical experiment is a large number of calculations performed to either derive new solutions or to test the viability of a set of axioms. This is usually conducted by a computer, though we could as easily apply the definition to economics — that we have been running an embodied mathematical experiment for the last three thousand years since we first invented coinage.

Supplemented by percentage interest (simple and compound) and second order trade (stocks, currencies, derivatives, market probabilities), these axioms help persist convenient mainstream delusions, that we can 'make money', 'save money', 'invest money' and that 'money grows in a bank account'. By proposing alternative axioms, we create an alternative mathematical experiment which may dispel the traditional operational delusions of money, meanwhile making most of our current economic expertise redundant. Which leaves us with a problem, how then can we

locked into working to pay off these debts of a house mortgage say (negative 2), selling their time when they don't want to thereby reducing self-worth (a consequence of negative 1). The cycle of negative forms, assisted by mathematics, self-reinforce a psycho-social knot.

A more subtle negative underlies the traditional psycho-social dynamic of money-exchange: the buyer and seller are in opposition. One or both parties may walk away thinking they got a better deal or a worse one; on a purely mathematical basis, only ¼ leave thinking they both benefit. Whatever the overal world stats may be, there is a psychic tension built into every exchange: each is trying to get the best deal for themselves. Multiplied over a lifetime and over centuries, markets of competition generate a landscape of social stress. Shears erupt throughout an individual's life while trying to balance their income/outgoing, and at the macroscale the bloody history of the West on one side or on the other the soporific 'natural social order' of the East. Money locks us into a perpetual 'oppositional state' socially.

Finally, and most challenging perhaps: ownership itself is negative, in the sense of imaginary (see V-1). The money paid for a car goes to 'owners' who funded the initial factory build, in perpetuity regardless of the initial outlay. The imaginative contract of 'ownership' persists through time, such that people continue to pay for houses despite the initial builders having been remunerated and having long since passed away. Or more simply, the £1 one pays for a pen, means the ownership of the pen is associated with the outlay, ie the absent or 'negative' £1. Ownership comes at a cost: it is negative.

By contrast, Ecosquared has no negative. There is no exchange, therefore no illusion of the money going 'backward' for the thing given. Once the illusions of money are dispelled, and clean, living, good money is evidenced, will the psycho-social knot unknot itself? Will Ecosquared unlock people from work, allow them to share resources, and commit to worthwhile and mutual purpose? Returning humanity to its genuine and authentic worth: the miracle of consciousness and the joy of co-presence?

Slideball

"At the bottom of the uncertainty problem in economics is the forward-looking character of the economic process itself." Frank Knight 1921

evaluate their validity? Ecosquared answers in kind — through experimentation. The economics which emerge from this level of axiomatic change will not behave like any institution we are familiar with. We learn by doing (see Open Business Practices, V2).

The unit of account becomes subjectively relative and hence multi-dimensional, we shift from scalar-money to vector-money. The form of transaction is opened from a paired exchange (between A and B) to an expanded circle of gifting (A with B with C... with potential closure with A). And the store of value is split between the SQ trust metric and the mapping of money from an abstract scalar to a vector in time which has inherent human meaning. As a result, Ecosquared offers a self-similar social contract, a financial protocol for networks (not bounded groups), a multi-dimensional and scalable pay-it-forwards system (not centrally controlled), an enumerated system based on giving (not taking).

The axioms of the traditional economic create two important mechanisms, one mathematical and one psychological. The mathematical mechanism is 'cost'. Because traditional economics tracks the instance of exchange, when there is a supply chain, the costs are accumulated. When we pay for an apple, the 'cost' compresses all the exchanges which lead to the apple being made available, the farmer's exchange with the distributor, the distributors exchange with the retailer, and finally the retailer's exchange with us. Our cost of the apple must 'pay for' all the previous exchanges. Consider the numerous links in the supply chain of a car or a computer or a house. We might want to consider 'cost' as a form of 'economic legacy'.

Balanced with this retrospective compacting of 'cost', we have the subjective evaluation of 'want'. If we really want the apple or car or computer or house, we artificially increase the cost, and this is called the 'price', what people are willing to pay for it. This psychological dimension is permanently in tension as parties negotiate around each of the transaction exchanges in a supply chain — 'to get the best deal'. The distributor is trying to reduce the farmer's price of the apple, while increasing the price to the retailer; if they do a good job, they make a 'profit'. The effect on psychology, relative to the individual, is to maximise 'profits', that is 'taking', thus polarising both parties. The traditional economic celebrates those who are better at taking more.

It is worthwhile noting three inherent emergent effects on the supply

The fundamental problem of money is uncertainty: we don't know where it is going.

Is there a better way of dealing with the 'forward-looking character' of money?

Sqale Power Usecases

Overcoming mistrust takes up much of standard business activity, a kind of social vestigiality, the social equivalent to the elaborate courting rituals in nature between potential partners. The information age has increased rather than decreased the amount of time committed to overcoming distrust; millions of people file into office blocks to push buttons which force millions of others to respond with their own button-pushing. Volume 2 describes the Open Business equivalents to office-work, meetings, companies, advertising and marketing.

In this Volume we describe the operational Power Usecases of the platform Sqale (recto), and the underlying maths of vector-money and number-value (verso). Instead of exchange, vector-money is used when sharing a thing or when recommending a future objective; it is mapped to the relational intention-responsibility in the act of sharing. Number-value is mapped to pre-verbal subjective values, enabling comparative analysis of values by an individual and between individuals. Vector-money and number-value can only ever be "held" by people (not organisations). They combine to create an alternative social contract, Ecosquared.

Simply put, we use two numbers. Money is used to track sharing, not exchange. And values are used to track subjective evaluations. Sqale provides an individual with their numbers, like a bank of values. Users buy the experience of participating in a gift economy. $10 buys 1000 Credits, setting up a one-to-one relationship between traditional money and vector-money; receiving 1000 credits is equivalent to receiving $10.

Organic Sharing & Social Neuron

There are several emergent usecases which emerge from the simple act of aligning money with the intent/responsibility of sharing. We briefly share two here, Organic Sharing or Virality, and Social Neuron, since readers' experience should suffice.

chain due to the combined effects of compressed 'cost' and maximising 'profit'. First, the devaluation of the originator. Whether it is apple or car or music production, because of 'competition', cheaper supply to the end-user forces reduction of profit down the chain. The originator is furthest away from the end-user who foots the bill and thereby has less negotiating power. There are macro-effects too, such as the devaluation of agriculture or nature in general. Second, even if the supply chain is contained end to end within the same 'empire' or 'government' or 'company', hierarchy expands in a political dimension. Position articulates political power which generally correlates to economic striation of ownership. The macro-effect is socio-cultural currents, understood as 'classes' for example; free and slave, aristocratic owners and peasants, managers and workers. Third, agents artificially stimulate the psychology of *want* with advertisements, thus inflating 'price'. The game of increasing 'price' overshadows the game of 'cost', and wants become serviced more than needs. The overal effect is that people pay more for music and apps than water and electricity, taste more than nutrition, form rather than substance. The stimulation of *want* denatures us to what we *need*.

Understanding of the traditional economic in terms of current economic jargon is kept to a minimum. Each of us has assimilated the effects of the economic machinery, the financial tools available to us and the financial landscape of companies and governments. Throughout our lives, we become aware of the mass production of stuff we don't need, the evolution of a 'cheap' mentality, and the global homogeneity of culture, both the mono-cultures of industrial agriculture and animal husbandry and the mono-culture of euro-american-western-civilised culture with blockbuster movies and global sports. Be aware that by altering the economic operating system, everything built on it changes.

Scalar Values, Vector Money, Collective Tensor, Whole-System Manifold

By combining vector-money and number-value, Ecosquared operates across the mathematical 'vertical' of factor, vector, tensor, manifold. Paradigms such as 'capitalism' versus 'socialism' rely on externalised rule sets and organisational restrictions, whether it is free-market or government regulated (which is funded through taxes), how revenue is

Organic Sharing or Virality results from aligning money with the relational function of sharing. Alice gives Bob a track of music with $1-equivalent. Bob shares the track and the $1-equivalent forward to Charlie, and loves it so much, adds $1 of his own and shares with Cam. This is viral behaviour. If everyone matches the amount given to them, the equivalent of paying for something in the traditional world, and shares forward to two people, this leads to exponential growth to the power of two: 1, 2, 4, 8, 16, 32 and so on. Each person receives the track of music and $1-equivalent, and then shares that forward and $1-equivalent of their own to two people in total. If this is done within five minutes of receiving the track, within an hour a total of $1000-equivalent is in flow, within two hours $1m-equivalent million, and within three hours $1b-equivalent. Just 'paying it forward'. Of course, Organic Sharing only works if people share things they think are valuable with people they think will appreciate it. It is grounded in human values. The viral dies if a person accepts and does not appreciate the music track, or forgets to share it forward.

This quite naturally enables crowd-funding. After a certain amount of sharing, the originating content-creators can invite participants to Support them instead of sharing it forward, so that the $1m-equivalent goes to them. It is not paying them back for the music track, but to pay-forwards the production and delivery of an album, say. Alternatively, if Locked, everyone knows that whatever money they add even when sharing, goes to the originators; for example, invites to a park-run go to a heart-foundation charity.

Social Neuron emerges from the distribution pattern of organic sharing, but instead of aiming for wide-spread distribution or virality, the aim is to connect two people. Alice is looking for work, and shares forward her CV and desire to work in certain areas, citing a reward of $1000 for those who help. Friends share this forward until numerous employers get in touch with her. When she is employed and paid, she splits the reward equally between the specific chain of people between Alice and the employer; if 5 people, each gets $200, if only one, they get the full $1000. It pays to consider carefully who to share it forward. It can also work in reverse, and the employer rewards the chain of people with the 'finder's fee'. Works for employment, contracts, crowd-sourcing partners or finding band members, anything where two

distributed, and so on, all of which manifest the manifold created by traditional money. The traditional economic manifold has many externalities: pollution and resource extraction leading to environmental degradation, economic poverty as wage-slavery, unpaid labour for the next generation of workers (pregnancy, birthing, child-care, education), obligatory tax, entrenched national expoitation, and global limits of unexploited labour. All peoples of the world are now part of the traditional politico-industrial, military-company manifold

Factor-value is a scalar which enables any individual to participate simply by evaluating intuitively from 1-10. Reasoning, influence and so on are secondary and open to discussion. The reflection of our values collectively provide us with a comparative map of our living values.

Vector-money is social action. It funds projects we wish to see in the world. Successful networks who achieve collective projects derive positive feedback loops to invest in further, longer-term projects (V2). This is organic growth versus money or production growth (ie GDP), where companies are caught up in an arms race of sales conflict.

The collection of vector-money aiming towards a future objective maps a tensor in psycho-social space. The combined tensor map of all nested projects, relating money to future objectives for the day extending to a year or more, indicates the meshwork's social health. How long the meshwork survives depends on the supply chains contained by it, whether enough vector-money is directed towards generating next year's crops, for example.

The many-to-many feedback loop of transparent values and vector-money helps produce an alternative social manifold, Ecological Economics. Second-order analysis will correlate the relationship between value and vector-money, time and mindmass (ie number of people). Live, warm data will reveal direct relationships between the factor-value spread by members of a project, the evaluation of the products provided by that project, and the amount of vector-money pointing toward it or supporting it: does our money follow our values? Just as with traditional money, hypothetical analysis is less important than the real-world use of vector-money. Networks who use the tool may well thrive, but it the high-trust skills generated by participants which are important not the tool. Relationships of sharing can continue even if the accounting system goes down; by comparison, without

people need to meet. People invest in the act of organic sharing because they are actively interested in helping the right people meet, and they are rewarded for doing so.

This reinforcement works like dopamine release when neurons hook up correctly; the success of walking for a baby, or pulling off a fantastic smash in tennis. The social success of matching two people amidst a network reinforces the good will in sharing it forward. Even if you don't benefit from a specific share, the social neuron will match you up with what you need one day.

Sqale's £10k Challenge

Connect us with our first viral content-creator or £100k investor, and I will reward you with £10,000.. With our

I, an individual using Sqale, distribute a finder's fee of £10,000 to users who invite our first content-creators or investors to the platform.

Let's up the ante. Elon Musk has a reputation for iterative testing. He's solving some of the biggest engineering problems on the planet, and he doesn't want to take the same chronic social problems to Mars. When he finds out about Sqale, Elon will invest a million dollars to test it. Share Sqale in his direction and I'll distribute 10%; with six degrees of connection, each connector gets $20k, or $50k if there's two connectors.

Value-Tracking & Silent Applause

Value-tracking has a wide range of applications. For example, estimating the feeling before a meeting by distributing a detailed agenda. The evaluations and comments allow a non-linear feedback format with high and low figures indicating at a glance the major issues and how strongly people feel about them. Evaluations of a meeting indicate how motivated a team might be, or the degree of completion of tasks which each member has decided upon, while commentaries show an ongoing progress report.

Silent Applause is when evaluations of an event are shared, for example projected on a screen behind a talker on stage. Unlike a twitter-stream, the numbers indicate a live fluctuation which the host can react to without interrupting the flow of a presentation, and they can drill down into particularly high or love values to access commentary, and even invite members of the public to engage directly.

money the traditional system grinds to a halt because its default state is mistrust: no money no trade.

Ecosquared is an ongoing, instant reflective economic to replace the cashflow peristalsis that chokes so much good intention in the world. We can dissolve the organisational cholesterol which has built up over the centuries and is threatening to bring us to the edge of self-extinction, environmentally or at the hands of our own creation, an AGI.

Hard Cash: How Does Sqale Make Money?

Sqale Ltd has three ways of generating revenue for itself in terms of the traditional economy, in order to pay for server growth and further development: taking a cut or tax, support or investment, consulting as brokerage.

Firstly, taking a cut is the standard practice of financial institutions, equivalent to service cost, interest or taxes in the traditional economic, specifically at the point when users 'convert' credits to money. To be legally compliant, in early implementations there is no conversion: Sqale may reward users with money for the credit valuation which has accumulated from the experiences they provide other users on Sqale. The user is legally responsible to declare this and may be taxed as VAT or income tax according to the governmental laws of their country. Secondly, users can support the ongoing development projects and business development within the Sqale platform itself. Just like any project may be supported, the credits are distributed to individuals; these individuals may then be awarded with money for the experience they provide (ie the Sqale platform) which pays for servers until Sqale liberates ownership of servers from the traditional economy. Thirdly, the transparent and public data our users are willing to share may be analysed to ascertain who might appreciate the offer of specific products, services and experiences. This service may be used by consultants to broker relationships between traditional companies and users, much in the same way social media experts emerged over the 2000's and 2010's.

Ideally, the Sqale platform is funded exclusively via the second method: direct support through the platform itself. To that end, the first method of taxation employs an inverted ramp: 32% of the awarded credits when the platform has less than 10,000 users, halving for every power of ten users increase until reaching 1% for less than 1 billion

What's important is to reflect the response in realtime in a non-invasive way.

Fair-Share & Golden Ticket

Fair-Share is the distribution of revenue-equivalent to all members of a team. Since vector-money can only be held by people, when vector-money is attracted to a product, service or experience it is immediately distributed to the team which produced it. There is no holding company or common pool. The ratio of how this is split is set by the team. It can be equal or weighted according to the ongoing evaluation between the team members. The SQ algorithm is a pure arithmetical calculation which biases the evaluations of a person according to that person's contributions as valued by others. If people are not happy working with each other, not being appreciated as much as they think, they leave (taking their credit share with them, there being no organisational budget). The ongoing evaluations indicate the balance of efforts by the team. Money attracted to the team is thereby justifiably distributed according to these relatively-valued ratios. It is like each person gets a budget, and then uses that money in directing towards future projects.

Golden Ticket is when individuals decide to create open, public or social sharing links with high credit values. Organic sharing is person-to-person recommendation. At times, an individual may not have specific people in mind, and so they share in a public space, a social media post. Alice wants to invite two people to an upcoming performance with an equivalent to $10; remember Alice received $10-equivalent and then added their own $10-equivalent thus doing the equivalent of buying a ticket while taking on the responsibility of growing the audience. When Social Share is enabled and the link is hit, a random offer is chosen from all outstanding offers. If there are 100 invites to the performance, there is a 2% chance it is Alice's invite. Bob has created an invite, but he decided to offer it with £100-equivalent. There is a 1% chance that a person hitting the link gets Bob's invite. This is the Golden Ticket through Social Sharing. Alternatively the originating content-creator could create 1000 tickets themselves all at $0.01-equivalent except for one Golden Ticket at $100-equivalent.

users. Upon reaching 1 billion users, the cut is reduced to zero, if direct support viably funds decentralised partners internally through credits. The third method of brokering consultants consists of individuals, and as Ecosquared and traditional economics run in parallel, the responsibility to maintain the platform shifts from company to individuals. The notion of 'employment' fits within the traditional economic where money is held by organisations; as individuals within the network of Sqale benefit from consulting with traditional companies, they are free to choose to support the Sqale platform directly.

As for where the actual money goes when a user converts eg $10 into credits, the answer is simple. In the first version of Sqale, all the money sits in an account held by Paypal. It does nothing. The lump sum increases with adoption, and as users realise the greater efficiency of sharing credits, greater retention stabilises growth. The money accrued in Paypal may be used in traditional ways, such as accruing interest which may be awarded with its equivalent as credits to users, buying collective assets, or liberating land and properties from ownership (satisfying Polyani). What must be kept in mind is that the money converted by users is distinct from credits given directly as support for Sqale projects. Credits given to Sqale projects are treated like any other project on Sqale: members may do what they wish with their share.

As the platform shifts towards a fully decentralised implementation, 'Sqale, the question of 'How does Sqale make money?' becomes a fallacy of reification and is debunked through practice: ultimately, there is no Sqale company which needs to make money, since credits are not held by any bounded organisation. The implications are staggering, potentially inverting or revolutionising or dissolving all institutional structures.

Value Ecology & Agency

Vector-money does not guarantee that we escape from the unpredictability of Chaos Theory, or somehow avoid the vaguaries of human behaviour. But rather, a tool is offered which takes away most of the financial machinery. Since things are given to you, there's less need for search and SEO. With transparency, each user can see what their use of money does, free from all the financial furniture of bounded companies and charities and government. Without the cashflow delays

Emergent Experience Economic

Gift, Network, Instant, Trust, Value, Organic, Experience Economic

As a legacy of traditional money use, vector-money is shared with a recommendation: a piece of music, article, film, game *and* vector-money. By sharing forward, virality is induced, and when vector-money is added, the viral is financial. This is the *gift or sharing economic*, versus the traditional exchange-based one. Over time, the need to move vector-money in this way will dwindle as communities put more faith in their value-tracking.

Value-tracking amongst collaborators enables a 'weighted democracy' of empowerment. An individual who has been evaluated highly has the trust of partners to make executive decisions (they possess an SQ of 5, say), whereas it may take several others to effect the same decision (twenty people with an SQ of 0.25 each for example). Vector-money given as Support is distributed according to gratitude-tracking amongst collaborators. The Sqale platform has a Global SQ feature which may be further developed in subsequent fully distributed 'Sqale versions, which automatically redirects vector-money according to person-to-person value-tracking. This is the *network economic* (V2) as contrasted with the traditional centralised economic. Over time, vector-money will behave more like a vote which individuals direct towards future objectives.

The transparency of people's direction of vector-money towards future objectives provides a 'standing wave' of intent. At any moment, a user can reflect on their social context, whether it is locally with street lighting and sewage works, local school needs and entertainment, allotment and farming, or national projects such as film or rocket production. This is the *instant or transparent economic* (V1) as compared to the annually delayed tax picture of government or closed quarterly accounts. Over time, the need for vector-money to move may become obsolete, as people trust real person-to-person relationships, with high trust enabling greater social flexibility in the performance of needed social tasks across different geographic and temporal scales.

Over time, there will be less need to check online accounts as real-world relationships foster long-term trust. Even were the virtual accounting system to temporarily blackout, business would continue

as money capitalises around organisations, we may be able to see more clearly how we can improve the quality of the roads outside our houses, the quality of foodstuffs offered to us, and the more intangible services like the education in our schools and the political decisions which need to be made to further our cultural heritage while stabilising our environmental stewardship.

SQ Average & Our Value Share

The Social Quotient is an arithmetic average, applying a relative value algorithm to subjective evaluations between people. It is a purely arithmetic process with no verbal bias: it is a kind of average as simple as mean, median or mode.

Values are attributed, and there is no actual transaction. Andrew evaluates contributions by teammates during a session: 4 for Bella and 6 for Charlie and 10 for Cathy during a session; 4/20 or 2/10 of Andrew's values are attributed to Bella, 3/10 to Charlie, 5/10 to Cathy.

Initial fractional value:

$$^{F}V_{ij} = V_{ij}/\sum_{G}V_{i}$$

(where ^{F}V is fractional Value; V_{ij} is the Value person i gives to person j; $\sum_{G}V$ is the sum of values person i has given)

The iterative calculation is given by:

$$^{F}V_{(ij;t+1)}=^{F}V_{(ij;t)}.(\Sigma_{R}V_{(i;t)}/\Sigma_{G}V_{(i;t)})$$

(where ^{F}V is the fractional value; $\sum_{R}V$ is sum of values person i has received and $\sum_{G}V$ is the sum of values person i has given)

Iterations continue until a set limit, eg 50 iterations, or preferably until the ratio of sums-received to sums-given enter the lower bound of 0.995 and upper bound of 1.005.

$$\frac{\sum_{R}V_{(i;t)}}{\sum_{G}V_{(i;t)}}$$

The calculation becomes more accurate as the ratio of summations approaches 1. A rather elegant way to indicate social balance: the relationship between values received ($_{R}V$) as a fraction of values given

with food being delivered, energy supplied, games played. The experience is primary, and the accounting system is secondary, essential only to maintain normative balance globally. This is the *trust economic* (V0) contrasted with 'zero trust' which traditional economics engenders. Over time, with greater trust and fair distribution of resources, there is less reliance on security both in the real world and virtually.

Sharing evaluations empowers everyone. Supporting comments may persuade or influence, but it is essential that everyone has equal empowerment in evaluating as they see fit. Value rises to the surface because there is no organisational bias. This is the *value economic* (V-1) as compared to the four or five year political cycle and the imprecision of mob social mobilisation. Over time, everyone will know local experts in every aspect of human experience who will confer across the global to share knowledge and best practice.

Our relationships bind us, person to person, scaled across the globe. Real, embodied, ongoing, living trust relationships. This constitutes the *organic economic* (V-2) as compared to the impersonal mechanics of traditional economics. Although virality begins with virtual objects (sharing music, articles, films, games), it will translate into physical objects (sharing food, cars, houses) as complete supply changes switch to vector-money. Over time, iterative social validation in sharing ownership of physical objects will enrich the trust in our social soil, enabling greater social flexibility.

With an economic supporting human endeavour, empowering alignment and collaboration, social projects thrive. Less waste in needless competition replaced with redundancy by design for healthy competition, needs are met and luxuries are distributed according to effort. Everyone born has opportunity to live peaceably, help one another or push the boundary of human exploration, and for those who wish it, realise their potential. This is the *experience economic* (V-3) as contrasted with the machine-like production of traditional economic.

Projection Map, Social Health & Temporal Trust

The Projection Map is a means of seeing the potentials of our future. Vector-money works more like an empowered vote, indicating how strongly one feels or the amount of resources required to achieve an objective, whether it is to buy local land or run a restaurant together.

($_G$V) relative to each individual.

There are various checks to be made: how to deal with zero values where users don't value, non-connected networks, dealing with bifurcating limits which result from circular arrangements of people's evaluations, and damping factor. Optionally, multiplying the sum of the received value ($\Sigma_R V_i$) by 100 we get SQ, deriving a similar quotient to IQ.

SQ provides a non-centralised way to distribute resources. When vector-money is directed towards a future objective, eg the writing of a book or the creation of an album, or the building of a barn. When it is released, it is not kept in a 'third party' account, but is immediately distributed to the individuals who are aligned towards working on that objective. That is, the vector-money is distributed to members of the band, not a holding organisation. The ratio of distribution is partitioned exactly equally, or it is proportionally distributed by SQ: people with higher SQ get more. Other factors such as how much effort or time people have put in or how much money they have invested may be factored in, but here we examine SQ as a single factor which conflates all the evaluations by members of a project. Each person receives:

$$xn^{(f-1)}$$

(where x is the amount of money to be distributed; n the number of people; and f the fractional dimension ranging from 0 [an average individual] to 1 [everyone in the group]; and where n^f is equal to SQ)

For example, if £1000 is distributed amongst 5 people, each person should get £200 if their SQ is 1; f = 0 in this case. We can work out f based on the following version:

$$f = \log_n(SQ)$$
$$\text{or } \log_{10}(SQ) / \log_{10}(n)$$

So in the above example, if someone has an SQ of 1.2, so their f = 0.113, and the amount they receive is £240. Another person with SQ of 0.7 has f = -0.22, the amount they receive is £140.

This is an example of the direction mathematical analysis may take us. Departments of mathematicians will be able to produce incredibly

The Projection Map indicates our social health, how long into the future we are preparing for, ensuring our food security for days and months, years and centuries ahead. This is the security we are looking for, for food and every other human enterprise. In a collaborative network economic, monopoly is good. Nevertheless, whatever we plan for, it is less a blue-print of the future, more conditional on present conditions of trust and business ecology. A transparent economy.

Ecosquared has two fundamental numerical structures which promise to achieve social benefits different to how money and votes work: vector-money and number-values. There is a direct relationship between the Value of a project and the amount of vector-money pointing toward it. Calculating the relationship between value, vector-money and time and the number of people, generates a manifold of our social health. Hypothetical analysis is less important than the real-world communities that use Sqale, real people who embody the values and skills, who may use the other practices in Fulcrum to generate whole system change.

Sharing intentions to future objectives is like shining light into the future. Imagine seeing what your friends are aiming to achieve, everyone in your street regarding street lighting, everyone in the area regarding sewage works, everyone in your city regarding a new city hall or sports ground, everyone in the country regarding food security. Seeing everyone's intentions as backed up by vector-money. Decentralised civic planning. The money tagged to position in a hierarchical salary structure, become credits in a horizontal or temporal dimension: those with most credit carry most responsibility, with longest term vision. For national and global scaled projects, enough credits to fund annual and decade, and century-long projects.

So, you like that organic chocolate from Peru? Then make sure there's vector-money pointing at next year's supply, so that once a threshold is met, the farmer can then harvest the organic cocoa and pass it on with vector-money to the factory, who then share it forward to zero-carbon distributors and eventually delivered to you, with vector-money. Like the circular economy or donut economics, with vector-money working in the correct direction.

The perishability and energy consumption required for physical things adds more 'friction'. For early adopters, only virtual objects, things that are recreated on your computer or phone as data where the friction

rich information based on real-world data to reflect a 'fair distribution'. The first mathematicians to correctly apply their higher level mathematical techniques will be able to improve the Ecosquared model, and with grounded empirical data potentially derive field equations for scalable social cohesion (see V-1).

Intrinsic Value

The value of 'fairness' is enacted through sharing. The act of Sharing is intrinsically value-sourced, as compared to the *transaction* of exchange.

A single $10 used in a hundred exchanges provides $1000 of economic activity. This is a source problem in traditional economics: the displacement of money and time, as money is used several times in its lifetime. There's more activity than money. The more activity, the faster the velocity of money.

From its origination, Graeber's Debt (2011) indicates money was invented to solve the supply problem: how does the emperor feed their soldiers across the far-flung empire? Solution: give soldiers tokens which they then give to local farmers in exchange for food, and then extract the tokens as tithes to the emperor for the protection that the soldiers provide, resulting in the enablement of marketplaces, safe roads for traders and so on. Money is military tech. The tokens are stamped with the silhouette of the emperor: the first coins struck in Phrygia, modern day middle-east, three thousand years ago. From imperial and royal tithes to governmental taxes, to banks charging interest, to companies taking a profit. Whatever the amount of economic activity, an amount is extracted to provide whatever service to maintain it.

Because money is going in the opposite direction of what is given (money for apple), there is potential mismatch in the intrinsic values of the parties involved in the exchange. Consequently, money becomes a proxy for human value. As such, it becomes susceptible to manipulation, and thereby humans become susceptible to corruption. For example, regardless of what is exchanged, money becomes the thing that is valuable: the mechanical objective of a business, the accountant's 'bottom line', to go from money to more money. Another corruption is the artificial stimulation of the movement of money through advertising. Yet another, increasing the speed of information at stock exchanges leading to flight capital where billions of dollars are transacted every

is minimal, that create social validation: music tracks and albums, posts and articles and books, puzzles and games, services and events. Realworld supply chains and geographical meshworks will grow in size only once there is sufficient evidence it works virtually; these are only considered later in the book as we consider and trial the other practices. But consider this: since there is a one-to-one relationship between money and credits on Sqale, what does the money sitting in a bank do, while Credits are being used on Sqale? Could the money be secured in long-term investment, eg land and housing? Could every £-$-€ added to Sqale for sharing whatever we want, also count as partial ownership? Why own a house when one can time-share a pool of residencies globally? A

This book can not meaningfully calculate the consequences of this alternative economic operating system. Speculation on adoption rates is more or less a futile endeavour since judgement is in terms of the self-supporting system of traditional economics, business, education, politics, media consumption, etc. To escape the interminable cycle of judgement-argument-politic, Fulcrum provides practices for creating minimal instances of an alternative whole-system which relies on a simple matter of trial and testing and rates of social validation. What should be clear is that it is not merely organisational transformation in the sense of incrementally improving mechanical efficiencies and balancing budgets. An alternative economic permits a civilisational paradigm shift from bounded or centralised organisations to non-bounded and decentralised networks. Land may become liberated from ownership. Only the billions who achieve whole system change may account for their proven history. For all earlier adopters, we might just catch an echo of their unbridled celebrations for the hope, courage and actions we exhibit in our current timeframe, now.

Use Sqale, feel what it is like to share what you value with people you value, and generate revenue for originators we value. You can begin by generating social validity from the social fact you are reading this book (V1), or creating non-judgemental spaces while trialing Open Business practices (V2). It is enough to give our future generations a chance of sustainable social health by providing an economic that supports high-trust practices. What they or we do, it is up to each one of us to make the decision.

second. The global sum of everyday human interaction, eating, working, living, watching films, occupies a tiny percentage of what is traded on stock markets every second. Money has become detached from human-scaled values.

The act of sharing is intrinsically stimulated through our values: what we share and with whom. You share what you value with people you value. There is an alignment of value within one's own system of evaluation, with another person's. Vector-money, credits, the number we use for money, is not detached from our values. And because credits can only be owned by people, it does not import the organisational momentum adults get trapped in as they go through life collecting debt in the form of negative ownership etc.

Agency & Governance & Stewardship

Credits are given with what is shared, and what is shared is valued. Should someone not share forward something, it is either because they do not value it or they are negligent. Either way, fewer things of similar value will be shared with them. Healthy relationships are contingent on the on-going sharing of what we deem is valuable. Agency is stimulated through the act of sharing (V2): the reception of a gift is converted into its offering. In the relational chain of giving, each individual becomes the effect-cause actuator. By contrast, in traditional supply-demand chains, the individual is an effector, a cog in the machine, having to sell something (including their time) in order to get money. Power is retained with money, 'buying-power', the more money the more power. With credits given with a thing, vector-money marks the relational direction of value shared, the potential difference between people becomes enumerated: 'sharing-power', the more shared the more one receives.

The repercussions of factor-value and vector-money effect a state-change in politics, from power-over to power-with (V-2), from ownership to stewardship. SQ is a means of sharing revenue according to networked self-evaluations, but it can also be used as a trust-metric for governance. Those with the highest SQ are the most trustworthy, most capable of helping a group achieve a mutual objective. Their decisions have more weight. A person with an SQ of 2 has the social power of two people. By setting a threshold percentage or quorum,

$-trillion Spitball Pitch - Homerun!

The bases are loaded. Bring it home.
Here it is, the $-trillion pitch:

Can you recognise a trillion dollar idea when you hear or read it?

While reading this book, we will take a few swings at it. Once you've finished this book, hopefully you will have made the connection and hit it out of the park. When you do, write “Homerun!” in your comment to indicate you are a player and you'll be invited to the A-game.

Origins

'Double Your Money'

In my early 40’s I found myself in the Hub, a superstudio in London’s Piccadilly for social entrepreneurs, being interviewed about the future of work. I have not been keen on the notion of ‘work’, on selling one’s time, having disinvested interest in politics and ownership as sustainable global solutions, and I had met plenty of children whose motivation to work was diminished by computer games: no need to work to get the money to buy a car, if you can get an interactive hit from a racing simulation. At the time, 2012, Muhammad Yunus and micro-lending was popular, the notion of a social entrepreneur working for triple bottom line (money, people, environment) was new but I felt it was too complicated. It needed to be simple. Imagine, I said, if when you met people in the street and they knew that when they came to the Hub, it would 'double your money'. Everyone would want to visit, but it was by invitation only. If it was as simple as this, social entrepreneurs would take over the world.

As it happened, before I left the Hub that day, I bumped into a good friend whom I had helped a few years earlier. In 2007, he was heading up a startup, more a social movement facilitated by a decentralised internet, Xnet. It was the first group of people who were playing around with social ideas similar to the practices I had developed with students in school (V-2). He didn’t manage to code a version of Xnet, so the movement petered out. During our conversation at the Hub, he gave me £40 so I ended up leaving with more money than when I arrived.

collective decisions can be set to cover any kind of political structure from equal to weighted democracy, autocracy to consensus. Settings suit conditions and self-apply, and because vector-money is held by all members, any group has the flexibility to disperse and reconstitute itself. A network's distribution of vector-money replaces hierarchy of positional salary with arrowhead of empowered purpose.

Money is a scalar, a quantity of a thing, and thus can be used in proxy for a thing during trade. Ownership of this thing, money. Credits are vectors in time, a relationship of intent and responsibility between people (V0). As money is converted into vector-money, so ownership is replaced with contingently relational responsibility. Collective ownership of resources, or stewardship. Once proven stable, ownership of real-world resources may be directly seeded to collective stewardship, receiving credits or a percentage-share as legacy of ownership.

Next Steps

Funding Transform

Every time money is converted into credits, the world shifts from the traditional economic based on exchange and competition, to ecological economics based on sharing and collaboration. The rate of global shift depends on the leverage we individually apply, as the fellowship of users scale in number. Whatever is shared on Sqale, the act of conversion is a kind of 'superscription' which includes a partial share of land and property. In this way, land is liberated from ownership to stewardship (V0), a return to a collaborative, embodied Mother Earth. As you read and share this book, introducing friends to make their own decision, we can reach $-millions fully determined by our individual, receptive human agency. All it takes is three of us: who shared with you, you, and who you share with. Give the power of agency.

The beta version of Sqale developed between 2021-2023 provides a rudimentary set of Ecosquared functions to 1-10 million users; implementation of the full features provides valuable social experimentation for exploring whole system change. A global version costs $500k, a decentralised version more, preferably funded directly from the viral success of content-creators to avoid the legacy of ownership which traditional venture funding entails.

This throw-away comment, 'double your money', combined with leaving with more money made me wonder, how feasible was 'double your money'? Over a month, I reached out to friends and developed the financial protocol: Money-Time-Trust-Protocol. It appeared to create an 'economic entity', a financial network which I called Ecological Economics or Ecosquared. I invited my co-creators to a meeting. Seven people turned up at the Hub whom I challenged to generate £10k by the end of the month using MTTP. By the second week, we had created a video online, but I realised that we would not achieve our goal: the team was committed, but they needed to understand how it workedm the wrong methodology. Most of my work with kids was about trying something and the result was the explanation, like with algebra (V-1).

It took two years to peel apart MTTP, to realise it treated money as a vector in time between people, and to stabilise the even simpler financial protocol of organic sharing: giving a thing *with* money.