



POLYMODERN ECONOMICS

An Economic Model Based on 300,000 Years of Human Experience; What to Measure for All to Thrive

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Paper in progress, last updated 2024-01-01

Abstract:

Economics is typically divided up into macroeconomics and microeconomics, the former regards states, the latter companies and households. We lack a macro-macroeconomic model for the global economy, and we lack a model that a) delivers healthy relationships among people and between people, planet, and economy, which will allow people, planet, and economy to interact and thrive in mutual balance as one big ecosystem, b) measures economic health in thriving rather than in growth, and c) supports and maintains different levels of economic complexity in enriching and meaningful rather than impoverishing ways. Polymodern Economics is a hypothesis or a model that offers this.

The polymodern economic model is based on the idea of polymodernity¹ and sees the economy as a structure of five integrated layers, of which four are economic models with different goals, dynamics, rules, measurements, criteria for success, and opportunities for sustainability and thriving, here in the order of emergence:

1. **Nature,**
2. **Indigenous gift economy:** family and neighbors, moneyless, household and neighborhood size.
3. **Traditional market economy:** local, cooperative, artisan, matching the town, borough or arrondissement, and smaller cities.
4. **Modern capitalist economy:** national, industry scale production, big cities and nation size.
5. **Postmodern digital economy:** bio-, info-, nano-, and cognitive sciences (BINC), continental.

By looking at the economy as four distinctly different economies that are integrated, legislation, human wellbeing, environment, sustainability, food supply, climate change resilience, infrastructure, personal (economic) autonomy, welfare services, global inequality, global development, migration, tourism, and much more may be addressed differently than today and with much better opportunities for individuals and local, private initiatives to contribute to a green and sustainable future.

This article should be read as the first presentation of an overall idea that needs further exploration, not as a final model.

If you would like to work with the hypothesis/model or discuss it—or if you would just prefer a print friendly A4-forman version—please go to <https://www.nordicbildung.org/polymodernity/>.

Current economic model(s)

Economics as we have come to think of it is a product of colonialism and the steam engine. For merchants to have enough money to send off ships to the “new world” they had to pool their investments. Capitalism was born, which is different from the market economy:²

Market economy:	products => money => products
Capitalism:	money => products => money



In the market economy, which has existed in many incarnations since the Bronze Age, farmers and artisans produced products that they took to the market to get money, so they could buy other products. In the capitalist economy, investors invest money in extraction of natural resources and/or production of products so that they can make more money.

There were joint investments in Europe in the 1400s and earlier, but the stock company as a commercial model really caught wind (no pun intended) when the merchants who could not afford to equip a ship on their own invented the stock company and the stock exchange. When the steam engine was invented, this finance model was applied to machinery and industrial production too.

Economics as we have come to think of it is based on these inventions, and economics is generally divided into micro-economics and macro-economics. Microeconomics regards households and companies; macroeconomics regards nation states.

The nation states were themselves a result of the middleclass that emerged from capitalism: In medieval European feudal societies there were Kings and three estates: clergy, aristocracy, peasants; 1st, 2nd, and 3rd estates. During the 1400s, from the 3rd estate, emerged wealthy artisans and merchants who gained economic power, particularly during the Renaissance after Gutenberg's invention of the printing press with movable type and because of colonialism and capitalism. This "middle class" between aristocracy and peasantry did not fit into the feudal order, and during the 1700s they started fighting for political power that matched their economic power. To make a long and complicated story short: By the mid-1800s, this middle class, now known as the bourgeoisie, promoted Liberalism and wanted nation states within which to have political freedom, civil rights, and free trade, while workers promoted Socialism and were fighting for the Socialist International, and traditional landowners were Conservative and tried to maintain the monarchy. Liberalists and conservatives thus both favored a nation state to socialism's International class-consciousness. Liberalism and Conservatism led to the creation of modern, democratic nation states in Europe, and socialism either became part of the democratic system or promoted the idea of a revolution and a world without nation states. In modern, democratic nation states, we have therefore witnessed over the past some 175 years three major ideologies negotiating political power over the economy: liberalism, socialism, and conservatism.

The result of this development has been, among other things, that we understand macroeconomics in a very particular way in the West: The state is sovereign within its borders and in relationship to other sovereign states, and macroeconomic models guide the states in how to shape economic legislation and taxes etc. The currently favored macroeconomic model across the West is a mixed economy based on capitalism with redistribution of wealth via taxes and social welfare; a combination of the Neoclassical Economic Model, which relies on the market forces, and Keynesian Economics, which focuses on redistribution, leaning towards socialism. In the West, we also tend to understand microeconomics in a very particular way: Households are nuclear families, and companies are stock companies. Other family structures, such as collectives, multigenerational, traditional families, etc. where the number of people sharing, say, a car and other expensive, durable goods which tend to put strain on the environment, are not specified. Other company/organizational structures, such as cooperatives, non-profits, NGOs, and steward ownership companies, which may serve another purpose than just profit, are not specified either.

Behind all economic thinking in the West is the role of competition. The fundamental assumption is that everybody competes over resources, profit, products, services, and social welfare, always; the economy is a zero-sum game. Collaboration and synergies do not figure. Collaboration and synergies are everywhere in the real world, but the economic models do not capture them. In nature, there is both competition and collaboration;³ that is how nature stays dynamic and thrives. In cultural systems, among them the economy, collaboration generates synergies too, for instance when accessible for all, good education creates a competent workforce and promotes conscientious citizenry. Current macroeconomics does not capture this. There are several structural differences between how we perceive, understand, and structure the economy and how nature works, differences that make the economy fundamentally unsustainable.



Perhaps the biggest difference between capitalism and nature is that capitalism is based on debt and the accumulation of capital. Nature can only use and cycle resources that are already there, it has nowhere to borrow anything or save up for later. Money is created from debt. Banks can issue credits that are bigger than the reserves they have, which means that there is more capital lend out and circulated than they ever had as deposits. The 'security' is the trust in the borrower and the expectations that the debt will be paid back with interest. This is how the economy grows: Somebody borrows money for a business endeavor that will create a revenue that will allow the business to pay back the debt plus a price for borrowing the money: interest. Hence capitalism: money is borrowed and invested to produce goods to make more money. This system demands growth, it cannot settle at a certain 'size.'

States can borrow and lend out money too, in this system, but they are a very unique kind of borrower: If they do not make enough money via taxes to pay back their loan, they can print more money (which, of course, leads to inflation), and the central bank can define the interest rate at which banks lend money to each other and borrow money from the state (which may also lead to inflation).

The bottom line is that capitalism is basically a pyramid scheme based on credits, including credits on nature. A fact that the neoclassical model conveniently ignores by taking land and natural resources out of the economic equation: In Adam Smith's classical model, the wealth of nations depended on labor, land, and capital. In the neoclassical model, there is just labor and capital. Both models ignore energy, and they ignore the wear and tear on ecosystems.

Add to this a digital economy, which knows no national boundaries and can, in theory, expand exponentially and dwarf both the real economy and the speculation economies.

The current economic model, therefore, has several flaws: it cannot protect nature, it does not guarantee human wellbeing, economies must keep "growing" not to collapse, "macroeconomics" covers nation size entities, rarely continents; there is no macro-macroeconomic model to grasp the global economy, and it focuses on GDP growth as the main measure of economic success. It is also almost impossible for individuals and individual households to have an impact on the economy and their own wellbeing, except by working and spending more. The system is not set up for a synergy of small changes, and if people do switch to lower or more sustainable consumption, it will not contribute to GDP growth. In fact, if everybody in the West started living sustainably tomorrow by lowering material consumption and buying immaterial services instead (say, massages and concert tickets instead of new stuff), and they switched from imported goods to locally produced goods, the global economy would crash. Not just the economy would fall apart, banks, companies, and societies would too.

To face the problems of the 21st Century, we therefore need an economic model that does the following:

- makes nature thrive,
- makes humans thrive,
- makes the economy thrive,
- deals with the globe and the global economy as a connected and interdependent whole consisting of individuals, households, organizations, nations, states, humanity, and all life on the planet, and the fact that all these need to interact in ways that make them all thrive,
- deals with the relationship between the real economy, the speculation economy, and the digital economy,
- allows everybody to contribute to the necessary changes right away where they are
- promotes human freedom, prosperity, wellbeing, and dignity.

Existing Ways of Looking at Economics Differently

Since the 1980s, economic models that try to compensate for the flaws of the classical and the neoclassical economic models by including natural resources and human wellbeing into the economic equations have emerged. Hazel Henderson developed the 'Cake Model,' which has nature as the foundation of the economy, in 1981, and the two currently most prominent models are Doughnut Economics and the Wellbeing Economy.



Henderson's Cake Model

Henderson sees the economy as layered, like a cake, with nature as the foundation for everything at the bottom.⁴ On that is built the Love Economy; all the production of value that is relationship and gift based. Together, the two make up the non-monetized half of the economy. On top of that are three layers: underground economy, public sector, and private sector, i.e. the monetized, other half of the economy, which, contrary to the non-monetized foundation under everything is included in the GDP.

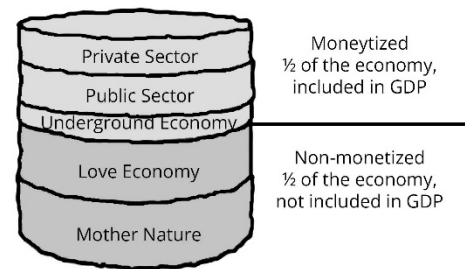


Figure 1: Henderson's Cake Economy y

Raworth's Doughnut Economics

Doughnut Economics⁵⁶ defines a space between minimum human needs (social foundation) and maximum strain we can put on nature if nature is going to be able to regenerate itself and remain in balance (ecological ceiling). The model is based on measuring human consumption and thriving and strains on nature and nature's thriving, and it allows particularly governments, municipalities, and other authorities to plan within planetary boundaries.

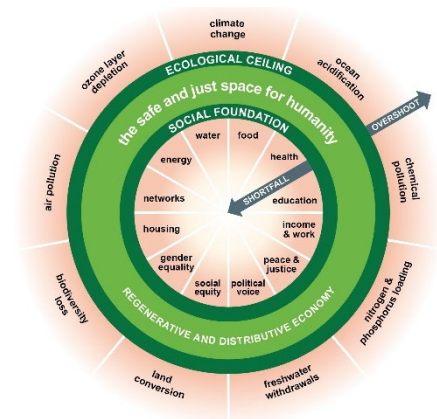


Figure 2: Raworth's Doughnut Economy, source: *DoughnutEconomics* [https://commons.wikimedia.org/wiki/File:Doughnut_\(economic_model\).jpg](https://commons.wikimedia.org/wiki/File:Doughnut_(economic_model).jpg)

Wellbeing Economy

The Wellbeing Economy focuses on human and nature's wellbeing: "In a Wellbeing Economy, the rules, norms and incentives are set up to deliver quality of life and flourishing for all people, in harmony with our environment, by default."⁷

More than an economic model, it is a political vision for society; the economy is just one aspect of society. The Wellbeing Economy measures human wellbeing, an outcome, but not the workings and results of the economy itself. It is as if 'society' has been substituted for 'economy.'

Baked goods, wellbeing, and polymodernity

The Cake Economy, Doughnut Economics, as well as the Wellbeing Economy look for a certain outcome of the economic activity, namely sustainability and thriving for both humans and nature, they include a much broader variety of costs in their model than the classical models do, and investments and policy making are directed towards other goals than economic growth. The economy itself, though, is still understood and structured the way it already is: micro- and macroeconomics within national boundaries, also when the economic activities affect nature and people around the globe.

The Cake Economy, Doughnut Economics, the Wellbeing Economy, and Polymodern Economics are concepts that approach politics and economics in each their way. Together, they ought to be able to supplement each other and create a conceptual, political, and economic synergy that allows global, continental, national, and local economies to transition faster towards a sustainable future.

Polymodern Economics

Polymodernity is about learning from all of human history, taking the best, and combining it in the best possible ways. Polymodern economics is about combining historical economic models deliberately to achieve sustainability, wellbeing, and prosperity in meaningful ways. It has the same goals as the three economic models mentioned above, but economic actors of different sizes and levels of complexity can onboard the polymodern economy more easily, each in their way; it is a model for governance, but it is also a model for activism and individual contribution. Polymodern economics conceptualizes the economy in layers like Henderson does, but the layers are different: the polymodern layers are about group sizes and complexity.



What is polymodernity?

The word polymodernity means 'many modernities,' and by modernity is meant a cultural code, a values system, a *modus*, a way of doing things, a meaning-making structure, and a structure for what is good and bad morality. It comes from French *moderne* (1400s) and from Latin *modo* "just now, in a (certain) manner."⁸

By polymodernity is meant, very specifically, the four cultural codes prehistoric indigenous, premodern traditional, modern, and postmodern, and the combination of the four into a fifth cultural code that we can aim to create by learning from the past and taking the best from the four first codes and combining it in the most fruitful way.

These are the five codes in bullet points:

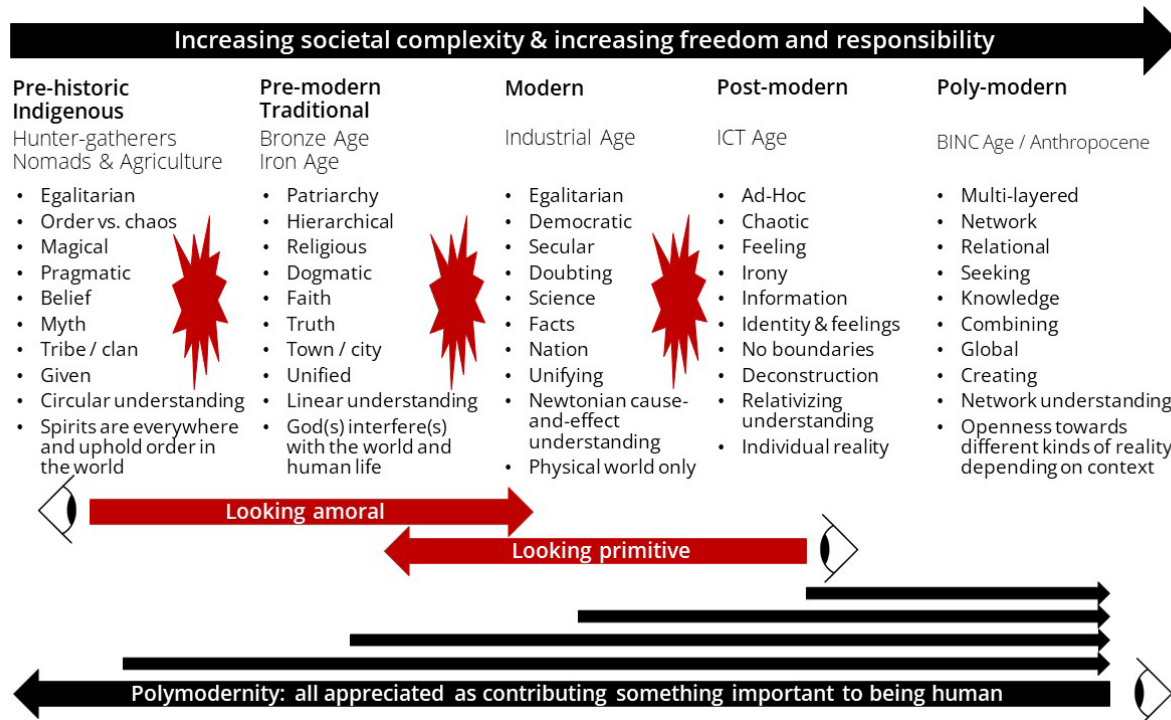


Figure 3: Polymodernity

Summing up and dividing up 300,000 years of human history around the globe into four cultural codes and claiming that this covers all historical development around the globe in all human cultures in all kinds of natural environments and climate zones is, of course, an oversimplification. Yet, there are some overlapping modes of being across cultures that relate to group sizes and technological development, particularly to communication technology and to the overall complexity of society and its technologies.

Polymodernity is about learning from humanity's cultural development so we can understand ourselves and make better deliberate choices about the future; we need a way to grasp and navigate history as it unfolded, so we have an idea of the big picture. With the cultural codes, we have a big picture, a map of history that allows us to see more patterns in human behavior and in cultures, and to learn from history. So, take this oversimplification for what it is: a map of history showing us the "continents of time," but no countries, cities, or towns.

The four historic cultural codes

Towards the end of this article, under the chapter Theoretical Framework, there is a slightly more elaborate exploration of the four cultural codes, but to get to the point and to polymodern economics, here are the four historical codes in headlines:



- **The prehistoric, indigenous cultural code** began with Homo sapiens sapiens 300,000 y/a and may also be referred to as the Stone Age.
- **The premodern, traditional cultural code** emerged with the Bronze Age in Mesopotamia, probably around 3800 BCE in ring-walled cities, some of which may have had up to 10,000 inhabitants.
- **The modern cultural code** began with Gutenberg's invention of the printing press with movable type in 1440, and it evolved with the Renaissance, the Enlightenment, capitalism, and industrialization.
- **The postmodern cultural code** has a few starting points, some of them are Nietzsche declaring God dead, Jaques Derrida's and Roland Barthe's poststructuralist philosophy in the 1960s, the playful and ironic aesthetics in the 1980s, and the collapse of the Soviet Union around 1991.

Between each two codes, there is generally a moral and cultural conflict: What is good moral behavior in one code is often perceived as amoral or immoral in the neighboring code (e.g. polygamy or questioning religious authority).

Polymodernity is different in that it sees value in all four previous codes; we cannot be human and live meaningful lives without elements from all of them, so polymodernity is about combining heritage from them in the best possible ways.

Polymodernity and sustainability

Particularly regarding sustainability, all four cultural codes provide a different relationship to nature, which may allow us to make sustainable living both more meaningful, better organized, and more effective:

- Indigenous code offers an intimate, spiritual, and emotional relationship with nature. We are nature. There is no boundary between us and nature.
- Traditional code offers a spectator's view on nature; it also offers a way for big societies to organize themselves culturally distanced from nature and provide food and shelter for tens of thousands of people. It allows us to see nature as an abstraction that is different from culture, it allows us to see the duality 'humans & culture' versus nature. This in turn allows us to see nature as an awe-inspiring 'other' that we need to obey: we are the small ones, nature is almighty. If we transgress nature's boundaries, it will kill us.
- Modern code allows us to study nature scientifically and to understand how it works. It allows us to manipulate processes in nature in ways that give us immense power and opportunities.
 - At first this understanding was Newtonian and linear and did not grasp the complexity and self-organizing systems properties of nature
 - Since the 1980s, mainly thanks to computers and computational power, modern science has increasingly understood, described, and computer simulated nature as self-organizing, dynamic, chaotic, complex, open systems, including their tipping-points and phase transitions, and scientists have developed models for circular and other non-linear systems and their processes and wellbeing.

One could argue that since this understanding emerged in the 1980s and 1990s, it could belong in postmodernity, not least because the concept of hierarchies is replaced by the concept of scale and context. What is a system is relative and defined by context. The reason I keep this understanding in the modern code and as part of its epistemology is that it is based on hard science and it regards natural systems as phenomena on par with, say, gravity and thermodynamics.
- Postmodern code allows us to deconstruct all three attitudes towards nature.

Let me here quote the former British Chief Rabbi, Sir Jonathan Sacks: *Science takes things apart to see how they work; religion puts things together to see what they mean.* We need to be able to do both, and polymodernity allows us to decide which one is most appropriate in what context.

A Polymodern Economy

The polymodern model of the economy entails structuring and measuring the economy in four different strata, layers, or sub-economic structures and treating them differently while daily life automatically combines and integrates them:



- 1) Indigenous stratum, micro-local gift-economy; group size: households and neighborhoods
 - a. In the following, I am going to refer to this stratum of the economy as the indigenous and households economy.
- 2) Traditional stratum, local, cooperative artisan market economy; group size: villages, towns, boroughs / arrondissements, and small cities
 - a. In the following, I am going to refer to this stratum of the economy as the traditional and town economy.
- 3) Modern stratum, nation based, industrialized, capitalist economy; group size: big cities, local states, and nation states
 - a. In the following, I am going to refer to this stratum of the economy as the modern and national economy.
- 4) postmodern; group size: continental
 - a. extremely investment heavy bio-, info-, nano-, and cognitive (BINC) sciences and technologies economy
 - b. speculation economy
 - c. digital economy
 - d. In the following, I am going to refer to this stratum of the economy as postmodern and continental economy.
- 5) polymodern, global, integrating all four and
 - a. contributing to and looking at the economy from the four different perspectives: household, town, nation, and continent, plus the global and nature as the foundation.
 - b. allowing for comparing economic complexity around the globe
 - c. promoting a tax, redistribution, and investment monitored and coordinated real economy based on sub-economies 1, 2, 3, and 4.

Each of the first four kinds of economy already exists within the most complex economies such as the American, the Danish, or the Chinese economy, but they are not seen as different strata of the same economy, their individual qualities and potential are not actively promoted, they are not linked to nature, and they are not linked to the global economy or compared to the similar strata globally either. We are also not measuring their unique contributions to the overall economy and wellbeing of society, which means that a: we have an incomplete picture of how healthy and robust the economy really is, b: people are probably not thriving as much as they could, and c: we do not have the optimal economic tools to promote sustainability and regeneration of nature.

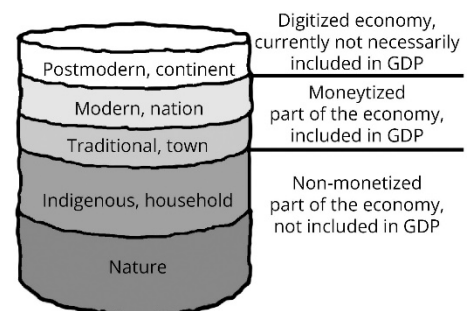


Figure 4: Andersen's Polymodern Economy

The polymodern economy can be portrayed as a cake with layers like Hendersons cake. Nature carries the households, and the households carry the rest of the economy, but once we get to the upper layers in today's economies, they mutually carry each other, it is just that the traditional town market economy came first, then the modern national capitalist economy, and then the postmodern continental digital economy.

Each of the four strata works in fundamentally different ways: they produce different things in different ways, they have different opportunities for promoting sustainability, they may contribute to social and individual thriving in different ways by allowing people to join and contribute in different ways, they have different onboarding barriers and opportunities and very different social dynamics. To see if any one stratum is thriving, different things need to be measured, and success looks very different in the four strata.

The indigenous, household economic stratum

The indigenous economic stratum is within the household and among households, typically within a 5-minute walking distance, and it supports relationships among individuals, families, and small groups. This is all the unpaid



work in the households (typically the work that used to be women's chores) and favors among neighbors and friends: I help you paint your fence; you babysit my toddler. I help you move; you give me a bottle of wine.

Characteristic for these mutual favors and non-monetary exchanges is that they create robust social networks, trust, and a sense of belonging. Characteristic for them is also, that if money is introduced, the relationship does not strengthen, it may even fall apart. Our brains grew from this kind of network creation among early hominids, and we get deep emotional satisfaction from exchanging these favors and bonding through them; the wine may just cost 10 dollars, and I would never have helped you move for 10 dollars, but the fact that you went out and bought it and gave it to me shows your appreciation and strengthens our relationship. We also maintain culture through shared meals, celebrating holidays, serving holiday foods etc. in the households and we socialize the next generation by playing games and passing on our norms and values. Henderson was absolutely right when she called it the Love Economy.

What is value in this stratum?

From the earliest indigenous hunter-gatherers to the nuclear family or single parent household in today's most high-tech cities, value in this stratum includes long-term good prospects for the children, sufficient and nutritious food for everybody in the household, time together, economic security, leisure and play, and happy faces. Food on the table, economic stability, intimacy, and happiness. Social status in the town and nation plays a huge role in happiness too, of course, which means that material wealth may dominate what is considered of value in a household. Whenever this is the case, depending on the scale, it tends to harm both the intimacy and emotional wellbeing of the household and nature.

What to produce in this stratum

In the indigenous, household part of the economy, we grow vegetable gardens, produce food and meals, care for children, the sick, and the elderly, we educate, reproduce culture, do repairs of everything from lost shirt buttons to building carports, and we clean, shovel snow, maintain buildings, and much more.

Sustainability perspective

The more production we can do within a 5-minute walk from our dining table, the less transportation we need. In suburbs, towns, and cities, growing vegetable gardens would contribute to biodiversity (especially compared to lawns and pavements), and it would contribute to food security.

Social perspective and thriving

Social interaction and deep relationships are basically what life is about. It makes us happy, and it combats loneliness, anxiety, and depression. The more the household is a work community where all generations play a role for the common wellbeing, the bigger the chances are that everybody feels needed and useful, and the stronger the social ties may grow. Homecooked meals are generally healthier than storebought, so health may improve along with increased production within the household.

Onboarding barriers and opportunities

The vast majority of us are born into a family and remain embedded in it through life—or at least we stay connected. The onboarding barrier is extremely low, in other words, and a good family life and life among close friends are among the best indicators for a long and healthy life.

What to measure

Since monetary transactions are out of the question in this stratum, other kinds of transactions need to be measured to see if the indigenous economy is doing well, whether it is growing or falling apart. My suggestion is regular surveys throughout the population, say, once per month, where, say, 0.1% of the adult population is randomly chosen to fill in an extensive questionnaire—or 1% a shorter questionnaire. To get a good baseline, the first-year surveys may be carried out once per week.

Among the questions could be: How many meals did you cook yesterday? How many people did you speak to yesterday? How many favors did you do or receive yesterday? How many minutes did you spend cleaning



yesterday? How many minutes did you spend taking care of children? How much of your food was homemade? How frequently do you take psychopharmaceuticals? How much did you talk to your neighbor(s) yesterday? How many minutes did you spend reading to a child? How many minutes did you spend teaching a child something? Etc.

The surveys need to be anonymous, of course, but the data could be linked to 5,000-10,000 person entities / areas (the traditional towns explored below), which would allow for better government and municipal investments in housing, cityscapes, gardening opportunities, and social interventions in general.

What does polymodern success in the indigenous stratum look like?

Success in the indigenous part of the economy would be high levels of social interaction and care among family members and neighbors, homemade meals prepared from fresh produce, particularly homegrown produce, and low consumption of psychopharmaceuticals and other medication.

The traditional, town economic stratum

This stratum consists of artisans, shops, independent healthcare providers, cultural venues, NGOs, coffee shops, restaurants, and schools and other educational institutions. It would typically be sole proprietaries, limited liability companies, steward ownership, associations, and cooperatives. Among the traditional production entities would also be regenerative farms.

Characteristic for this stratum is that people buy their day-to-day goods and services here, their kids go to school together, and over the years, even complete strangers may become familiar faces. There is chit-chat with local vendors, and they get to know their customers' personal preferences.

In the polymodern economy, the purpose of the traditional, town stratum is to promote strong, local economies that offer local jobs and business opportunities, and which generate local collaboration, creativity, and diversity, and a sense of identity and belonging. The goal is for people to get engaged locally and through different business and consumer choices to make more sustainable decisions, among other things by reducing transportation and buying produce from regenerative farms as close by as possible. Another goal is to increasingly shift from material consumption to immaterial consumption, such as art, culture, and education.

The 'traditional town economy' is the actual town, the borough or arrondissement, or the smaller city. It is an entity big enough to have at least one school, a cultural venue, a post office, and other basic public and health care services such as doctors and dentists, several artisans, grocery stores, shops of various kinds, and one or more houses of prayer. It is big enough that there can be both competition and collaboration among artisans and artists in the same industry, and it is an economic ecosystem within which one could spend all one's time and not lack anything (except, perhaps, variety).

The traditional town stratum is not an equivalent to but aligned with the idea of the 15-minute city, in which most daily necessities and services, such as work, shopping, education, healthcare, and leisure can be easily reached by a 15-minute walk, bike ride, or public transit ride from any point in the city.

This town sized traditional economy may rather be 15 minutes across, and though it does not have any physical boundaries towards neighboring 'towns,' it is conceived as a defined geographical area within which the economy is regarded a separate economy (like a municipality is separate from the neighboring municipalities and their economies, and they are all part of the national economy). These towns do not need to have separate political institutions, but regarding local production, artisans, shops, and cultural venues etc., the towns' economies are measured separately. They could establish 'town assemblies' for local collaboration purposes.

A town contains households from the indigenous economy, companies and other organizations and institutions from the modern capitalist national economy and from the postmodern continental digital economy. It also benefits from the national educational system and all the modern institutions of the state and municipalities, of course. But the town-local economic entities that define this 'traditional stratum' are the traditional market economy production entities: single stores, shops, artisans, local music venues, bakeries, microbreweries, repair



shops etc. The size of these production entities are typically 1-50 employees, and the ownership is generally sole proprietorship, cooperatives, and small limited liability companies. To 'qualify' as a traditional town company with the benefits that come with this, the company needs to be registered as such and meet certain criteria regarding size, local employees, and sales range; to be considered a traditional producer, production entities meeting a certain set of requirements such as 1-50 employees could simply register as 'traditional,' and if they grow out of it, they can change their status.

Many production entities matching these criteria mainly serve local customers, i.e. local individuals and households. A polymodern economy would reward this and have built in feedback loops in the economic structure so that they would also predominantly employ locals and trade with other local producers and customers. These feedback loops could involve lower taxes for local employees, and tax deduction for invoicing within, say, a 50 km radius based on postal codes. Particularly for cooperatives: lower taxes depending on the number of local members.

Lower taxes and/or VAT exemption could be offered to production entities producing immaterial products such as education, entertainment, and art, be it individual artists and educators and/or the institutions where they perform / work.

Other feedback loops would be tax deductions for buying produce from regenerative farms. This would mainly be relevant to bakeries and restaurants etc.

What is value in this stratum?

Value in this stratum is customized products, whether it is at the dentist, the hairdresser, the bakery, or when the plumber is called, and, typically, quality is appreciated over quantity.

What to produce in this stratum

In the town stratum any kind of artisan product can be produced: bread, clothes, plumbing, websites, beer, cheese, carpentry, interior decoration, unique furniture, ceramics etc. Independent (i.e. not franchises) local stores and small shops also belong in this stratum: bakeries, flower shops, bookstores, etc. as do services and healthcare such as dentists, doctors, masseurs, physio therapists, hairdressers etc. and artists, educators. Independent cultural and entertainment venues such as clubs, music halls, theaters, libraries, restaurants, and movie theaters thus also register in this stratum as do schools.

Sustainability perspective

The more local production and trade are promoted, the less transportation people and goods will need. By favorizing regenerative agriculture through the taxes, market mechanisms will move consumption towards regeneration. If people did not spend their time commuting, there would be more time available for culture and education, and consumption could be moved from material goods to immaterial goods.

Social perspective and thriving

By favorizing local employment and local production and trade, local social networks will be strengthened, and a traditional 'village feel' may emerge where people know their local artisans and shop keepers. If more cooperatives are created locally, people will invest in them, engage in them more as members, become loyal patrons, perhaps even volunteers, and they will start getting to know more people locally. Individuals, companies, and cooperatives may also knowledge share and start collaborating locally.

With local communities strengthened this way, it may also be possible to lower the threshold to employment for people who are normally hard to integrate into the workforce. With more of a local community, it may be easier to know who can, say, sweep floors for an hour per day, and who among the stores need that kind of help. It may also be easier to share, say, a bookkeeper or a cleaning person if 2-3 stores 5-10 minutes apart realize they have the same need for parttime help.

The polymodern economic model is about economic structures, but structures have social consequences, so, without trying to define what the social outcome should be, the idea is to make local word-of-mouth knowledge-



sharing as easy as possible. If the system is set up to prioritize local interaction, human nature will get people talking and they will start collaborating and solving local problems.

Onboarding barriers and opportunities

Taxation, legislation, regulations, and business categories will need changes and additions, but the production entities will just carry on as they normally do. They will have to qualify and register as a 'traditional company' to get the tax benefits, and there will be some extra reporting for the cooperatives, since their number of members will influence their taxes. There will thus be some extra auditing and monitoring, but at the day-to-day business level, running a traditional production entity will not be fundamentally different from the way it is today. The day-to-day decision making will hopefully change as business decisions will include from and to which postal codes it makes the most sense to buy and sell to reduce transportation and get tax benefits, and where to find regenerative farms or wholesalers who deliver regenerative products.

For the individual, the traditional, town local production entities would offer lower thresholds to the production side of the economy than the modern economy. Companies registered as traditional might even be allowed to 'employ' locals on social welfare up to, say, 5 hours per week at reduced or no pay that will not interfere with their social benefits, but which may add tremendously to their thriving and integration into the local social life. Such changes to employment would need support from the unions, of course, which will be easier if there is a separate economic category for the kinds of companies that can employ on different terms.

What to measure

The current economic measurements for the economy can continue. In addition, the following could be registered and measured:

- Whether production entities mainly produce material or immaterial products. Immaterial production should be favored taxwise.
- For producers of material goods, byers' and seller's postal codes on invoices should be registered so that auditing and taxation can factor in geographical distance for transactions.
- The number of cooperatives in a local economy, the number of members in the cooperatives, and the distribution of members as an expression of local interconnectedness.

What might also be a useful measure would be the distribution of invoiced business connections: a company invoicing only one or very few customers may be very vulnerable during times of great changes; a company invoicing numerous customers only one time each, may be equally vulnerable but for very different reasons. The distribution of invoiced customers may be used as a measurement of economic robustness and may indicate the health of a local economy.

What does polymodern success in the traditional stratum look like?

Success in the traditional stratum is thriving local communities with a rich cultural life, local production of food, services, entertainment, art, culture, and education. It is local areas and towns with strong local identities and flavors, such that one town may become known for its clothing designers, microbreweries, and vegetarian restaurants, another one for its outdoor activities, ceramics, and furniture design. Local history, an educational institution, or access to certain fruits or fish may spark a cluster of production entities that compete in the same field and thus inspire and push each other to set new standards. Michael Porter has explored this development particularly at the national level in his Cluster Theory,⁹ but it exists at the local, town level as well. Such environments cannot be designed or predetermined, but by building feedback loops into the economy that favors local networking and collaboration, creative people may start moving to places that offer an inspiring environment and potential collaboration for them.

With such a diversification or schismogenesis among towns, tourism may change. To experience something interesting of a high quality, one would not have to travel hundreds of kilometers or fly away for the weekend, one might just need to get on the bicycle for 20 minutes to arrive in another part of the city with aesthetics like nowhere else, excellent restaurants door by door, and a unique music scene.



The modern, industrialized, national economic stratum

Production entities in the modern, industrialized stratum of the economy are the capitalist companies that need massive investments up front to get started: factories and extraction of raw materials where it would make no sense to have the products produced by artisans in the traditional economy. Historically, stakeholders such as investors and employees have been from the same national economy, and they are the main production entities of modern macro-economic theories.

What characterizes the modern, national economy is mass production of homogenous physical goods, from toast bread and pain killers to refrigerators and cars. The purpose of the modern stratum, historically as well as in the polymodern economy, is optimization of productivity, minimizing waste, energy efficiency, and standardization of quality by large-scale manufacturing.

Since land and energy were taken out of the neoclassical model, and nature and ecosystems were never part of it, the modern, national stratum of the economy needs to rethink how they work and what is success.

Included in the modern stratum of the polymodern economy are companies and NGOs with more than, say, 50 employees, and all institutions (courts, hospitals, military etc.) of the modern society. In the following, focus is on the companies that produce material goods.

What is value in this stratum?

This is all about producing more with less, and about creating a profit for the shareholders. Money is turned into products in order to generate more money; money itself is the value here. It is based on this concept of value that the concept of GDP was created: Gross Domestic Product. Transactions that include money are defining the GDP; neither nature, love, nor quality counts, and it is explicitly domestic, i.e. national.

What to produce in this stratum

The modern capitalist production entities are still needed for large-scale production of cement, wires, tires, tiles, pipes, chemicals, etc. and standard goods and foodstuffs like flour, pasta, sugar, canned goods, frozen vegetables, sodas, jam, bread, detergents, soap, furniture, clothing, shoes, pots, pans, cutlery, etc. Low tech goods where quality may vary and design and brands may make a difference, but where there is no big need for R&D and groundbreaking technology. Some medicines and other products such as dishwashers and fridges that were once high-tech products but are now commodities that have been in the market for decades may be included in this stratum as well, but cars that are increasingly R&D, AI, and tech heavy and need electrical charging are drifting towards the digital, continental stratum.

Sustainability perspective

Large-scale production may be more efficient than small-scale, but it may also involve more transportation. So, as with the traditional stratum, feedback loops should be built into this part of the economy, so geographical gravity is rewarded, and long-distance transportation is minimized. Modern industrial production entities can do a lot to make their production more sustainable by promoting circular and regenerative choices, and they may hire a mainly local workforce to minimize commutes, but industry production may also be located away from residential areas and have poor public transportation options because bulk delivery of goods is prioritized. Green tech from the postmodern stratum may have considerable sustainable impact.

Social perspective and thriving

Companies in this stratum may contribute to a thriving workforce by prioritizing indigenous elements in the business culture such as small work groups and communal eating during lunch breaks, and they can make a huge difference with regards to job security, decent work hours, living wages, and distributed, collective, democratic, modern decision making within the organization.

Onboarding barriers and opportunities

The onboarding for the companies themselves into the modern stratum, i.e. the capitalist startup investment is not that different from what it has always been. To a large extent, the opportunities for the modern, capital-demanding



industrial production lies in investing in robots and AI to do standardizable work and to use green energy for the robots, and though both may represent a bigger investment up front than hiring people, it is long-term cheaper and likely greener.

Industry work used to be hard and dirty for most of the workforce, now much unskilled labor has been taken over by robots, at least in the West, and much skilled labor is being taken over by AI and robots too. The entry barrier to the modern job market is getting higher and higher, and the jobs that are left are currently getting increasingly stressful. Onboarding into the modern stratum of the economy is becoming more and more demanding. This can be seen as an opportunity for more meaningful jobs in the traditional stratum of the economy, and as a wake-up call for better education, which may also give access to the postmodern economic stratum.

What to measure

Production entities in the modern stratum of the polymodern economy should be measured on the same parameters as the traditional production entities, and on top of that, they should be measured on energy efficiency, CO2 neutrality, impact on the natural environment in general, and the durability of their products. This should be weighed up against their economic success as a score that can be compared across companies within each industry.

What does polymodern success in this stratum look like?

Success for the modern production entity in a polymodern economy is to contribute to a thriving planet and a thriving local environment while making a profit on producing safe, durable, quality products with thriving employees who do not have to commute long hours.

Companies that are town size with regards to numbers of employees, may also think of themselves as a town (fractal mindset) and incorporate town elements in the way they let employees self-organize how to solve their tasks.

The postmodern, BINC, continental economic stratum

Production entities in the postmodern BINC stratum of the polymodern economy are universities and companies with cutting edge R&D departments, and though perhaps funded nationally, they should be working continentally: the talent mass needed for cutting edge research and creativity in any high-tech field is limited, and any one country cannot count on educating and growing the necessary talent mass themselves.

Among the postmodern production entities are the BINC tech startups, though they may only employ a handful of people. Particularly the software companies are by definition fundamentally different from the modern industries since they require no physical transportation, geographical gravity has been eliminated, employees can be anywhere, and the value creation is very often global very early on. They change the economic fabric, since scaling up the number of produced copies is basically without marginal cost, very few people can create enormous value in the market, and, very often, the real product is the company itself. Typically, small startups are bought by larger companies once their software has proven successful, which means that there is a radical monopolization in the postmodern, digital stratum: losers have paid for their own failure, successes are bought up, become part of a hub, and create new multimillionaires and billionaires.

From a global perspective, it is crucial that all continents educate and develop their own talent mass to participate and contribute to the postmodern, digital economic stratum, and that they have universities and companies that can do this.

What is value in this stratum?

We need to find out and to define it, because the technologies are undermining the previous economic model, modern capitalism, and the democratic political system.



The purpose of the postmodern stratum in the polymodern economy must be to make life easier and safer for people and planet, not to concentrate money and power or to increase surveillance and undermine freedom and democracy.

Included in the postmodern stratum of the polymodern economy are all companies in the bio-, info-, nano-, and tech industries (BINC), but particularly the digital production entities are creating an entirely new economy beyond the real economy. The economy in cyber space can, in principle, grow exponentially and dwarf both the traditional and the modern economic strata as well as the rest of the postmodern economic strata, including the speculation economy.

What to produce in this stratum

Production entities in this stratum produce goods that require extremely high levels of technological and academic expertise.

Sustainability perspective

If the so-called Power-to-X turns out to be more than a wet dream among tech fetishists who are not interested in changing their material consumption, the BINC technologies may be able to solve many of the environmental problems. The problem is that nobody can plan for technologies that have not been invented yet. Another problem may be that one company may have monopoly on the new energy source.

Among the challenges produced by the postmodern, digital economic stratum is the energy consumption by servers; the generation of Bitcoin alone uses more energy than Norway.¹⁰

Social perspective and thriving

The intersection between bio- and nano-sciences was where the extremely fast development of efficient covid vaccines took place, which allowed humanity to end the deadly part of the pandemic within two years. The covid virus is still out there, but thanks to fast intervention and BINC technologies, it quickly mutated to a relatively harmless virus, which has allowed us to resume a normal life.

Digital technologies may make production easier and contribute to lower work hours if we are clever about it, but as long as the market is the driver of the BINC technologies, particularly the information technologies are making millions of people miserable. Social media are designed not just to keep us engaged, but to keep us enraged. Particularly teenage girls are suffering under the social media regime. Furthermore, children are now growing up having their brains “wired” by screens rather than physical, social interaction with other children and adults, and nobody knows what this is going to do to their emotional and cognitive life as they grow older.

Onboarding barriers and opportunities

Onboarding into the production side of the postmodern, BINC, continental stratum is extremely hard and requires years of education.

The opportunities for individuals with access to the education and other resources that allow them to have a career in the BINC part of the economy are immense, for everybody else, the picture is mixed.

What to measure

First of all, nations need to collaborate globally to monitor and stay on top of what BINC technologies are actually doing. We need new institutions that can handle the BINC companies and make sure they benefit humanity and pay their due taxes.

New taxes that may be worth considering are data taxes and market share and monopoly taxes, so that taxes increase with market share. Above a certain revenue, copyright, patent, and immaterial property rights fees would make sense, so that any company above a certain size that wants to keep exclusive copyright, patent rights, and immaterial property rights pay the society that upholds these rights for them.



What does polymodern success in this stratum look like?

The first criterium for polymodern success in the postmodern BINC stratum is that the new technologies do not tear societies apart, ruin civilization, and ruin the planet. Secondly, that we do not allow them to overrule democracy and human rights, re-feudalize humanity, increase inequality, and keep us all under constant surveillance and manipulation.

On the positive side, new technologies may cure previously incurable diseases and allow us to feed 10 billion people with nutritious and tasty food while restoring much of the nature we have already ruined.

To allow this kind of success will require an immense upgrade of the educational level among everybody, so that not only political and corporate decision makers can make wiser decision regarding the BINC technologies, but so that also voters in general can grasp what is going on.

What would polymodern economic success look like?

A successful polymodern economy has four economic strata that are all healthy and thriving, and nature is thriving too. Within each stratum, there is co-evolutionary variety and a rich structure of interconnectedness, an interconnectedness that also extends into the other strata.

In and among households, there is frequent social interaction and exchanges of favors and homemade goods.

Individuals and households buy more locally produced food, increasingly have broken things repaired locally rather than by default buying new replacements, and they frequent local cultural, educational, and entertainment venues incl. restaurants rather than spend their money on material consumption. They generally have a short commute to work, they are members of several local cooperatives, and they volunteer locally.

Traditional production entities with any kind of artistic component (i.e. bakers and musicians but not plumbers and electricians) co-evolve and specialize in the local competition, which in turn improves quality and drives the development of clusters and aesthetic schismogenesis away from neighboring towns. In this process, towns will, over time, attract people who share certain lifestyles, values, and ambitions. They will rely on shared sub-contractors and, for instance, students from local trade schools and/or universities. With time, even cities and suburbs with no particular history but with 50,000 or more people may develop enough local flavor and uniqueness that they may become tourist attractions, and cities with 1 million inhabitants may have 5-10 towns within them, each with its unique flavor and cultural scene.

Modern production entities will produce raw materials, commodities, and durable material goods that, in case they are broken, are worth repairing. Repair will typically take place in the traditional stratum where repair shops may flourish.

Both traditional and modern production entities are deliberately contributing to regenerative production.

The postmodern BINC production entities are regulated continentally with due oversight from a new generation of public institutions under democratic control and are deliberately conscious about and held responsible for how they promote human and planetary wellbeing, freedom, human rights, and democracy.

These changes are achieved mainly through new criteria for success, new kinds of measurements throughout the economy in all four strata, new opportunities for education, new content in education, and new feedback loops in the economy, mainly in the form of taxation and tax deductions.

Theoretical framework for the polymodern economy

Behind this suggested polymodern economy are concepts such as the cultural codes, considerations about economic theory, productivity, complexity, healthy self-organizing systems and the relationship among them, human psychology, and harmony with nature.



Cultural Codes

Human history did not unfold in four distinct 'chunks,' but the four cultural codes are a way of seeing a bigger picture and some patterns in the way cultural evolution unfolded. The codes are a map, not the historical territory, and they allow us to see how some societal structures evolve over time, and to consider which structures are worth preserving and strengthening, and which perhaps need to go, depending on the context.

The prehistoric, indigenous cultural code began with *Homo sapiens sapiens* 300,000 y/a and may also be referred to as the Stone Age. As nomadic hunter-gatherers, humans lived in small tribes with rarely more than 150 people in their day-to-day group, and nobody would own more than they could carry around. Hence there was not much social hierarchy, and everybody could talk to everybody else or to the same shaman or wise old woman in case of a problem. There was no or very little power distance.

Stone Age agriculture fully evolved with the onset of the Holocene around 11,600 y/a. As humans settled around horti- and later agriculture, settlements or villages may have grown to some 1,000 or 2,000 people. This would still be relatively small groups where everybody would know who belonged there and who was a stranger, and where everybody could gather simultaneously for collective rituals. Leadership would still be rather democratic, society would still be egalitarian, and ownership of wealth would generally be collective and distributed rather evenly among group members.

Nomadic hunter-gatherers, pastoral nomads, settled hunter-gatherers, and agricultural groups were all animists: Humans saw themselves as part of nature, there was no boundary between humans and all other life, all life had spirit, and so did rocks, the wind, and the water etc. One difference between horti- and agriculturalists and the hunter-gatherers would often be that with agriculture, earth and the soil itself became a goddess; Mother Earth became the central deity. The human connection to the rest of the planet was intimate and spiritual.

The premodern, traditional cultural code emerged with the Bronze Age in Mesopotamia, probably around 3800 BCE in ring-walled cities, some of which may have had up to 10,000 inhabitants. With more people, inequality grew, and power hierarchies emerged. So did work specialization, artisanship, and the market square. Here merchants started jotting down deals and debts on little tablets of wet clay, which could then carry the message once the clay had dried: codified picture writing had begun. Around 3000 BCE, it had evolved into cuneiform, a full-fledged codified writing system that lasted millennia. With work specialization and artisanship came polytheism; each important thing in society got a deity of its own: the sun, the water, the Earth, truth, justice, fertility, love, war, trade, writing, metalwork, wine, etc. Each with its own temple and priesthood. At the top of these societies was a divine or semi-divine Ruler, not unusually presented as the son of a virgin mother and a male deity, Codified writing allowed for written legislation, and many of these rulers we know about today due to the legislation they produced: Divine rules for society. Religion and legislation were one, priests were representatives of both divine and societal power, and to support them there were soldiers. The feudal order or caste system had arrived: The god-king at the top, under him the clergy, then the warrior caste, then the landowners, and at the very bottom: the landless and slaves.

Iron was first introduced for tool making in present day Turkey around 1300 BCE, and around the same time, people further south, in Phoenicia, invented the alphabet. Iron came into use in China around 1100 BCE. What has been called the Axial Age, was the period 800-300 BCE when, in an axis from Greece to China, Greek philosophy, Judaism, Zoroastrianism, Hinduism, Buddhism, Taoism, and Confucianism all emerged; the religions have older roots, but during the Axial Age they got their main texts and forms we recognize today. This axis was a climate belt where seeds and livestock could be traded and bred, and the cities along the axis bloomed as a result. The largest cities in China, the Middle East, and Europe grew to 100,000 inhabitants, some even 300,000, and Rome reached 1 million inhabitants around year 1. In these large cities, the individual faced a new kind of autonomy, there was a new kind of expectations around personal responsibility, and what we know as the world religions today were a reply to the confusion of city life: Follow this way of life and you will be good! Societies that came up with good narratives, rituals, public spectacles, viable answers to existential problems, and meaningful methods of prayer



survived. During the Iron Age, the feudal structure did not change; politics and religion were still in the hands of the priests.

Part of the premodern, traditional code was to distance culture and humanity from nature and see humans as a unique lifeform 'outside' and above nature.

The modern cultural code began with Gutenberg's invention of the printing press with movable type in 1440. This caused a communication tech revolution that undermined the monopoly on knowledge of the Catholic church, then sparked the Renaissance, colonialism, capitalism, and the Reformation, which resulted in a new political and religious landscape in Europe. After the 70 Years War and the Peace of Westphalia in 1648, the 'secular rulers,' i.e. kings and dukes, could now decide to which of the two Christianities they would submit their reign: Catholicism or Protestantism. Europe got 'collective freedom of religion,' state by state. Then came Newtonian physics, modern science in general, the invention of the steam engine, industrialization, and a revamping of the feudal society as bourgeoisie and industry workers could not be contained within the feudal structure of fixed estates. Eventually, modern nation states emerged, religion and politics were separated, and the West got individual freedom of religion, political liberties, and liberal democracy. Later came two world wars, the UN, and the Universal Declaration of Human Rights. From the 1960s and onwards, the colonies acquired independence.

Part of the modern code was to put humanity in control of nature; with the steam engine followed not just mass production, but also an immense sense of power over the forces of nature.

The postmodern cultural code has a few starting points, some of them are Nietzsche declaring God dead, Jacques Derrida's and Roland Barthe's poststructuralist philosophy in the 1960s, the playful and ironic aesthetics in the 1980s, and the collapse of the Soviet Union; ideology and power hierarchy imploded all by themselves. The winners: irony, relativism, and cultural deconstruction. The main structure that was not deconstructed, capitalism, filled the existential void, and ended up defining everything.

Part of the postmodern code was to not see nature at all. Everything was a social construct. Eventually, the two sexes that produced us in the first place were seen as social constructs too; the 'real' sex was the gender, which became 'ascribed' at birth rather than observed. Sex became subjective truth, which then overruled biological sex, which in turn could be brought in line with the subjective truth via surgery and medication.

Conflict between the codes

Between any two neighboring codes, there was always a conflict: From the perspective of the old code, the newer code looked as if it had no moral values; the old code could not decipher the morality of the new. From the perspective of the new code, the old one looked 'primitive' or outdated, if not downright immoral. This perspective is not a White Western perspective, the old Babylonians regarded the non-city dwellers as primitive too.

After postmodernism

Not mentioned in the polymodern economics but worth knowing about is **metamodernism**. Metamodernism is a concept that was first conceived by Albert Borgman in 1992 in his essay *Crossing the Postmodern Divide* where he suggests that metamodernism may be what follows postmodernism.

Later, after the financial crash in 2008, metamodernism was re-invented and explored by two Dutch cultural theorists, Timotheus Vermeulen and Robin van den Akker, as a sentiment among a generation of young people who had grown up on postmodern irony and deconstruction and suddenly faced the harsh realities of economic restraint and a need for structures. The world turned out to have consequences. As a result, a double-sentiment of sincerity and irony, and a need for both structure and deconstruction emerged. Metamodernism has thus blended two previous codes, modernity and postmodernism, and does not see much of a conflict between itself and those two codes. Depending on the metamodern thinker, metamodernism may or may not see what came before modernity, and different thinkers or schools of metamodernism have different views on the premodern traditional and the prehistoric indigenous.



Metamodernism, metamodernity, and polymodernity

What I now call polymodernity I have previously called metamodernity. To avoid confusion and a mix-up between metamodernity as I have suggested it and the metamodernisms that others explore, I decided to change the name metamodernity to polymodernity. Semantically, it is also a better name: meta- means beyond, poly- means several. What I am suggesting is a potential future epoch of several cultural codes or 'modernities.'

Hypermodernism

In his 1992 essay, Albert Borgman contrasted metamodernism with hypermodernism. Metamodernism was a possible post-postmodern future that would be meaningful and acceptable; hypermodernism would be a future in which capital, tech, constant surveillance, and violence would rule and ruin the planet.

Polymodernity and why we need four codes

The threat of a hypermodern future is not just real, it is the direction in which the world seems to drift, unless we make a deliberate effort to create a humane, meaningful future.

Polymodernity offers a vision for the future that is meaningful because it continues elements from all four historical cultural codes, all four meaning-making structures that have already served generations of humans by allowing them to make sense of the world and to be good, moral people.

Polymodernity is a deliberately multi-layered cultural code that allows a plurality of both codes (how civilizations change over time) and of cultures (how the codes are practiced by different peoples) simultaneously and in the same physical location. Rather than seeing conflicts among the codes, polymodernity allows us to see how each code serves its own purpose in different contexts, and with this openness to plurality a door also opens to seeing how different cultures within the same code may co-exist and enrich each other. One may see codes and cultures as two different ways of cutting the cake: layers versus slices.

France has indigenous roots that grew from its particular flora, fauna, and landscape, it has uniquely French traditions, there is also a modern France, which has contributed uniquely to the political development in the West, and French philosophers trailblazed postmodernism. Something similar can be said about Norway, China, and other countries and, today, all cultures are struggling to get their indigenous, traditional, modern, and postmodern roots and heritage to co-exist.

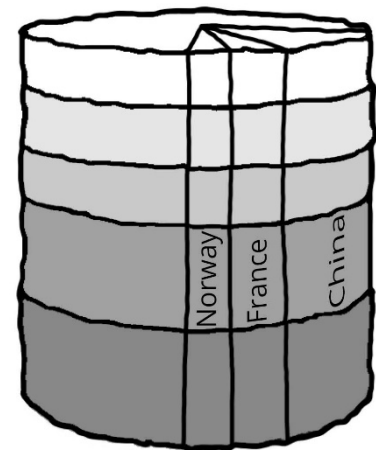


Figure 5: Have your cake and slice it too...

The same can be seen with even bigger force within religions. Judaism, Christianity, Islam, and most other religions are both products of the traditional, premodern world, and Jews, Christians, and Muslims etc. with a premodern, traditional worldview have tremendous problems accepting that their religion has indigenous roots that are older than the religion, just as they have problems accepting the modern and postmodern cultural codes. In many cases, traditional Jews, Christians, and Muslims have more in common than premodern and modern Jews have, or premodern and modern Christians and Muslims, respectively. Cultural codes are about morality, and within premodernity, there are shared structures of morality that clash with the moral structures of modernity, and this clash between codes is deeper than the clash between one denomination and the other. Morality, which is what the codes represent, is a basic human need; any one religious denomination is not. Morality is deeply connected to the way our brain works and it is embedded in our most intimate relationships; denomination is varnish.

Recognizing all layers of morality

Polymodernity is about recognizing that all four ways of meaning-making and morality have important qualities. And that neither one of them is enough on its own in the complex world that we have now created. Our inner world and moral meaning-making must match the outer complexity, otherwise we cannot handle the outer world.



Contrary to each previous individual code, polymodernity thus does not require of people that they give up their current morality and meaning-making, but it insists on adding something to everybody's meaning-making. Hopefully, this will be easier for many to accept rather than having to give up one's current meaning-making and morality.

This raises some other questions, though: When to apply which cultural code? How to avoid an even bigger moral relativism than postmodernity, or a complete mess of conflicting moralities?

Polymodernity and power

A rule of thumb that I think may work regarding when to apply which code as an organizing principle and power structure is group sizes—with very fuzzy boundaries; here illustrated as gaps in the numbers:

- Indigenous code: family and other small groups up to 150 people:
- Traditional code: groups of 500-100,000 people
- Modern code: 500,000+ people
- Postmodern code: a lens through which to deconstruct and take a critical look at all groups and their codes.

Within the family and other small groups where one can see everybody and read their body language, ad-hoc, nonformal negotiation may work as organizing principle and power structure. Within the midsize groups (companies, for instance), shared rituals and top-down leadership may work as organizing principles and power structure. In the nation state size groups, there needs to be rule of law, room for diversity and disagreement, negotiation, and democracy for everybody to thrive as much as possible.

The reason group size is suggested as a rule of thumb is that any group size matched with the wrong organizing principle is a recipe for trouble:

- Indigenous code applied to nation state leadership, i.e. where intimate relationships and ad-hoc negotiations of decisions rule, equals corruption.
- Traditional code applied to either family or nation states equals tyranny.
- Modern code with democracy and written legislation applied within the family would break down intimate relationships.
- Postmodern code can only deconstruct, it cannot build lasting social structures.

The four codes developed because of growing group sizes, and they cannot serve people well as a power structure in the wrong context.

In a polymodern culture, we would be conscious about which codes to apply or take inspiration from in which context, particularly which groups size.

Economy versus policy

Recently, an understanding that the neoclassical economic model cannot deliver sustainability for humans and nature has sparked new models such as *Doughnut Economics*, *Wellbeing Economy*, and *Earth for All*, which is a project by the Club of Rome. All three models are crucial, and I am positive that they can support as well as benefit from the polymodern economic model. However, I only perceive *Doughnut Economics* them as an economic model, I see the other two as political frameworks and political choices. There is nothing wrong with this, quite the contrary, I just find it slightly misleading and food for thought that we may have become so afraid of calling anything political that a new, political idea needs to be labelled 'economy.'

Polymodern Economics is about actors in the economy and how they interact. The goals of how much greener or sustainable any particular part of the world should be, I consider political choices, and these political choices may be promoted by adjusting economic levers as described in this model. Polymodern Economics may serve high or low regenerative and sustainability ambitions, but the actual outcome is not set by the model itself, it offers only a structure and a different way of looking at macroeconomics as economics.



What is value and wealth?

A rich life has many qualities, among them material and economic security, but that is only part of life. A rich life consists of intimate and stable relationships, cultural identity, participation / contribution on both the consumption side and the production side in one's society and economy, and access to thriving nature. How much of each the economy should generate is a political choice, and polymodern economics will allow us to measure and adjust mechanism in the economy that may produce less or more of this multifaceted richness.

The purpose of polymodern economics is to promote rich and meaningful lives, but the measures of the model are not the impact on nature, which what Doughnut Economics does, and/or subjective measures such as well-being. The measures are in the economy and the transactions in the economy itself.

Complexity

Different scientists and mathematicians have defined complexity differently. The definition of complexity behind polymodern economics is two concepts coined by Brian Arthur:¹¹ co-evolutionary diversity and structural deepening. Co-evolutionary diversity means that the entities in a system are products of one-another; they brought forth each other. As the entities compete and specialize to find their niche in the system, they become increasingly advanced and specialized, which is what Arthur calls structural deepening.

Co-evolutionary diversity and structural deepening mean that one cannot design an open, self-organizing complex system, but the circumstances for it can be designed so that the entities in it may flourish. Polymodern economics is an attempt at such a design, which will allow individuals, households, and traditional, modern, and postmodern production entities to thrive and contribute to lives as rich as possible. The outcome is not predefined, but the framework promotes and rewards certain trading patterns.

The polymodern economic model does not suggest measuring co-evolutionary diversity and structural deepening per se, but suggests that transactions per capita among individuals, households, and production entities in the traditional, modern, and postmodern strata are an expression of economic complexity. Particularly if there is a normal or scale-free distribution of connections that turn out to represent a robust and fruitful level of complexity, which is a topic that ought to be explored.

Productivity

With robots and AI taking over increasing parts of the production of physical goods, we are about to find ourselves in the peculiar situation that we are no longer necessary for our own survival. Taken to its extreme (economists like that kind of pure scenarios), we could increase productivity to the point where one big super-AI-robot produces everything everybody needs, loads it onto drones, and they fly it out to everybody around the globe, and only one person needs to be employed to switch it on. That would be the ultimate optimization of human productivity.

This is unlikely to happen, of course, but our productivity is increasing so drastically that the entry barriers to the capitalist national economic stratum is becoming increasingly hard. The national stratum is also the part of the economy where we have seen the big productivity increase since the invention of the steam engine; in the current economic models increased productivity equals growth, which equals economic success. Our economic growth, in other words, is making it increasingly hard for people to join the stratum of the economy that has accounted for the majority of past economic growth—and joining the continental BINC stratum, which contributes to 21st century growth, is even harder.

Another problem with making economic growth based on increased productivity the goal of the economy is that we produce so much in the West now (or have outsourced it to overseas producers) that we need to increase our consumption to keep our jobs. This is not sustainable, neither ecologically, nor economically.

By measuring economic transactions and complexity instead of growth, we can create a sustainable measure for economic success. Economic success does not have to involve increased productivity and increased material consumption, we can increase transactions and immaterial consumption and have a thriving economy. We just



need to measure something that we are not used to measuring, namely complexity, and using trade connections as a proxy for complexity.

Global Polymodern Economics

This text is written very much from a Western welfare state perspective, which from a global perspective is very much an exception.

However, understanding any economy as a polymodern economy will allow us to compare economies around the globe in more informative ways than GDP, GDP per capita, employment, educational levels, and companies and patents per capita etc. The measurements in all four strata ought to be possible to carry out, at least to some extent, in any relatively developed economy. This will allow us to compare households, towns, nations, and continents and the relationships among/between them around the globe. Suburbia in Brazil and China become comparable to towns in Russia and the US, which become comparable to inner city neighborhoods in France and Australia.

Economic complexity

Any economy may be seen as a network of transactions, and the number of transactions as well as the distribution of transactions may be seen as a measure for complexity in the network. In polymodern economics, it is assumed that a more complex economy is both richer, stronger, and more robust than a lesser complex economy, i.e. with fewer connections.

By looking at the four strata separately, it may be possible to develop a model for a thriving economy based on the complexity in each stratum: What are the optimal relative levels of complexity among the four strata for people to thrive in any given place? It is assumed, for instance, that the extremely high level of complexity in the postmodern continental tech industry stratum in Silicon Valley surrounded by extremely low complexity in the indigenous household stratum among homeless people is the cause of great misery, even though the neoclassical model shows economic growth in the area.

It may also be possible to compare economic complexity among households, among towns, among nations, and among continents, and it may thus be possible to explore globally, how weak (i.e. less complex) economies may best become more complex and thus stronger by focusing on the development in each stratum.

Global Economic Thermodynamics

Oversimplified, the second law of thermodynamics teaches us that if we add water to a kettle, add energy to the water in the form of heat, the heat will rise inside the kettle and so will the pressure, and unless there is an energy exchange with the surroundings through work or an opening in the kettle, at some point the kettle will explode. Alternatively, one could have fortified the kettle and kept fortifying it, or one could have raised the heat and pressure in the surroundings to the same level as inside the kettle. Energy levels in systems and barriers between those systems need to match, or we have exploding systems.

If we keep letting some of the world's economies grow in complexity while others do not, we either need to keep building the barriers between the economies stronger, or we should expect exploding barriers. This may be very literal in the form of terrorism and war. If we remove the barriers completely, we should expect the systems to fall apart. To have functioning and healthy economic systems there needs to be exchange of energy and economic activity among systems, and we should expect explosions if some systems become significantly more complex than others.

To promote peaceful global development and to lower the number of economic refugees, levelling out complexity inequality is crucial; polymodern economics would allow us to draw economic complexity heatmaps of the world that would clearly show where households, towns, and nations are in the most need of complexification and economic development.



Human Psychology

The reason for the explosions of barriers between unequally complex economies is not the economic activity itself, but the human sense of justice and injustice. When basic necessities are guaranteed, it is not absolute wealth that defines our happiness, but relative wealth. Being poor among other poor people is bad, but being poor and living next door to significantly richer people is unbearable. It creates resentment, frustration, anger, and hate, and it often also leads to violence among the poor.

The worst thing that people can lose is their sense of hope. Given the way polymodern economics looks at economy in four different strata, it ought to be possible to approach economic development from a hope perspective: How can economic development be promoted so that it creates in the fastest possible way a sense of opportunity, results, and hope among the poorest? In countries with low levels of education, the market economy town stratum is most likely the stratum on which to focus. It is probably where deliberately creating easy onboarding into the economy would give the most people new opportunities. Instead of just seeing economic aid and investments in weak economies as aid and investments, we should identify what would increase the number of economic transactions in the traditional town stratum as quickly as possible, which would allow households to earn more money, and the national stratum to grow too. Among the tools may be progressively taxing the rich, which are usually making their money in the national capitalist stratum if not in the BINC continental stratum and paying the poorest individuals for getting education, doing simple jobs in the traditional market town economy, and establishing cooperatives.

Humans are by nature industrious if we can see opportunities. It ought to be the task of economists to provide the structures within which human industriousness can unfold in fruitful and sustainable ways with the local resources available.

Harmonizing the Economy with Nature

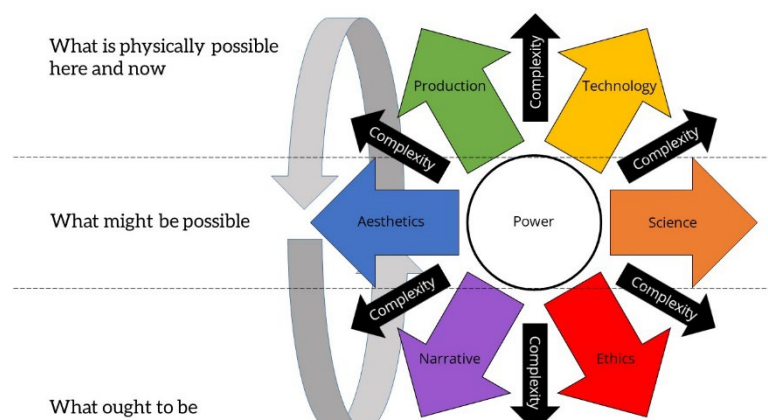
With polymodern economics, it becomes possible to see economies as self-organizing complex open dynamic systems with fractal properties, just like nature. By studying biotopes and their internal balances, we can learn what a thriving, long-term sustainable 'economy' looks like where energy, work, and resources are in constant flows or transactions, and where there is no debt and value accumulation. Nature does not over-consume its resources, instead, due to co-evolutionary diversity and structural deepening, nature has feedback loops that allow biotopes to be long-term robust, adaptable, and thriving.

Bildung Rose Distribution

To complete the polymodern economy, I suggest that the Bildung Rose¹² is also used as a tool to assess whether any society is balanced and will be long-term thriving or not.

According to this model, all human societies have the following seven domains: production, technology, aesthetics, (political) power, science, narrative, and ethics. This is brought together in the description of society called the Bildung Rose. It is my claim that for any society to thrive, the seven domains need to be in balance.

An add-on to the polymodern economy might be to register production entities according to the domain(s) in which they have their activities and to thus monitor to what extent towns and nation are balanced regarding those seven domains.





For the past couple of generations, the economic mantra has been investment in what is possible here and now: production and technology. We have reluctantly been willing to pay for and invest in the domains that explore what might be possible: aesthetics, institutions of power, and science. We have gladly let ourselves be entertained by narratives that tell us who we are, but not so much about who we ought to be, and we have neglected ethics. This is not culturally sustainable, it is ruining both humans and nature, and thus, eventually, it will not be economically sustainable either.

Measuring the town, the national, and the continental strata for how much of the economic activity takes place in each of the seven domains may be yet another way to monitor the wellbeing of societies and their economies.

Plug and Play Right Away

Besides being a macro-macroeconomic model that may allow us to handle both household, town, national, continental, and global economies in the same model, the polymodern economic model offers easy onboarding for individuals and households that allows them to make a sustainable difference right away. We have always been able to do that, but here is an economic model that grasps it and promotes it. Polymodern economics offers 'plug and play right away!' Change material consumption to immaterial, create local cooperatives, find work close to where you live, talk to your neighbors, get a vegetable garden, exchange some of your carrots for some cake, repair stuff instead of throwing it out, and invite people over for a homecooked meal. Rather than seeing this kind of economic behavior as lowering growth and thus being a bad thing for the economy, it increases complexity and saves the planet.

¹ Andersen, Lene Rachel: Polymodernity: Meaning and Hope in a Complex World (Nordic Bildung, 2023)

² I first came across this definition in Debt: The First 5,000 years by David Graeber, though it is not his; he had it from the French historian Fernand Braudel, and he referred to it as C-M-C, Comodity-Money-Comodity, and M-C-M, Money-Comodity-Money.

³ <https://sciencing.com/examples-synergy-nature-12322176.html>

⁴ Henderson, Hazel: Ethical markets: growing the green economy (White River Junction, Vt.: Chelsea Green Publishing Company, 2006.)

⁵ Raworth, Kate: Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist (Random House, 2017)

⁶ <https://doughnuteconomics.org/>

⁷ <https://weall.org/>

⁸ <https://www.etymonline.com/search?q=modern>

⁹ Porter, Michael: The Competitive Advantage of Nations, Macmillan Press 1990

¹⁰ <https://www.forbes.com/advisor/investing/cryptocurrency/bitcoins-energy-usage-explained/>

¹¹ I found the reference to Brian Arthur's definition in The Ingenuity Gap by Thomas Homer-Dixon (Alfred A. Knopf, 2000); I have not read Arthur's original work.

¹² <https://tidsskrift.dk/FECUN/article/view/130247/176001>