

Some Cultural Foundations of Financial Macroeconomics

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Abstract: Mainstream economists concede that finance tests the deductive powers of the microfoundations model. Accordingly, we attempt to derive a structural model inductively through use of empirical studies and history. Culture is the means by which a task is set about. The term consists of the following elements. The unit of analysis is groups or classes as found in National Income accounts. The connection between them does not consist of substitution effects or conflict but complementarities and cooperation. Secondly, the economy is defined as the inseparable composite of the fiscal and the monetary authorities and the components of the private sector. Finally, finance eases the flow of production and consumption and investment. However, banks are beset with problems of asymmetric information and runs. Additionally, market finance is prone to bubbles and crashes. Elements of culture are required to hold fast during the interactions between the financial and the real world.

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1. Introduction

The representative agent is known to be a dubious foundation of macroeconomics given the fact that the aggregation of preferences over all members of society is not regarded as a solved problem. The recent addition of agent heterogeneity with differing discount rates and so on in the models does not address the fundamental issue. The dubious status of the aggregate production function established in the last century has been relegated to the footnotes of intellectual history. Finance is introduced into the standard model by the extension of the general equilibrium theory. Arrow securities,

contracts written over all date-states of the world pairs that fan out from the present, are devised. The Arrow–Debreu theorems are extended as are their welfare properties.

Perceptive advocates of the theory have always insisted that general equilibrium is no more than a vehicle for organizing thoughts. Given the imposed standards of rigor, it is claimed that no other theories of finance are available. For instance, the efficient markets hypothesis was universally castigated following the financial bloodbath of 2008, but this hypothesis was invalidated in every empirical study that came out following its publication. The Kuhnian exit of the paradigm never occurred because there was no other theory waiting in the wings to enter as a substitute. In fact, one of the modern founding fathers of general equilibrium theory, Kenneth Arrow, was appreciative of the work of the communitarians who regarded the standard conception of the agent as over-individualized (Cato and Lutz, 2018). People live in a society with a culture and a history. In formulating social values and collective decision making, it is essential to remember that people abided by moral codes and social norms. These practices are tacit. They were followed unconsciously.

Step by step, we proceed to provide an orientation towards such an alternative, challenging each of the precepts in the standard account. The strategy is a constructive critique. We chip away at some of the building blocks and the process suggests other bricks that can be laid for constructing an alternative structure.

The next section builds from micro to macro in turn. The conclusion in each instance is the same. In the former case, the aggregation over individual actions results in instability and the locking out of vulnerable sections of the population from the economic process. In the latter case, while “finance matters” has been a durable theorem in our times, it is only recently, and after sobering experiences in countries and with the collection of fine-grained data, that the salutary role of finance has been confined to a well-defined middle ground. Below this, finance does not matter. Above it, finance is potentially destabilizing. The golden mean consists of middle-level banks lending to medium and small-scale industries. We confront the realm of noncalculable probabilities in Section 3. The resolution is provided by a democratic or participatory economy in which the distinction between producers and consumers is blurred. The notion of the autonomous agent is grappled with in Section 4 and is found to be elusive. He or she slips into a mesh of social inducements and disincentives in which governments have a large role to play. Secondly, excess demand functions aggregate to theorems in general equilibrium. General equilibria are, in general, not unique—good equilibria coexist with bad. Developing the concept of atomistic agents as members of a team, a leader is required to guide the team to a cooperative solution. The notion of a team leader leads naturally to the introduction of the Government Planner in Section 5. The government problem is maximization of the social welfare function and the Planner works backward from a desired state of affairs to the present. The policy package includes Pareto-improving progressive income and wealth taxes. Additionally, governments lay the groundwork on which individual plans are made. This point is illustrated by the concept of innovation. We consolidate the elements of our case in Section 6 on financial planning. We record that the takeover of finance by financial mathematics was a quirk of history. A feedback mechanism between theory and practice operated between academia and Wall Street for mutual profits. One unfortunate consequence of the sweep of finance has been the financialization of the nonfinancial company. Mergers and acquisitions and share buybacks have taken over the issue of shares for the purpose of investing in capital and productive equipment. The classes that drive the wealth of nations, capitalists, workers, and entrepreneurs have given way to a thick rentier class. The sway of the arbitrage principle can only be countered by ethics and morality. We discuss some of these factors. Section 7 is a summary.

2. Financial Disequilibrium

Starting from the microeconomic perspective, aggregation of optimal individual solutions might be a suboptimal social outcome. Private virtues might engender public vices. In no sphere is this proposition more relevant today than in the area of finance. Financial innovation is about minimizing risk. Yet, the new instruments collectively generate instability and crises. For instance, saving is deferred consumption and may, for the moment, remain in a bank or a financial institution. The individual optimization problem is solved by backward induction after imposing

a No-Ponzi-Games condition. Working forward in real time, however, “strategic defaults”—that is, defaults not suffered by the state of the cycle—by the intermediaries cannot be ruled out. Over time and states of the world, financial instruments are contracts written on underlying real assets. Welfare is not necessarily reduced as contracts get complex as long as the second- and third-order arrangements correspond to the substratum of goods and services. What people have learned over the last decade, though, is that the interregnum between decisions at the beginning and consumption at the end may take on a life of its own. The outcome is financial-real cycles of activity. Consumers and producers and private bankers and central bankers get caught up in euphoric spirals. The only way forward is down—a bubble must end in a crash. The President of Iceland described the “delirium praesidis” clearly in a speech in 2008 (Gylfason and Zoega, 2019). The conflicts were “entrepreneurship versus structural training, prices versus results, trust versus competition, creativity versus financial strength”. A hard-core market aficionado would exclaim “So be it!”. The rough and tumble of the market dynamic throws up winners and losers. However, the market is also cruel to those who do not play the game, the innocent entering the labor market who find no employers. The common perception is that finance and the Nobel laureates who founded this construct and whose fingers were burned in applying their principles to their own products were indicted. However, financial economics was not at fault in terms of its assumptions. The truth is that the cut-throat competition on Wall Street forced promoters to mix and match tranches of contracts using the protocols of finance in an illegitimate manner. To say that the deals that precipitated the crisis were not transparent is a gross understatement. The army of auditors that came in after 2008 could not perform postmortems with satisfactory surgical skill. Additionally, the promise “This too will pass” when the good times roll in is hollow. The wage and employment trends are flat across the world and are expected to be so for some time to come. In this case, financial innovation must be regarded with disquiet as it is a hothouse flower not rooted in the earth. Wall Street’s second wind after 2008 in the form of credit default swaps (CDs) entering the life insurance business in the US is cause for concern as incentives become perverse. Investors pray for an early death in a morbid travesty of the *raison d’être* of the life insurance industry. The reasons are familiar: short termism because of continuous marks to market. In contrast, the social requirement is for so-called “patient capital” that nurses and nurtures employment-generating projects that promise decent returns.

Beginning from the macroeconomic perspective, disturbing evidence of the hiatus between the volume of profits appearing in income accounts and the quantity of real investments and capital accumulation recorded in expenditure accounts continues to flow in. The effect of finance on growth is nonlinear. Scholars have established a threshold above which it operates. Below a critical minimum which applies to poor countries, priors in the form of an educated and healthy potential workforce, roads and assured water supply, electricity, and so on are the *sine qua non*. Above the modicum, directed bank credit and growth feed on each other. As the financial sector becomes bloated, the impact on growth turns negative. Wall Street impairs industries with intangible investments or that are R&D-intensive because they cannot offer collateral for loans. A vicious circle operates as follows. Private equity firms raise capital from rich individuals and cash-rich institutions and make risky investments that promise high returns. They buy companies and use high leverage to deliver the promised returns. The debts, which are fixed-interest payments, offer high returns on the capital invested by wealthy investors since they pocket all the profits. If the company fails, the debts are defaulted on and the investors walk away unscathed. Only the workers are thrown out of employment. The proliferation of securitization and newfangled financial instruments has resulted in the evolution of the “inverted pyramid” (Minsky) of the American financial structure, with big business profits at the tip which is now the base and an expanding base of financial innovation which is now the superstructure (Piacentini, 2017). The dictatorship of the big tech companies has resulted in the “rentification of capitalism” (Dosi and Virgillito, 2019). Market capitalization is out of proportion to the value and price of products sold.

The next area we question is stochastics.

3. Radical Uncertainty

The future, in finance or indeed any economics, is dealt with by means of known probability distributions. Learning from emerging states of the world is taken care of by Bayes' formula. The harsh lesson from the financial meltdown in America is that symmetric distributions were fatally inadequate to capture the characteristics of the instruments and fat-tailed distributions were required to model "black swan" events. Most economists agree, however, that the profession needs to get a firmer grip on the uncertainty that defies any kind of probabilistic calculus, objective and subjective. One way of approaching fundamental uncertainty is in terms of imagined future scripts of the world. Beliefs in causal mechanisms that lead to future states that do not necessarily bear any correspondence to empirical reality today will be held (Beckert, 2011b). The iconoclastic microeconomist Tibor Scitovsky insisted on novelty in the choices people made. Radical uncertainty is at work. Even in conditions of certainty, tastes can change arbitrarily. The space of outcomes cannot be completely specified. Along with commodities, people have a preference for surprise. The resolution of uncertainty can change given or assumed "states of nature". That is to say, states of nature may be endogenous. Additionally, a positive resolution of uncertainty generates "internal economies". At any rate, these considerations are made against the backdrop of competition and markets that defines the familiar model. Probing further into the political economy, we need to counter an unarticulated idea of markets that has percolated into academe. A distinction needs to be made between neoliberalism and classical liberalism (Stockhammer, 2013). The former refers to an uneducated reliance on markets and comprehensive rolling back of the state whereas the latter appreciates that markets have to be nursed and nurtured. Neoliberalism presupposes that once government is out of the way capitalist activity will come into its own. However, capitalists, we have noted, do not necessarily invest their profits. Their propensity to invest is a category sui generis. Finally, a society "of the people, by the people, for the people" will be furthered by the encouragement of technologies that enable participation of citizens from the bottom up. Consumers will become producers. The future will throw up a class of "prosumers"—coproducing consumers. Instead of the vulgarities of the market, the economic organization of the future will be a participatory, variegated, all-inclusive organism. It would be a "democratic economy" or "participatory market economy".

We proceed to an examination of individual agency in a social context in contrast to microeconomics which is context-free.

4. Individual Agency

Many scholars roundly reject the microfoundations enterprise because once people entertain a vague idea of their goals, their behavior and realization of these ends is determined by constraints present in the environment rather than their internal dispositions (Hoover, 2016). In the language of Popper, social science is type-explanations and not singular explanations. The subject of an introductory lecture of an economics course, for instance, is the individual demand curve. The construct of interest, though, is a market demand curve. In social-scientific reasoning, preferences are not the attachments to individuals of received economic theory but are regarded as reflecting meanings commodities carry to individuals in a particular concatenation of space and time (Beckert, 2011a). Elements of an aggregative approach to economic science can be traced to the putative father of economic science, Adam Smith. His *Wealth of Nations* is routinely cited as extolling the virtues of self-interest. The *Theory of Moral Sentiments*, however, is rich in references to sociability and fellow feeling. Modern research conducted in laboratories and field experiments resoundingly confirms that nonselfish preferences are the rule rather than the exception (Bruhin et al., 2018).

In the familiar story, the path to equilibrium is clear, though frictions and cognitive limitations may inhibit movement. The arbitrage principle overrides. Unexploited opportunities cannot persist. However, the absence of learning in people knows no bounds (Cimoli et al., 2020). The accumulation of capabilities and characteristics in societies may be necessary but not sufficient. With all incentives in place and property rights established, the process of industrialization might have little to do with either. The production possibility frontier is a notional technological

device. We illustrate the point in the subsection on innovation below. The requisites of culture to move towards it might well be absent. At this juncture, the authors make the case for the state as an “entrepreneur of last resort”, a theme we develop below. They do so in the context of a plan, all elements of which violate the assumptions of the market model. They include: (1) state ownership of the means of production, (2) selective credit allocation, (3) favorable tax treatment to selected industries, and (4) blockages or conditionalities on foreign investment.

General equilibrium is the grand finale of the neoclassical story of the individual agent. Thereafter, welfare theorems are proved. What can we offer as an alternative to the Pareto principle, is that no one agent can be made better off by not making at least one other agent worse off. Since no road leads to market clearing in our accounts, it turns out that we are developing a disequilibrium framework. The proof of the model is in the process not in the outcome. Some scholars are exploring happiness as a metric of the market dynamic. We endorse the translation of the concept to the “flourishing” of Aristotle (Pugno, 2019). Eudaimonia, instead of happiness, means functioning well and realizing one’s human potential. “Final goods” means that all ends are valued for their own sake. Dimensions of human flourishing need not be commensurable. Happiness emerges in working on projects driven by virtue. Virtuous activities, in turn, are pleasurable intermediate interventions towards the access of final goods. Only initial conditions can be specified. The end cannot be forecast. Happiness is not a maximand, nor are initial conditions constraints.

General equilibria are, in general, not unique. In macroeconomics, it is commonplace that there is a continuum of macroeconomic equilibria defined over inflation and output space. Coordination games in macroeconomics sharpen this insight. In particular, we look at unsolved problems associated with the notion of a team equilibrium (Gold, 2019; Lawless, 2018; Lecouteux, 2018). Team reasoning allows solutions that only a collective agency can generate. We have with the theory of teams an empirically grounded theory of games. Players are neither selfish nor altruistic. Together, they reflect over the achievement of common goals. Their individual preferences are held intact but their choices will not flow therefrom. Members who play as one do not need to form expectations of the strategies of others. The Nash equilibrium is defined by each player taking the maximizing behavior of others as given. Team reasoners, in contrast, are concerned about joint membership. As the dependence between members increases, the value of joint information to all increases. Indeed, markets can crowd out or destroy “shared evaluations”. The value of “frames” is the enjoyment by all stemming from a shared understanding of the meaning of the good or service. Each individual must correctly expect that the jointly held beliefs are mutual. When all inhabit an identical sensory world, sharing is communally sustained and a warning is in order—mutual beliefs are easier to destroy than create. The joint entropy of two agents, according to Shannon, exceeds the entropy of one. In other words, when a team is working as a well-oiled machine, the information set begins to disappear as the contributions of individual members cannot be ascertained. As the team operates as a unit, individual degrees of freedom reduce. The task for the future is the direction offered by intelligence. It is the job of social navigators to lay a path that leads to the superordinate goals of the team by amplifying its strengths with constructive interference. Team boundaries would be laid and outside interference blocked. In simple terms, the team needs a leader.

We proceed to examine the mechanisms of team leadership in the form of state involvement that elicit cooperative equilibria. The word policy connotes the existing mechanisms of monetary and fiscal policies. Planning is the correct term for the case we make. We illustrate the concept with the notion of innovation.

5. Economic Planning

As an illustration of team play, French planning was not an exercise of authority of the state but an uncertainty-reducing device (De Carvalho, 2018). It was not the case that the Commissariat-generated forecasts and private agents accepted them but consensual prognoses were generated by both groups participating in the plan. In the titanic exchange between John Maynard Keynes and Friedrich von Hayek on *The Road to Serfdom*, Keynes appraised their differences as not about less planning but about situations where the government and the people shared a moral philosophy. His advocacy of the socialization of investment was founded on uncertainty reduction.

The solution is to recapture the Keynes–Tinbergen sequence of policy steps to be taken following from outcomes set by the community (Morgan, 2019). “The logic of economic policy is an inversion of the logic of economic analysis.” In the aftermath of the Second World War, Europe pondered over different blueprints of social market economies. Planning was common to countries in the Eastern as well as Western bloc in the sense of implanting development projects falling short of full-fledged central planning. For instance, a way out is the reinvention of the central bank as a receptacle of trust. Society demands a generalized (over time and space) device as a medium of exchange and store of value. Chartalism is a reminder that citizens must pay their taxes in the coin of the realm. The variable of interest to the macroeconomist is disposable income. Progressive taxation, that is, state imposition increasing with private incomes, has long been omitted from the textbooks on the grounds that the income tax is a disincentive to work. The theorem is not supported by the evidence. However, another reason for the disenchantment with high income and wealth taxes is that an income tax would have to be part of a world scheme as high income earners would flee home countries searching for greener tax pastures. The French social scientist Marc Fleurbaey has reopened the issue, digging deep into culture and ethics. The social welfare function may include so-called inequality aversion or a prioritization of the welfare of the worst off in society. The Pareto principle is not violated, nor does the age-old choice between equity and efficiency have to be made. Considering the preferences of all members of society, there are no limits to the ratio between the loss of the rich and the gain of the poor in terms of their equivalent transfers. It turns out that social effects in the field of tax compliance explain the evidence better than the standard economics model (Weber et al., 2014). Contrary to popular lore, people do not intrinsically mistrust governments and the taxwoman. What is called for is a shift from a tax regime oriented to enforcement to one oriented to service. In the broad realm of finance, trust is not equivalent to grounded optimism or risk aversion (Algan and Cahuc, 2013). The explanatory mechanism runs from the nature of finance to the quality of institutions to trust.

Innovation

The topic of this section seems to be the least susceptible to the discipline of structure. Innovation, it is believed, originates in individual thoughts and ideas. However, evidence suggests otherwise. Knowledge is a public good and innovation is public policy (Schellenbach and Schubert, 2019). The joining of economic history and economic development is invaluable in exploring this theme (Diebolt and Hauptert, 2018). Both investigate the trajectories of economies after embracing new technologies and both study the existing incentives to adopt innovations and new institutions.

Markets are characterized by freedom of entry and exist. Consequently, positive profits tend to get whittled away as successful production lines attract entrants. Thus, the R&D cells of incumbents are under constant pressure to innovate—to distinguish their products from those of others. The economics of innovations is a pre-emptive strike against potential rivals. Innovations in economics consist of stretching the flexible neoclassical language to embrace novelties as the world throws them up. However, there are gaps in understanding that theory cannot easily illuminate. Long tracts of time and space are recorded when technological blueprints were available but were not grabbed as an economic theorist would expect. We illustrate the point made in the section on individual agency above. A bread-and-butter connection that economists gloss over is the following (Lourenço and Moura, 2017): Sets of technological blueprints are the concern of engineers. They enter the field of economics only when agents become aware of them and find it worth their while to apply them. Culture matters. By the same token, “technological accidents” occur. Philippe Aghion at the Collège de France has proposed an inverted U-shaped technological trajectory. The technological dynamism of societies flows and then ebbs. The curve would have to be tested for robustness across milieux. One constructive interpretation of this work is the plea to move beyond the standard incentive-compatibility constraints of principal-agent models (Kornai, 2016). Principals are employers, lenders, insurers; agents are employees, borrowers, insured people. Each enters into implicit contracts with the other. Optimal contracts are those which quell the incentives for agents to renege on the terms of the contracts. Instead, János Kornai makes the case for examining/constructing incentives for individuals beyond the thrall of contractual

obligations. From where do the autonomous urges of entrepreneurs spring? What kicks off a startup or the setting up of a new firm? Entrepreneurship and entrepreneurial activity are mysterious. Incidentally, Schumpeter's legendary buccaneer is expected to be the manager of a firm but could as well be a government official or a union leader (Dodig and Hansjörg, 2015). The stack of new technologies to draw upon and potentially new commodities and services to produce is large and nobody has pride of place in taking the pick.

Nonroutine tasks depend upon an understanding of the world that cannot be captured by a set of deductive instructions that can be programmed. Computers cannot participate in sustained, unstructured human interactions (Adams, 2018; Goos, 2018; Levy, 2018). Such interactions arise from formulating responses to nonstandard problems that arise. The outcomes, in turn, depend on the broad context of meaning in which language is used. Jobs that cannot be substituted by automation are complemented by it, such as ATMs. Skilled capital is a third input in the production function. Technological progress has led to capital deepening, a fall in the price of capital over time. However, the substitution between capital and skilled labor is less than the complementarity between the two. The policy conclusion is science, technology, engineering, math (STEM) education. Workers with these skills will be able to engage with new forms of technology as they emerge.

Institutions encouraging broad access of opportunity instead of being confined to the few at the expense of the many foster an innovative environment (Donges et al., 2017). The positive effect is enhanced in environments where individuals and firms have access to finance. Hand-collected, country-level data on Imperial Germany shows that until the 18th century, extractive institutions were still widespread across the German states. Privileges and rents were the monopoly of a few. Following the French revolution of 1789, the French occupied large tracts of Germany and spread the radical ideals of liberty, equality, and fraternity. The evidence shows that these principles, enshrined in constitutions, fructify rapidly when supported by a developed banking sector.

We bring our discussion to a close by making a case for finance structured by the components of culture introduced in the sections above.

6. Financial Planning

There was a time when financial activity was driven by intuition and experience, when chartists and fundamentalists squabbled over the best use of data. The import of stochastic calculus and the formalization of financial economics at the citadels of learning in the US gave an apparatus with which to view and appraise financial instruments. Practitioners began to see their business through the eyes of theory and their habits ballooned when the best theorists entered the practice in Wall Street. The raw material of contracts such as housing mortgages began to dial back to theory and new-fangled synthetic instruments began to proliferate. Social scientists have developed the concept of performativity to analyze the manipulation of the data to fit the demands of financial theory. However, performativity contains within itself the seeds of counterperformativity (Mackenzie and Bamford, 2018). The following through the logic of the models leads to results that undermine the structure of the model. As an example, the hedge needed to synthesize a put requires selling more and more of the underlying asset as its price falls. Thus, hedging, a procedure designed to minimize risk, can set in chain a self-referential downward spiral in the price of the asset. The uncontrolled free fall of the price can result in changes in the price of the asset at odds with the prediction of the model. Secondly, as has already been referred to, the growing conviction that the normal distribution according to which extreme events are unlikely is an unpersuasive model to work with and will lead to strategies and actions that make those events more likely.

Reporting on the US by one of the world's prominent historians, all plans to invest in public assets crashed on the rocks of privatization and low taxes (Temin, 2018). Thus, the tax cut of 2017 meant a massive financial disinvestment because the national debt increased by USD 1.5 trillion in the next decade. Business investment continues to be lukewarm and continues to be oriented towards short-term financial returns. Tax rates do not have the incentive effects expected. Half the tax cuts to large corporations and the rich, not unexpectedly, found their way to tax havens abroad. The other half was invested in stock purchases to lift stock prices and spread the spoils

among cronies. Considering this rout of the real by the financial in our times, some scholars have recommended more radical solutions to the regime. The state must be a proactive holder of the equity capital of banks which are adjuncts to a plan (Polychroniou, 2013). It is not enough for the state to take over the means of production, but it must assume control of the forces of production. It must be intimately involved in the process of capital accumulation (Malikane, 2015).

Policy administration involves values and sensibilities (Colander, 2018). The means to achieve desired ends requires a blending of science and moral philosophy. Many arguments in moral philosophy can only be resolved by argumentation. The posture is one of inherent skepticism and the offering of potential solutions. Thereafter, the solutions are discussed threadbare until a joint resolution is arrived at. A philosophical truth is a proposition that when revealed and explained would be welcomed by most people in society. The truth is embedded in *phronesis*, the Greek philosopher's word for practical wisdom that is earned through the process of reflection and close reasoning by many. "Formation policy" concerns the redesign of systems within which people act. For instance, what should the system of property rights be? The task is to create economic mechanisms that would encourage people to advance their prosocial goals rather than their private goals. The notion of sustainability cannot ignore environmental degradation. The subject has just begun to permeate monetary policy. However, a "tragedy of the horizon" has been noted here (Campiglio et al., 2018). The connection between monetary policy and financial stability remains unclear but at least they share a common horizon of operation—two to three years to a decade. Climate-related risks call for an infinitely longer horizon. Unfortunately, the two domains are not disconnected. For instance, an increase in climate-propelled physical risks would affect suppliers of the related insurance products. Households that are uninsured would be impacted on, as would the balance sheets of corporations. Lender banks would suffer losses.

In contrast, constructive macrofoundations are illuminated by the output of the new economic historians. Indeed, some have christened the discipline "New Applied History" to announce that the scholarship has reached the stage from which generalizations can be deduced and new policy conclusions drawn (Colvin and Winfree, 2019). That profound ideas emerge at the meeting point of economic history and economic development has already been noted. A third axis joining the two would be extraordinary circumstances such as wars and epidemics. For instance, the quality of institutions generated by the 1688 revolution is still under scrutiny. What is not in question, though, is the birth of the fiscal-military state therefrom (Rouleau-Pasdeloup, 2016). During the 18th century, the state borrowed heavily to support government expenditures, most of which were directed towards the navy and the military. The upshot of the circumstances was an increase in total factor productivity. The fiscal-military state opened up a new market and engendered the opium war—that is, for entrepreneurs. The demand for British manufactures rose as a result and it became attractive for manufacturers to adopt new technologies and economies of scale. The current worldwide recession with a threat of deflation is a shock of the same order of magnitude. All schema must work under the aegis of the state. All constructive proposals would be of gigantic scale. Thus, while the characteristics of individual irrigation projects and road networks are known, when part of an economy-wide scheme the level of uncertainty might paralyze individual initiatives. The financial requirements are beyond the pale of private consortia. Consequently, old ideas are being revitalized. Development banks and nationalization of banks, albeit in a refurbished form, learning from the errors of yesteryear, are part theory and part practice.

The virtuous coupling between business and finance have been earlier tied in institutions such as community banks, credit unions, cooperatives, and local councils. With globalization and financialization, the nexus between the real and the financial has become unstuck. We need "moral narratives" to cover larger and larger groups (Snower, 2019). Our current moral compass must expand to embrace cooperative outcomes in the global domain. Thus, a change in perspective transformed slavery from an acceptable business practice to an internationally reprehensible and illegal practice. Morality is the end of a road which starts with sympathy (Thoron, 2016). Sympathy is the transmission of direct emotions from the person experiencing the situation to another. Imagination is the ability of an individual to place herself in the same situation. Mutual sympathy generates utility to both and cannot be derived from self-interest. The outcome is harmony emerging from convergence. Each individual wants their sentiments to be in tune with those of others. Sympathy leads to empathy and the ability to cooperate. Empathy

is a learning process initiated during childhood and carries on unceasingly through life. Humanism is morality extended to all humanity.

7. Conclusion

A non-neoclassical education in macroeconomics would originate in debt-taking and making by households and firms. Connecting the two is a bank and bank money is the fructification of the relationships. It is the received wisdom that asymmetric information characterizes the relationship between entrepreneur and bank. The outcomes are high interest rates and credit rationing. Policy solutions such as optimal contracts with truth-telling conditions are theoretical constructions. Transcending the formalities of revelation mechanisms, the classic societies of Germany and Japan made the model infructuous. Over time, the economies evolved bipartite and tripartite arrangements, the government being the third party in the latter, to guide and control and oversee credit to the benefit of all. Additionally, depositors, by virtue of the security provided by the mechanism did not have to fear for the security of their deposits. Government was not obtrusive in the form of lender of last resort or deposits insurance but offered secure ground on which people could consumer and produce and invest. We have traced the elements of what constitutes trust in monetary and real transactions. The encompassing word for all is culture. Finance serves the needs of commerce. However, in a context where a vulgar notion of markets is propagated and the components of culture deliberately eroded, it can be a terrible master.

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