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Sharpening Differences in Orthodox and Heterodox Views on Money and Banking

Romar Correa
University of Mumbai
romarcorrea10@gmail.com

Abstract

We engage with David Andolfatto (2018) on the theme. The two approaches are alleged to have converged in regarding banks as creators of money in the process of initiating lending. We synthesise insights from different factions of the French camp of political economy to make the case that heterodoxy is richer than this claim. Money as an asset-liability is the wage fund in the "first moment" of the monetary circuit. The accumulation of capital is the "second moment" in the sequence, recorded in a separate account at the bank or supported by a financial institution. The "third moment" is the closing of the accounts of demands and supplies generated by the first two moments. Régulation Theory is a related internally-consistent conceptual structure which tracks modes of production as they evolve in history. We dwell on the constructive aspects of the programme as scholars stitch together elements of the present and develop an apparatus to grapple with the emerging new regime of production and distribution. The private sector and state are joined and the bank-central bank is a continuum. Finally, the class structure in the heterodox approach goes deeper than agent heterogeneity.

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1. Introduction

David Andolfatto (hereafter, DA) is to be commended for deploying the universality and tractability of the OLG model to cordon off meeting ground in "orthodox and heterodox views on money and banking". As he reports, conversations between the two, while rare, are usually dialogues of the deaf. The orthodox find the heterodox incomprehensible; the latter continue to throw stones at the general equilibrium edifice whose inhabitants, when they bother to pay attention, regularly respond by building fortifications to repel the attacks. DA's paper has the merit of matching heterodoxy in introducing money in the form of a bank creating an asset-liability which, along with not being institutionally artificial, also resonates with practices across time and space. The fundamental difference between orthodoxy and heterodoxy is the deep roots of the latter in the labour process of classical theory. From there, the tree of heterodoxy has flowered into different branches, some growing through the economics of Keynes. The foundation of orthodoxy is the medieval fair or trading posts where agents, armed with their initial endowments, search and find mutually profitable exchanges. Out of the starting block, both classical and neoclassical theory is developed in 'real' terms, money being a 'veil'. Both are joined in subscribing to a "substance theory of value", labour being immanent in the commodity in the former, utility in the latter (Orléan, 2014). Instead, according to the different strands of French monetary macroeconomics on display here, the value of a good is measured by the quantity of money that makes it possible for the good to be acquired, its price, in short. We will demonstrate below that value is *objective* (my emphasis) when it is *universally recognized* (Orléan, 2014, 124). As another illustration from an independent and connected line of thinking, in the beginning are not use values but a "payment matrix" connecting entrepreneurs and workers (Benetti & Cartelier, 2013; Cartelier, 2013). Marx's challenge is accepted, to determine the mode and relations of production from the mechanics of money flows. Money has a threefold character: it is a "nominal unit of account", the output of a "minting process" and a "procedure of balances settlement". In sum, while the different enclaves of French heterodoxy squabble with each along many dimensions, they are one in introducing money on the 'ground floor'. In addition, developments in heterodox

macroeconomics across the world are conducted in conjunction with changing points in history. Nowhere is this join between theory and practice more evident than in Régulation Theory that self-consciously develops a vocabulary that maps into changing modes of accumulation. Succintly, "historicity" is "a pillar of régulation theory" (Boyer, 1995a). Another pillar is the "wage-labour nexus" and the production relation is "structurally complementary" with the "money regime" (Boyer, 1995b). If the circuit approach can be described as a 'closed system', régulation theory must be an 'open system' in constantly absorbing significant real-world changes of relevance into its analytical armoury. Thus, *money* (italics in the original) poses an "unresolved theoretical issue …" (Boyer & Saillard, 1995b). Again, the "institutional form" constituted by the "root" of the "monetary regime", the "wage-labour nexus" and the "nature of the state" is "a research programme" (Boyer & Saillard, 1995a). We are concerned with the conflict and cooperation between capital and labour in the present conjuncture. Our thesis is that with the inability of workers to form 'combinations' in the modern workplace which is diffuse and undefined, coordination between capital and labour must be negotiated by the mediation of the state (Fine, 2017). The model is "tripartism" between capital and labour and the state where the state "co-enforces" settlement between all three parties to mutual benefit. The institutional ground on which this cooperation can be writ is the variety of community-based worker centres and not-for-profit legal cells. The lynchpin of the workable system would be "high-road firms" which compete by differentiating products. They offer quality by increasing the productivity of their workforces. Typically, they share their profits with labour and government, non-owners who are indispensable to that productivity. Changes in the form of robotics must intrude as must employment in projects using clean technology. The classical description of an aspect of the mode of production was class conflict, not without foundation. Indeed, the thesis was a critique of the bourgeois vision of the development of capitalism as the expression of rugged individualism and the signaling and inducements offered by markets. It turns out that the 'demand' and 'supply' of land was worked out by conquest, colonization, the blocking of access to cultivable lands, forests and minerals to small freeholders and peasant families by the aristocracy (O'Brien, 2017). Property rights and 'governance' are not a one-dimensional, tranquil reading of the past and the present.

The support of the "public good" of "stability" was a weapon in the hands of landowners, merchants, industrialists, to wield against employees in Hanoverian Britain (Baker, 2018). The law was rewritten to supersede common laws and reduce the welfare of the asset-poor working class. The famous illustration is the Elizabethan Poor Law promulgated to contend with poverty and unemployment by securing an oppressive regime over the labour of children, women, the unskilled. The punishments meted out by Parliament to "combinations" forged by the industrial proletariat became increasingly harsher. As a footnote, we note that the discovery and dissemination of new technologies by buccaneering entrepreneurs is a myth. The basis was state expenditures in the interest of growth. Over time, the accumulation of skills and knowhow on the shopfloor by England's urbanised working class enabled the breakthroughs in knowledge spearheaded in Europe to be embodied in viable, commercial blueprints there.

We follow in the steps of the paper by DA, noting our points of departure. As indicated, the common core to most heterodox economics is the proposition, contra DA, that banks are special because they and only they can create money. A corollary of the proposition is that the appendage central to a bank is neither necessary nor sufficient. Thus, contesting the opening lines of the paper, in well-publicised publications by the Bank of England and the IMF, the definition of money as bank money has been absorbed to the point of overturning the money multiplier exposition of the money supply. Charles Goodhart has been a notable critic of the statistical identity or the erroneous causal mechanism (Goodhart & Needham, 2018). In the UK, private sector residents' bank deposits in the post-war period comprised most of the bank liabilities which equaled bank assets after making adjustments for changes in non-deposit liabilities. The outcome was the credit counterparts approach, the scrupulous tracking of broad money aggregates as monetary policy. DA does not go so far and proceeds to work out the standard implications of the reserves ratio concluding with the inflation target and the interest rate instrument a la John B Taylor. It is not clear how illuminating this familiar end of the road is in a milieu of negative policy rates, the blunting of the inflation objective, and the expectation of governments to create a swathe of jobs across economies. Indeed, in one study expanding

on the consequences of 'secular stagnation', the authors propose that the long-term 'natural' interest rate has turned negative (Bar-Yam et al, 2017). They conclude that monetary policy must be directed towards labour and away from capital and consumption. In that context, we welcome DA's conflation of the two macroeconomic arms of the government, the monetary and the fiscal. In that, he is on board with the historical account of the 20th century which growth record is attributed to the coordination between the monetary and the fiscal authorities (Ryan-Collins & Van Lerven, 2018). Countries that countered the trend toward financialisation like Brazil and South Korea emerged relatively unscathed from the crisis of 2008. Brazil was blessed with a slew of economists of a Minskian persuasion. In South Korea, the finance minister Yoon Jeung-Kyun crafted a financial system to enable capital to flow into productive outlets. The government came down heavily on banks that prioritised dividend payouts over supporting local projects. The finance ministry worked hand-in-glove with the central bank and was the prime prudential agency.

We proceed with and without the DA paper over the next three sections. The fifth section is an extension of the case for coordination between capital and labour sketched above. The sixth section is the conclusion.

2 The environment

DA considers a two-period OLG model where, in each period $t = 1, 2, \ldots, \infty$, $2N$ individuals are born into the economy. At the initial date, $t = 1$, there are the $2N$ initial old. The population is divided equally into *workers* and *investors* so that there is a mass of N of each type. We will use the term *employers* instead of investors for reasons adduced. Developing footnote 9 of the paper, young workers, by definition, are endowed with no more than a unit of labour each that can be transformed into y_{t+1} units of output via a production function $f(l_t)$. We do not need the assumption that employees and employers are concerned only with consumption when 'old'. Young workers and managers are joined in the production process. The worker maximises a utility function over 'young' and 'old' consumption and producers maximize profits

$\pi_{t+1} = p_{t+1}y_{t+1} - w_t l_t$, where footnote 12 kicks in in the price-, p, and wage-, w, -taking assumption of the competitive model.

We need to distinguish between 'given' and 'exogenous' prices. The latter is a simplification of the textbooks, both orthodox and unorthodox. All schools of thought consider competition, even in a situation of the many and the small, as dynamic under all circumstances with discretion in fixing prices based on local conditions and information at the behest of all parties. The money price and wage rate here are given and endogenous. Sometimes liberalism is conflated with competition. The theme is a source of vibrant discussion in non-mainstream macroeconomics and we dwell here on the Freiburg School of classical liberalism that developed to counter the critiques of laissez-faire by ascribing a well-defined role to organs of the state (Feld et al, 2018). Walter Eucken was a proponent of the Lautenbach Plan, a fiscal stimulus package crafted in the aftermath of the Great Depression in Germany. It consisted of a public works programme with price and wage controls exercised by capital and labour. In this instance, the employment details included the building of roads and railways. The scheme was to be financed by promissory notes issued by the national railway company that was regarded as an implicit form of money creation.

DA introduces the welcome dimension of digitalization of accounts in banks. Even central banks have begun to appreciate that digitalization would have to include other nodes in the network structure of the monetary economy (Albagi et al, 2018). Digitalization is in the process of cementing the "sharing economy" wherein the distinction between consumers and producers is dropping. While DA also bids adieu to the representative agent, the modes in which workers and capitalists can organize themselves are boundless. We remark, as an aside, that heterodox macroeconomics has always been grounded on the differential propensities to consume of the capitalist and the working class. It would not be difficult to extend the assumption to "savers and borrowers" and DA's footnote 3 is without merit. Demands for goods and services are emerging out of the bundling of experiences leading to definitional and measurement issues of goods and services, their prices, and

profits. Central bank officers seek the granularity of labour market data as technical change crowds out low-skilled employment. Microdata is already throwing up evidence of what is common knowledge, part-time work and temporary contracts. We continue with the case for granularity and digitilization in the case of financial markets below.

3 The money wage and bank money

The sharp contrast with DA already noted, is the initialisation of the money wage contract between employer and employee mediated through a bank.

How do employers pay the money wage bill, $w_t l_t$, in the current period? DA offers a private IOU issued by employers, entitling the bearer the rate of return r_{t+1} in the following period. Distinguishing workers and employers by the superscripts w and e respectively, workers will sell $w_t l_t - p_t c_t^w$ units of their nominal income in the present period and consume $c_{t+1}^w = r_{t+1}(w_t l_t - p_t c_t^w)$in the second period of their lives. The employer's maximand is now $p_{t+1} y_{t+1} - w_t l_t - r_{t+1}(w_t l_t - p_t c_t^w)$. The first-order condition is

$$f'(l_t) = \frac{w_t(1+r_{t+1})}{p_{t+1}} \qquad 1$$

We proceed to examine market clearing and the stationary solution of the model in turn. In the case of the output market, we have

$$y_t = c_t^w + c_t^e \qquad 2$$

Let us denote the total supply of IOUs issued by M. In that case, the equality of the demand and supply of IOUs is given by

$$(1 + r_{t+1})M_t = N_t(w_t l_t - p_t c_t^w) \qquad 3$$

We lag equation 3 one period, express the rate of interest term as $(1 + r_t)$ and the other expressions with the subscript $t - 1$. The influx of new entrants every period is constant, $N_t = N_{t-1} = N$. Preferences and other fundamentals unchanging, we assume that the quantum of IOUs issued is unchanging period to period, $M_t = M_{t-1} = M$. In a stationary solution, the consumption and work of the young is unchanging across generations. Then take the ratio of the two expressions. Conduct the same procedure for equation 1. Since population growth is constant, membership of the working class is constant. Subtract the expression for t+1 from the expression for t. The left-hand side disappears. We derive

$$\frac{w_t(1+r_{t+1})}{p_{t+1}} = \frac{w_{t-1}(1+r_t)}{p_t} \qquad 4$$

Since, in contrast to the standard account, prices and wages are not exogenous but given by the process of production, in the absence of any change in the fundamentals they are unchanging from period to period, ceteris paribus. The resultant is

$$\frac{1+r_{t+1}}{1+r_t} = 1 \qquad 5$$

The 'coupons', as modeled by DA, meet the standard definition of government money in the form of a zero coupon or a unit rate of return. Also, the notion of liquidity or money as a store of value not subjected to the vicissitudes of price fluctuations and corresponding to income can be introduced (Palley, 2018). Thirdly, scholarship on Keynes has established that the master was not less interested in long-term rates than short-term rates for policy purposes. The modus operandi included the monitoring of bank lending. The central bank balance sheet and government debt management policies had to connect. Monetary policy had to be perfectly forecast so as to secure expectations across periods (Saraceno, 2017; Cristiano & Paesani, 2018). To that end, not necessarily 'big' government but 'active' government was always the need of the cycle when animal spirits dimmed, to retreat when activity picked up again. We term this a 'real bills-real bonds' approach.

The private IOU, motivated by DA, is the *Canadian Tire*, a non-nominal instrument issued by a retailer. In contrast, history is replete with instances when non-fiat monies took on the character of fiat money. For instance, Farley Grubb and coauthors have hand collected data and calculated the 'moneyness' and other characteristics of the paper money of colonial America in a series of papers (Cutsail & Grubb, 2017). The British North American colonies were the first western economies to emit large tranches of bills of exchange. This paper was printed and placed in the treasuries by colonial legislatures to be spent on the wages of soldiers. They were loaned on interest to citizens who had to pledge their lands as collateral to secure the loans. The scholars divide the market exchange value of the instrument into the expected real-asset present value and "pure moneyness", a transaction premium. The value of the asset as non-money was controlled by the governments. The present value formula of the zero-coupon bond is an iterated version of our equation 5. The origins of the Bank of Amsterdam (AWB, hereafter) is another example (Quinn & Roberds, 2010). As a municipal exchange bank in 1609, it was set up to smoothen settlements. The mandate was to protect commercial creditors from the debasement of commodity money in circulation by holding high-quality coins. The payments bank covered its operating costs with fees. In 1683, the bank limited the ability of depositors to withdraw on demand, adopting the traits of an issuer of fiat currency. The purpose was lending to the Dutch East India Company, a government enterprise, to meet its wage bill of 50,000 employees. Liquidity became less dear and risky after this date. Akin to a large-value netting system, the AWB assured finality through gross settlement. The bank did not extend credit and bank repayments were final. All large bills of exchange had to be settled at the AWB as required by the city of Amsterdam. As bills of exchange were the primary mode of credit, a demand for deposits was created thereby.

Following DA, we can write the mirror of M in the government deficit or the "net government's contribution" of Laughlin Currie (Velasquez, 2018). Hyman Minsky's monetary-fiscal "employer of last resort" was matched by Currie's "leading sector model" which, in an application to Colombia, was the housing construction sector. The *Plan Jefes y Jefas de Hogar Desocupados* of 2002 is another illustration of a huge employment

program instituted by the government of Argentina to contend with the crisis that devastated the country in 2001.

4 Capital and financial institutions

The section above goes through with capital goods included in the production technology, $y_{t+1} = f(l_t, k_t)$. Suppressing the first argument in the production function and the implications for the sake of convenience, the division of the classes in each period now is *capitalists* and *entrepreneurs*. The former are born with wealth as an initial endowment of which some portion is capital. After choosing their consumption bundles, k units of the capital good are offered to the entrepreneurs. Wealth and capital are stocks. If invested, the capitalist receives xk units of the consumption good when old. The entrepreneur hires out the machinery and maximizes $p_{t+1}y_{t+1} - xk$. The familiar first-order condition is

$$f'(k_t) = \frac{x}{p_{t+1}} \qquad 6$$

Along with equation 1, the pair of equations are the familiar marginal conditions of the producer problem. The standard impulse here would be to connect them through the 'no-arbitrage' condition. Resources would flow into and out of opportunities so as to ensure a uniform yield across assets. However, here the postulate implies perfect substitution between labour and capital which heterodoxy rejects.

Consider now, a three-period OLG model with all three classes in the background. Workers and capitalists and entrepreneurs live for three periods. Two periods after it is an input in production in period t, a unit of capital produces x units of the consumption good in period $t+2$ and disintegrates. How do members of the three classes provide for consumption in period $t+1$? There is no market for capital-in-process in the second period.

Once again, we assume that the capitalist is wealthy and can provide for first-period consumption from her wealth. Of the residual, the chosen k is a machine that can be lent out. Her problem of consumption in 'middle age', however, remains.

The profit possibility of financial intermediation arises naturally here. In period t, a financial institution (FI) would offer an 'inside IOU' to capitalists. A capitalist would find the offer attractive as long as the rate of return is greater than unity, the value of 'outside money'. Let $v \geq 1$ denote the one-period rate of return. In period $t+1$, the capitalists are owed v and the project has not fructified yet. To pay them off, the FI manager borrows v from the capitalists born in period $t+1$. At the end of the last period, the FI is in debt of v^2. The arbitrage plan is viable as long as $x \geq v^2$. If the condition is met, there would be no need for FIs to hold return-dominated liquid assets because they could always borrow inside money in the wholesale private IOU market. However, it is precisely wholesale markets that dry up in a panic without adequate buffers of the liquidity offered by central bank money (Goodhart, 2018).

We pause to reflect on the difference between sections 3 and 4. Financial intermediation arises when already-existing wealth is lent. This is "credit money" in the language of the circuitistes (Cencini, 2013). This "transmission" and the "creation" of money of section 3 are different. In contemporary parlance, bank money should arise out of the firmness of a handshake. The interest rate should be nil. A positive rate should be charged and collected on transactions recorded in the 'capital account' which should be a separate department in a bank or a different financial institution. Aphorisms connect sections 3 and 4. In the case of the former it is the more familiar, "loans make deposits", while in the case of the latter it is "wealth creates loans".

We continue with the case for financial microdata promised in section 2. The model can be extended to permit capitalists extending credit to each other because of the absence of regulation as well as the comovement of interfirm credit with the cycle. Secondly, the need for data on unregulated credit providers like financial leasing and factoring companies

and renegotiated loans is urgent. Apart from the receivers of loans, collection of evidence of their solvency and vulnerability gets pressing. In the event of a slowdown, the modern central bank wants information on spreads and employment and wages.

We proceed to consider a plan to back fiat money with productive capital or so-called fully-backed central bank money. We dispense with the ownership of capital by the capitalist class referring to the stock of capital as k^g to denote its ownership by the government. The size of the government project under consideration is beyond the savings capacity of members of the working class. At the same time, capital is not chunky and indivisible. It is the outcome of the non consumption decision of a member of the working class when young and we embrace the fungibility of capital driven by modern technology. The fundamental cooperative decision concerns economy-wide employment and 'economies of scale' here refers to the magnitude of the task. Thus, the new energy enterprises and assets have called into question the traditional modes of governance of enterprises (Pollin, 2018; Verdolini et al, 2018; Vona, 2018). Ascendant green enterprises will be driven by the dynamism of small and medium-sized firms. The metric of profits is likely to be blunted in novel modes of ownership and control of enterprises. The highly-successful community-based wind farms over countries is a case in point. It is imperative that the production and distribution of clean energy grows exponentially even as the global fossil-fuel capitalist complex is reduced to nought over the next half century. Calculations have already been made of the large job-creation effects of the renewable energy, building retrofitting, waste management and pollution control that will exceed the jobs destroyed in the imploding energy-intensive sector. Private capital will not bear the incalculable risks. Governments will have to construct long-term pathways through procurement contracts. All green or low-carbon technologies have high ratios of upfront to operating costs. States can mobilise private capital by leveraging private funds to signal innovative SMEs that have reduced their environmental footprints. Public investment in proof of concept at market rates through dedicated finance would scale up demonstration projects. If these outlays are reported on green finance disclosure platforms, bilateral private information

problems would be ameliorated and positive externalities from public investments in innovation captured.

We see that the rate of return of unity of central bank money will be dominated by the rate of return of FIs. The central bank is in competition with private entities. We revert to our two-period specification of the problem. The excess of wage income over consumption by workers is invested in capital owned by the central bank. Consequently, the following rate of return equality must be fulfilled in a stationary equilibrium.

$$1 + r \geq v \qquad 7$$

Now, the gross return from the central bank investment is vk^g. To maintain the stock of capital fixed under our assumption of one-period obsolescence, k^g of this gross return must be used to replenish the stock of central bank capital. The net return is $(v\ -1)k^g$. In a stationary equilibrium, the stock of money is M. The central bank is committed to payment of a nominal interest rate of r. The total interest payments bill is, in that case, rM. Since the money stock is constant in stationary equilibrium, this interest disbursement will ensue from the production of output generated from central bank capital. In that case, the aggregate central bank budget constraint is

$$(v\ -1)K^g = rM \qquad 8$$

If inequality 7 is to hold as an equation because of the assumption of competition between private paper and central bank money, the conclusion is that the central bank will use all of its return from its investment in capital and production to pay interest on its money. The central bank, in short, is a zero-profit bank offering the same rate of return on money as it receives from its capital.

In the infancy of central banking, it turns out that the central banks financially differentiated the supply of credit in response to financial meltdowns (Anson et al, 2018).

Officers at the desk would lock in and lock out specific types of borrowers and collateral. The identity of counterparties was central for obtaining support at the discount window. The bill of exchange was the instrument of use on which the names of the discounter, the acceptor, and the original drawer were inscribed as jointly responsible for the paper. In addition, we refer to a macroeconomic identity that Post Keynesians privilege: a private sector surplus equals a budget deficit. Differently put, there is a complementarity between private and public sector cash flows across the cycle (Ugolini, 2018). The public sector can buy goods and services from the private sector, to repay the debt when taxes from the latter flow in. Due to the generalised acceptance of short-term debt eligible for tax payments, the paper tends be accepted as means of payment by third parties; to be monetized, in short.

5 On Trust

DA introduces the important dimension of trust in relationships through a "trust parameter". The basis is the well-known asymmetric information in principal-agent problems leading to the framing of implicit contracts that incentivise truth telling. Outside of the mainstream, trust is beginning to be understood as a system-wide desideratum. One instance when a practice is contrary to neoclassical precepts is when work is unmotivated and rewarded on an hourly basis (Menzies, et al, 2018). In agency theory, hidden action is equivalent to private information. In closely-knit communities, on the other hand, people possess knowledge greater than what can be revealed by direct observation. Prior to deregulation, the City of London boasted a reputation for "probity and truthfulness" in the late 20th century. A workplace of service providers was to be transformed later into an arena of profit maximisers. For most of the century, British bankers were risk-averse. Members of the "Club" were "gentlemen bankers" whose credentials were vetted and, if not found "fit and proper", individuals, firms, partnerships were shown the door. The banking system was self-regulated. The fiduciary relationship is a legal relationship. The fiduciary is a person who is in an ethical relationship with one or more parties. A requisite duty that arises therefrom is loyalty. In legal theory, the requirement of trust is met by attaching responsibility with the stick of legal penalties. In societies characterised by system-wide

trust, formal and informal institutions are coherent and mesh (Engel, 2018). The common elements across societies are policies representing democratic consensus and sophisticated labour market institutions. In addition, trust is fomented when "cleavages cross cut" (Vokkart, 2018). The relations between Catholics and Protestants in the Age of Reformation remained fractious but an area of détente was found in the negative consequences of multiple currencies all the estates suffered from. The Dukes of Pomerania closed their mints expecting the Emperor to mint a single empire-wide currency. Trust was forged around a single element, money, in repeated negotiations between the two religious groups who retained their acrimony along other dimensions. Helped along by the leadership of Ferdinand, a cooperative outcome emerged in the legislation of 1559 and 1566.

5 Conclusion

The bank has emerged at the center of the web of financial-real transactions that distinguish the modern economy. The profusion of papers on the subject has followed the financial crisis in 2008 in time-honoured fashion when the elasticity of general equilibrium theory is in dazzling display once more. However, the exponents do not find it necessary to distinguish between banks and financial institutions. On the other hand, money has always been endogenous in all varieties of heterodoxy. We have drawn attention to common elements in the French approach to monetary macroeconomics because they are structural, logically-coherent, and accounting-consistent. Besides, the categories are embedded in the differential trajectories of varieties of capitalism. The current new Keynesian-new classical consensus macroeconomics is unable to deliver a constructive policy package to address the atrophy of work across the world wedded as it is to a dichotomy between the real and the monetary. We are not likely to see a rigorous model to match the derivation of the inflation target-short-term interest rate instrument formula. Yet, we welcome DA's extension of an olive branch to permit the two sides to sit at the ideas table together. He has provided in the toolbox of dynamic macroeconomics a common language where the

protagonists can specify commonalities and differences. Our contention is, however, that "reconciling orthodox and heterodox Views on Money and Banking" is no mean task.

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