THE CORE-PERIPHERY STRUCTURE OF MONEY AND THE MICROFOUNDATIONS OF WORLD-SYSTEMS RESEARCH

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ABSTRACT

The world-systems approach has inspired an impressive range of research programs since the 1970s. Yet it may simultaneously also have failed to attain its full emancipatory and academic potential due to the underspecification of the precise mechanisms which allegedly render differentiated economic relationships and political loyalties into single, integrated, internally stratified units of analysis. This paper approaches the prevailing theory gap from the perspective of the institutional specifications of the social relation of money. It is argued that in order to explain the emergence and evolution of integrated economic and political structures based on the notion of unequal exchange, one first needs to explicate the institutional preconditions for *equal* exchange. Once these conditions – which may or may not be attainable in the real world – or their potential absence in certain spatiotemporal configurations have been identified, the nature of the deviations from the standard of "neutral" exchange and the specific manner in which the deviations may be exploited by powerful economic and political actors can be used to explain the emergence and evolution of structural phenomena. It is suggested that money – particularly some of the prevailing forms of centrally controlled credit – tends towards the formation of integrated core-periphery hierarchies within its sphere of influence.

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INTRODUCTION

The world-systems approach has inspired an impressive – and sometimes "high risk", due to their actual or perceived "deviation from the sociological norm" (Martin 2000:242) – range of research programs since the 1970s. Yet the world-systems perspective may simultaneously also have failed to attain its full emancipatory and academic potential due to the underspecification of the precise mechanisms which allegedly render differentiated economic relationships and political loyalties into single, integrated, internally stratified units of analysis. Analysis has often focused on actual or perceived macro-structural phenomena without elaborating on the transmission mechanisms which could explain the asserted levels of economic, political, social or cultural interconnectedness and thus also "wrest our expectations about the future [or about the present analytical and empirical preconditions for theory-building, for that matter] away from theology and into the realm of science" (Chase-Dunn and Grimes 1995:414-415). Consequently, it may be only a slight exaggeration to suggest that the explanatory potential of the world-systems approach has often been suppressed through the quest for plausible-sounding narratives to support one's epistemological preconceptions rather than the identification of specific mechanisms or power relations which could explain the emergence of interconnected social phenomena and their ongoing evolutionary transformation.[1]

This paper approaches the prevailing theory gap from the perspective of the institutional specifications of the social relation of money. It is argued that in order to explain the emergence and evolution of integrated economic and political structures based on the notion of unequal exchange, one first needs to explicate the institutional preconditions for *equal* exchange. Once these conditions – which may or may not be attainable in the real world – or their potential absence in certain spatiotemporal

[1] Despite the fact that world-systems analysts sometimes employ methodological rhetoric similar to the one adopted in this paper, it may not always be immediately clear what the analytical value of much of such work might be for scalar agnostics. One might expect research into the nature and forms of economic organization to focus on specific mechanisms of economic interdependence to identify the appropriate units of analysis rather than the other way round.

configurations[2] have been identified, the nature of the deviations from the standard of "neutral" exchange and the specific manner in which the deviations may be exploited by powerful economic and political actors can be used to explain the emergence and evolution of structural phenomena. It is suggested that money – particularly some of the prevailing forms of centrally controlled credit – tends towards the formation of integrated core-periphery hierarchies within its sphere of influence. The paper also explores the potential wider relevance of micro-foundational approaches to world-systems analysis through their relationship to some of the extant methodological commitments of world-systems research. While money may be one of the most important micro-relational institutions which regulate social interdependence and the transformation of structurally integrated social entities, comprehensive comparative analysis would be needed to determine the relative significance of other micro-foundational economic, political, social or cultural mechanisms in the formation and evolutionary transformation of world-systems.

THE DEFINITION OF A WORLD-SYSTEM AND THE IMPLICATIONS FOR MICROANALYSIS

In the words of Wallerstein, "in 'world-systems' we are dealing with a spatial/temporal zone which cuts across many political and cultural units, one that represents an integrated zone of activity and institutions which obey certain systemic rules" (2004:17). According to an alternative view whereby "concepts [have been] opened up, and the links among them loosened" for the purpose of "comparing small, medium-sized and global world-systems":

> World-systems are defined as intersocietal networks of regularized interaction. … The idea of a core/periphery hierarchy is defined generally as any kind of power hierarchy among polities or regions, and is turned into a question rather than an assumption, i.e. 'does a particular world-system have core/periphery relations, or not?' The question of interstate relations is broadened to include

[2] Some working fiction of neutrality is required for money to exist in the first place. In case any specific mental model points towards the absence of an appropriate benchmark for neutrality while the actual social reality continues to operate as if such a standard existed, the task for the scholar is to identify the institutions, norms or customs which permit monetized market exchange to take place and to expose their implicit claims to neutrality to wider scrutiny.

> systems of interacting polities, so that tribes and chiefdoms may be studied. The analysis of hegemonic ascent and decline is expanded to include the rise and fall of large chiefdoms, states and empires as well as modern hegemons (Chase-Dunn 2005:172-173).

Although the identification of an analytical tradition's intellectual origins and conceptual core is a notoriously difficult task, one observer has suggested that one could

> …reconstruct the origins of the [world-systems] perspective by noting its reliance upon, and synthesis of, three traditions: (1) studies of imperialism and colonialism – usually Marxist or Panafricanist in inspiration – that stressed the interdependent nature of European and Third-World development, and thus an international if not 'world' division of labor; (2) the *Annales* tradition, with its emphasis upon multiple, contingent temporalities and localities; and (3) radical studies of European capitalism which, although more nationalist in unit, provided insights into phases of economic stagnation and expansion, creative destruction, and hegemony. Each of these lineages brought with it critical insights, as well as limiting assumptions (Martin 2000:238).

Bringing speculation and conjectural knowledge claims on "systemic rules", "intersocietal networks of regularized interaction" or analytical blends of historicized non-theories[3] of structure-forming, polarizing exchange into the realm of science would require first and foremost a theory of *equal* exchange: under what conditions, if any, would a specific form of exchange be neutral in terms of any given variables such as surplus allocation, transnational class formation, or shaping the opportunity structures for "development" in either relative or absolute terms? While it is quite possible that some forms of social organization contribute to "ever-expanding, deepening and polarized relational networks" (Martin 2000:240) or "an evolutionary pattern towards regimes of increasing size, scope and complexity" (Arrighi 2004:532) more than others, excluding alternative explanations for increasing structural differentiation and polarization – chance, intrinsic features of specific modes of "neutral" exchange etc. – would require a theory of equal exchange against which any potential deviations and the associated causal patterns can be analyzed. As Amin (2000:600) has pointed out, "The key question this [capitalist polarization or "globalization"] raises is whether this

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[3] Wallerstein's aversion to the label world-system *theory* has often been pointed out. See e.g. Gellert and Shefner (2009) and Wallerstein (1991).

polarization is immanent to the global expansion of capitalism, that is to say, produced by its governing internal logic, or if it is only the result of various concrete, multiple and specific conditions having all, as if by chance, operated in the same direction." In order to show that polarization is indeed "immanent to the global expansion of capitalism", one would thus first of all have to identify a "neutral" form of exchange which can be distorted either by the "governing internal logic" of capitalism or by the confluence of "various concrete, multiple and specific conditions" that are conceptually heterogeneous to the forms of exchange that they modify. There is ontologically nothing exceptional about such claims that could single out scholars working on the political economy of world-systems or other critical perspectives for higher standards of analysis than some of the competing views: the same requirement to explore rather than assume the "neutral" forms of exchange or types of social interaction applies equally to the proponents of "free" markets or any other teleological mental models which attempt to redefine legitimacy through all-embracing self-referentiality. In the same way as "the classic mugger's opening gambit, 'your money or your life,'" or "the classic terrorist menace, 'do *x* or else'" offer free market alternatives (Wallerstein 1999:25), a number of alternative social arrangements with the potential to produce highly egalitarian market outcomes could conceivably be classified as falling within the "free" market doctrine in the absence of an unambiguous conceptual benchmark for "neutral" exchange. In short, there is no power-based method to relieve an analytical burden of proof, and some of the more marginal analytical perspectives – among the gatekeepers of academia if not necessarily among those members of the oppressed majorities who have been fortunate enough to have the minimal resources necessary to reflect upon such issues – should hardly pretend otherwise merely due to the ongoing omissions and inconsistencies of the hegemonic views.

An analysis of the micro-foundations of power – the relational dynamics which form and continuously reshape larger social aggregates and the conditions of their own existence through ongoing agency-structure interaction[4] – does thus not involve

[4] It is curious that – of all the conceivable analytical perspectives – world-systems analysts should question the feasibility or desirability of conceptually distinguishing between the institutional design features of money and the political and economic processes that govern the system within which a specific form of money operates. If it is not possible to distinguish interdependence between mutually constitutive parts of a whole from the management of inherently unrelated economic entities which could be forced into any shapes and sizes depending on the shifting power relations, it may not be obvious that the world-systems perspective has managed to "wrest our expectations about the future away from theology and into the realm of science". In contrast to some interpretations of the world-systems perspective, this paper suggests that evidence of structural interdependence – a theory of the structure-forming institutional

knowledge claims regarding the appropriate unit of analysis or the scale of the phenomena that are being studied. All that is being demanded is the identification of the precise mechanisms through which larger agglomerations of social interconnectedness may operate. If, for instance, it is "true that the concept of 'surplus' – that which is transferred from periphery to core – is not defined in a clear manner" (Hornborg 2003:209), the explanatory power of analytical frameworks relying on such concepts would appear to be limited. A focus on the micro-foundations of "neutral" exchange may help to remedy such analytical deficiencies through a number of conceptually distinct channels. The infrastructures for production and exchange involve a virtually infinite set of technical arrangements designed to facilitate certain parts of the transactions. If it is possible to identify conditions under which different parts of such infrastructure would constitute neutral conductors of exogenous power relations – neutral facilitators of exchange which may reflect the extraction and distribution of surplus that emanate from separate power structures but are not themselves involved in the origination and management of such processes – the origins of misallocated surplus value could be pinpointed to specific rogue social institutions that fail to live up to the community's publicly professed standards of "neutral" market exchange. If, on the other hand, it turns out that such institutional preconditions for "neutral" exchange cannot be identified, it may be counterproductive for emancipatory scholarship and activism to promote the myth of the possibility of procedural efficiency associated with some – not necessarily the prevailing – forms of market exchange by continued adherence to the concept of surplus value.[5]

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specifications in the context of money – is needed before any specific economic space might be analyzed as a world-system. In contrast to some of the economistic interpretations of the term "microfoundations", the mutual constitution of the micro- and macro-dimensions is seen as an evolutionary process rather than simple aggregation and disaggregation of homogeneous data: the evolution of the institutional specifications of money, for instance, may transform rather than merely reflect micro-level economic incentive structures with potentially unanticipated consequences for the aggregate performance of the economy. Irrespective of the selected methodological labels, the focus is on the theoretical preconditions which might justify the adoption – or perhaps even point towards an analytical comparative advantage – of the world-systems perspective.

[5] Discussion of the potential merits and demerits of specific benchmarks for neutrality is beyond the scope of this paper. The benchmark can be expressed in terms of a physical quantity – flows of natural resources, energy, labor power etc. – an abstract or all-embracing conceptual entity in line with some variants of the view that conceptualizes money or capital in general as commodified power, or even in the self-referential terms of money itself – as a specific combination of "technical" specifications which eliminates all institutionally induced price distortions, such as interest charges included in the prices of virtually all goods and services due to the

Any aspect or element of the world-systems perspective could in theory be analyzed through the micro-foundational approach. Amin (2000:601-602; 1997), for instance, has identified "five monopolies" or "advantages which allow the historic centers (the triad for short) to maintain their dominant positions (in spite of the industrialization of the peripheries): … technological initiative, the control of financial flows at the international level (the most internationalized facet of capital), access to the natural resources of the entire planet, control of the means of information and communication, and, last but not least, monopoly of weapons of mass destruction." It would thus in theory be possible to identify preconditions for a "neutral" distribution of the capacity for technological innovation, natural resources, weapons of mass destruction etc. to substantiate any potential claims that these concepts are either directly involved in unifying certain geographical areas into a single unit of analysis and stratifying their inhabitants in a zero-sum game for resources or at least contribute to the permanence or effectiveness of alternative social structures which do so. This paper, however, focuses on analyzing the implications of potentially "the most important institution of civilization" (U.S. Monetary Commission 1877:46, quoted in Carruthers and Babb 1996:1579) for the world-systems perspective: the social relation of money.

THE CORE-PERIPHERY STRUCTURE OF MONEY

World-systems theorization of money has so far fallen largely within two camps. The first one has focused on the implications of some aspect of the *management* of money for world-systems research. It has, for instance, been suggested that "money has a global structure" and that "the exchange rate system is one of the mechanisms by which high-wage countries extract value from low-wage countries" (Köhler 1998:145). Under this approach, a specific "technical" discrepancy in the management of monetary phenomena is identified from the world-systems perspective: "In this study … I will focus on two contentions, that: (1) the discrepancies between the two measurement methods [exchange rate versus purchasing power parity (PPP) rate] are systematic (non-random) and correlate with the global center-periphery structure (empirical claim);

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prevailing mechanisms for issuing money. What is being argued here is that *some* real or perceived objective measure or working fiction of neutrality is inherent in every conceptualization of monetized market exchange, and each specific conceptualization has the potential to explain not only the nature of unequal exchange through the practical deviations from the selected standard of neutrality, but also the constitution of systemic interdependence through the social relation of money.

and (2) this situation constitutes a form of exploitation (normative claim)" (Köhler 1998:147). Consequently, a specific reform proposal pertaining to the element of monetary management in question may be seen as a relatively effective remedy – "a reform of the global exchange rate system in the direction of purchasing power parity (PPP) rates… would raise the wages of low-income countries relative to high-income countries… improve the terms of trade for low-income countries…[and] significantly reduce unequal exchange" (Köhler 1998:157).

Alternatively, it has been suggested that "money is now more a political relation than a value relation" (McMichael 2000:682). According to one variant of this view, "[a]ccumulation … has little to do with the amassment of material things measured in 'utils' or 'abstract labor'. Instead, accumulation, or 'capitalization,' represents a commodification of power by leading groups in society" (Bichler and Nitzan 2004:254). As profit is not seen as coming from production but from the "*power to reshape the trajectory of social reproduction as a whole*", "[p]roduction, narrowly defined, is merely an aspect of that power" (Bichler and Nitzan 2004:256-257, original emphasis) rather than the centerpiece of economic analysis aiming to identify "narrowly defined" surplus value.

In the former case the impact of the institutional design features of money on the nature of economic exchange is often seen as either non-existent or insignificant compared to distortions arising from the political and economic processes which govern the system of monetarily mediated economic interaction. Under such circumstances money as an institution is not a significant constituent element of the world-system: while the monetary system may be used as a transmission mechanism for economic, political and social power projection, the institutional design features of money do not explain or substantially contribute to the spatial and temporal patterns of monetized market exchange. Even a single global currency could not necessarily overcome the structural spatiotemporal indeterminacy of money: money could be used to promote any universal or particularistic economic or political projects depending on the distribution of power in other realms of social interaction.

In the latter case money's capacity to structure economic, political and social relationships is explicitly recognized. Nonetheless, neither the ontological origins of monetary power nor the distinction between the institutional design features of money and the management of monetary phenomena are typically articulated in more detail. It may not be immediately obvious what the significance of these analytical orientations to the world-systems perspective might be unless these questions are satisfactorily addressed. Has there ever been an era in which money was not "more a political relation than a value relation”? If yes, what are the appropriate criteria for making such inference? In the absence of a more elaborate theory of monetary power, where is the evidence that the political relation of money contributes to the formation of a world-system rather than to any other conceivable scale(s) of economic organization?

The conceptual distinction between the institutional design features of money and the management of monetary phenomena may thus be more important to the analysis of monetary power from a world-systems perspective than what has often been acknowledged. As Chase-Dunn (1982:184-185) has observed, “we need a clear theory of capitalist logic to help us distinguish newly emerging forms which contribute to the transformation of the system from those which reproduce and further expand and deepen it.” Although there is no direct correlation between the institutional design features of money and the reproduction of the world-system, on the one hand, and the management of monetary phenomena and the transformation of the world-system, on the other, both elements of monetarily mediated economic power would appear to be needed to explain the emergence and evolutionary transformation of monetarily integrated areas of economic interaction. If, for instance, no neutral benchmark for the institutional specifications of money exists or can realistically be attained, equal exchange in a monetized market economy is an oxymoron. Consequently, some of the traditional periodizations in the emergence and transformation of world-system(s) would have to be revised accordingly. Irrespective of the theoretical or practical feasibility of constructing a neutral benchmark for monetized market exchange, the conceptual bifurcation of monetarily mediated economic power into the institutional design and the management aspects may also help to illuminate some of the conventional misunderstandings of the nature of a single global currency. The introduction of a single global currency would not automatically produce an integrated area of economic interaction where “’Organization’ catches up with ‘structure’” (Hopkins 1982a:85): the inbuilt “technical” design features of any specific monetary system may well favor progressive disintegration or violent separation over economic inclusion as some of the structurally exploited individuals, communities or polities struggle for alternative modes of economic organization. In order to attain a single, monetarily integrated economic space, the desirable forms of economic, political and social organization would have to be selected as deliberate objectives when designing the institutional specifications of money and the appropriate division of labor between the structural and the discretionary policy aspects of the monetary system.

While both of the aforementioned approaches to money contain valuable insights for analyzing some aspects of money’s multiple potential manifestations, this paper argues that it is the institutional design of money which should be at the center of social scientific inquiry – including the world-systems perspective. The social construction of money – the choice of the precise manner in which tokens of abstract value come to symbolize wealth and the rules governing their issuance, subsistence, circulation and extinction – is logically prior to any form of economic, political and social analysis that involves or is influenced by some of the technical functions of money – virtually all forms of human activity in a modern society. Like all human institutions, the institutional specifications of money[6] have a profound impact on the types of social relationships and activities that money is likely to promote. Far from representing alternative sets of equally neutral rules of the game, the institutional specifications of money have the potential to effectively finish the game of achieving economic efficiency, distributional justice or any other objective pursued through monetized market exchange before it has even started. In other words, the "technical" specifications of money may be so deeply at odds with publicly professed policy goals, structurally favoring alternative outcomes, that it is difficult to see the relevance of political discourse that does *not* entertain the possibility – and perhaps the necessity – of alternative institutional configurations for money.

The implications of this thesis are particularly relevant for counter-hegemonic research programs such as the world-systems approach. If the entire score-keeping system for resource allocation and economic interaction is recognized as a thoroughly political creature that may have a larger impact on economic, political and social outcomes through its socially constructed technical specifications than its capacity to aggregate and channel presumably apolitical market signals, it is not obvious that an "economic" sphere of human interaction in a monetary economy is logically possible, let alone has ever existed. Similarly, if the relative incomes and power positions of capital and labor are largely determined by the precise manner in which financial capital is socially constructed – as opposed to the interplay of market forces *after* the nature of financial capital has been politically and socially determined – the historical ideological struggle between capitalism and socialism, i.e. a dispute focusing on the ownership of

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[6] Although the expressions "institutional" or "technical" specifications of money and the "logic" of money are often used interchangeably, the former expression is conceptually and analytically more precise than the latter. The institutional specifications of money involve several conceptually distinct elements which may even work in opposite directions in terms of money's distributional impact or capacity to approximate any specific real world economic processes. Monetary logic, in turn, averages out the net impact of overlapping or contradictory institutional tendencies and thus effectively reduces the rich diversity of money's analytical dimensions into a single, monolith concept.

the means of production, may pale into insignificance compared to the economic, political and social implications of specifying financial capital in a manner that structurally favors one factor of production over others. According to Wallerstein:

> Core-periphery is a relational concept. What we mean by core-periphery is the degree of profitability of the production processes. Since profitability is directly related to the degree of monopolization, what we essentially mean by core-like production processes is those that are controlled by quasi-monopolies. Peripheral processes are then those that are truly competitive (2004:28).

The ultimate monopoly *par excellence* may well relate to the production of money: forcing peripheral producers of goods and services to accept the terms and conditions that the monetary core chooses to set for lending or circulating the monetary media used for international transactions. Structurally neutral money would permit unlimited monetized market exchange – the monetary settlement of all real claims to monetized market exchange – while fully respecting the prevailing interpretations of the property rights of the holders of both money and real assets. It is far from clear that such structural neutrality is technically feasible, let alone has ever existed in actual monetary systems.

Relevant distortions of monetized market exchange – ones with the potential capacity to appropriate and distribute surplus along the polarizing lines suggested by many world-systems analysts – arise whenever the incentives for obtaining or producing the monetary media diverge from the incentive structures inherent in multilateral barter. In other words, whenever disparities exist between the rules governing the allocation of the actual goods and services that are to be exchanged in the market and the distribution of the monetary media that regulate the access to and the cost of multilateral exchange, the form of exchange that money mediates diverges from the multilateral exchange of goods and services. The prevailing practice of forcing the members of the monetary space to borrow into existence the bulk of the money supply against interest-bearing debt, for instance, effectively eliminates the possibility of neutral multilateral barter of goods and services: it is the rules governing the issuance and circulation of the “value of things without the things themselves” (Simmel 1978:121) – the price of the socially constructed gatekeeper for social interaction involving some of the technical functions of money – which determines each individual’s ability and willingness to engage in multilateral exchange rather than their capacity in real terms to do so.

The implications for world-systems analysis depend on the specific conceptualization of money. If, according to the outmoded and in modern circumstances clearly inaccurate conceptualization, money is viewed as a commodity with a fixed or highly inelastic natural supply, the holders and producers of the monetary commodity might be conceptualized as the "core" of the monetary dimension of the world-system, receiving surplus from everyone engaging in monetized market exchange through the growing divergence between the monetary commodity's intrinsic value and market price. In other words, the position of the holders of the monetary commodity might not be entirely unlike that of common stockholders of the economy as a whole: the holders of the monetary medium – or the "shares" of the real economy – might ultimately be able to extract the value of any productivity increases through the gatekeeper role of money to monetized market exchange.[7] The fact that the prevailing income and wealth disparities would be likely to constitute a reasonably accurate proxy of each individual's or nation's capacity to acquire currency over and above the requirements of bare survival – and thus exploit everyone who is dependent on monetized market exchange for survival – would effectively result in a monetarily mediated core-periphery structure for the economy: those who are wealthy enough to possess or lend monetary capital over and above their needs for survival would constitute the core and the hand-to-mouth participants of monetized market exchange the periphery.

In the more realistic case of conceptualizing money as a credit relation that is legally restricted to specific types of issuers the core-periphery structure of money is perhaps even more clearly visible. If money indeed constitutes an "obscuring layer" (Samuelson 1973:55) or a "veil" (Pigou 1949:14, both quoted in Ingham 2004:15) of real economic phenomena – the temporary conversion of real value into more liquid forms for the purposes of multilateral exchange under conditions which perfectly mimic the incentive structures for barter – one might expect every public or private entity with a certain standard of creditworthiness to be able to "issue" or convert their real wealth into the international transaction medium – whether the dollar, euro, or something else – under equally neutral terms. Should this not be the case, economic actors are effectively forced to undertake capital borrowing merely to gain access to the (international) division of labor mediated by money. After all, it is not capital that any potential

[7] The polarizing power dimension arising from the gatekeeper role of money remains applicable across a wide spectrum of views on the nature of money, including many of the "general-purpose" variants which rest on the idea of generalized interchangeability. While the "ambiguity" of money's "social function" as "an instrument of cohesion and pacification in the community" and as a "centre of power struggles and a source of violence" (Aglietta 2002:31) is hardly new, few observers have pursued the types of social structures that different conceptualizations of money's gatekeeping role or "violence" are likely to produce to their logical conclusion.

transacting parties wishing to engage in monetized multilateral exchange of their real assets are in need of, but a mere accounting system for facilitating the multilateral exchange of existing real capital. Yet if the issuance of money *against* interest-bearing debt by the core states and their banking systems automatically involves the creation of borrower IOUs that exceed the value of the money that is put into circulation, the issuers can gradually increase their control over economic activity within a given monetary space that effectively lacks a permanent money supply or capacity to monetize real assets. The fact that the positive accounting value of the monetary IOU must be accompanied by a corresponding negative accounting value of the credit instrument plus the interest payable indicates that the economy – or the world-system that is subject to the division of labor mediated by currency issued by the core – as a whole is incurring debt that is both wealth-centralizing and effectively unrepayable irrespective of any potential claims by the issuers of the currency to "recycle" money "back" into circulation against interest bearing debt as needed. Such a situation could not arise just by the members of the monetary space issuing monetary IOUs to each other, as the valuation of such IOUs would automatically involve any possible interest payments – the monetary value and the credit value of the IOUs would be equal by definition. The systemic insolvency arises from the requirement that the members of the monetary space must incur interest-bearing debt as a precondition for "issuing" or accessing monetary IOUs, which do not include the interest portion of the debt against which they have been created. Consequently, regardless of the choice of currency, users must incur debt and pay interest to the issuers merely to trade physical and human capital that may already exist and have been paid for. It may be appropriate to note once more that the issues at stake here have nothing to do with the mechanisms of capital lending for investment purposes. All that is being argued is that "neutral" exchange of existing real capital or resources would not require capital borrowing.

Analyzing the specific types of distortions introduced by an economy's or a world-system's reliance on structurally non-neutral money provides a fruitful avenue to theorize unequal exchange and the formation of economic, political, social and cultural structures. Every discrepancy between the logic of multilateral barter and the conditions which the gatekeepers of monetized market exchange choose to set for issuing or circulating money constitutes a potential mechanism of exploitation and dominance. Nonetheless, perhaps one of the conceptually simplest such mechanisms involves the aforementioned practice of issuing money against interest-bearing debt: the requirement for the transacting parties to incur interest charges payable to the issuers of the currency merely to participate in the economy's or world-system's monetarily mediated division of labor. The distribution of the benefits and the burden of the interest payments arising from the structural features of some of the prevailing forms of money[8] are typically highly unequal. According to one study, only the two highest deciles of the population in terms of net interest income are net beneficiaries at the expense of the eight lowest deciles, while the largest benefits are disproportionately concentrated on a fraction of a percent in the highest income group (Kennedy 1995:25-29). Hence the class structure imposed by the prevailing forms of money is consistent with some of the Marxist notions of exploitation and class analysis in general, as the interest-based exploitation "binds the exploiter and the exploited together in a way that economic oppression need not" and "a substantial proportion of the population, at least in the advanced capitalist countries, occupy contradictory locations within exploitation relations, locations in which they are simultaneously exploited and exploiters" (Wright 1985:75,288).

In world-systems terminology, third-party-issued credit money may be conceptualized as a relatively autonomous element of a wider structural hierarchy between the economic and political units of choice – a system with a clear core group of beneficiaries, periphery of the structurally exploited, and a semi-periphery of individuals with an uncertain long-term structural status. Returning to the definition of Wallerstein, "in 'world-systems' we are dealing with a spatial/temporal zone which cuts across many political and cultural units, one that represents an integrated zone of activity and institutions which obey certain systemic rules" (2004:17). An increasingly important element of such an institutional configuration involves the monetary system, which has an individual micro-dimension in addition to the macropolitics of currencies. The core of such a system consists of individuals or institutions with significant positive monetary balances or the capacity to influence the mechanisms of money creation, who exploit everyone else outside the core through a monetarily mediated mode of accumulation that has no efficiency-based economic justification. Although the monetary social hierarchy is not structurally entirely fixed, such individuals have negligible personal risk of downward social mobility due to the continuous upward redistribution of wealth through compound interest. The periphery includes the vast majority of the world's population who have no realistic opportunity to escape negative monetary net worth – either personal or government debt – through their own productive efforts. These individuals are subject to constant exploitation through resource transfers corresponding to interest payments on unrepayable debt. The semi-periphery consists of individuals whose structural position based on the net effect

[8] For the difficulty of reaching a stable and unambiguous definition for money, see Auvinen 2010.

of exploiting the periphery and being exploited by the core remains indeterminate.

It is far from clear that such structural tendencies for intensifying social polarization can ever be completely eliminated from any monetary economy. The inherent conflict between the medium of exchange and the store of value functions of money – or the property rights of the holders of real assets, on the one hand, and the monetary media, on the other – for instance, may well remain irresolvable (see Auvinen 2010). The closest feasible monetary approximation of the logic of undistorted multilateral exchange might involve either the issuance of the monetary IOUs at each transaction on a mutual credit basis or the debt- and interest-free delivery of the monetary media to the members of the monetary space who would spend them into circulation. Nonetheless, in the absence of an unambiguous, universally optimal benchmark for "neutral" monetized market exchange, the structural non-neutrality of money may always tend towards the reproduction of core-periphery-like social hierarchies. While other economic, political and social institutions may have the theoretical capacity to mitigate the polarizing impact of money through "redistribution" and other policies aiming to attain egalitarian *outcomes* to compensate for the monetarily rigged market *processes*, it may not be immediately clear how such policies could be implemented and sustained under the stratifying pressures emanating from the prevailing forms of money.

In addition to its direct relevance to world-systems analysis in explaining some of the tendencies towards core-periphery polarization, the conceptualization of money – particularly its centrally controlled credit variants – as a relatively autonomous source of structural social hierarchies provides a useful analytical tool for understanding the ongoing financialization and transnationalization of capital and the opportunities for transnational class formation and reterritorialization that they confer to individuals and sovereign bodies. The scope of the monetarily induced structural social hierarchies does not need to coincide with any other types of institutionalized political spaces. Such structural spatial indeterminacy renders money an exceptionally versatile instrument of power projection. As one student of the increasingly transnational nature of class formation puts it, "[t]he class relations of global capitalism are now so deeply internalized *within* every nation-state" that the relevant question to ask has become "how and by whom in the world capitalist system values are produced (organized through what institutions), how are they appropriated (through what institutions), and how are these processes changing through capitalist globalization" (Robinson 2007:23,24, original emphasis). Much of the previous research on the transnational capitalist class (TCC), for instance, has focused on organizational overlap and transparent elite social networks as opposed to structural features of the world economy, which could explain the convergence of the incentive structures faced by national capitals (Carroll and Carson 2003; Carroll and Fennema 2002; Kentor and Jang 2003; Sklair 2001; Staples 2006). Any potential identification of a TCC through some of the more transparent social networks would not necessarily explain the persistent social polarization experienced in virtually any economy that becomes subject to a division of labor mediated by the prevailing forms of monetary institutions. In other words, any possible identification of a TCC based on the prevailing methodology could only answer the question *by whom* values are produced, not *how* such production is organized and appropriated institutionally and how these processes are shaped by the transnationalization of capital. The conceptualization of the prevailing forms of money as a relatively autonomous element of wider structural social hierarchies fills this theoretical gap by providing simultaneously an explanation for the incentive structures inherent in the TCC formation and the organizational structure through which the organization of production and the appropriation of surplus occurs. The same insights may, of course, be applicable to more traditional core-periphery analytical approaches with nation-states, for example, as the relevant units of analysis.

The micro-foundational view may thus have the potential to illuminate mechanisms of power projection which have wide applicability across different scales of analysis. Once money as an institution has been shown to produce essentially a core-periphery pattern among the members of the relevant economic space, it is no longer exploitation or the transfer of surplus[9] per se that needs to be explained, but the specific spatial patterns of resource flows which are empirically observed in the real world. In other words, the differential capacities of various economic, political and social actors to influence and shape the structurally exploitative monetized market processes to their own relative advantage become highly relevant. Consequently, while some of the factors that have been identified by world-systems scholars – the distribution of technological innovation, information, natural resources or weapons of mass destruction, the *control* of financial flows rather than the power to *define* the forms of social relations embodied in financial capital etc. – may not always directly explain the mechanisms through which surplus is appropriated, they may well help to shed light

[9] Once again, the use of the concept of surplus – however defined – for expository purposes should not be taken as an indication of endorsement on the part of the author. The reader is perfectly free to adopt any alternative benchmark for neutrality – whether based on the flows or distribution of resources, power, money, or something else – and relabel the deviations which might arise between the implicitly or explicitly stated benchmark for neutrality and the actual real world market processes with more agreeable conceptual symbolism.

on the manner in which alternative sources of influence permit relatively powerful political entities to manipulate surplus-extracting economic structures to their own advantage. Similarly, while the micro-foundational view is necessary to demonstrate that surplus-extraction which is less than perfectly legitimized by the hegemonic discourse does indeed occur through at least one of the constitutive elements of a world-system, it is unlikely that any single institutional aspect alone could conceptually define, produce and continuously reproduce "an integrated zone of activity" worthy of the label "world-system".

RELATIONSHIP TO THE EXTANT METHODOLOGICAL COMMITMENTS OF WORLD-SYSTEMS RESEARCH

Some of the potential rhetorical red flags notwithstanding, infringement of the prevailing methodological commitments of world-systems research by the micro-foundational approach would appear to be far from inevitable. Three examples may suffice to substantiate this claim, presented in the context of the "quibble about the unit of analysis" (Wallerstein quoted in Frank 2000:223) and the notions of capitalism and historicity.

The "quibble about the unit of analysis" has been described as "the question" (Frank 2000:223) in world-systems research.[10] While some world-systems analysts may not "believe in small things" (Wallerstein according to Derluguian 2005:7), their presumed faith in larger entities does, however, necessitate an explanation of the

[10] The essence of the world-systems approach has not infrequently been inadequately specified, if not outright misunderstood. In the words of Lloyd, Mahutga, and De Leeuw (2009:49-50), for instance, "At the center of the world-systems perspective is the intuition that structure (is all that) matters … the structural intuition that countries occupy stratified positions in the world-system – core, periphery and semi-periphery". Yet such structural state centrism would appear to be far from inevitable in world-systems analysis, let alone "all that matters" or the "anything fundamental" (Lloyd et al. 2009:49-50) that the authors claim to have identified. As Wallerstein (2004:17) has observed, "Since [core-like and peripheral production] processes tended to group together in particular countries, one could use a shorthand language by talking of core and peripheral zones (or even core and peripheral states), as long as one remembered that it was the production processes and not the states that were core-like and peripheral." There is thus nothing inherently state-centric about the world-systems "way of doing social science" or "angle of vision" (as distinct from "a unified 'theory'" [Moran 2009:119]), a fact that may become increasingly relevant if the perceived tendencies of global neoliberalism – or the "World War IV" (Marcos 2001) – to break apart existing nation-states into many "nations" along the lines of class cleavages persist.

relational dynamics which allegedly constitute the relevant macro-analytical units in question. In the context of money, the possibility of an integrated, relational spatiotemporal unit of activity which cuts across geographic and cultural space would thus necessitate an analytical approach which combines micro-foundational polarization with a macro-level explanation for the permanence of specific monetary logics or structures across territorial and cultural space. There are several analytical approaches to the nature of money which could reconcile a micro-foundational explanation for the institutional role of money in unequal exchange with a world-system level structural analysis. In the words of Alfred Sohn-Rethel, for instance:

> Money … acts as the concrete, material bearer of the form of exchangeability of commodities. That this form can be expressed as the oneness of the commodities' existence explains why there attaches to money an essential, functional unity: there can, at bottom, be only one money in the world. There can, of course, be different currencies, but so long as these do effective monetary service within their own orbit, they must be interchangeable at definite rates and thus communicate to become one, and only one, universal money system. Thus all communicating societies of exchange effect a functional unity (Sohn-Rethel 1978:44 quoted in Maurer 2005:86).

While the level of monetary integration envisioned by Sohn-Rethel is by no means necessary to demonstrate the potential analytical complementarities between microanalysis of monetary power and the world-systems perspective, it may be one of the most powerful approaches for the purposes of world-systems researchers: whatever forms money may take in any given political or cultural space, the "functional unity" of money ensures that the same monetary logic will be shared by the entire functionally integrated world-system of production and exchange. Consequently, the specific theoretical approaches or rhetorical labels adopted in the study of the monetary mechanisms which are involved in the extraction and distribution of surplus through unequal exchange would have no impact whatsoever on the applicability of the world-systems perspective to analyze the monetarily integrated zone of economic activity.[11]

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[11] It may be appropriate to point out once again that the absence of monetary fragmentation is not a necessary condition for the emergence of monetarily defined or interrelated social entities. Nonetheless, for the purposes of this paper the functional unity approach constitutes perhaps the least controversial analytical framework to illustrate the relevance of money in the formation and transformation of relationally

If an examination of the appropriate unit of analysis confirms rather than challenges the potential utility of the micro-foundational approach to money to world-systems research, might a closer investigation of its compatibility with the world-systemic notions of capitalism reveal a latent methodological conflict? After all, if "[monetized m]arket systems are older than capitalism" (Denemark 2009:241) and "[c]apitalism is the first and only historical social system that has become truly global in scale and scope" (Arrighi 2004:527), what is the analytical relevance of money for macro-research of world-systems evolution? First of all, it should be pointed out that opinions on the historical importance of capitalism for world-systems research are far from uniform. Arrighi and Frank, for instance, appear to agree that "capitalism is not as fundamental as many scholars believe. A capitalist region might have dominated the system for a time, but its hold was not as profound as to structure all areas or all subsequent world history" (Denemark 2009:241). Nonetheless, whatever one's views on the importance of the notion of capitalism for world-systems research may be, it would appear to be unwise to discount the potential transformatory significance of changes in the money form and the shifting opportunity structures for monetary management that they have given rise to. If, for instance, it is true that "[t]he *differentia specifica* of capitalism is to be found in its particular monetary institutions, in which privately contracted credit relations are routinely 'monetized' by the linkages between the state and its creditors, the central bank and the banking system" (Ingham 2003:302), then exponents of the different variants of the world-systems approach – whether of the 16th century Eurocentric variety or proponents of the "much more developed financial markets in Asia" (Frank 2000:226) view – would have a concrete analytical standard against which to assess any potential contribution of capitalist monetary relations to the emergence and evolutionary transformation of the modern world-system. Conversely,

intertwined social spaces. Any alternative theoretical framework would have to demonstrate inter-space independence in addition to intra-space interdependence – the capacity of any geographically or relationally delimited monetary space to not only provide an alternative solution to monetized market exchange among its members, but also to some degree exempt the members collectively from the more traditional mechanisms of monetary power projection in their *external* transactions. Should this not be the case, the various local or complementary currencies would run the risk of merely pooling individuals into groups of real or perceived mutual solidarity which would collectively continue to be exploited by the mainstream monetary structures in precisely the same manner as each individual would be in the absence of such monetary microstructures. There may, of course, be several possible analytical approaches to demonstrate the emancipatory potential of monetary microstructures, but it is not obvious that pursuing some of these lines of reasoning in more detail would substantially add to the core argument on the relevance of the micro-foundations of monetary power to world-systems research.

the institutional features of money may constitute a useful indicator of the qualitative nature of each economic system to complement the more traditional measures of quantitative financialization. As an analytical tool rather than a theoretical approach, there is no reason why a micro-foundational focus on money should necessarily be viewed as inconsistent with any specific faction of world-systems analysis. To the contrary, since any potential qualifying attribute of money – "capitalist" money, "credit" money etc. – merely reflects the utterer's own angle of analysis without diminishing the explanatory potential of alternative labels to describe the same processes, microanalysis of money may in fact help to bridge some seemingly irreconcilable analytical divides. In the case of the controversy of production versus exchange as the appropriate locus of attention when analyzing a capitalist economy, for example, the micro-foundational focus on money may, depending on one's analytical perspective, help to uncover either a structural source of coercion through which productive relations are administered in a capitalist society in line with the view that money is more "a political relation than a value relation" (McMichael 2000:682), or a mechanism for extracting and distributing surplus value in the view of those who see exchange as the center of capitalist social relations.

If after a brief examination of the "quibble about the unit of analysis" and some of the controversies over the appropriate definition and historical significance of capitalism the micro-foundational view has still not transgressed the extant methodological commitments of any specific faction of world-systems research, might the suggested approach be accused of insufficient historicity – of constituting a veiled attempt to introduce a Trojan horse of the "post-modern turn that rejects the field's historical, structural and so-called Third World or Marxist foundations" (Martin 2000:235) into world-systems research? While there may be far more room for complementary analysis between historical materialists and postmodernists than many scholars may realize,[12] such theoretical pluralism is by no means necessary for world-systems analysts to benefit from the suggested approach to money. The world-systems' focus on *la longue durée* inherited from the *Annales* tradition has been described as "an attack against both the episodic and the eternal, both event-centered

[12] Read (2003:15), for instance, has pointed out how, "the various intersections between Marx, Althusser, Negri, Tronti, Foucault, Deleuze, and others … [are] not just the byproduct of a sort of theoretical eclecticism; rather, there are strong philosophical undercurrents and conflicts linking these various perspectives." According to Jessop, "there is more scope than many believe for dialogue between critical Marxist and Foucauldian analyses" as "Marx seeks to explain the *why* of capital accumulation and state power", while "Foucault's analyses of disciplinarity and governmentality try to explain the *how* of economic exploitation and domination" (2007:40, original emphasis).

political history and the universalizing generalizations of abstract social science" (Goldfrank 2000:161 drawing on Wallerstein). One of the closest existing approaches within the world-systems tradition which could demonstrate the compatibility of the micro-foundational approach with some of the existing methodological commitments to historicity is perhaps McMichael's "incorporated comparison" – "a vehicle of historical theory", whereby "the units compared… form in relation to one another and in relation to the whole formed through their inter-relationship" (McMichael 2000:670-671; 1990).

> Incorporated comparison views all objects of inquiry as historical and historically connected. Unlike conventional comparison, cases cannot be abstracted from their time/space location, via an experimental logic which juxtaposes cases 'externally,' in order to generalize from observed patterns. Rather 'cases' or instances are understood as relational parts of a singular (historically forming) phenomenon (McMichael 2000:672).

There is thus no necessary tradeoff between relational microanalysis and the historical evolution of macrostructures. To the contrary, the two concepts may be seen as mutually constitutive. Terence Hopkins expressed essentially the same issue as follows:

> I think the methodological directive with which we work is that our acting units or agencies can only be thought of as *formed*, and continually re-formed, by the relations between them. Perversely, we often think of the relations as only going between the end points, the units or the acting agencies, as if the latter made the relations instead of the relations making the units (Hopkins 1982b:149, original emphasis).

Whatever one may regard as the most relevant relational variables that shape and are being shaped by the institutional structures of money – material conditions of production or exchange, postmodern subjectivity formation, etc. – the interaction between the "cases" or the "acting agencies" and the structure is always a historical process visible through the evolutionary transformation of the macrostructures and the shifting conditions for their constituent relational dynamics. A focus on the historically evolving structural logic which conditions the formation of relational patterns – the monetary logic which defines at each point in time and space the types of structure-forming agentic relations which are likely to take place – would thus be expected to improve the explanatory powers of macro-structural world-systems analysis rather than to undermine its methodological traditions. This may be partly due to the fact that such an approach cuts across some of the more traditional domains of analysis: rather than limiting itself exclusively to the realm of the economic, political or the cultural (see e.g. Hopkins and Wallerstein 1982), the micro-foundational view on money retains its relevance in the analysis of the historical evolution of structural economic and political power as well as in the context of any potential "historico-cultural formation" whereby money produces and is a product of "collective social meaning" in "the social worlds of interpretive communities" (Baronov 2009:149-150).

CONCLUSION

The micro-foundational approach to money constitutes a useful analytical tool to examine the underlying relational dynamics of macro-structural world-systems while remaining faithful to their extant methodological commitments. An analytical focus on the concrete monetary deviations from the logic of undistorted multilateral barter facilitates the identification of structural power irrespective of one's theoretical predispositions: structural monetary power may be viewed either as a surplus-extracting economic mechanism between the periphery and the core, a predominantly political source of coercive power which shapes the organizational patterns of production and accumulation, or as a postmodern transformer of subjectivities through mutually constitutive agency-structure interaction. Such an approach leaves less room for the invocation of labels such as "theology" or "intuition" by adopting less controversial analytical standards to theorize the conditions under which some of the socially constructed forms of economic interdependence – such as the prevailing forms of money – might be involved in the formation and evolutionary transformation of structurally integrated zones of economic activity. As it appears to be far from clear that a micro-foundational approach would not confirm the validity – perhaps even analytical comparative advantage – of some of the epistemological innovations of the world-systems perspective under certain assumptions or circumstances, there would appear to be few obvious reasons to refrain from the incorporation of the institutional features of money or the micro-foundational analytical perspective in general into the research program.

REFERENCES

Aglietta, Michel (2002). "Whence and Whither Money?" in *The Future of Money*. Paris: OECD.

Amin, Samir (2000). "Economic Globalism and Political Universalism: Conflicting Issues?" *Journal of World-Systems Research* 6(3):582-622.

Amin, Samir (1997). *Capitalism in the Age of Globalization*. London: Zed.

Arrighi, Giovanni (2004). "Spatial and Other 'Fixes' of Historical Capitalism," *Journal of World-Systems Research* 10(2):527-539.

Auvinen, Tero (2010). *On Money*. Rovaniemi: Lapland University Press.

Baronov, David (2009). "The Role of Historical-Cultural Formations Within World-Systems Analysis: Reframing the Analysis of Biomedicine in East Africa," *Journal of World-Systems Research* 15(2):147-166.

Bichler, Shimshon and Jonathan Nitzan (2004). "Dominant Capital and the New Wars," *Journal of World-Systems Research* 10(2):255-327.

Carroll, William K. and Colin Carson (2003). "Forging a New Hegemony: The Role of Transnational Policy Groups in the Network and Discourses of Global Corporate Governance," *Journal of World-Systems Research* 9(1):67-102.

Carroll, William K. and Meindert Fennema (2002). "Is There a Transnational Business Community?" *International Sociology* 17(3):393-419.

Carruthers, Bruce G. and Sarah Babb (1996). "The Color of Money and the Nature of Value: Greenbacks and Gold in Post-Bellum America," *American Journal of Sociology* 101(6):1556-1591.

Chase-Dunn, Christopher (2005). "Social Evolution and the Future of World Society," *Journal of World-Systems Research* 11(2):171-192.

Chase-Dunn, Christopher and Peter Grimes (1995). "World-Systems Analysis," *Annual Review of Sociology* 21:387-417.

Chase-Dunn, Christopher (1982). "Commentary," in *World-Systems Analysis: Theory and Methodology,* Hopkins, Terence K. and Immanuel Wallerstein (eds.) Beverly Hills, CA: Sage.

Denemark, Robert A. (2009). "World System History: Arrighi, Frank, and the Way Forward," *Journal of World-Systems Research* 15(2):233:242.

Derluguian, Georgi M. (2005). *Bourdieu's Secret Admirer in the Caucasus: A World-System Biography*. Chicago: University of Chicago Press.

Frank, Andre Gunder (2000). "Immanuel and Me With-Out Hyphen," *Journal of World-Systems Research* 6(2):216-231.

Gellert, Paul K. and Jon Shefner (2009). “People, Place, and Time: How Structural Fieldwork Helps World-Systems Analysis,” *Journal of World-Systems Research* 15(1):193-218.

Goldfrank, Walter L. (2000). “Paradigm Regained? The Rules of Wallerstein’s World-System Method,” *Journal of World-Systems Research* 6(2):150-195.

Hopkins, Terence K. (1982a). “Notes on Class Analysis and the World-System,” in *World-Systems Analysis: Theory and Methodology*, Hopkins, Terence K. and Immanuel Wallerstein (eds.) Beverly Hills, CA: Sage.

Hopkins, Terence K. (1982b). “World-Systems Analysis: Methodological Issues,” in *World-Systems Analysis: Theory and Methodology*, Hopkins, Terence K. and Immanuel Wallerstein (eds.) Beverly Hills, CA: Sage.

Hopkins, Terence K. and Immanuel Wallerstein (1982). “Patterns of Development of the Modern World-System,” in *World-Systems Analysis: Theory and Methodology,* Hopkins, Terence K. and Immanuel Wallerstein (eds.) Beverly Hills, CA: Sage.

Hornborg, Alf (2003). “Cornucopia or Zero-Sum Game? The Epistemology of Sustainability,” *Journal of World-Systems Research* 9(2):205-216.

Ingham, Geoffrey (2004). *The Nature of Money*. Cambridge: Polity Press.

Ingham, Geoffrey (2003). “Schumpeter and Weber on the Institutions of Capitalism,” *Journal of Classical Sociology* 3(3):297-309.

Jessop, Bob (2007). “From Micro-Powers to Governmentality: Foucault’s Work on Statehood, State Formation, Statecraft and State Power,” *Political Geography* 26:34-40.

Kennedy, Margrit with Declan Kennedy (1995). *Interest and Inflation Free Money: Creating an Exchange Medium That Works for Everybody and Protects the Earth*. Philadelphia, PA: New Society Publishers.

Kentor, Jeffrey and Yong Suk Jang (2004). “Yes, There is a (Growing) Transnational Business Community,” *International Sociology* 19(3):355-368.

Köhler, Gernot (1998). “The Structure of Global Money and World Tables of Unequal Exchange,” *Journal of World-Systems Research* 4(2):145-168.

Lloyd, Paulette; Matthew C. Mahutga and Jan De Leeuw (2009). “Looking Back and Forging Ahead: Thirty Years of Social Network Research on the World-System,” *Journal of World-Systems Research* 15(1):48-85.

Marcos (2001). “La Cuarta Guerra Mundial,” *La Jornada*, October 23.

Martin, William G. (2000). “Still Partners and Still Dissident After All These Years? Wallerstein, World Revolutions and the World-Systems Perspective,” *Journal of World-Systems Research* 6(2):234-263.

Maurer, Bill (2005). *Mutual Life, Limited: Islamic Banking, Alternative Currencies, Lateral Reason*. Princeton: Princeton University Press.

McMichael, Philip (2000). "World-Systems Analysis, Globalization, and Incorporated Comparison," *Journal of World-Systems Research* 6(3):68-99.

McMichael, Philip (1990). "Incorporating Comparison Within a World-Historical Perspective: An Alternative Comparative Method," *American Sociological Review* 55(3):385-397.

Moran, Timothy Patrick (2009). "Studying Long-Term Large-Scale Change: Concluding Reflections on the Relevant Unit of Analysis," *Journal of World-Systems Research* 15(1):115-123.

Pigou, Arthur C. (1949). *The Veil of Money*. London: Macmillan.

Read, Jason (2003). *The Micro-Politics of Capital: Marx and the Prehistory of the Present.* Albany, NY: State University of New York Press.

Robinson, William I. (2007). "Beyond the Theory of Imperialism: Global Capitalism and the Transnational State," *Societies Without Borders* 2:5-26.

Samuelson, Paul (1973). *Economics*. 9th edition, New York: McGraw-Hill.

Simmel, Georg (1978). *The Philosophy of Money*, London: Routledge.

Sklair, Leslie (2001). *The Transnational Capitalist Class*. Oxford: Blackwell.

Sohn-Rethel, Alfred (1978). *Intellectual and Manual Labor: A Critique of Epistemology.* Atlantic Highlands, NJ: Humanities Press.

Staples, Clifford L. (2006). "Board Interlocks and the Study of the Transnational Capitalist Class," *Journal of World-Systems Research* 12(2):309-319.

U.S. Monetary Commission (1877). *Report of the U.S. Monetary Commission, Senate Report no. 703*, Washington D.C.

Wallerstein, Immanuel (2004). *World-Systems Analysis: An Introduction*. Durham: Duke University Press.

Wallerstein, Immanuel (1999). "States? Sovereignty? The Dilemmas of Capitalists in an Age of Transition," in Smith, David A., Dorothy J. Solinger and Steven C. Topik (eds.) *States and Sovereignty in the Global Economy*. London: Routledge.

Wallerstein, Immanuel (1991). *Unthinking Social Science: The Limits of Nineteenth Century Paradigms*. Cambridge: Polity Press.

Wright, Erik Olin (1985). *Classes*. London: Verso.