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**INTERNATIONALIZATION OF CAPITAL, METAMORPHOSES OF  
CAPITALISM, AND PROGRAMMATIC ELABORATION:  
GLOBAL SOCIALISM AND THE PERIPHERY**

**Eduardo da Motta e Albuquerque**

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FACULDADE DE CIÊNCIAS ECONÔMICAS  
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REGIONAL**

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**Eduardo da Motta e Albuquerque**  
Cedeplar/UFMG

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<sup>1(\*)</sup> Cedeplar-UFMG

# Internationalization of capital, metamorphoses of capitalism, and programmatic elaboration: global socialism and the periphery <sup>2\*\*)</sup>

**ABSTRACT:** This paper discusses contemporary changes in the global capitalistic dynamic and their implications for political elaboration. The challenges for this programmatic elaboration are huge, especially those related to internationalization of economies – the road for a global capitalism. The role of the periphery in these metamorphoses shows how strategic it is for the making of global capitalism, highlighting how this outcome is a global hierarchy that changes over time. This evaluation introduces a discussion on six contemporary problems, from global warming to wars, indicating how international they are. An agenda for global reforms is suggested to face those challenges.

**JEL CLASSIFICATION:** P00, P5

**KEY WORDS:** metamorphoses of capitalism, socialism

**RESUMO:** Este artigo discute mudanças contemporâneas na dinâmica capitalista global e suas implicações para a elaboração política. Os desafios para essa elaboração programática são enormes, especialmente aqueles relacionados à internacionalização das economias – o caminho para um capitalismo global. O papel da periferia nessas metamorfoses mostra o quanto estratégico ela é para a construção do capitalismo global, destacando a sua natureza como uma hierarquia global que muda ao longo do tempo. Esta avaliação introduz uma discussão sobre seis problemas contemporâneos, do aquecimento global às guerras, indicando o peso da dimensão internacional. Uma agenda para reformas globais é sugerida para enfrentar esses desafios.

**CLASSIFICAÇÃO JEL:** P00, P5

**PALAVRAS-CHAVE:** metamorfoses do capitalismo, socialismo

Belo Horizonte

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<sup>2(\*\*)</sup> Paper prepared for presentation at the *Historical Materialism London Conference*, 2024 – Stream *Post-Capitalism*, Session “Planning (Eco-Socialist) Futures at the Global Scale”, 7 November 2024.

## INTRODUCTION

This paper discusses how contemporary changes in the global capitalistic dynamic might be evaluated and interpreted for a collaborative effort to update a program for overcoming capitalism. The challenges for this programmatic elaboration are huge, but this paper would like to focus in one issue: the implications of internationalization of economies – the road for a global capitalism – for the programmatic elaboration.

Capital has a “power of expansion” (Marx, 1867, p. 752) that knows no national borders - internationalization of capital is an inherent part of the capitalist dynamic. This process leads to structural changes related to the formation of global capitalism. There is a broad consensus related to the internationalization/globalization processes, that can be grasped from different institutions, each dealing with different aspects of this internationalization – internationalization of production (UNCTAD, 2005, 2011, 2013), globalization of finance (BIS, 2017, chapter 5), international movements of people (World Bank, 2023). Theoretical elaboration may point to this process, with a debate on its scope and depth (Panitch and Gindin, 2012; Robinson, 2004).

The formation of a global capitalist economy is a long-term process, already identified by Marx (1867), a process that has a dynamic that should be investigated. Kondratiev (1926, p. 49) suggests that the structural changes that shape long waves of capitalist development are caused by four different factors, one of them is the “inclusion of new regions in the global economy”. Furtado (1987) evaluates how the industrial revolution is related to a new division between a center and a periphery, new international division of labor, a process that is defined by those countries that generate technological progress. Furtado stresses, therefore, the importance of this center-periphery divide, a structural feature of a global economy in formation.

From a theoretical framework based on Kondratiev (1926), Furtado (1987) and Cohen and Levinthal (1989), a previous work suggests that the global economy is shaped by an interplay between expansionary forces emanating from the center, and assimilatory forces created at the periphery (Albuquerque, 2023, chapter 2). The outcome of this interplay is a global economy characterized by a global hierarchy among regions and countries. Over time, this hierarchy is reshaped by that interplay, as technological revolutions take place at the center,

renewing the sources of initiatives that lead to new reconfigurations of the international division of labor – a key component of metamorphoses of capitalism (Furtado, 2002).

The role of the periphery in these metamorphoses shows how it is strategic for the making of a global capitalism, highlighting how this outcome is a global hierarchy – a source of deep problems such as global and regional inequalities, a persistent incapacity to solve very basic human problems, and a source of new challenges for humankind – the subject the Historical Materialism London Conference 2024.<sup>3</sup>

As a structural feature of global capitalism, this global hierarchy should be understood for the elaboration of a socialist alternative. This paper has a very simple objective: to discuss/investigate how the international dimension, global because it includes the periphery, might be part of the collective effort for a programmatic elaboration of a contemporary socialist alternative.

This paper is organized in five sections. The first presents methodological notes on programmatic elaboration. The second section integrates the periphery in metamorphoses of capitalism. The third focuses on selected international dimension(s) for contemporary programmatic elaboration, that guides the suggestion of an agenda of global reforms summarized in the fourth section. The fifth section explores how these programmatic points, with their mutual influence, might trigger a transitory dynamic towards a new system, that must be as global as current economy – global socialism.

## 1- METHODOLOGICAL NOTES ON PROGRAMMATIC ELABORATION

Rosdolsky (1968, chapter 28) is a starting point for this discussion, as he combines investigation on transformations of capitalism, affecting the operation of the law of value, and the attempt to identify in that dynamic elements that could indicate trends of a new society within contemporary capitalism: visible seeds of socialism (Rosdolsky, 1968, p. 414). An investigation of “historical limits of the law of value” must understand changes in capitalism to elaborate a program adequate to the present historical phase.

The investigation of changes in the operation of the law of value is part of an understanding of its “historical limits”. Rosdolsky (1968) highlights the impact of contemporary “new

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<sup>3</sup> See the Call for Papers (<https://www.historicalmaterialism.org/event/twenty-first-annual-historical-materialism-london-conference/>)

industrial revolution” and “developments of modern technology” on the possibilities of a transition towards a new reality where “disposable time” and not “labour-time” could be the form that “social wealth is measured” (pp. 427-428). These methodological notes from Rosdolsky can be read as suggestions that as capitalism pushed by technological revolutions changes, the program for its overcoming should also be changed – there is a relationship between metamorphoses of capitalism and programmatic elaboration.

One key change in the operation of the law of value is the increasing role of the international dimension. Marx (1867, p. 247) pointed that “world trade and the world market” as institutions from which “the modern history of capital starts to unfold”. Heinrich (2004, p. 217) stresses a dynamic process, as “the world market is not just a precondition, but the constantly recreated result of capitalist mode of production”. This constant change in the structure of world markets is investigated within the complex systems’ approach in Melo (2024).

The interconnectedness of world market and the operation of the law of value is highlighted by Rubin (1926, pp. 144): “[w]hen exchange is restricted within national boundaries, abstract labor does not yet exist in its most developed form. The abstract labor achieves its completion when international trade connects and unifies all countries”.

Over time, the world market changes, and this is an important subject of research: Mandel (1972, chapter 2) is a good reference for those changes after four technological revolutions. Neusüss (1974, p. 160) is an elaboration focused on changes in the operation of the law of value after the international movements of capital – and she stresses that after the Second World War, the multinational corporation became the most important form of internationalization of capital. Neusüss (1974, p. 158) presents a very interesting elaboration on how the law of value is modified when operating at the world level, and that the multinational corporation, with its subsidiaries, may modify and/or block those changed conditions.

As international connections and international organizations change the world market, they put forward a challenge for programmatic elaboration: internationalization is a specific dimension of the metamorphoses of capitalism. On the one hand, following Rosdolsky’s suggestion, we should investigate how this inner tendency of capitalist development may present new visible seeds of socialism – those new developments may present new



opportunities – and challenges - for the international organization of workers. On the other hand, the extent of internationalization in contemporary economy creates a new source of problems, a new source of crises: the mismatch between the scale and scope of internationalization of the economy and the lack of international institutions to regulate and manage them.

Metamorphoses of capitalism have presented new challenges to humankind, that might be related not to visible seeds of socialism, but to tragic and destructive elements that are pointed by Rosa Luxemburg's slogan: "transition to socialism or regression into barbarism" (Luxemburg, 1915). Rosa Luxemburg writes from the prison, condemned by her fight against the war. After the German defeat and during the revolutionary moment in Germany, Rosa Luxemburg (1918) in her programmatic elaboration proposes that "*entire war and munitions industries* must be abolished". Those comments from Rosa Luxemburg may be a methodological complement to Rosdolsky's approach: the programmatic elaboration must deal with destructive tendencies inherent to the capitalist dynamics, visible self-destructive mechanisms. These visible self-destructive mechanisms may be related to lock-ins built after the blind logic of capitalist system, in the feedback between profit and innovation.

These visible self-destructive mechanisms – that put forward imminent catastrophes – demand programmatic points to deal with war and environment.

One visible self-destructive mechanism is a consolidation of war-related investments that are institutionally embedded in the variety of capitalism that formed in the United States during late 1940s and early 1950s: the incorporation of the military-industrial complex as a key institution (Higgs, 1994). This incorporation impacted other institutions, illustrated by the US innovation system, which has war-related investments as a very important structural component (Mowery, 2010), that even contributes to shaping the nature of innovative processes in the leading capitalist country. This dynamic and this institutional arrangement impact other countries and is one of the explanations of the total of military expenditures in 2023: US\$ 2.44 trillion (SIPRI, 2024, p. 4). This huge accumulation of destructive resources impacts the global society, as a logic that the war feeds the war arises and generates various armed conflicts (Kaldor, 2012, p. 182).

Another visible self-destructive mechanism is the impact of (unforeseen) consequences of two technological revolutions and of the exponential growth of capitalist economies:

environmental problems and climate change. The second and fourth technological revolutions (Freeman and Louçã, 2001) are based in fossil-fuels, coal and oil, respectively, that science discovered that are causes of Earth warming (Nobel Prize Committee, 2023). The exponential growth of global economy blinded guided by the connection between profit and innovation – source of super-profits - puts forward new problems related to exhaustion of Earth's natural resources.<sup>4</sup> Both dynamics put forward imminent catastrophes that demand new programmatic points.<sup>5</sup>

In sum, metamorphoses of capitalism demand for programmatic elaboration the need to identify three topics: structural changes of global capitalism, visible seeds of socialism emerging in these changes, and visible self-destructive mechanisms to be undone.

## 2- METAMORPHOSES OF CAPITALISM AND THE PERIPHERY

The formation of global capitalism is discussed by different authors, showing different balances on the dynamic and stage of this formation. Panitch and Gindin (2012) stress the role of the US state in this process, still in the making, while Robinson (2004) evaluates that a real global capitalism has already emerged.

This section explores the role of the periphery in this process, as global capitalism should be interpreted as a system that since its beginning includes new regions and expands to reach a point today that it is present everywhere. In this global system, where nation-states are its units, the role of the periphery is an important part of the metamorphoses of capitalism. As this section discusses, the periphery has not a passive role and over time impacts the dynamic at the center. Over time, there are different roles of the periphery, and its heterogeneity points to different roles of different regions, and different connections between the center and the periphery.

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<sup>4</sup> This blinded guidance given by the search of super-profits could be understood using Simon's (1978) elaboration on bounded rationality – the impossibility to know the consequences of decisions. Rosenberg (1996) mentions ignorance and Kahneman (2013, p. 201) discuss how the crises are unknowable. Those consequences of technologies were unknown, but now there is a scientific understanding of the implications of human activities on climate (Nobel Prize Committee, 2021; Blake and Gilman, 2024). Therefore, today that blinded guidance is also unjustifiable – there is enough evidence of the weight of “negative externalities” created by fossil-fuel-based investments.

<sup>5</sup> During this HM London Conference 2024 this topic is very important. There are many important contributions on this subject, as the conference program shows ([https://drive.google.com/file/d/1LfVEop53r2RGzWXa8IyO23II\\_zY3Q7tx/view?usp=sharing](https://drive.google.com/file/d/1LfVEop53r2RGzWXa8IyO23II_zY3Q7tx/view?usp=sharing))

## 2.1- THE INTERPLAY BETWEEN EXPANSIONARY AND ASSIMILATORY FORCES SHAPING A GLOBAL HIERARCHY

Expansionary forces emanating from the center and assimilatory forces created at the periphery over time have mutual influence, both impact and are impacted by the other, forming an interplay that shapes the global economy. This interplay, since the Industrial Revolution, has configured and reconfigured the global economy.

This interplay is at the root of capitalism expansion (Albuquerque, 2003, chapter 2). This interplay suggests that the periphery is not a passive global region that is shaped by only the expansionary forces emanating from the center. On the contrary, very hard built institutions for technological learning and assimilation – innovation systems -, that depend strongly on political conditions – political independence is a key factor for the formation of innovation systems. The rarity of successful catching up processes is evidence of how difficult this process is (Lee, 2019, p. 22). The different assimilatory forces built at the periphery define how far a country/region can achieve in the absorption of technologies generated at the center. These unequal assimilatory forces shape a heterogeneous periphery.

The mutual influence between expansionary and assimilatory forces shapes a peculiar dynamic in the global economy (Albuquerque, 2023, chapter 8).

On the one hand, the growth of assimilatory forces impacts expansionary forces in various forms. As assimilation grows at the periphery, the expansionary logic must also change, as new nuclei of capitalist accumulation develop throughout the world, with diverse consequences such as larger markets for imports, new capabilities that put forward new industrial demands for capital goods, new technical and engineering capabilities that might attract multinationals to build subsidiaries to take advantage of those new resources etc.

On the other hand, changes in expansionary forces impact assimilatory forces, as new targets for technological learning appear, new imports may later push new import-substitution policies, new institutions of the innovation system should be built, etc.

The stress in this interplay, in this mutual influence between forces emanating from the center and created at the periphery, is important to highlight the role of the periphery in the configuration of the global economy. The global economy is organized by this interplay as a

global hierarchy, an international division of labor, defined by a changing dynamic between a center and a periphery.

This global hierarchy is preserved and transformed, it changes over time. It is preserved as the division between a center and a periphery persists. And it is transformed, as countries/regions change their roles in this hierarchy – industrialization processes, new demands for natural resources, industrial policies transform peripheral countries, meaning new positions in the international division of labor. The global hierarchy becomes more heterogeneous, with more and new connections, more firms, more products, different natural resources demanded by new technologies, and changing income and technological gaps.

## 2.2- ORGANIZATIONS AND MARKETS AT THE WORLD LEVEL

Simon (1991) presented a balance for the US economy on the relationship between these institutions that organize capitalism, showing “[a] large part of the behavior of the system now takes place inside the skins of firms, and does not consist just of market exchanges” (Simon, 1991, p. 25). The “ubiquity” of organizations is an important topic of Simon’s paper, that concludes evaluating that “[t]he economies of modern industrialized society can more appropriately be labeled organizational economies than market economies” (Simon, 1991, p. 42).

These structural changes derived from the interactions between changes in the frontiers of firms and changes in markets are constitutive of metamorphoses of capitalism. The question now is how these changes apply to the international arena.

As one important change in the frontiers of firms during the XXth century was its capacity to build new divisions in foreign countries, the issue put forward by Simon at the national level may be also present at the international level. Hymer (1970), following Coase and Chandler, suggests that “[e]ach step in the evolution of business enterprise had important implications for the structure of the international economy” (p. 442). More specifically, “[m]ultinational corporations are a substitute for the market as a method of organizing international exchange” (p. 441). As an international planning entity, coordinating production among different countries, creating divisions and an intra-firm international labor division, the multinational corporations create new layers of hierarchy with the global economy.

Over time, the growth of the scale and the scope of transnationals, up to a point when global trade is dominated by transnational firms (BIS, 2017, p. 102), new reconfigurations take place and multinational firms become organizers of global value chains, employing diverse contractual forms for international production (UNCTAD, 2013, p. 140). These changes mean newer forms of hierarchy, now involving intra-firm, non-equities mode of production and many different contractual relations: markets become a tool for transnational firms' planning global activities.

Transnational corporations and their global value chains are new forms of connections within the global hierarchy that is the world economy. In this topic, the interplay between expansionary and assimilatory forces is also transformed, as peripheric countries begin to headquarter transnational firms (UNCTAD, 2006) – transnational corporations are a form of assimilation of new technologies, and another form of connection with the center.

The intensity of internationalization of capital promoted by transnational corporations creates an important mismatch in the global economy, as there is no cross-border institution to regulate them: this may be an important source of imbalances that become source of crises. Proposals as a global tax on capital may be a starting point in this regard (Piketty, 2013, chapter 15).

### 2.3- GLOBAL HIERARCHY AND CHANGING INTERNATIONAL DIVISION OF LABOR

The outcome of the interplay between expansionary and assimilatory forces is a global hierarchy, basically a hierarchy between a center and a periphery, as the structuralist approach has suggested (Furtado, 1987). The division between the center and the periphery is not static, changing over time as technological revolutions at the center impact the periphery, and the periphery learns to absorb at least part of the new technologies (Chaves et al, 2020). There is a sequence of divergence and convergence between these two poles of the global economy, as the dominance of expansionary or assimilatory forces change.

Both the center and the periphery are heterogeneous, as a myriad of varieties of capitalism may be an indication of the economic diversity.

The center may be divided initially by the leading and hegemonic country and the rest of the center – being the hegemonic country matters, especially for the advantages derived from an

international monetary hierarchy, that gives the leading currency “exorbitant privileges” (Eichengreen, 2011). This hierarchy – and its changes over time – may be indicated by the position of the British pound at the end of the XIXth century (Eichengreen, 2008, p. 20) and by the position of the US dollar after the Second World War (Guttmann, 2022, pp. 75-77). Guttmann (2022, pp. 20-23) discusses preconditions to be the issuer of “world money”, that depends on economic and technologic capabilities – related to the conditions to have initiative to configure the international division of labor: “the economy that ... generated technological progress” (Furtado, 1987, p. 219).

The periphery is heterogeneous, and over time this heterogeneity increases. The roots of this growing heterogeneity are the strength/limitations of assimilatory forces in each region. Furtado (1987, pp. 220-221) presents typology of different abilities of peripheric regions to keep domestically wealth created by their participation in the international division of labor. In one extreme there is a pure colonial condition, in which the surplus is completely appropriated by the center (p. 220), and in the other extreme there is a condition where the state and the domestic elites can keep a huge part of the surplus (p. 221) – this type may eventually achieve a successful catch up.

These different economic structures built in peripheric countries explain their heterogeneity. As illustration of one extreme, the exclusive operation of expansionary forces from the center, in movements searching from different natural resources demanded after different technological revolutions, there is the case of contemporary Congo. Kara (2023, p. 15) presents a very pedagogic description of those changes, as Congo is “home to some of the largest supplies of almost every resource the world desired, often at the time of new inventions or industrial developments”: from ivory in the 1880s, rubber in the 1890s, and finally “cobalt for rechargeable batteries” (2010s). This wealth of resources exploited did not lead to a transformation of Congo’s economy from a mining country to at least the beginnings of industrialization.

The other extreme may be illustrated by East Asia, where countries still peripheric as China, Thailand, Malaysia are developing some absorption of technologies related to semiconductors, as their host firms that are part of global networks producing them. This participation may be an indication of the size of domestic investments necessary to understand and learn how to deal with those technologies. Those advances of assimilatory

forces, especially in the case of China, provoke reaction in leading countries, that reenergize their technological investments, a change in the operation of the expansionary forces at the center (Wong et al, 2024).

In between those extremes, there are peripheric regions that were included in the global economy after the technological revolution of the combustion engine (the fourth technological revolution in Freeman and Louçã, 2001) searched for oil reserves everywhere: Russia, Iran, MENA countries, some sub-Saharan African countries, and some Latin American countries were transformed by that huge demand, and over time the nature of this relationship changed, with some countries only extracting oil, and others refining it and eventually developing some sectors of the petrochemical industry. This differentiated forms of connection to the global economy mean different levels of economic development, but also shows how this sort of connection may lead to predatory behavior of transnational companies and local elites. These different forms of connection introduce an important topic of the visible self-destructive mechanisms at the periphery, as countries at the periphery may have incentives provided at the center to strengthen predatory patterns of economic activity as access to profits (Albuquerque and Faria, 2019).

The global hierarchy as it promotes unequal (preferential, selected) connections between the center and peripheric regions is reproduced – fractal properties of global capitalism? – locally, magnifying inequality within the periphery.

This global economy, with its hierarchy, is a consequence of forms of expansionary forces: colonialism in Africa. Michalopoulos and Papaioannou (2020, pp. 58-81) survey the role of colonialism as a historical legacy, that has negative impacts on contemporary developmental perspectives. One important legacy is the political fragmentation of the Sub-Saharan region, with nation-states' artificial borders dividing ethnic and linguistic communities (p. 89): this partition, a legacy from the “Scramble for Africa”, may have impact on current levels of violence in the region (p. 89).

Political fragmentation – important also in regions of Latin America -, artificial borders – probably relevant for parts of Middle East -, are elements of the configuration of the global hierarchy discussed in this section, as it may weaken regional connections with neighboring countries and strengthen direct connections between specific peripheric regions and countries at the center (example in Central America). And this type of connection favors the condition

from the center to define the role of that peripheric region in the international division of labor.

The inclusion of former USSR countries in the international division of labor emphasized the new potential of countries like Russia as source of mineral resources, especially oil, without further efforts to rearrange the new order after the end of the Cold War. On the one hand, this incentives for a consolidation of Russia's role as an oil-exporting country also favors the predatory side of economic growth. On the other hand, this rearrangement might be behind the escalation of violence in that new peripheric region of the global economy.

And, finally, when countries show potential for a successful catch up, reactions from the center arise to make that trajectory harder. Wong et al (2024) is a good illustration of this difficult new problems – geopolitical problems are part of the challenges that a country may face to be successful in the narrow pathway that leads to catch up (Lee, 2019). Geopolitical problems are translated into military goals and arms expenditures, reinforcing the logic behind military-industrial complex in the global economy.

In sum, metamorphoses of capitalism, outcome of the interplay between expansionary and assimilatory forces, configure and reconfigure a global hierarchy that defines contemporary world economy.<sup>6</sup> This global hierarchy is a problem that the capitalist system is not able to solve, and its organization incorporates in the global economy problems that must be faced as international problems. The introductory notes on the global hierarchy and the related problems created by it are a guide for the definition of key topics that are challenges for the programmatic elaboration.

### 3- CROSS-BORDER CHALLENGES FOR PROGRAMMATIC ELABORATION

The organization of the global economy as a global hierarchy is simultaneously a problem and a cause of other problems. As the global nature of the existing system is increasingly felt through the multiplication of international connections and cross-border movements and flows discussed in section 2, it is not possible to deal with these problems within nation-states.

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<sup>6</sup> Leonardo C. Ribeiro, Pedro M. Loureiro, Leonardo G. de Deus and I are working with this issue, preparing a paper provisionally intituled "Technological revolutions, assimilation and changes in the global hierarchy in capitalist dynamics".



This section lists six structural problems, contemporary challenges, investigating how they are consequence of the global configuration of the capitalist system presented in the previous section.

### 3.1- PERSISTENCE OF UNDERDEVELOPMENT, INEQUALITY AND PREDATORY CAPITALISM

The hierarchical nature of the global economy discussed in the previous section incorporates the underdevelopment as a historical trap (Furtado, 1992, pp. 37-57). This historical trap may have roots at one specific impact of expansionary forces on the peripheric countries, as they may initially mean a growing income gap and an increase in the relative backwardness of countries. Historically, expansionary forces do not come without important restrictions to the free flow of ideas and technologies. Illustrations of these barriers are the British ban on exports of machines in the early XIXth century and the later XXth century movements for strengthening intellectual property rights.

The domestic reproduction of the global hierarchy, related to inequality within peripheric countries, is a blocking factor for economies of scale necessary for important positive feedbacks of economic development. Legacies from colonial times, especially where political fragmentation is a reality, are also important self-sustaining mechanisms that preserve the underdevelopment trap.

The initiative from the center to organize the international division of labor means a strong incentive for regions and countries at the periphery obtain surplus from mining and agricultural production, creating lock ins in backward economies that preserve the roots of underdevelopment. The type of connection established between the center and mineral-rich countries at the periphery represent self-sustaining mechanisms that renew the hierarchical links as the demand changes at the center after new technological revolutions. Furthermore, easy gains of predatory dynamics are also a blocking factor of a more virtuous growth dynamic, besides a source of new problems related to environment and health.

The assimilatory forces operating at the periphery have been changing the relative economic weights of the region vis-à-vis the center, and this is a source of a type of global mismatch between the two broad blocks of the global hierarchy: this increasing economic, scientific and technological relevance of the periphery is not translated into institutional

rearrangements to this new reality. This type of mismatch may have been an important source of the 2007-2008 crisis, for example (Wade, 2010).

### 3.2- GLOBAL WARMING AND ECOLOGICAL CATASTROPHES

The global economy with its global hierarchy connects the center and the periphery in the fossil fuels' lock in (Soares, 2024, chapter 1). The international division of labor, transformed over time as International Oil Companies, National Oil Companies and Service Oil Companies change their roles after political and technological events, shows how this global lock in (Beyazay-Odemis, 2016) is very difficult to break. The long and global formation of this lock in involves an international division of labor with countries specialized in the provision of oil – a component of the problems discussed in relation to development, including persistent incentives to predatory practices like the risk of oil extraction in the Amazon region. This global lock in, organized hierarchically from the center, includes its countries, illustrated by the recent boom in fracking – related to the “shale revolution” (The Economist, 2024).

This global lock in is an important source of the human impact on climate change (Nobel Prize Committee, 2021). This key problem of humankind is an international problem, certainly without condition to be solved in one single country.

The global hierarchy that shapes the exploration of mineral resources in Congo, as discussed above, is also an organizer of environmental problems, related to deforestation there. Maps indicating mineral resources within today's forests may be a guide for the problems derived from expanding mining activities – at the periphery – to tap the demand at the center for new products.

### 3.3- EMERGING INFECTIOUS DISEASES AND GLOBAL HEALTH

The blind guidance of the profit-innovation link led to the problems related to environment discussed in the previous sub-section. This form of economic relationship with nature is behind potential new infectious diseases – Covid-19 is the last pandemic in a long list (Gatti et al, 2021). Global capitalism is a complex system that interact with other complex systems – our biosphere and our planet. Diseases never knew national borders (Porter, 1998). The strengthening of interconnections around the world only accelerates an old dynamic.

As diseases do not know national borders, health becomes an international issue, also because the transnational links in the production of drugs, vaccines, and medical knowledge. Very basic monitoring of potential emerging diseases demands international cooperation. The Covid-19 is evidence of “the disproportion between pandemic risk and the investment in global public health” (Tooze, 2021, p. 34).

### 3.4- MILITARY EXPENDITURES AND WARS

Military expenditures reached a total of US\$ 2.44 trillion in 2023 (SIPRI, 2024, p. 4). This is a huge misallocation of resources, certainly related to the power necessary to hold hegemonic positions – Arrighi (1994) associates it with economic and military power. Military power is correlated to geopolitical conditions sustaining the global hierarchy discussed in section 2.

This resource misallocation is structurally related to a feature of the variety of capitalism built in post-Second World War United States, where the Military-Industrial Complex is a key component of its dynamic. This structural feature is copied by other varieties of capitalism today, leading to the size of global expenditures with military resources – destructive tools.

This logic is inherent to the current variety of capitalism prevalent in the US, and affects other sectors. One impact on the size and role of the state in developed countries: arms’ expenditures and related expenses shape priorities, define a form of global presence, and defines the logic of war globally. The outcome is a reality with beyond the wars in Ukraine and in the Middle East, there are more 50 wars reported by SIPRI (2024, p. 3). All of them are at the periphery (Geneva Academy, 2024). Countries under war suffer destruction, deaths, falling life expectancies, in sum, negative impact on their prospects of development. The weight of the Industrial-Military Complex leads to other misallocations, given the impact of military goals in the “direction of technological progress”, that may strengthen visible self-destructive mechanisms.

The global accumulation of destructive resources reported by SIPRI (2024) is even more dangerous in the current conjuncture defined by Arrighi’s “systemic turbulence”: the risk of military escalation and conflict in geopolitical changes is not a minor problem, as the Doomsday Clock shows in early 2024 (SIPRI, 2024, p. 4).

### 3.5- MISMATCHES BROUGHT BY INTERNATIONALIZATION OF CAPITAL

The level of interconnectedness of global economy is and object of diverse investigations. BIS (2017, chapter 6) describes the level of globalization of production and its relationship with globalization of finance (p. 97, p; 102). There is now, after especially the war in Ukraine and the intensification of geopolitical conflict, a worry about de-globalization (Lee, 2024), a sort of rearrangement of global value chains following this new movements from the leading country (Wong et al, 2024). Those conjunctural rearrangements, however, do not seem to point towards a return to strictly within nations policies – there are rearrangements in the international connections.

Furthermore, the intensity of transformations brought forward by transnational corporations as they became the dominant form of organization of production led to changes that are already inscribed in the global dynamic of the system.

One important consequence is a mismatch between regulatory institutions of capitalism, still basically at the level of nation-state and the level of internationalization of economic activities pushed by internationalization of capital. Hymer (1970, pp. 447-448) points for this contradiction, while Panitch and Gindin (2012, p. 5) articulates the making of global capitalism with the leadership of the state of the United States – a manager of global capitalism. This mismatch is more evident during crises, as illustrated by the action of US FED as an informal global lender of last resort in 2008 (Tooze, 2018, pp. 202-203).

This mismatch is a crucial element of contemporary global economy, probably a new source of crises.

Another mismatch is between the internationalization of capital and the weakness of labor international organization, certainly a source of flexibility to capital and advantages from multinationality – this mismatch may be related to inequality. Another issue related to labor at international level is the intensification in international movements of people (World Bank, 2023). Migration is a source of strength of the capitalist center, as it attracts valuable labor force for their economic growth. However, those movements are source of new problems, in the central countries and in the peripheric countries that sometimes lose skilled people formed by their rudimentary institutions of their immature innovation systems. The lack of truly freedom of international movements and the lack of citizenship rights that transcend national borders are problems that could also be identified in the institutional mismatches between

the level of internationalization and the weakness of international labor organization and new institutions to deal with it.

### 3.6- ADVANTAGES FOR THE ISSUER OF WORLD-MONEY

The hierarchical organization of the world monetary system is an additional source of problems for the peripheric countries in general. Guttman (2022, p. 13) suggests an “international currency pyramid”.

The history of the dollar as the world-money shows the maneuvering room that this hegemonic position allows: Bretton Woods (1944), the end of Bretton Woods (1971), the Plaza Accord (1985), the reverse Plaza Accord (1995) are illustrations of this hierarchy among developed countries (Guttman, 2022, pp. 75-77 and pp. 84-85; Brenner, 2006, pp. 206-208 and p. 290). This monetary hierarchy – the “international currency pyramid” (Guttman, 2022, pp. 12-14) – has even stronger impacts on the periphery, in a form that eventually turns the use of the international finance more challenging for peripheric countries (BIS, 2022, p. 11).<sup>7</sup>

Guttman discussing that pyramid locates peripheric countries only in a fourth layer (Brazil, South Africa, Russia), of “commodity currencies”. This elaboration is interesting here because it connects the movements of those currencies to their country position in the international division of labor, as discussed in the previous section. For Guttman, “[t]he exchange rates of these currencies move in close correlation with the world-market prices of the commodities these countries specialize in exporting, as long as those commodity exports make up at least a quarter or more of their total export earnings” (Guttman, 2022, p. 13). This whole process may be interpreted as further pressure to a mineral-producing position in the global market, a consolidation of the global hierarchy.

## 4- AN AGENDA FOR GLOBAL REFORMS

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<sup>7</sup> According to BIS (2022, p. 11), “traditional model of cross-border payments presents even more challenges for emerging market and developing economies”. Cross-border payments “are often settled in a handful of dominant currencies and FX trading involving non-dominant currency pairs remains limited. This exposes EMDEs to spillover effects from the monetary policies of jurisdictions from which the foreign currency originates, as well as associated financial stability risks, such as credit cycles. The limited international role of many local EMDE currencies also raises the issue of access to liquidity for these economies in times of global financial turbulence.” (BIS, 2022, p. 11).

Those six problems are international. Therefore, there is the need for an agenda for global reforms, each dealing with one of these topics. But they are also interrelated – complex systems -, in a web of multiple influences. This phenomenon adds one further issue to the whole dynamics, as each of those problems is international and each of them is related to others: they cannot be solved neither in one country, nor one by one.

The answers for these six challenges might be starting points for programmatic elaboration. Each of one of these six programmatic topics involves a huge theoretical elaboration, many of the already in progress – the objective of this section is to list some very introductory points, to identify especially their inherent international nature, and to suggest how they are interrelated.

#### 4.1- DISARMAMENT AND INDUSTRIAL RECONVERSION (1)

The first step is an international proclamation of the end of the use of military means for the solution of problems and cease-fire for all existing conflicts. This first international step needs to be connected to the formation of peace institutions that should manage the demobilization of troops globally and create institutions to monitor peace and end hostilities. The demobilization of the nation-based military-industrial complexes, responsible for the US\$ 2.44 trillion expenditures in arms in 2023, is a subsequent step: this involves a conversion of these industries to civil uses, a subject that the literature on “peace dividend” after the end of the Cold War may be an initial reference for the gains that may impact the global economy (Brzoska, 2007, pp. 1181-1184). The reconversion from a military production to peaceful priorities may also use the experiences from previous reconversions, especially the reconversion from the Second World War (Alexander, 1994).

The embeddedness of the military-industrial complex in the structure of present capitalism is the source of a strong lock in present in the global economy, which demands concerted policies to break it. The international dimension of this effort may be reflected also in the type of planning, cross-border, necessary for the reconversion of the military economy to civil uses. This reconversion, as Brzoska (2007, p. 1180), involves also transformation in research priorities and new uses for scientific and technological resources in the military sector.

#### 4.2- CLEAN ENERGY AND INDUSTRIAL RECONVERSION (2)

The transformations to deal with climate change call for strong international cooperation, demanding steps towards planetary institutions (Blake and Gilman, 2024, chapter 6), and provide important evidence on the limits of nation-states to deal with them. The strong lock-in created by the complex network that involves oil-extraction, refining, distribution, and the network of transport oil-dependent demands a set of important reforms that include another industrial reversion: from fossil-fuels to clean energy. From the decision to not explore new reserves to build new infrastructure based on clean energies, this industrial reversion demands cross-border cooperation and planning.

This programmatic point is also related to economic changes that block incentives to predatory dynamics, a topic related to other points, especially the overcoming of underdevelopment. The predatory legacy spread worldwide demands a special type of investments, with reparatory goals – that might include issues such as reforestation, deconstruction of barrages with refuges from mining, huge investments in recycling etc.

#### 4.3- PANDEMIC PREVENTION AND GLOBAL PUBLIC HEALTH

Covid-19 pandemics highlights how health problems are an international issue, demanding international action. Demands for such international initiatives were part of the discussions in 2020.

The international dimension in health, on the one hand, demands monitoring and pandemic prevention that is related to how we humans deal with nature (Gatti et al, 2021), on the other hand, a formation of health institutions to deal with new emerging diseases.

The formation of a global welfare system is an old topic in the discussions of development economists (Rosenstein-Rodan, 1984, p. 221). Its formation has already some initial roots in international institutions such as the WHO, in the strength of international collaboration in science, in the international activities of transnational corporations in this sector. The health sector has a peculiar structure, as a sectoral innovation system very internationalized – an illustration of this institutional arrangement is presented by Binz and Truffer (2017), that illustrate their suggestion of a global innovation system with a “hypothetical global innovation system in healthcare” (see Binz and Truffer, 2017, p. 1288).

These two institutional arrangements may be important for a new dynamic built upon a priority, international, for public health. Franco et al (2022) explore how they are interconnected and related to the logic of global public goods.

#### 4.4- MULTINATIONALITY BENEFITS SHARED GLOBALLY

The rise of the transnational corporation as the basic microeconomic unit of contemporary capitalism brings new issues for programmatic elaboration.

First, the need to share with society the benefits of multinationality, as the presence in diverse countries is a source of comparative advantages (Dunning and Lundan, 2008, p. 101), of extra-profits. One initial measure could be Piketty's proposal of a global tax on capital (Piketty, 2013, chapter 15). This global tax would need an international institution to manage it, probably with priority to be invested in the eradication of poverty and improvement of labor conditions.

Second, the important mismatches that arise from the internationalization of capital need to be institutionally addressed. On the one hand, labor initiatives should build international networks of self-organized commissions, within firms and their value chains, that would match the international organization of capital. Simultaneously, political movements for international freedom of movements of people, matching the freedom of movement currently enjoyed by capital. On the other hand, international institutions to deal with international corporations should be formed, to regulate them and to have enough political and economic power to guide them to join the two international industrial reconversions to deal with disarmament and clean energy, and to block incentives to predatory economic activity.

#### 4.5- A NEW FINANCIAL ARCHITECTURE

A new financial global architecture is necessary to overcome cotemporary problems derived from the "exorbitant privilege" earned by the leading country's currency as the world money, on the one hand, and to solve the huge problems that countries with currencies in the lower levels of the international currency pyramid incur to participate in international transactions. The elaboration of an international money managed by international institutions might be a step in this direction. The initial steps of this reform may be following suggestions put forward by Guttman (2022, pp. 295-297).



#### 4.6- GLOBAL DEVELOPMENT

A new financial architecture would be a change favorable to break the hierarchical nature of global economy. Global cooperation for development may focus on strengthening assimilatory forces. As the formation and improvement of innovation systems is the key factor for assimilation, less developed countries and regions may benefit from the emergence of a global innovation system, that may expand global connections in a less hierarchical form. Local institutions articulated with a global innovation system may build scientific and technological capacities to integrate the country/region in the international efforts related to pandemic prevention and blocking of predatory economic activities.

The institutions of an emerging global welfare system may accelerate the overcoming of poverty, advance the control of preventable diseases and include more regions in research and investments related to health.

The planning of investments generated by the reconversion from military expenditures and for clean energy may include as destinations the poorest regions in the world, with positive feedbacks that may emerge from a broader perspective linked to more cross-border initiatives.

#### 5- GLOBAL REFORMS AND A NEW ECONOMIC DYNAMIC TOWARDS OVERCOMING CAPITALISM

These six programmatic points are elaborated according to the methodological notes in section 1: after an introductory evaluation of structural changes in global capitalism there is an attempt to identify, on the one hand, visible seeds of socialism, and on the other hand, visible self-destructive mechanisms. The two industrial reconversions are related to the erosion of self-destructive mechanisms, and the emergence - or the road to - a global welfare system and a global innovation system may be steps enabled by visible seeds of socialism.

The presentation of these six points for programmatic elaboration puts forward two new questions: How might they interact, over time opening room for mutual influences between them? May changes in one of these dimensions trigger a new dynamic that impacts other problems?

Each of these programmatic points demands international cooperation and a reorientation of the combination between planning and market implemented by contemporary capitalism. Both elements – international cooperation and planning focused on social and human goals – have features of a commons-led dynamic. Connecting the commons-led dynamic to the methodological notes, this new dynamic may be seen as consequence of the strengthening of visible seeds of socialism and the weakening of visible self-destructive mechanisms.

A commons-led dynamic could be defined as a logic that overcomes the blind-guided relationship between profits and innovation that shapes capitalism. This new logic implies something that is present in each of the programmatic points presented in section 4: a reorientation of goals, with an impact of the current orientation of technological progress.<sup>8</sup>

This reorientation of the direction of technological progress might unleash a more creative and innovative use of the scientific resources accumulated globally, certainly reinforced by the gains coming from increasing international cooperation and from a shared multinationality of those efforts.

The topics of programmatic elaboration presented in this paper are only a small contribution to a broader collaborative effort to build an effective new orientation for social struggles. This collective and collaborative international programmatic elaboration may help to reorganize and recompose social movements and political action. A tool to contribute to the social forces that might push those changes: workers' international initiatives and self-organization – invention of new forms of action, new institutions -, global public opinion and global public sphere, formation of cross-border democratic institutions. In the process of formation and reconstruction of social movements, a democratic basis for these advances, it is important to include at the center of elaboration and action the international dimension, to push the international collaboration of different local movements, and a shared perception that an international horizon is essential for the struggles necessary to face contemporary challenges.

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