

# UNDOCKING AND COLLISION: THE RECENT PATHS OF THE SEMIPERIPHERY IN THE WORLD-SYSTEM

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## Introduction

In the 1970s Immanuel Wallerstein set out to counter the current theories that dealt with the unequal development of countries. His proposal, an analysis of the world-system, included the idea that the framework structure of the international environment was composed of three different strata, periphery, semiperiphery and an organic nucleus. Of all the ideas presented by Wallerstein, the semiperiphery is still one of the most controversial concepts of his work.

The semiperiphery appears as an important part of the World-system morphology. Unlike the nucleus and the periphery, this stratum gathers certain peculiarities in its functions, the main one being the very maintenance of the system's equilibrium. In the face of the attribution of vital importance, many approaches have sought complementarities to the seminal idea of semiperiphery, as well as tried to construct methods that would make it possible to identify the countries that make up the said structure.

This article seeks to retake the relevance of the semiperiphery for the understanding of contemporary international circumstances. Its operation allows global data to be aggregated, offering a factual and updated temporary clipping of the most diverse economic and political facets that make up the World-system. In the first section, the most relevant constructs applied to the semiperiphery by Wallerstein and other authors will be resumed, including criticisms of the concept. In the second section we will discuss the most di-

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verse approaches already performed for the geographic definition of the semiperiphery, being one of the most important studies already performed, here replicated and later applied to some data for methodological exemplification purposes.

## Conceptualizing the Semiperiphery: resumption of its main constructs

The analysis of the Wallerstein<sup>2</sup> World-System seeks to find since the 1970s the mechanisms that have lasted from century to century in the international division of labor. The author attempts to bring together elements of the social sciences that have dissociated into four specific areas of knowledge, history, economics, sociology and political science into one perspective, privileging the “system” as a unit of analysis and insisting on the *longue durée* of Braudelian inspiration as a temporal clipping dimension because it reflects the continuity of structural realities (Wallerstein 2005a).

Wallerstein’s conception also sought to confront the then prevailing theory of modernization, which proposed extending the studies developed in Europe and the United States to the rest of the world, “universalizing universalism,” in the author’s words (Wallerstein 2003, 232). For him, the main problems of the modernization theory referred to the assumption that all states operated autonomously and were not affected in an impactful way by factors there are external to their borders, besides the fact that it assumed as a plausible possibility the development of all countries that were in stages prior to modernization: “The theory of modernization argued very simply the following: all societies go through a definite set of stages in a process culminating in modernity” (Wallerstein 2003, 232).

World-Systems analysis would then oppose the idea of a model-induced modernization (very convenient in Cold War times in which bipolarity gave a very distinct contour to two possible development projects) through two developments that would impact the study of International Relations. The first of them would be globality, replacing the traditional unit of analysis (society/state) with the World-System, once it assumed as impossible the analysis

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<sup>2</sup> Wallerstein’s work on the World-System is supported mainly by the four publications that gave rise to the analysis of World-Systems, namely, *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (1974), *The Modern World-System II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750* (1980), *The Modern World-System III: The Second Era of Great Expansion of the World- 1840* (1989) and *The Modern World-System IV: Centrist Liberalism Triumphant, 1789-1914* (2011).

of countries in an isolated way since all were in an intensely interconnected system. The second epistemological contribution was the notion of historicity, derived from the first point: “If the processes were systemic, then the history - the whole history - of the system (as opposed to the history of the subunits, taken separately and comparatively) was the crucial element for understanding the present state of the system” (Wallerstein 2003, 234). Wallerstein argued that the whole analysis was both historical and systemic (Martin 1990, IX).

The World-system analysis was, for some authors, “an imaginative attempt to shake pre-established paradigms of comparative sociology” (Evans 1979, 17). On the one hand, the theory of modernization was marked by “blaming the victim” when they suggested that underdeveloped countries had poor values in terms of choices to promote development. Consequently, to overcome the endogenous obstacles would require high doses of cultural and financial transfer from rich countries to the poor. The salvation of the periphery would be given according to the links it could create with the core countries of the system (Evans 1979).

But not only the theory of modernization was contested by the analysis of the World-system. On the other hand, for the dependency paradigm, links to the core were the problem rather than the solution, as profit was drained to rich countries instead of remaining in poor countries. The political and economic power of the nucleus was used to prevent any structural change in the periphery (Evans 1979).

What is invigorating about the World-system approach is that the issue of exogenous effects on development is no longer delineated in terms of the strength or weakness of the links between the nucleus and a given peripheral country. On the contrary, this question is given in terms of the consequences of occupying a given structural position in the World-system as a whole (Evans 1979, 15).

Another contribution of the concept refers to the explanation of the economic growth differential presented by nations (Snyder and Kick 1979). Many of the developmentalist explanations at the time treated economic growth as an endogenous process and further considered that it occurred in a preordained sequence whereby poor countries could replicate the experiences and strategies of rich countries. The evidence, however, was that international economic stratification had a very low pattern of change.

In the wake of globalization studies that identify world-empires from the most remote records of mankind, although the present system that be-

gan in the sixteenth century is recognized as just one of many others (Osterhammel and Peterson 2005), the Wallenstein approach differs from the others because it comprises a capitalist world-economy that for the first time in history was able to “include the whole globe in its geography” (Wallerstein 2003, 92). The present capitalist system has as a characteristic the incessant accumulation of capital with the maximum profit realization, that takes place through transnational chains of commodities that determine the borders of the world’s economy labor division between multiple cultures and political systems.

An important aspect of the theory in question, with regard to this analysis, would be the treatment given to the structure of the World-System, which is divided into activities-center and activities-periphery, the first ones being those benefited by the added value in the unequal trade provided by international trade. However, the two types of activities are not always exclusive at the borders of a State, and “peripheral” activities may be carried out in the central countries (and vice versa), although the contrary is predominant (Wallerstein and Hopkins 1982).

Although the activities of one type or another were not fully coincident with the boundaries of either state, Wallerstein perceived a pattern in which the central or peripheral activities of the system were distributed unevenly among the various segments of the World-System, being these actually divided into three different categories. The third category would then be composed of semiperipheral States that would export peripheral products to central countries and central products to peripheral areas of the system (Wallerstein and Hopkins 1982).

In each capitalist world-economy, economic life is organized under what might be called the “double triad,” consisting on the one hand of the trinomial “material life - market economy - capitalism” and, on the other, hierarchical under the auspices of the whole “organic nucleus (or Center) - semiperiphery - periphery” (Lourenço 2005, 176).

The second triad, in contrast to the assumptions of the Economic Commission for Latin American and the Caribbean (ECLAC) regarding dependence, which considered that the unequal exchange drained riches from the periphery towards the center, composes an intermediate position with the semiperiphery that avoids the super polarization of the World-system. Yet, while most theorizations frame the intermediate categories as transitional, the analysis of the World-system considers it a permanent condition (Lourenço 2005). For the modernization and dependency theory, the inter-

mediate extracts were considered temporary, however, for the analysis of the World-system, intermediate positions are considered something constant in the structure.

The three structural positions in the World-system were consolidated around 1640, but what allows the system to have political stability are three mechanisms. The first one is the concentration of military power in the hands of the dominant forces, the second, the ideological commitment to the system as a whole. The third mechanism is precisely the presence of the semiperiphery, since the existence of a third stratum means that the higher category will not have to face a unified position of all others because the middle level is both exploited and exploratory (Wallerstein 1974a): “Semiperipheral States play a particular role in the capitalist world economy, based on the dual class antinomy (bourgeoisie-proletariat) and function in the labor division (core-periphery)” (Wallerstein 1976, 462). These are states that, in part, act as peripheral zones alongside core countries and partly act as core countries alongside some peripheral areas.

The semiperiphery states play a facilitating role for the oppressive relations of the center and the periphery, being even economic and political agents of certain powers in times of expansion of world’s economy. In spite of this, they are also exploited by the center, since they usually depend on obtaining the usual sources of growth, capital and technology (Wallerstein 1984).

In terms of the stability of the World-System, the effect of the semiperiphery is dual. The semiperiphery has a buffer function (Wallerstein 1974a), in order to avoid the possible conflicts that would arise from the poor distribution of the rewards in an extremely polarized world structure, since the concentration of the military power in the hands of the dominant forces and the diffusion of the ideological commitment to the system would not be sufficient to avoid insurgencies against the system’s center (Wallerstein 1974a): “The semiperiphery is not an artifact of statistical points, nor a residual category. The semiperiphery is a necessary structural element in a world economy” (Wallerstein 1974b, 350).

At the same time that it functions as a buffer of conflicts by keeping apart the exploitative relations that allow the unequal division of benefits, the semiperiphery is a place of political instability (Wallerstein and Balibar 1988). The expropriation mechanisms existing in the most different levels of violence and modernity, which do not clash precisely because of the semiperiphery existence, coexist within it, dividing the same space and generating social conflicts more frequently because within each of its units both central and peripheral activities are gathered (Wallerstein 2005a).

Terlouw (1993) goes in a similar direction by saying that the semipe-

riphery is the most dynamic region of the World-System. This dynamism is due to the fact that the social structure of the semiperiphery is more fluid and adaptive than the rigid structure of the nucleus. The semiperiphery must be more flexible because of the severe social tensions to which it is subjected. Social tensions are due to the fact that in the semiperiphery there are two types of exploitation: the one promoted between the nucleus, the semiperiphery and the periphery, and the other type that occurs between the bourgeoisie and the proletariat. It is possible that the nucleus exploits the semiperiphery because in this zone the proletariat is more precarious than in the nucleus. The existence of precarious and not precarious proletarians in the semi-periphery would be the second reason why social conflict is much higher in this area.

Wallerstein also points out that the semiperiphery has a second dual effect that focuses on the stability of the World-System. The existence of this third category is not a guarantee of system pacification, precisely because they occupy an intermediate position - closer to a central position than the countries that concentrate peripheral activities -, the semiperiphery states constantly struggle to obtain reinforcement of the State apparatus in order to use it in economic interventions that can change its position in the system. These attempts, on the other hand, tend to reinforce the resistance of the center states, so that they constantly seek to reinforce their military apparatus (Wallerstein 1984). The State rivalry arising from these movements usually takes the form of a power balance, further encouraging the attempt of the stronger States to become dominant powers by gaining hegemony in the system (Wallerstein 2005a).

Still in the sense of the semiperiphery role in the World-System, a number of other roles were attributed to this stratum in the evolution of the current world economy. Chase-Dunn and Thomas D. Hall (2000) argue that the semiperiphery, as the link between core and periphery, is responsible for spreading the institutional, social, technical and organizational innovations. The very rise of the “West” in the formation of the capitalist system is understood by the authors as an instance of semiperiphery development:

In this scheme, the semiperipheral States and the semiperipheral capitalist city-states were the actors who carried out the most important transformations in the ascension of ever larger empires, in the increase of the scale of the markets and in the eventual emergence of the predominant capitalism (Chase-Dunn 2000, 100).

The semiperiphery is an important locus of forces that transform the World-Systems. They are areas in which new institutional forms - that trans-

form the systemic structures and the modes of accumulation - are generated. These forces eventually promote mobility to semiperipheral actors (Chase-Dunn and Hall 1997). Chase-Dunn and Hall (1997) argue that new organizational forms, activities with different logics of operation, are more likely to emerge in semiperipheral areas, where the combined core and periphery are subject to contradictory forces. They argue further that the countries that have been most successful in the capitalist structure, which have achieved the status of hegemonic powers (the Netherlands, England and the United States are cited in the example), were all previously part of the semiperiphery and claim that "A semiperipheral locality is a fertile soil for those who wish to implement organizational, ideological or technological changes" (Chase-Dunn 2014: 16).

Another semiperiphery peculiarity is that its abilities to take advantage of the flexibilities offered by the contractions of economic activity are generally greater than those of the core or peripheral countries. In these moments, the intermediate zones gain advantage at the expense of the central countries, as they manage to expand the control of their domestic market at the expense of the core producers, as well as expand their access to peripheral neighbors (Wallerstein 1976). In these periods, the semiperipheral countries can not only choose from among the most diverse producers of the nucleus, but they can also accept their investments in the fabrication of manufactured goods.

Wallerstein (1974) mentions two important reasons for the fact that the World-System can only exist because it presents a trimodal structure, having a semiperiphery, being one political and the other economic political. Politics, as pointed out earlier, would be due to the fact that a system based on unequal rewards needs to maintain a constant concern about the possibility of rebellion on the part of its oppressed elements. A polarized system between a high-income and a low-income sectors would rapidly tend to disintegrate. To avoid crises, there needs to be an intermediate sector that tends to think of itself as something better than the lower sector rather than thinking of itself as inferior to the higher sector.

The second reason refers to the role of the semiperiphery in absorbing sectors that, for many reasons, become unprofitable in the core countries, and if this process did not occur the capitalist system it would quickly face several economic crises. Within the semiperiphery it accounts for the fact that, although it has managed to industrialize, it has not achieved material progress in the world's labor division, that is, structurally its condition remained the same. This is possibly due to the fact that "the intensive application of capital in the semiperiphery usually occurs with the use of technologies that are already obsolete at the core" (Chase-Dunn, 1998: 81). Lourenço's (2005) ob-

servation of a study by Arrighi and Drangel (1986), which will be dealt with in the following section, is quite elucidative:

[...] the semiperiphery not only reached, but exceeded the organic core in terms of degree of industrialization. From 1965, the nucleus is already de-industrializing, but the gap between the three steps of the hierarchy does not change, because, over time, the industry was becoming peripheral. The industrialization of the periphery and the semiperiphery, therefore, was not a channel of subversion, but a reproduction of the hierarchy of the world economy (Lourenço 2005, 183).

One issue that rises is that the more the number of countries promoting processes of industrialization in the World-System, as a way of leaving the periphery, the more insignificant becomes the reward (Grell- Brisk 2017). Core agents migrating to the semi-periphery contribute to the decentralization and reallocation of resources in more profitable areas (Ruvalcaba 2013), making semiperipheral countries more attractive places for industrial migration than the core or the periphery (Mahutga and Smith 2011, 258 apud Ruvalcaba 2013, 152).

Thus, the changes provoked by the Scientific-Technical Revolution in capitalist development imply a profound reorganization in the world industry and gave rise to the so-called new International Division of Labor (IDL). It is possible to industrialize outside the center of the World-System. Previously central chains, such as textiles, which were among the most dynamic in the world economy (Fröbel et al. 1981), can be transferred to the semi-periphery. In these regions, cheap and abundant labor could be harnessed, and enclaves of production destined for export activity were formed, selling to the center the products that had been made there since the First Industrial Revolution. The crisis in the central countries also led to the expansion of these productive investments. According to Fröbel et al. (1981, 7-9), there was a decline in employment and production in several industrial branches of industrialized countries during the 1970s. Changes were observed in the rationalization of labor and consequent problems in the labor market, in addition to the fiscal crisis of the State. On the other hand, there was an increase in the center's external investments, with an increasing percentage being directed to the developing countries. Among these investments, those destined to transfer productive capacity to other industrialized or developing countries gain importance. In the face of the recession in the industrialized countries, large companies achieve an increasing volume of sales and benefits worldwide (Lima 2007, 66).



It should be noted that in the 1980s several studies attempting to identify the semiperiphery used block modeling, often considering the proportion of manufactured products versus the proportion of raw material marketed by the country to determine its position in the market hierarchy of the World-System. This would have no validity at the same time. Considering that the stage of industrialization is indifferent to establish the stratum to which the country belongs, this logic no longer holds.

Corroborating the notion that industrialization no longer corresponds to core activities, Korzeniewicz and Martin (1994), after categorizing countries into three groups following the methodology proposed by Arrighi and Drangel, applied the classifications to the production of six different products and observed that in the production of cars there was no transfer of production in the core-periphery sense as predicted the notion of a “new international division of labor”. This new division had as presupposition the displacement of the manufacturing activities from nucleus to periphery.

Beyond the industrialization issue, semiperiphery meets in theory the two other specificities. One is related to the **role of the State** in the semi peripheral countries and the other one related to the issue of the **countries mobility** among the strata that compose the World-System. In relation to the role of the State, this is a distinctive feature of the semiperiphery: the interest of the state machine in controlling the market - both domestic and international - since semiperipheral states can never depend on the market to maximize their margins in the short term. profit (Wallerstein 1974). Highlights Terlouw:

A semiperipheral country that wishes to improve its position in the World-System must, first of all, strengthen its state apparatus. Intense economic intervention is necessary to stimulate national production and to protect the national economy from the influences of the World-System. The bourgeoisie in the semi-periphery is not strong enough to compete effectively with the core producers. The economic survival of the bourgeoisie is dependent on active state intervention. The semiperipheral states therefore have the most active state apparatus (Terlouw 1993, 96).

Due to the mix of core activities and peripheral activities in this stratum, development and government policies end up with extremely opposing interests, but are in most cases characterized by state control (Ruvalcaba 2013). For Wallerstein, this results in the politicization of economic decisions may be seen as operative in semiperipheral states (Wallerstein 1974).

Another important aspect about the conceptions of the World-System is that its structural positions are considered permanent, assuming that the

mobility of the units is very restricted or even nonexistent. Since hierarchy among countries is a necessary condition for the maintenance of the capitalist system, “abandoning a structural position means playing a new role in the division of labor and not escaping from the system” (Evans 1979, 16).

Only a few semi-periphery countries can achieve status change at some point in their history. To achieve this, the country will have to accumulate a large share of advantage over the rest of the semiperiphery, that is, a country ascending in the hierarchy does so not only at the expense of core countries, but also at the expense of semiperiphery countries. This is not development, it is only a successful expropriation of a share of world profit (Wallerstein 1976, 466).

It turns out that in the stratification of the World Economy, the proportion of its three categories of economic insertion being constant, there is a low mobility of the countries between these strata (ideally only, as will be seen later) and the state apparatus of a semiperipheral state can do to change the mechanisms of unequal exchange existing in the capitalist system:

The main thing to note about the set of chairs ... is that, even if the one who plays each role can change, the distribution of roles (how many in each role: that is, core, semiperiphery, periphery) remained remarkably constant, proportionally, throughout the history of the world-economy (Wallerstein 1984, 2).

Considering the expectation of nations mobility among the strata, it is assumed that a nation that played a peripheral role may, at least theoretically, see itself someday as part of the nucleus. However, internal change, even if combined with the transformation of links with rich countries, is not enough for a change of position. There needs to be a “wave” at the top (Wallerstein 1976). Wallerstein points out that:

To be very concrete, it is not possible for all states to develop simultaneously. The so-called widening gap is not an anomaly, but a basic mechanism of operation of the world economy. Of course some countries can develop. But these progressing do so at the expense of those who decline (Wallerstein 1974, 7).

It is well known that among the peripheral countries some have changed their status and others have not (Wallerstein 1974, 8). For this to

happen, Wallerstein (1974) points out that there are basically three types of strategy: seize the opportunity, be promoted by invitation and self-confidence. Wallerstein also considered that active change of status could occur in two different moments: “the transition from the peripheral to the semiperipheral state or the reinforcement of a semiperipheral state to the extent that it can proclaim that it is a member of the nucleus” (Wallerstein 1974, 6).

A characteristic that is finally emphasized in the semiperiphery is that this World-System stratum is an undisputed recipient of investments from countries of the organic capitalist economy core. When Wallerstein (1974) cites the two reasons for the semiperiphery existence, the economic rationale is detailed as follows: when a sector begins to present disadvantages for producers either by increasing wages (which occurs in the nucleus) or by one declining profit margins, the ability to move capital to other sectors is the only way to survive the cyclical changes that occur in the leading sectors. And the “sectors” from which these investments are derived are called semiperipheral countries.

The concept of semiperiphery is not only a middle ground, because, as Wallerstein (1979, 69-70) puts it, the semiperiphery plays a key role in the world economy and in the interstate system. In the first, semi-peripheral states can alleviate capital congestion at the center (Lima 2007).

### Criticism to the semiperiphery concept

The concept of semiperiphery engendered by Wallerstein is considered by some authors as his most important contribution (Babones 2005; Chase-Dunn 1998; Grell-Brisk 2017; Weng 2011; Lee 2009). But it did not become immune to criticisms of the most diverse ones like Lourenço: “The semiperiphery is something that is uncomfortably ‘in the middle’, which is not defined theoretically and which, moreover, is extremely diffuse and heterogeneous” (Lourenço 2005, 179). Sanderson emphasizes that while it makes sense to characterize the capitalist world economy as a hierarchical structure, concepts of core, periphery, and semiperiphery often produce reified forms of sociological analysis, and it is preferable simply to refer to global inequalities (Sanderson 2005).

Yet, it is pointed out that there is much more mobility in the capitalist world economy than the analysis of the World-System considers. Much of the capitalist periphery has moved towards the semiperiphery and much of the semi-periphery has moved towards the nucleus, and some formerly

peripheral societies will soon become part of the nucleus (Sanderson 2005). In relation to the role of the semiperiphery as a mediator between the polarization of the core structure and the periphery, Sanderson criticizes the fact that this type of expression, “the role of the semiperiphery”, considers that the World-System is a type of organic system where the system itself is aware of and allocates the tasks of each element on a global level. It is the World-System as a whole that acts and not the capitalists and workers that form the system (Sanderson 2005).

The other problem with the concept of semiperiphery is the fact that it can be classified in qualitative terms - the zone that has a stabilizing role - and in quantitative terms - economies with an intermediate level of development - causing the semiperiphery to become a kind of “garbage category” in which all societies that do not fit into the other concepts are dumped (Sanderson 2005). Sanderson (2005) suggests, in the end, that the concepts of nucleus, semiperiphery and periphery are “de-reified” as well as all the analysis associated with them. It argues that concepts can still be used, but only as descriptive indicators, and the notion that a core necessarily implies a periphery must be abdicated. Of particular importance, the author calls for the abandonment of the notion that the semiperiphery functions as a sort of mediating mechanism in the relationship between the three elements (Sanderson 2005).

Bringing attention to aspects of the *longue durée*, Chase-Dunn (1997) draws attention to the fact that, until more detailed comparisons have been made between the different types of World-System, it would be premature to conclude a priori that all core/periphery had three levels. The problem is that measuring regions comparatively using traditional methods poses a challenge. In order to analyze the relations between the different regions, archaeological methods could be used, however, some theses argue that some artifacts arose concomitantly in different regions of the world without any interaction. Also, in order to test the hypotheses that support the existence of core-periphery relations, it is assumed that it is possible to measure the level of intersocietary exploitation, and it would be necessary to develop indicators that account for the present inequality among the studied societies. For this type of inference, however, archaeological evidence is always problematic (Chase-Dunn and Hall 1997).

In criticizing the existence of semiperiphery permanently, Lee (2009) systematized in four different types the critiques of the World-System trimodal form: criticism of functionalism, teleological explanation and instrumental vision of the State; criticism of the underestimation of class relations; criticism about the homogenization effect of unequal space in the same area of the world economy; criticisms of the status of national states as mere building

blocks of the world capitalist economy (deterritorialization). Regarding the latter type of criticism, Lee (2009) points out that Castells, Hardt and Negri and Taylor share a critical position on the trimodality traditionally assumed by the World-Systems perspective, claiming that the trimodality of the core, the semiperiphery and the periphery lost its heuristic vitality as the world has changed.

Other streams thicken the chorus. Pires (1990) argues that the creation of the category of semiperiphery has its origin in a misunderstanding when it stands against the theory of dependence (and its polarized categorization of center-periphery). This misconception is given by the idea that a typology of analytical nature must correspond to situations or processes empirically observable. Among the critiques of the concept of semiperiphery is also that of Marxists who claim that Wallerstein's emphasis on the effects of structure on the units of the system caused him to neglect the fact that certain class structures historically determine local responses to market forces (Evans 1979).

Those who assumed that economic analysis allowed states to define the semi-peripheral regions are lamenting that this “does not provide evidence for the relationship between the economic position in the world economy, the geopolitical position and the emergence of semiperipheral policies” (Griffiths 2004). Others like Worsley (1979) strongly argued that much of the conceptual imbroglio was due to the forced attempt to put three categories where they should be four in times of bipolarity (capitalist-industrial, capitalist-underdeveloped/agrarian, communist-industrialist and communist-agrarian). Brenner (1976, apud Arrighi 1998), in turn, criticized the impossibility that socio-economic structures could be superficially generalized for each of the three proposed strata.

Boaventura de Souza Santos, although making use of the notion of semiperiphery to guide his conception of the conjuncture of Portugal in the late 1980s, condemned Wallerstein for creating a descriptive, vague and negative concept:

Descriptive, because its theoretical content is quite reduced and little more than analog. [...] In addition to being theoretically inconsistent, the concept of semiperiphery is vague in so far as the criteria of the semiperipheral position are numerous and difficult to quantify. [...] Finally, the concept of semi-periphery is a negative concept in that the characteristics attributable to semi-peripheral States or societies are not based on their own materiality nor do they have a specific evolutionary logic and are rather a mixture of characteristics attributable to States or central and peripheral societies.

(Santos 1985, 870).

Among the criticisms most common to the concept of semiperiphery are those that regret the fact that its application is somewhat restricted because there is no consensus on how it should be given its operationalization. As an example, it should be noted that in all attempts at geographical determination of the semiperiphery countries do not coincide. The attempt to transpose the concept to certain geographic units, however, is recurrent and intense, although for some authors like Chase-Dunn<sup>3</sup> this is not a necessary task: “To produce a map that shows where the semiperipheral countries are, it is necessary that cut-off points be adopted, but it is not necessary to argue that there are empirically discriminable positions in the global hierarchy” (Chase-Dunn 2014, 19).

## The geographic unknown: measuring the semiperiphery

Although it is possible to extract some normative elements, Wallerstein, never took care to define spatially the geographical location of the semiperiphery. This is precisely to conceive the trimodal structure of the World-System as something metaphorical and representative of certain political-economic elements existing in a system of unequal exchanges. The geographical concentration of the peripheral or central economic processes is, of course, due to the emergence of the state, which Wallerstein, in his Braudelian *longue durée* paradigm, came to consider as one of the elements that emerged in the course of the capitalist world:

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of characteristics attributable to States or central and peripheral societies. (Santos 1985, 870).

The concept of semiperiphery is controversial not only in the modern World-System, but also when reference is made to premodern systems. To remedy this problem, Chase-Dunn and Hall (1997) define the semiperiphery sufficiently broadly so that it follows one of the following principles:

1. A semiperipheral region must have typical forms of organization of the nucleus and the periphery.
2. A semiperipheral region must be spatially located between the nucleus and the periphery.
3. A semiperipheral region should be spatially located between two or more core regions.
4. Mediation between core and peripheral areas should be possible in semiperipheral regions.
5. A semiperipheral area should be one in which institutional characteristics are intermediate to those found in the nucleus and periphery (Chase-Dunn and Hall 1997, 37).

Wallerstein (1974) argues that in trying to identify the semiperiphery one should not identify particular products or sectors, but rather observe the wage patterns and profit margins of certain products at certain times so that it is possible to determine who does what in the system. In a system of unequal trade, the semi-peripheral countries would be in the midst of their exported products, wage levels and profit margins. In one of the few times Wallerstein pointed to the geographical location of the semiperiphery<sup>4</sup>:

The semi-periphery includes a wide range of countries in terms of economic strength and political landscape. It includes the economically strong countries of Latin America: Brazil, Mexico, Argentina, Venezuela, possibly Chile and Cuba. It includes the entire outer edge of Europe: the southernmost layer of Portugal, Spain, Italy and Greece; most of eastern Europe; parts of the northern zone such as Norway and Finland. It includes a number of Arab States: Algeria, Egypt, Saudi Arabia; and also Israel. It includes in Africa at least Nigeria and Zaire, and in Asia, Turkey, Iran, India, Indonesia, China, Korea and Vietnam. And it includes the old white Commonwealth: Canada, Australia, South Africa, possibly New Zealand (Wallerstein 1976, 465).

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<sup>4</sup> It is important to note that the three hegemonic powers recognized by Chase-Dunn (1998), the Netherlands, England and the United States, were during some part of their history in the semi-peripheral region of the World-System.

Despite the methodological difficulty presented in trying to determine the constitution of the semiperiphery, several attempts were made from the emergence of the concept. In 1979, Snyder and Kick presented some contributions to the operation of the semiperiphery by proposing a block modeling for 118 countries. They defined the structure of the system according to four types of international networks: trade flows, military interventions, diplomatic exchanges and sets of treaties.

In 1985, Nemeth and Smith proposed a World-System structuring based on the countries' trade patterns. For them, the strategic question was not the number of layers that would exist, but the fact that the countries occupied structural positions in a coherent World-System. Inspired by the work of Snyder and Kick (1979), Nemeth and Smith (1985) created a block modeling for 86 countries of unplanned economy, using, however, different variables that considered the type of product to be exchanged, be finished products or raw materials.

In the wake of Snyder and Kick (1979) and Nemeth and Smith (1985), in 1992 Smith and White reworked the analysis of international trade networks with the introduction of some improvements such as the use of a new standard of equivalence of industrialization standard and the development of the method more dynamically with the measurement occurring in three different years (1975, 1970 and 1980).

In an attempt to determine which countries are part of what category of the World-System, Terlouw<sup>5</sup> (1993) grouped six different indicators: participation in world trade, stability of trade relations (with regard to the change of partners), proportion of GDP per capita to world GDP, military power, number of diplomatic representations sent and received and the number of diplomats sent and received.

It is a huge temptation to fill the semiperiphery with states that are not clear examples of the periphery or the nucleus. The semiperiphery can be easily used as a residual category for problematic states in the World-System theory, which maintain specific but unparalleled characteristics. The semiperiphery tends to harbor deviant cases, exceptions to the rule (Ter-

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<sup>5</sup> Terlouw (1993) classified two studies that attempt to measure the semiperiphery: relationships-focused studies (Snyder and Kick 1979; Nemeth and Smith 1985) and studies that focus on the characteristics of states (Arrighi and Drangel 1986). Terlouw (1993), when analyzing these various studies attempting to allocate states in the categories of nucleus, semiperiphery and periphery, observed that the only countries that were always in the nucleus were the United States, England and Germany, and the vast majority of countries were in some studies classified as semiperipheral, but no country was classified as semiperipheral in all studies.



louw 1993, 91).

Korzeniewicz and Martin (1994) followed the approach proposed by Arrighi and Drangel (1986), which will be discussed below, to find the representatives of the three layers of the World-System using a base covering 134 countries in 34 years. For the authors, in agreement with the seminal article by Arrighi and Drangel (1986), it was considered that the productive processes that constitute the productive chains generate unequal rewards, making the distribution of wealth in the World-System also occur in an uneven manner. If productive chains, then, reflect the division of labor in the system, the outcome of all transactions must be found in the global distribution of wealth.

Van Rossem (1996) constructed a map of the World-System collecting data from 163 countries for five different networks of dependency relations between nations: imports, exports, arms trade, presence of foreign troops and presence of diplomatic representation. Van Rossem assumes that the World-System is a multiple system consisting of military and economic relations. Their findings suggest that the best measure for the roles played by World-System extracts is the absolute size of the economy itself. His research, however, classified as unusual core countries in this position as Brazil, China and Saudi Arabia, leaving out a number of countries with better economic conditions.

Babones<sup>6</sup> (2005) recognizes that the most diverse attempts to measure the semiperiphery have been successful, reaching, through the analysis of trade patterns, economic networks, political or military relations or the distribution of income levels, the objective of demonstrating the existence of a structure divided into three different zones. Given that there is no widely accepted method for dividing countries into the three distinct zones, the author proposes an update of the method proposed by Arrighi and Drangel (1986).

Recently, Grell-Brisk (2017) presented another reprint of the method proposed by Arrighi and Drangel (1986) locating in the three strata, periphery,

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<sup>6</sup> Babones (2005) distinguished between the various attempts to determine which countries belong to which extracts, three different currents. The tradition of the networks given by the studies of Snyder and Kick (1979), Nemeth and Smith (1985), Van Rossem (1996) and Smith and White (1992) capture the notion of roles for the zones of the World-System, but suffer of some shortcomings as information is available for just about 60-80 countries. The tradition of the continuum is based on the Chase-Dunn theoretical current and expressed in the proposals of Terlouw (1992) and Kentor (2000), which emphasize a scale of states in a continuous line of status and power. Finally, Babones (2005) detects the income tradition, which is represented by the studies of Arrighi and Drangel (1986) and Korzeniewicz and Martin (1994) that consider the premise that all states contain to some extent activities of the nucleus and periphery at its borders, and the former being better paid, this should be reflected in the GNP per capita of the country.

semiperiphery and nucleus, the entire database of the World Bank for a temporal extension superior to the original study. The author's main conclusion was that, with China's entry into the semi-periphery, the structure as a whole would be compromised and no longer serve as a buffer against conflicts.

### **The proposal of Arrighi and Drangel (1986)**

Among all the attempts to apply the semiperiphery to the world geographical divisions thus establishing a morphology for the concept, the study of Arrighi and Drangel of 1986 was a watershed. Wallerstein used the concept under discussion as a taxonomic tool in analyzes of particular conjunctures, such as when it reflects on "semiperipheral classical" countries like Russia and some Europeans that declined from the center of the World-System economy, such as Portugal and Spain. But his approach did not go far beyond what has hitherto been gathered in this text.

Because of this, in a classic study conducted in partnership with Jessica Drangel, Giovanni Arrighi set out on the complex task of identifying which countries would be part of the semi-periphery at different times in history, not without protesting against the little help offered in the undertaking itself author of the concept who was content to proclaim that a semiperipheral state would be one that met two criteria, (i) to be in an intermediate position in the unequal exchange system in terms of its exports, salary levels and profit margins within it, and (ii) the existence of an interest of the State concerned in play a highly interventionist role in their internal and external markets (Arrighi and Drangel 1986).

Due to the theoretical relevance of the semiperiphery, Arrighi and Drangel carried out in 1986 some methodological effort to find objective parameters for the classification of countries in this stratum of the world economy. In an attempt to demonstrate empirically the existence of a trimodal division in the capitalist economy, the authors instrumented the concept by analyzing the Gross National Product (GNP) per capita of 96 countries. The choice of indicator was due to the fact that countries of the center performed a greater volume of "core" activities than those of the other categories. Although no country performs only "core" activities or only "peripheral" activities, the former are marked by the peculiarity of concentrating the profit of the system. Central states, then, would be those who control access to the most profitable commodity chains of various states, those who provide the infrastructure and services required by the center's activities, and who are capable of creating a favorable climate for capitalist enterprises.

As central activities are more profitable in the world division of labor, and these are essentially linked to the process of innovation and creative destruction with a view to extending the monopoly described by Schumpeter (1975), to Arrighi and Drangel (1986: 31) the difference in command of all the benefits of the world division of labor must be reflected in commensurate differences in the GNP of the States concerned." From the graphical representation of the frequency distribution of the world population (in percentage terms) according to the country of origin, in relation to the logarithm of GNP (in intervals of 0.1), the author confirmed the constant presence of three intervals of distribution in nine different historical moments between 1938 and 1983. In addition to the three intervals, there were in some instances intermediate instances between these intervals that the authors called the perimeter of the semiperiphery and perimeter of the organic nucleus.

It is not known whether by the inertia caused by the lack of formulation that counteracted the height or by the precision of its methodological parameters, Arrighi continued considering the research carried out with Drangel as something very relevant, so much, that he mentions it in several of his texts until mid-1990s. However, from then on, when he mentions the study in the book "The Long Twentieth Century," it no longer indicates that he has found the three strata on which capitalism is based, but rather refers to them as income "countries" low, medium or high (Arrighi 1994, 348). Arrighi assumes in the foreword to that edition that there is no previous concern about the strata of the World-System:

The class struggle and the polarization of the world economy in centers and peripheries - both of which played a prominent part in my original conception of the long twentieth century - almost disappeared from the scene. Many readers will be intrigued or even shocked by these and other omissions (Arrighi 1994, XII).

In 2003, Arrighi published an article with a concern very similar to the seminal study that will be reproduced here, comparing the convergence in the level of industrialization of the countries with the average GNP of the first world countries in order to realize how much the increases in the rates of industrialization accompanied the increase in income that each citizen was able to obtain in comparison to the citizens of the advanced economies. Thus the concern with dividing the gains of the world-economy appeared again on the radar of Arrighi, but the author does not assume to be reediting the previous research, as well as returns to deny the paternity of its findings when referring to it in a skewed way:

It is a very stable wealth hierarchy that Giovanni Arrighi and Jessica Drangel (1986) found for the period 1938-1983. Based on the worldwide distribution of GNP per capita, they identified three distinct groups of countries (high, middle and low income countries). In addition, they found that long-term upward / downward mobility of countries from one group to another was extremely rare (Arrighi 2003, 6).

The curious thing is that although Arrighi did not associate the 2003 study with the 1986 research in which he tried to instrumentalize the concept of semiperiphery, Wallerstein himself reveals that this was indeed his intention in a 2005 article:

And while our statistical data have a minimum of quality over the past 75-100 years, comparative studies such as the ones we have shown a steady trimodal distribution of wealth in the World-System, with some countries moving from one category to another. [...] The classic article is that of Giovanni Arrighi and Jessica Drangel, "The stratification of the world economy: an exploration of the semiperipheral zone". Arrighi is updating this argument for a future article (Wallerstein 2005, 1267).

Moreover, in an earlier study on the African continent of 2002, Arrighi reissues the preoccupation with the appropriation of the surplus value of the capitalist system (Arrighi 2002). In this study the author analyzes the GNP per capita of Sub-Saharan Africa as a percentage of GNP per capita. In both the 2002 and the 2003 studies, Arrighi was concerned with assessing the growth of the appropriation of income by certain groups of countries in a binary way, being satisfied to see whether they followed the growth of the two reference groups (the "first world" countries in one article and the total world population in another).

The apparent methodological impoverishment, since Arrighi no longer associated the inequalities encountered with the problem of the unequal international division of labor in the stratification of the world economy is understandable, since the abandonment of the debates of the 1970s in the framework of the Wallerstein World- have been a necessary sacrifice in the fight against the ever more pronounced proliferation of the current univocal idea of associated economic development or industrialization or an idealized conception of "good governance" in the case of developing countries. With these two researches, Arrighi establishes important parameters so that certain generalizing and reproductive patterns of the necessary structures of exploitation for the world economy do not go uncontested, but, in taking this turn

towards other fronts of debate, abandoned its previous methodology somewhat precipitately as will be supported below.

The conceptions of this study, however, are not immune to criticism, such as that of Lima:

The methodology and some assumptions, however, may be considered insufficient. In the research, there is a lack of observations for some countries in different years, mainly for the peripherals and for some of the semi peripherals. There is a structural break in the series, since there is a change in the source, which also modifies the calculation methodology. These researchers made use of per capita GNP figures for dollars at the current exchange rate from 1937 to 1983. The different price levels to which different countries are subject at different times usually entail unavoidable discrepancies if these effects are not neutralized. International comparability becomes otherwise deficient (Lima 2007, 64).

Among the possible criticisms of the approach proposed by Arrighi and Drangel is the argument that per capita GNP is not an indicator that is given in relative terms. However, for Korzeniewicz and Martin (1994) the use of this indicator as a relative distribution of aggregate rewards is indicative of the distribution of core activities and peripheral activities in the world economy. Not all authors, however, agree with the statement:

The use of per capita income as an approximation of the share of peripheral and central activities in a given country seems extremely problematic. It would be more representative for these purposes to use a stock measure - wealth, net worth - rather than flow. As these flow measures are much more sensitive to sharply temporary effects - the rise in oil prices, for example -, results in sharply distorted results on the hierarchical position of oil producing countries, as defined by Arrighi's article, of other countries in a similar position, with a strong specialization in few products (Lourenço 2005, 184).

Despite the critics, the method proposed by Arrighi and Drangel (1986) is consecrated in the literature. His conception was intensely replicated and also praised. In 1988, Peter Taylor published some notes supporting the proposed method. Taylor (1988) tested the robustness of Arrighi and Drangel's proposition by spatially reorganizing the world population by removing state boundaries while finding the same trimodal pattern, despite the changes.

## Updating the study of Arrighi and Drangel (1986)

Replicating the stratification of Arrighi and Drangel, however, was an attempt that encountered a series of operational and methodological difficulties. At the outset, there was the fact, impossible to ignore, that the logarithmic progression of GNP does not analytically reflect any of the essential characteristics of the concept of semiperiphery described above from Wallerstein's work. The generic qualitative attributes of difficult verification really cannot be appropriated by means of a statistical study, however, in front of the obtained results, the risk of the own logic of the method proposed by the two authors, that is centered in the fact that the organic nucleus of the World-System concentrates the gains of the most profitable productive chains, regardless of where the production is located, and this must be represented in the GNP because this is an indicator that includes, in addition to GDP (Gross Domestic Product), the net income received from the outside (RLRE)<sup>7</sup>. Thus, while GNP reflects what is produced internally at the borders of a State, GNP also shows transactions in the international territory, owned by the citizens of this State.

The second challenge in the replication of the study, which needed to be verified, at least in partial terms, was the set of indicators used by Arrighi and Drangel, since for the nine distributions of GNP calculated by the authors, three sources data were used in an unspecified way. Another central problem was the fact that not all countries were used in each of the distributions found by the authors, using three different country "baskets" for the calculations. In addition, in the reference study, GNP per capita of all citizens of the planet had been converted into constant dollars of 1970, using the deflator of the GNP North American.

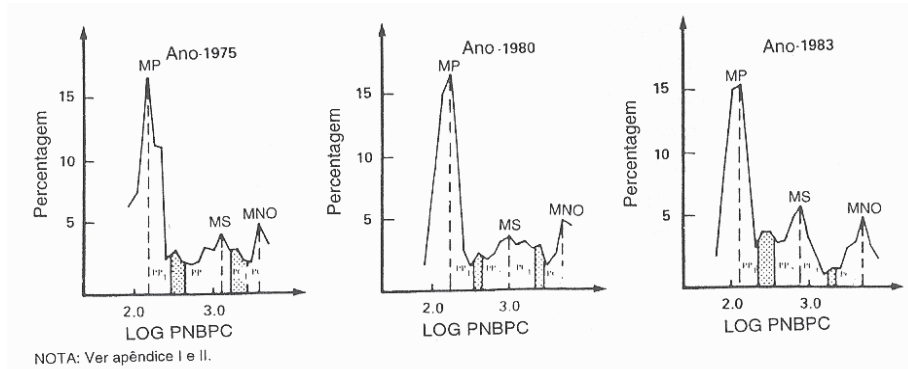
Since the data available for conducting the study were World Bank databases and per capita GNP was informed in purchasing power parity, it was decided to replicate the Arrighi tests for the three distributions for which Figure 2 shows that, although they are not identical, the drawings reflect a distribution very similar to the original study (Figure 1), which proved the possibility that the search was replicated based on the procedure described below. It should be remembered that the small distinctions found between the original charts and the present ones are due to differences of lesser relevance between the databases used, which may have been caused by the absence of a

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<sup>7</sup> In the national accounts, Net Income Received Abroad (RLRE) includes the following balance of payments accounts: A) Balance of incomes: wages and salaries, direct investment income (includes profits and dividends and intercompany loan interest), income from investment portfolio (including profits and dividends and interest on debt securities), income from other investments. B) Current unilateral transfers (Carvalho and Silva 2006).

few countries in one or another edition of the study.

**Figure 1: India and China – National Competitive Advantage**

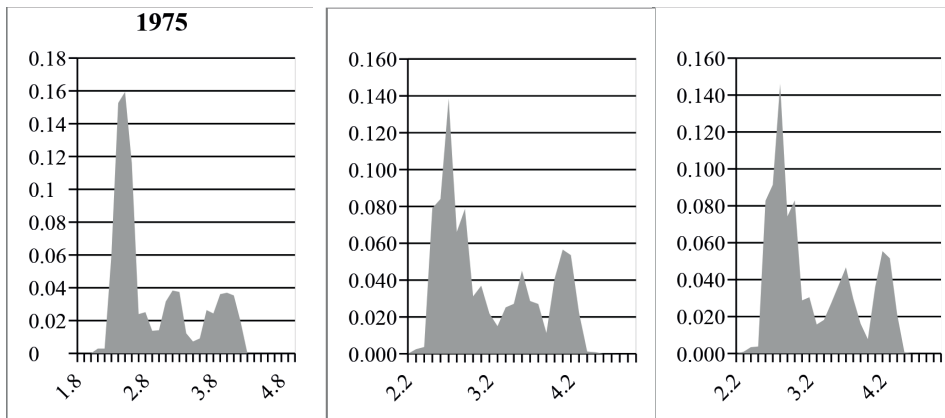


NOTA: Ver apêndice I e II.

*Figura 2c*  
*Distribuição real da população mundial*  
 (porcentagem da população total pelo  
 log do PNB per capita do Estado de residência)

Source: Page 165 of ARRIGHI, Giovanni; DRANGEL, Jessica. The stratification of the world economy: considerations about the semiperipheral zone. In: ARRIGHI, Giovanni. The illusion of development. Petrópolis: Vozes, 1997.

**Figure 2: Distribution of the percentage of the world population by the logarithm of annual per capita GNP for 1975, 1980 and 1983.**



Source: World Bank. Self elaboration.

For the calculation of the distributions shown in Figure 2, the data

available in the online databases of the World Bank (World Bank 2012; World Bank 2017) were used, with the exception of Russia for the period prior to 1989, which had estimated GNP based on data obtained from another source (Ofer 1988). GNP per capita was converted to a logarithmic scale and the population recorded for each country was converted to a percentage. The frequencies of the logarithm of the GNP found were distributed in decimal intervals and each was related to the percentage of the world population that corresponded in terms of income at each of these intervals. According to the proposal of Arrighi and Drangel (1986), the frequency distributions were attenuated by a moving average of three intervals. The result of these calculations is shown in Figure 2 above.

Before further results are presented for subsequent periods, other methodological considerations are needed. The reliability of the method was ensured in view of the impossibility that the same countries were included in the reply of the Arrighi and Drangel study, because the coverage of the calculations demonstrated above was much higher than the original study, which proves that the indicators proposed by the authors are able to graphically represent the World-System in its strata, independently of the states being absolutely the same. Since the proposition tested is a profit-sharing pattern in the World-System, which is not altered by small variations in the samples, the comparisons made above (Figure 1 and Figure 2) were interpreted as confirming the possibility of replicate the 1986 article method.

As stated, the present study was carried out with an even wider coverage of the world population than that of Arrighi and Drangel. The largest of the “baskets of countries” used in the original study contained 104 units, and in the above tests the entire data available from the 216 countries in the World Bank databases was worked on. In order to ensure that large portions of the population were not omitted from the calculations, both those already presented and those to be followed, counted the percentage of countries for which GNP per capita could not be obtained. The missing data at the World Bank bases were then 11% of the world population for the 1970s, 8% for the 1980s, 3% for 1990 and 1% for 2000 and 2010.

In conclusion to the methodological aspects, there are some comments regarding the procedures and their implications, two that discredit the proposal of Arrighi and Drangel and one in favor of the method. The first of these refers to the highly reductive approach given by the use of the logarithmic scale used to demonstrate the distribution of world wealth. Although this has consistently reflected a trimodal distribution, it allows for members of the



semiperiphery category in 2010<sup>8</sup>, for example, to include countries with an income as disparate as the Republic of Congo (with a GNP per capita of US \$ 3,220) and Estonia (with \$19,760.00). Although Arrighi and Drangel (1986) show that the world economy is extremely polarized intra- and inter-categories, it shows graphically that, nevertheless, on a logarithmic scale.

The second broadly debatable aspect of the method discussed here is the use of the moving average of three ranges within a same data sequence for curve smoothing purposes. In more stringent terms, the moving average could only be applied in time series, calculating, in the case in question, the average of the last three years of each of the indices presented in the study. However, Arrighi and Drangel (1986) used the resource on the frequency distributions found each year, making both the validity of the statistical resource arguable but obtaining a constant trimodal distribution result from 1938 to 1983.

Finally, regarding this referendum of the Arrighi and Drangel (1986) method, the calculations were made using other indicators to verify if the moving average polemic would produce the same effect. It was found, then, that the debatable use of the attenuation by the moving average of three intervals is not a subterfuge that allows to be found trimodal distributions for any and all data inserted in the function. Tests were performed for all the years that will be presented here with GDP, and the constant trimodal distribution pattern that appears with the use of GNP was not found. Given the appropriate methodological considerations that had as their main objective to recover the validity of the research of Arrighi and Drangel of 1986, the results were surprising. The present study graphically found the trimodal distribution of the world GNP in all years between 1972 and 2003. It is assumed that the same pattern was not found in the years prior to 1972 due to the unavailability of data, since for more than 24% of the population global GNP data were missing from the source used, the World Bank.

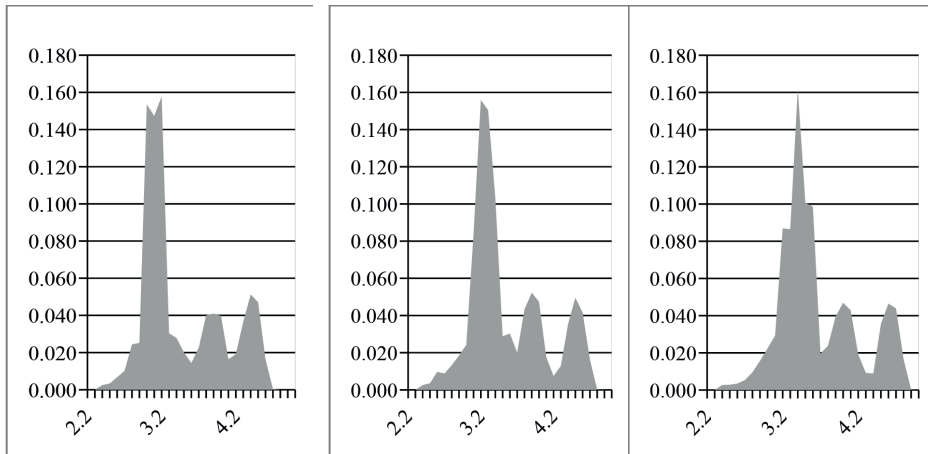
According to expectations for the entire 1990s, it was possible to lo-

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<sup>8</sup> In 2010, the following countries were included in the per capita GNP: Congo, Rep., Moldova, Iraq, Guyana, Micronesia, Kiribati, India, Timor-Leste, Mongolia, Honduras, Cape Verde, Samoa, Vanuatu, Fiji, Tonga, Morocco, Bolivia, Guatemala, Swaziland, Bhutan, Georgia, Sri Lanka, Paraguay, Syrian Arab Republic, Angola, Armenia, Jordan, Egypt, Arab Rep., Belize, Namibia, El Salvador, Ukraine, Jamaica, Turkmenistan, China, Ecuador, Maldives, Algeria, Thailand, Albania, Bosnia and Herzegovina, Peru, Dominican Republic, Colombia, Tunisia, Azerbaijan, Grenada, South Africa, St. Lucia, Kazakhstan, St. Vincent and the Grenadines, Macedonia, Brazil, Palau, Serbia, Costa Rica, Dominica, Venezuela, Panama, Montenegro, Gabon, Bulgaria, Belarus, Botswana, Mauritius, Uruguay, Romania, Lebanon, Malaysia, Mexico, Chile, Turkey, Argentina, St. Kitts and Nevis, Latvia, Lithuania, Croatia, Hungary, Poland, Russian Federation, Estonia.

cate the periphery, the semiperiphery and the center (organic nucleus) in the distribution map, as can be seen in Figure 3. It is important to note that the graphs presented here do not demarcate the (cut lines in the original study distributions) were used to separate the perimeters that divide the three zones

**Figure 3: Distribution of the percentage of the world population by the logarithm of annual per capita GNP for 1990, 1995 and 2000.**



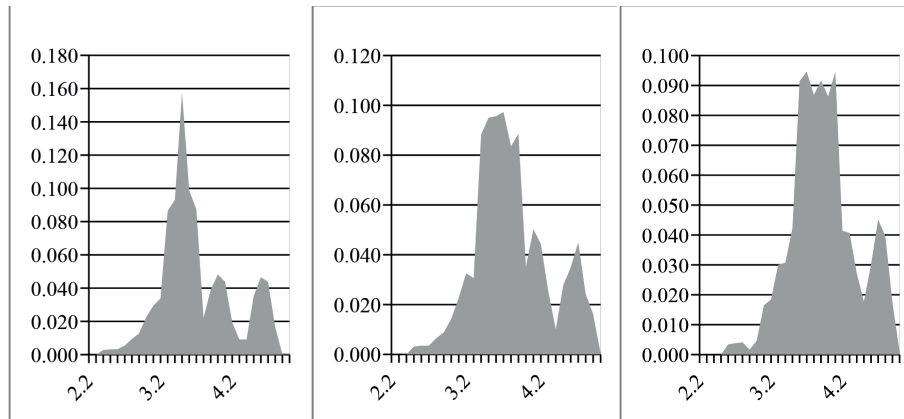
Source: World Bank. Self elaboration.

Though, what happens with the stratification of the world economy in the beginning of the last decade is something that neither Arrighi, much less Wallerstein, would expect to occur as it can be seen in Figure 4. For Wallerstein, the existence of an intermediate layer is essential for the stability of the system, and he was emphatic in stating that “It is a regular condition for any kind of World-System to have a three-layered structure. When this ceases to be the case, the World-System disintegrates itself.” (Wallerstein 1974a, 404). However, he accepted that some countries would shift from category to category, as the ones that occupied a central position would fall in a decline trajectory, a process that was thoroughly dealt with in the volumes that support the systemic analysis.

Arrighi, on his turn, approached the structure of the World-System in an even more static way, stating that, even though, there were endless efforts of peripheral and semiperipheral States to get closer to the income of the organic nucleus, in terms of repositioning in the stratum, 95% of the countries stayed, in all moments, in the same group (periphery, semiperiphery or center) in the original study, whereas few were able to rise or were lowered

to inferior categories: the up or down mobility of states, individually, is not excluded, but is considered exceptional” (Arrighi and Drangel 1986, 42). In the following case, the results found counter this position.

**Figure 4: Distribution of the percentage of the world population by the logarithm of annual per capita GNP for 2001, 2005 and 2010**



Source: World Bank. Self elaboration.

In the year 2003, a trend that is further deepened in 2009 began, with the collapse of the periphery and the global semi-periphery. If the World-System has long been predicted to lead to definitive structural changes, as seen in the whole debate that has emerged on the problems of capitalism due to the crisis of 2008, the evidence presented in this analytical model supports the idea that profound changes are occurring. Two state units, however, are responsible for a large number of them, since the distribution of the graphs presented was summarized by the entry of China and India into the semiperiphery in 2003.

If these tendencies are final, and if Arrighi and Drangel’s (1986) study, here reproduced, can be given as necessary to indicate the formations of the strata of the world economy conceptually developed by Wallerstein, the coming epoch promises to be of great turbulence because the middle layer, which once guaranteed that culturally distant and unequal worlds, but deeply connected by economic ties, merged with the advancement of the periphery towards economically central activities.

In addition to the considerations already made, it should be pointed out that the intention to replicate the study developed by Arrighi and Drangel was not intended to praise a supposed econometric scientism, but rather to

bring back to the center of attention to certain theoretical constructions that, developed in another time and place, have their genesis precisely at the epicenter of the events that culminated in the transformations that we live at the same time.

The statistical exercise performed here revealed the rupture of structures that, according to Wallerstein, have stabilized since the seventeenth century (Wallerstein 1974a). Considering his epistemological tradition, some other developments of his work can be used to analyze the tendencies that are being formed:

The main explanation for the supposed fundamental structural change has been the dissatisfaction of the exploited and oppressed. As conditions worsened, the people below, or some very large group, were destined, he argued, to rebel. There would be what is generally called a revolution. I will not return to arguments and counter-arguments, which are undoubtedly quite familiar to almost anyone who has seriously studied the history of the modern World-System. [...] However, I do not believe that a new version of the revolutionary movement is the fundamental factor in what I see as the structural collapse of the world capitalist economy. Systems collapse not primarily because of rebellion from below, but because of the weaknesses of the ruling classes and the impossibility of maintaining their level of gain and privilege (Wallerstein 2005b, 1269).

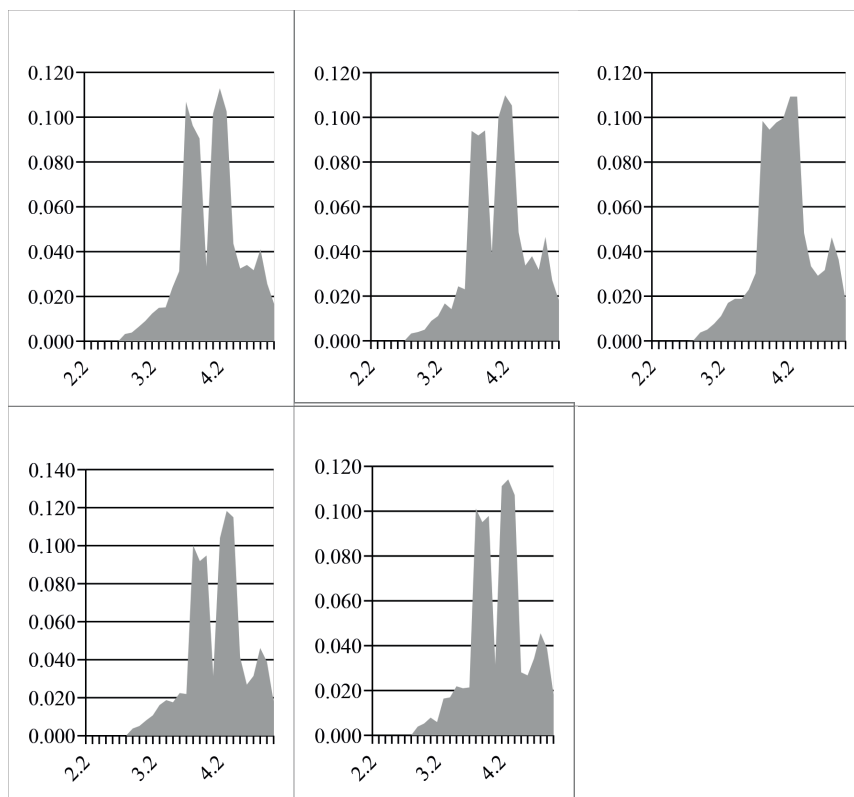
Regarding the citation above, it must be agreed that the profound transformation of the structure has occurred up to the present moment in a silent movement in terms of the conflict that should be expected due to the narrowing of the borders of the periphery alongside the semiperiphery, precisely because the intermediate stratum, is the stabilizing element of the system. However, the process of extinguishing the intermediate layer, which later reverted, was not due to the insurgency of the strata exploited by the organic nucleus, but to the inability of the latter group to maintain the status quo.

In addition to the analysis of the distributions of the extracts for the years already reported, the semiperiphery has come to exist again in the past few years, as can be seen in Figure 5.

As shown in the reconstructions of the Arrighi and Drangel (1986) methodology, the collision of the semiperiphery with the periphery ceased to occur since 2011, and repeated itself in 2013. Although the future scenario is rather indefinite, it can be expected that is a time of change during which states will change positions and the stability of the World-System could be put in check. In a phase of changes some choices will be given to semiperipheral states:

Semi-peripheral states are at the checkpoint where two different paths emerge: to advance their democratic processes, the advance of their governmental institutions, the protection of human rights, that is to say, that the state apparatus is similar to that of the countries of the nucleus; or to see themselves incapable of maintaining the rule of law, moving backwards towards the arbitrary exercise of authority and human rights violations, diminishing the institutional quality, in short, deepening the process of peripheralization (Ruvalcaba 2013, 149).

Figure 5: Distribution of the percentage of the world population by the logarithm of annual per capita GNP for 2011 to 2015.



Source: World Bank. Self elaboration.

## Final considerations

The current landscape of the international system makes it possible for most observers to become aware of the leading role played by China and

the other countries included in categories such as mid-level powers, regional powers, emerging markets, countries of the global “South”, among others. Of all possible classifications, to call them semiperiphery is also feasible nowadays.

It is not possible, however, to say that the semiperiphery is not a very controversial concept because of the amount of criticism it has attracted. Some authors claim that the semiperiphery as a theoretical construct is diffuse, heterogeneous, reified, deterritorialized, difficult to empirical observation and negligent towards class structures. However, many of these criticisms can be answered at a time when Wallerstein’s work is analyzed as a whole, since the author has distributed the concept of semiperiphery throughout many publications.

It should also be considered that the semiperiphery, throughout its almost half century of conception, has been the subject of several studies, which sometimes challenge the possibility that this important contribution of Immanuel Wallerstein is presented as an operable way for the analysis of political developments and economic conditions in the current World-System.

Many studies that have been presented here have used the most diverse possibilities to grant a little more materiality to the semiperiphery, using variables such as trade flows, military interventions, diplomatic exchanges and sets of treaties, industrialization patterns, stability of relations trade, military power, the proportion of GDP per capita relative to world GDP, or the distribution of income levels.

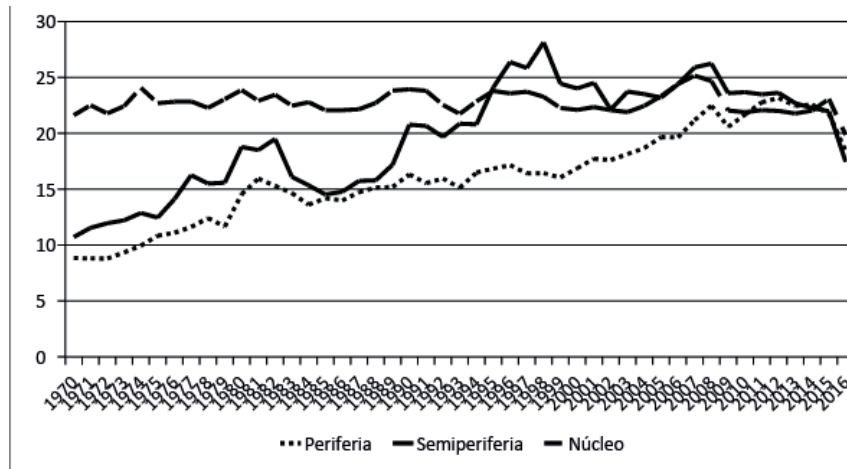
Among all the possibilities offered by the literature, however, the method proposed by Arrighi and Drangel (1986) stands out as one of the most successful ways of measuring the semiperiphery. Its application in other indicators (GDP), even, did not show the same trimodal pattern, which reinforces the notion that this proposal has fully reached the objective of identifying the countries that make up the three different strata that make up the World-System.

From the update of the study by Arrighi and Drangel (1986) and starting from a new definition of which are the countries of the semiperiphery, it is possible to use this categorization in different analytical approaches of the international scene. As an example, the semiperipheral countries mentioned by the method were taken and some indicators provided by the World Bank were applied in order to analyze the relevance of their results in terms of reflecting with a consistent way the political reality and economic development of the international scene.

Taking into account certain specific economic indicators, gross fixed

capital formation, international reserves, IMF credit use and balance of trade balance, it is allowed to analyze the behavior of these variables for the semi-periphery, core and periphery countries, according to the result of their distribution in the year 2015<sup>9</sup>. The demonstration of these indicators is important for understanding the usefulness of applying the differentiation of the three strata in the World-System.

Figure 6: Gross fixed capital formation as a percentage of GDP (1970-2016) for the periphery, semiperiphery and organic nucleus.



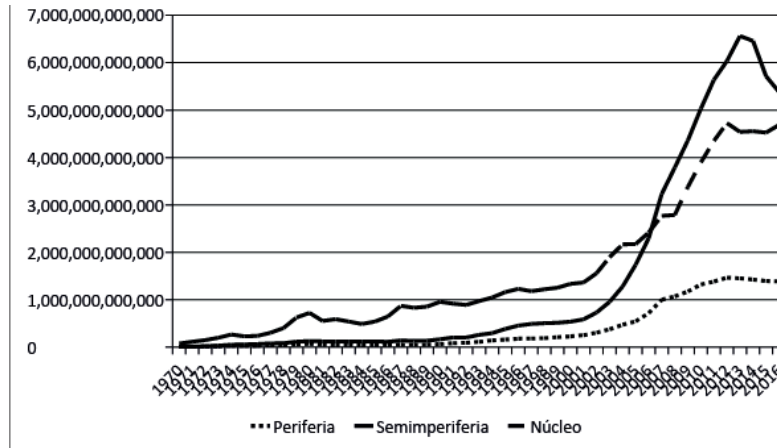
Source: World Bank. Self elaboration.

The first presentation regarding the gross formation of fixed capital expressed in Figure 6 corresponds to an expectation of reality. Central economies maintain a more stable indicator growth, in line with what is expected from more mature economies. The semiperiphery, in accordance with its rise since the end of the Cold War, behaves in order to show its expressive development occurred in the last two decades. The periphery, on the other hand,

9 According to the methodology developed by Arrighi and Drangel (1986), the distribution of countries in the World-System strata would be as follows: NUCLEUS: Australia, Austria, Belgium, Brunei Darussalam, Cape Verde, Qatar, Cyprus, Denmark, Finland, France, Germany, Iceland, Ireland, Israel, Italy, Japan, Korea, Kuwait, Luxembourg, Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, United Arab Emirates, United Kingdom. Periphery: Afghanistan, Algeria, Angola, Armenia, Bangladesh, Belize, Benin, Bolivia, Bosnia and Herzegovina, Burkina Faso, Burundi, Bhutan, Cameroon, Cambodia, Canada, Chad, West Bank and Gaza, Comoros, Rep. Congo, Democratic Republic of the Congo, Côte d'Ivoire, Egypt, El Salvador, Ecuador, Ethiopia, Fiji, The Gambia, Ghana, Georgia, Guatemala, Guiana, Guinea, Guinea Bissau, Haiti, Honduras, Yemen, Marshall Islands, Islands Malawi, Mali, Mauritius, Mauritania, Micronesia, Mozambique, Moldova, Mongolia, Myanmar, Namibia, Nepal, Nicaragua, Republic of Korea, Samoa, Malabo, Jamaica, Kiribati, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Serbia, Sri Lanka, Swaziland, Sudan, South Africa, South

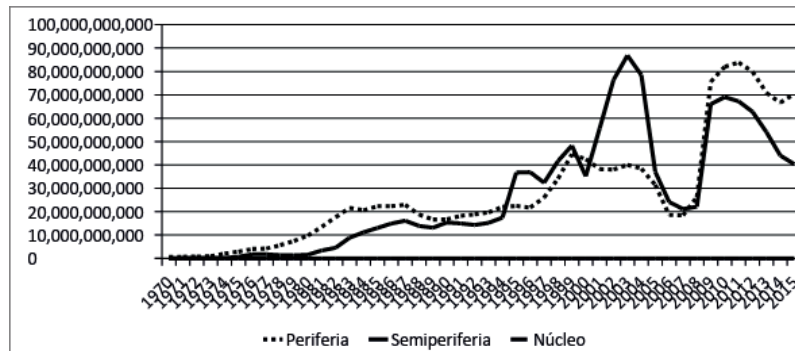
presents the constant growth of investments, in keeping with the marked international expansion of the industrialization of the central countries in vogue since the end of World War II.

Figure 7: International reserves (1970-2016) in US \$ for periphery, semiperiphery and organic core.



Source: World Bank. Self elaboration.

Figure 8: Use of IMF credit (1970-2016) in US \$ for periphery, semiperiphery and organic core.

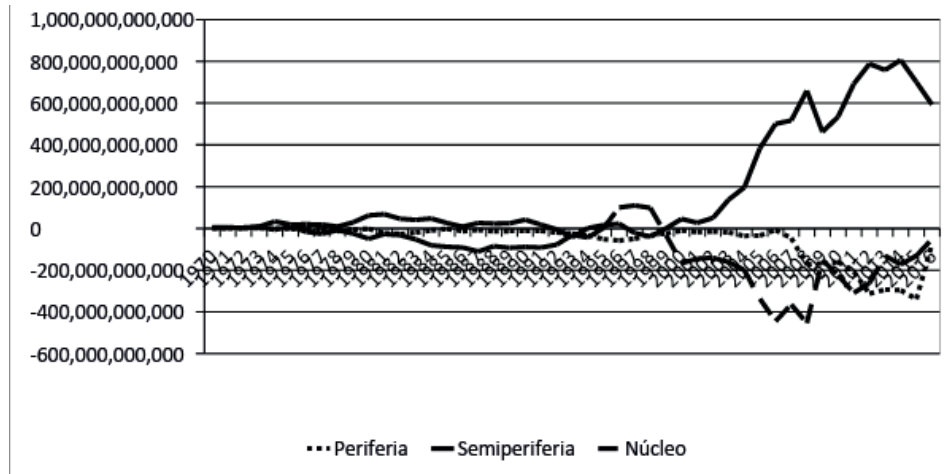


Source: World Bank. Self elaboration.

Africa, Thailand, Kuwait, Niger, Tajikistan, Tanzania, Timor-Leste, Togo, Tonga, Tun Tanzania, Tuvalu, Ukraine, Uganda, Uzbekistan, Vietnam, Zambia, Zimbabwe. SEMIPERIPHERY: Antigua and Barbuda, Argentina, Azerbaijan, Bahrain, Barbados, Belarus, Botswana, Brazil, Bulgaria, Kazakhstan, Chile, China, Colombia, Costa Rica, Croatia, Dominica, Slovenia, Estonia, Gabon, Grenada, Greece, Equatorial Guinea, Hungary, Latvia, Lebanon, Lithuania, Malaysia, Maldives, Malta, Mauritius, Mexico, Montenegro, Nauru, Oman, Palau, Panama, Peru, Poland, Portugal, Slovak Republic, Romania, Russia, Santa Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Seychelles, Suriname, Trinidad and Tobago, Turkmenistan, Uruguay, Venezuela.



Figure 9: Balance of trade balance (1970-2016) in US \$ for periphery, semiperiphery and organic core.



Source: World Bank. Self elaboration.

Regarding the indicators of financial impact, international reserves, IMF credit use and balance of trade balance (Figures 7, 8 and 9), these evidences the unusual influx of capital in the semiperiphery of recent decades. Recently, the prosperity enjoyed by the emerging economies to the detriment of the recessive processes under way in the advanced economies has been evident. To a large extent, the good tide could be attributed to the large investment inflows that these economies have received since the mid-1990s.

In addition, since the Asian crisis at the end of the 20th century, most emerging countries have accumulated successive current account surpluses (on the other hand, central economies have incurred deficits, only the US responsible for half the world's deficit). These surpluses increased by the investment flows made possible by the expansion of US debt contributed enormously to international liquidity and the constitution of reserves.

Despite the generally positive results for the recipient economies, it should be argued that the previously described success of the semiperiphery in capturing global liquidity cannot be attributed solely to the strengthening of its capacities, and is largely taxed by changes in the system mechanism. The understanding of this process can occur as a consequence of the financialization of the world economy, or financial globalization, that started forty years ago.

These developments have contributed to the deepening of what is

nowadays widely debated as financial globalization that has led to the financial investment of its national bases, or even the detachment of these investments from the productive bases in a directly linked and proprietary way.

Financial globalization, or “world financialization” in the conception of Chesnais (2005), based on the processes described above, was based on a deregulation and liberalization *continuum* that dismantled the barriers to financial activity in the industrialized countries, multinationals to opt for the centralization of non-reinvested earnings in production, opting instead for the international financial performance instead of the productive one. In this race for profit, some countries of the semi-periphery obtained the seal of the financial markets to become the destination of capital accumulated both by industries and their *holdings*, and for these transnational actors the geographic paths of their investments were ideologically indifferent, since sufficiently secure.

It is not part of the normalcy of the capitalist logic that emerging economies that traditionally imported, high cost of capital surplus economies, to access significant financial flows, to finance its persistent current account deficits. The shortage of capital, accentuated the underutilization of labor, wasting thus potential for growth through the creation of internal markets and services to a consumption *standard* considered basic in advanced economies. This financial availability led to strong growth in a select group of emerging nations, with significant improvements in the standard of living of these populations and an increase in their *per capita* income.

The phenomena pointed out by the use of semiperipheral classification in selected indicators are consistent with Wallerstein’s developed theoretical work. The semiperiphery then presents itself as the recipient of the center capitals. The feeble industrialization endured by the semiperiphery was not enough for the countries that are part of it to change their structural position in the World-System, since the reward for the process of industrialization was reduced with its diffusion.

Finally, the semiperiphery is a concept that concentrated a series of criticisms, but with the operationalization of its constructs given by Arrighi and Drangel (1986) and with the use of its definitions for the exemplification of the possibility of clarifying certain topics, it has become part of the theoretical principles that underlie it and, moreover, proved to be an important construction that, even if formulated forty years ago, is still very useful for the understanding of contemporary phenomena.

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#### ABSTRACT

The concept of semiperiphery is considered by many authors as the most important contribution of Immanuel Wallerstein's work. Since its definition in the 1970s, strenuous attempts have been made to define a geographical dimension. This article seeks to retake the relevance of the semiperiphery to the understanding of contemporary international circumstances. Its operation allows global data to be aggregated, offering a factual and updated cut of the most diverse economic and political facets that make up the World-System. To define which countries make up the semiperiphery in the present time, one of the attempts is replicated and an update of the listing is presented. In the end, some examples of instrumentation of the concept are presented, based on selected indicators.

#### KEYWORDS

Semiperiphery, World-system, Immanuel Wallerstein.

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