

Capitalist Development and the Growth Paradigm

Abstract This chapter traces the relationship between the emergence of the current growth paradigm and the development of capitalism. It argues that economic growth is a fairly recent phenomenon which is inherently linked to the emergence of capitalism in the seventeenth and eighteenth centuries. It argues that economic growth in capitalism is inevitable, since this economic system is oriented towards unlimited and short-term valorisation, quantitative and geographic expansion, circularity and reversibility. This monetary or “exchange value” aspect of the capitalist economy is in later chapters contrasted with the principles that guide the ecological system (the “use-value” aspect), involving stable and sustainable matter and energy transformations and throughputs as well as irreversibility.

Keywords Capitalism · Growth · Profit motive · Stagnation

According to environmental historian McNeill (2000: 236), the “overarching priority of economic growth was easily the most important idea of the twentieth century”. And today, in the early twenty-first century, what Herman Daly (1972) first called the “growth paradigm” is almost universally accepted. This paradigm presupposes that economic growth is “good, imperative, essentially limitless, and the principal remedy for a litany of social problems” (Dale 2012a). The predominant approach in economics, the neoclassical perspective, tends to identify prosperity

with not merely wealth but growing wealth (Soper and Emmelin 2016). It views economics as a repetitive cycle linking money and commodities as well as households and companies. A “return to capital” basically means that the original capital spent, augmented by a surplus, returns to its owner, and the process of capital valorisation starts over again on a greater scale. The production of goods and services is analysed from the standpoint of growth of monetary value, which is seen as indefinite, while the roles played by energy and natural resources in this production are sidelined. Hence, the economy is conceptualised as if it were a closed system, within which flows of services and goods are compensated by financial flows in the opposite direction and whose coherence is guaranteed by the link of exchange alone, while use values, matter, energy and nature in general are treated as if they were infinite. However, economics has not always been regarded as synonymous with a science of prices, exchange value and monetary growth. In this chapter, we trace the development of the “growth paradigm” by focusing on its parallel development with capitalism. How did the notion of economic growth emerge and under what socio-economic conditions did it become hegemonic? What are the prospects for future growth?

ECONOMIC GROWTH IN THE PRE-CAPITALIST WORLD

Angus Maddison (2007) empirically demonstrates that before the 1820s, when economic growth started to accelerate in the context of the industrial revolution, global economic activity had been characterised by periodic swings, but expanded by an average of 0.05% annually only, and this was largely due to a slow increase in populations. Ancient civilisations knew commitments to the accumulation of wealth, especially the expansion of territory and riches earmarked for particular purposes such as the building of palaces or pyramids. The “impulse to acquisition, pursuit of gain, of money, of the greatest possible amount of money” has, as Max Weber (1958: xxxi–xxxii) famously pointed out, “in itself nothing to do with capitalism” and “exists and has existed among waiters, physicians, coachmen, artists, prostitutes, dishonest officials, soldiers, nobles, crusaders, gamblers and beggars”. While, hence, unlimited greed for gain is “not in the least identical with capitalism”, the “pursuit of profit”, and particularly that of “forever renewed profit, by means of continuous, rational, capitalist enterprise” (ibid.) indeed is. In feudal societies, by contrast, the pursuit of profit for its own sake tended to be seen as deviating from the

norm. In medieval Europe, for example, economic interests tended to be subordinate to what Weber (1958) referred to as “salvation” (Fig. 2.1).

In the sixteenth- and seventeenth-century England, the societal respectability for the pursuit of “forever renewed profit” (Weber) grew, and this was reflected in increasingly liberal trade regulations. However, the concern of mercantilists was “not growth in production for use but the increase in products for sale” (Dale 2012a) with the expansion of exports becoming a “state-supported imperative”. Not growth per se was the goal but the “enrichment of the state. ... Acquisition was what mattered, not production or consumption” (Dale 2012a). In the pre-capitalist world, most economic activity—agrarian labour—and time followed daily and seasonal solar cycles. Mark Elchardus (2011: 15) recalls that before the introductions of the Gregorian calendar by Pope Gregory XIII, which corrected some deficiencies of the Julian calendar and standardised time in the Christian world, and, specifically, the Greenwich

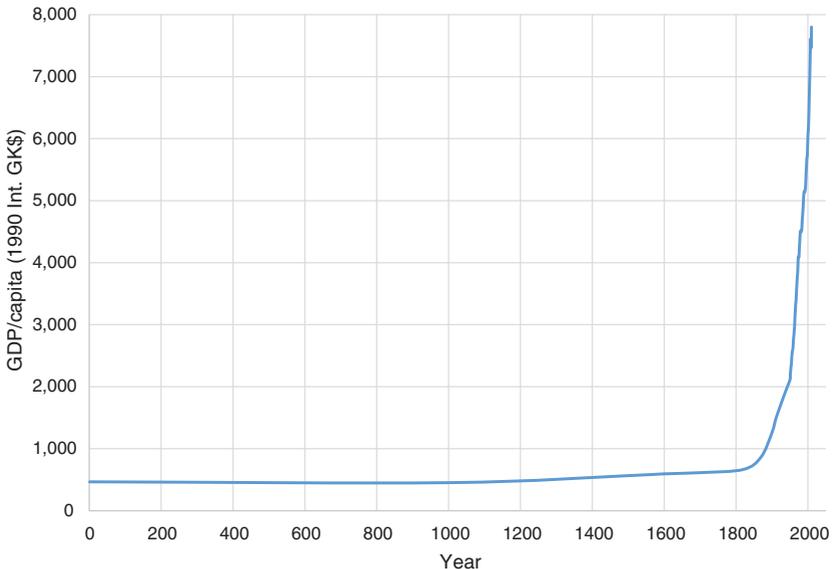


Fig. 2.1 World GDP per capita 1–2010 (1990 Int. GK\$). *Source* The Maddison-Project Historical Database, <http://www.ggd.net/maddison/maddison-project/home.htm> (2013 version)

Mean Time, most localities had a local time or a mean local time, based on the sun. This meant “that in general every difference of 20 km in the east–west direction corresponded to a time difference of about 3 minutes”. The standardisation of time went hand in hand with the spatial unification of capitalist markets and, specifically, the development of transport, particularly railroads and shipping. In 1875 representatives of the railroads and shipping interests proposed to unify the world in one time reckoning system: “using one reference point and creating zones that differed in full hours from that reference point” (Elchardus 2011: 15). Once the Greenwich Mean Time had been adopted as the international standard in 1885, time could “appear as an abstract continuum, uniform, linear and measurable” (Dale 2012a).

Political economists of the pre-industrial period did not conceive growth in abstract, quantifiable terms, or as a principle policy goal for governments. The economy was instead presented as processes that follow a natural rhythm. In the Physiocratic system, the wealth of nations was derived solely from the value of land and the entire economic process was understood through focusing on the productivity of agriculture that was seen as the only kind of work that created value and surplus (Cleveland 1999: 127). In his *Wealth of Nations*, Adam Smith (1993) was the first political economist to suggest a direct link between a nation’s welfare and the amounts of goods and services produced. To support this, he encouraged free trade that would advance the division of labour which, in turn, would lead to further specialisation. While, hence, “Smith did more than anyone to elaborate a conception of economic growth as natural, self-reinforcing, and an unqualified good” (Dale 2012a), this advocacy of self-sustaining growth was somewhat tempered due to his consideration of countervailing tendencies such as heightened competition amongst large companies that would result in declining profit rates. David Ricardo was first to conceptualise the economy as a separate sphere with respect to politics. Like Smith, he assumed a long-term tendency of diminishing returns and growth rates due to an increasingly competitive context, but, unlike Smith, Ricardo argued that this could be postponed to “the ‘almost indefinite future’” (cited in Dale 2015) by technical progress, foreign trade and the exploitation of overseas’ resources.

In his *Principles of Political Economy*, and particularly with the notion of a “stationary state”, John Stuart Mill likewise grapples with the issue of diminishing returns. As growth rates decrease, a “stationary

economy”—one that does not grow further in monetary terms—would be the inevitable result: “It must always have been seen, more or less distinctly, by political economists, that the increase of wealth is not boundless: that at the end of what they term the progressive state lies the stationary state” (Mill 1848: 514). Mill was bold in predicting, in the mid-nineteenth century, that the “richest and most prosperous countries would very soon attain the stationary state, if no further improvements were made in the productive arts, and if there was a suspension of the overflow of capital into the uncultivated or ill-cultivated regions of the earth ...” (1848: 514). In contrast to Smith, who considered a stationary state a “dull” affair (cited in Dale 2012b: 865), Mill thought that falling profit rates would have a positive effect. Distinguishing between a stationary state of the economy and a “stationary state of human improvement”, he argued that there would be “as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living, and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on” (Mill 1848: 515).

Gareth Dale’s recent reconstruction of classical political economists and their respective contributions towards understanding environmental issues in the context of capitalist development and economic growth is of great merit given that Mill’s “stationary state” became a common point of reference in present ecological economics, particularly in Daly (1972; 2011), Jackson (2009) and a range of degrowth texts (Chap. 4). Though Mill goes some way in explaining the growth imperative in capitalist society, Dale (2012b: 437) demonstrates that Mill gives “unqualified support to its basic institutions—wage labour, market exchange, and private property in the means of production—as well as to *laissez faire* and free trade”. There is indeed a tension between Mill’s support of a stationary state, on the one hand, and of an unfettered capitalism, on the other. The failure to link the two largely contributes to the “determinism” (Dale) from which Mill’s projected falling rate of profits suffers. He therefore ends up not systematically considering what Marx called “countervailing tendencies” for the profit rate to fall, chiefly the intermediating and growth-promoting effects of technical and spatial fixes as well as the expansion of foreign trade. And instead of exploring “the participatory-democratic possibilities that a stationary state might afford” (Dale 2012b: 438), Mill promoted a number of authoritarian measures to enforce population control including the separation of spouses

in work houses and the support for legislation forbidding marriage unless the parties could provide the means for supporting a household.

GROWTH AS CAPITAL ACCUMULATION: KARL MARX

By contrast to his classical political economy predecessors, Karl Marx witnessed a more developed capitalism, where the industrial revolution had dramatically raised labour productivity and most labour products had taken the form of commodities, that is, they were produced for exchange on markets. Marx develops the notion of the structural imperative of capitalist economies to expand in scale and grow in monetary terms from the logic of exchange relations and, specifically, the money form (Marx 1961: 94–142). He compares two kinds of exchange or “metamorphoses” of commodity and money. In the first one—commodity–money–commodity—the purpose of the exchange is qualitative. A holder of a commodity exchanges it for its money equivalent; then, he or she buys another commodity for his or her own use: “selling in order to buy” (Marx 1961: 147). In this exchange, the role of money is that of a measure and store of value as well as that of a legal tender. Then, Marx (1961: 130) argues that with the “very earliest development of the circulation of commodities, there is also developed the necessity, and the passionate desire, to hold fast the product of the first metamorphosis”: money serves here as the general and ultimate expression of the wealth available in a society or as capital that potentially leads to profit and bears interest. The purpose of the second metamorphosis—money–commodity–money—can only be a quantitative one, since there is no qualitative difference between its origin and result: the production of more money compared to the original amount.

According to Marx, profits can be made due to the fact that a commodity is available for sale that has the use value of creating exchange value and can be used longer than the time period that represents the cost of its own reproduction: labour power. In the capitalist mode of production, producers—as wage-earners—are largely separated from their means of subsistence and production and have no alternative but to offer the only commodity at their disposal on “labour markets”. Likewise, the other “factors of production”—land, raw materials, fuels, auxiliaries, etc.—can be purchased on separate markets as “fictitious commodities” (Polanyi 1944), and it is only through the intermediation of employers, who hold the necessary capital, that the various elements

of the production process come together. For capitalist production, all that matters is that these factors and the ingredients of material production are separately available for purchase and in forms that can be combined in the production process of capital.¹

Marx (1961: 312–321) discusses the tendency of capitalist economies to expand in scale—and thereby the “growth imperative”—when analysing the production of “relative surplus value”. The profitability of a company can not only be improved by increasing the working hours of the wage-earners (“absolute surplus value”) but also by shortening the part of their working day that is necessary for the workers’ physical and social reproduction. Marx explains a reduction in the price of labour power through increases in productivity in those branches of production that are part of the consumption patterns of the wage-earners. However, he also stresses that the realisation of such a relative surplus value will face an immanent contradiction: individual owners of capital are permanently motivated to optimise the technological and organisational basis of the work process in order to be one step ahead of their competitors. This is normally carried out by a substitution of workers by machinery or by an improved organisation of the internal division of labour. The employers whose productivity level is above average can thus achieve extra profit since they are able to sell their commodities at prices below the normal level.

Yet such an improvement of production methods tends towards generalisation, and the extra profit moves towards zero, since competing companies have no choice but to copy the new methods or even to improve upon them. As the new productivity level gradually becomes the new social standard, a given quantity of commodities is now produced with less labour effort than previously—and the price of a single commodity decreases as a result. Marx concludes that, on the one hand, the rate of surplus of the employed workers increases (because of higher volumes of sales per worker); on the other hand, however, the absolute volume or mass of surplus value (and, other conditions being equal, the mass of profit) decreases since fewer workers are needed to produce a given amount of commodities than before. In order to keep the volume of profit stable, despite this dilemma, there is no alternative but to expand the overall scale of production through the reinvestment of previous profit, in other words “accumulation” of capital.

Marx was aware of the structural tensions that exist in an economy geared towards growth of money as a homogenous material entity

and the general principles of the work process based on heterogeneity of its natural and material ingredients the combination of which is bound up with rearrangements of energy and matter (Burkett 1999; Koch 2012). Using the historical example of England, he discussed the advancement of the division of labour and how the work process became successively independent from the individual skills of workers through the systematic application of natural forces and the natural sciences. The Industrial Revolution introduced tools and machinery that reduced the role of many individual workers to that of an “appendage”. Once the work process had an industrial foundation, the subjugation of nature under capital became more complete. Expanding scales of production and economic growth coincided with greater amounts of throughput of raw materials and auxiliary substances, especially in the form of fossil fuels as well as of available energy. Rising demand for raw materials and available energy normally leads to rising prices, for example, for crude oil, creating incentives for individual companies to recycle and to use a given quantity of materials or fuels in more efficient ways (Marx 2006, Chap. 5).

Yet progress in the efficiency of raw and auxiliary materials does not fundamentally alter the link between the expansion of the scale of production and the increase in the material and energy throughput, a phenomenon that had been observed by William Stanley Jevons (1865). According to the “Jevons paradox”, greater efficiency in the use of a fossil energy source such as coal or oil leads to an increase in demand—not to a decrease—and in fact constitutes a necessary precondition for further capital expansion and economic growth (see also Chap. 4). The second and third volumes of *Capital* reflect the fact that capital does exist not only in its productive, that is, value-producing, form but also in unproductive forms, as money and commodity capital. While alternating between these three forms, competition forces individual companies to reduce the two unproductive functions of the capital cycle and, hence, to speed up the overall turnover process as much as possible. Hence, while the matter and energy transformation processes associated with all work processes have an irreversible and linear character, the structural imperative towards increasingly rapid turnover cycles is characterised by “time–space compression” (Harvey 1990) and a tendency towards temporal and geographic “simultaneity”.

Marx’s *Critique of Political Economy* not only provides a theory of the structural imperative of capitalist economies to expand in scale and grow

in monetary terms, it also demonstrates how the economic categories and social relations are reflected in actors' minds. The historically specific mode of transfer of surplus labour and its social genesis—specifically the fact that the appropriation of past unpaid labour is the prerequisite for the appropriation of further unpaid labour on an increasing scale—is hidden by a range of mystifications as a result of which the capitalist mode of production appears as the natural and eternal way of organising “the” economy. Due to the wage form, all labour seems to be paid so that profit in its various forms seems to result from other sources than surplus labour. The “topsy-turvy world” of the “trinitary form” (Marx 2006), where wage labour contributes to societal wealth on the same footing and in functional harmony with profits and rent is the structural context for the widespread idea that economic growth is beneficial to all—including to those who contribute to it through work. The corollary is the meritocratic illusion that the more one works, the greater one's share in societal wealth will be. In fact, from the common perspective of commodity–money transactions, own work seems to be the only possibility of becoming a commodity owner in the first place. Core societal values and orientations such as “achievement”, “upward mobility” and “social position as result of own work and merits”, which are of crucial significance for the maintenance of the growth paradigm, have their structural basis in the specifically historical features of the capitalist production and accumulation process that present themselves as natural features of economic activity.

THE TWENTIETH AND EARLY TWENTY-FIRST CENTURIES

The OECD proclaims that for “a good portion of the twentieth century there was an implicit assumption that economic growth was synonymous with progress: an assumption that a growing Gross Domestic Product (GDP) meant life must be getting better” (OECD 2008, cover text). In the course of the nineteenth century, the reduction of concrete use values, matter and energy to abstract numbers and monetary magnitudes had begun to become a salient feature of economic life. In the early twentieth century, this development reached a new level, when, in 1932, the US Congress commissioned the economist Simon Kuznets to devise a means by which to measure the nation's output. This resulted in Gross National Product (GNP), a measure that estimated the market value of all final goods and services produced within a country per year, including

the costs of government services. After the Second World War, GNP was turned into an official measure of economic policy in the USA. In 1953, the United Nations issued its international standards for a system of national accounts. In 1991, after the collapse of the Soviet Union which had used “net material product”, which included physical goods but excluded services, as measure of economic progress, GNP was replaced by GDP. “With GNP, the earnings of a multinational company are attributed to the country where the company is owned, and where the profits end up. With GDP, on the other hand, the profits are attributed to the country where the factory is located and resource extraction occurs, even if the profits leave the country” (O’Neill 2013: 104).

Focusing on monetary flows, GDP does not distinguish between “good” and “bad” economic activities. While the purchases of beer, bicycles and cars as well as government investments in education contribute to GDP, it excludes various social practices relevant to human well-being including voluntary work and unpaid housework but also illegal transactions or environmental damages (see, for more details, Chap. 4). Despite these anomalies, GDP came to be seen as a proxy for the profitability of national economies and a sort of magic potion to cure all kinds of social problems during the so-called golden age of capitalism (1950–1975). For the USA, Dale (2012a) reports that in 1958 Henry Kissinger chaired a panel of economists representing large corporations and major universities. It produced a book called *The Key Importance of Growth to Achieve National Goals*, which identified “growth as the solution to the continual pressure of competing claims on national income (the arms race, public infrastructure, education, etc.)”. Not only would economic growth bring “dignity, freedom, and purpose” (cited in Dale 2012a), but also expand the opportunities in combating poverty, economic hardship and poor health and in improving the educational system.

The regulation approach refers to the predominant growth strategy of this “golden” period as “Fordism” (Boyer and Saillard 2002; Koch 2006, 2012), a label that alludes to the division of labour in Henry Ford’s automobile factory first used by Antonio Gramsci (1971). This growth model was characterised by a parallel restructuring of both the technological and organisational basis of the production process and the lifestyles and consumption patterns of wage-earners. It took the form of a compromise or exchange between management and organised labour: Wage-earners could benefit from productivity gains via wage increases, shortening of labour hours and the establishment and expansion

of welfare services (Chap. 3). In return, trade unions accepted “scientific”, that is Taylorist, management methods involving a clear distinction between conception and execution, production and sales, marketing and finance, where manual workers’ function was largely reduced to simple and repetitive tasks within the work process, while skills, control assets and qualifications were increasingly concentrated within the planning department.

Originating in the USA, where the wartime experience of ending the depression seemed to justify the continuation of the “grand coalition” of government and business to prevent the recurrence of crises and to maintain economic growth (Agnew 1987), the new growth strategy began to be applied in Western Europe with the help of special economic recovery programmes such as the Marshall Plan launched in 1949. One favourable condition of the post-war period for economic growth to pick up was the fact that producers could count on a quasi-“infinite” demand for mass-produced goods such as automobiles and household appliances such as televisions and washing machines. Unlike the 1930s, when solvent consumers were scarce, during the era of post-war reconstruction, there was stable and expanding demand for both consumer goods and the means of production to build them. Since most Western European households did not yet own durable goods such as household appliances, mass production could become the technological basis for their speedy generalisation. The turnover of fixed capital was accelerated by the continuing increase in the number of products, which reduced the costs of one single product. Profits were supported by consumer demand, based on increasing real wages, which were usually determined by collective agreements and tied to expected growth in productivity. The result was unprecedentedly fast growth rates of GDP and productivity during the 1950–1973 period (Koch 2013: 33).

In the course of the 1970s, the Fordist growth strategy went into crisis.² Compared to the 1950s and 1960s, labour productivity and GDP growth fell in all countries on both sides of the Atlantic from levels of between 4 and 5% to around 1% in the 2000s (Koch 2013: 33). To understand how the crisis of Fordism was overcome and how a new period of capitalist growth was initiated, a number of scholars focus on the notion and process of the “financialisation” of socio-economic relations (Boyer 2000; Stockhammer 2008; Krugman 2009; Stiglitz 2010; Koch 2012). The term covers a range of phenomena including the deregulation of the financial sector and the liberalisation of international

capital flows, with a corresponding increased instability in currency markets. It further reflects significant increases in financial transactions and the proliferation and profitability of new financial instruments such as hedge funds. The priority within companies' competitive strategies moves from investments in the real economy towards greater importance of financial profits, financial markets and foreign investment. In relation to consumption, wages and salaries continue to be essential for the demand generated by wage-earners, but they are increasingly complemented by loans (Boyer 2000), especially via mortgage-based borrowing. The decrease in real wages and the corresponding fall in spending power of wage-earners are partly compensated by the increase in the access of the wage-earning class to consumer loans. Money is issued primarily as debt, and it is now commonly held that, even more so than under Fordism, the economy as a whole needs to continue to grow so that debtors can service the growing volume of interest on the debt. Productive investment expenditures tend to be slow due to shareholder-value orientation and the general focus on financial profit. Such investment becomes more risky and is carried out under the imperative of sustaining higher profit rates than those achievable by financial investment. Generally, the hierarchy of institutional forms changes from a "management-labour balance" to a "management-shareholder balance" (Stockhammer 2008: 191). Last but not least, the cancellation of the Fordist compromise and its replacement by a finance-driven regime is not viewed as an exogenous shock to economies by most political economists but as the "outcome of particular policy arrangements" (Stockhammer 2008: 187). The overwhelming majority of countries introduced reforms that facilitated rather than complicated foreign and particularly financial investment since 1992 (UNCTAD 2009; Koch 2012: 97).

Under these new regulatory and institutional conditions, the continued search for growth is confronted with a range of "headwinds" (Gordon 2012) that include the interplay of globalisation and modern technology, which "accelerates the process of catching up of the emerging markets and the downward pressures on wages and real incomes in the advanced nations" (ibid.: 20), energy and environmental issues, partially as results of the emerging markets, problems deriving from the rising cost and declining quality of education, environmental regulation, demographic trends such as the ageing of the population in Western societies, rising tax burdens as well as massive consumer and government

debt, which have been used to justify and impose austerity measures on whole countries such as Greece. Fuelled by consumption and government debt, consumption grew faster than real GDP over the last 40 years. However, Gordon (2012: 20) reckons that over a “substantial number of years in the future consumption must grow more slowly than production”. Gordon predicts that “future growth in real GDP per capita will be slower than in any extended period since the late nineteenth century, and growth in real consumption per capita for the bottom 99% of the income distribution will be even slower than that” (Gordon 2012: 2). If, conversely, just 1% benefit from recent economic development, it is difficult to see which societal strata are supposed to carry the next economic upswing required for new growth.

CONCLUSION

This chapter has reviewed the socio-economic processes during which economic growth and the “growth paradigm” have become universal. While economic growth did not play any major role prior to the industrial revolution, the imperative for the economy to expand is inherent to more developed capitalism and anchored in its social relations and corresponding mindsets. In the most recent decades, economic growth was accompanied by an unbalancing between “real” and financial economy, unprecedented private and public debt, massively rising inequalities as well as an exacerbating ecological crisis (Chap. 4), which together have the potential of severely undermining the structural prospects for further growth. While the growth period that began in 1820 may be coming to a close, the growth period of the post-war decades took the form of a parallel advancement of profits and wages, and this was the structural precondition for the introduction and expansion of various welfare systems to which we turn next.

NOTES

1. Moore (2015) refers to the structural preconditions necessary for long-term capital accumulation in terms of “four cheap”: labour power, food, energy and raw materials.
2. Crisis factors included the exhaustion of the productivity growth potentials of “scientific” management strategies, limits to product standardisation,

changes in product demand structures and in the international regulation of Fordism as well as an increased questioning of Fordism's male-breadwinner-based mode of societalisation and its fossil energy regime (Koch 2012; Bieling et al. 2016).

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