Food Crisis and the Structure of Trade

Hersh, Jacques; Schmidt, Johannes Dragsbæk

Publication date:
2010

Document Version
Early version, also known as pre-print

Link to publication from Aalborg University

Citation for published version (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

? Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
? You may not further distribute the material or use it for any profit-making activity or commercial gain
? You may freely distribute the URL identifying the publication in the public portal

Take down policy
If you believe that this document breaches copyright please contact us at vbn@aub.aau.dk providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from vbn.aau.dk on: October 28, 2019
Food Crisis and the Structure of Trade

Jacques Hersh and Johannes Dragsbaek Schmidt
Food Crisis and the Structure of Trade

Jacques Hersh and Johannes Dragsbaek Schmidt

“Erst kommt das Fressen, dann kommt die Moral.”
Bertold Brecht, Dreigroschenoper

Situating the problem: Food for Thought
When Francis Fukuyama published his essay ”The End of History” at the time of the breaking-up of the Soviet Empire and the demise of the Soviet Union, the dominating ideological discourse was that liberal capitalism would now have a free hand to resolve humanity’s problems without having to face opposition from political forces. The mood of optimism encapsulated in neoliberalism became overwhelming in the 1990s. British Prime Minister, Margaret Thatcher going as far as to coin the phrase “There is no alternative,” or “TINA” for short.

The implication of the new mantra was that notions of malfunctioning and disharmony in the global capitalist system now belonged to the dustbin of history. Markets were again considered to be self-regulating and best left out of political control. Forgotten from the collective memory was that such a project had in fact been carried out in the period between the two world wars. The attempt to decouple the economy from society was analyzed as being utopian by Karl Polanyi (1944/1957) and bound to result in disaster. According to his thinking, this in turn would bring back the “double movement” of state interventionism with the aim of protecting society from world market forces.

The decades of neoliberalism brought ravage to the social sectors of leading regulatory capitalist states, former state socialist countries, capitalist developmental states and nationalist states in the so-called Third World. The period has been marked by concentration of wealth and internal polarization at the national level as well as between countries in the international system. In essence however, the implementation of a global neoliberal economic strategy represented the attempt to surmount the tendency of overproduction tied to the former state-led productivistic model. The experiment with the market-driven model of capital accumulation, based more on financial speculation in the “fictive” economy than productive endeavours in the real economy, was intended to resolve the difficulties encountered by the state-led economic model.

1 “First the grub, then the morality.”
Accompanying the hegemony of finance was the search, on the part of industrial capital, for more profitable sites of production. Outsourcing production to lower cost areas (China is a case in point) permitted a catching-up process based on uneven development characterized by the relative deindustrialization of the United States economy in relation to China and other potential emerging powers. The trade imbalances created by the export-orientation of new economic giants, like China, and the market of last resort, the United States, was untenable in the longer run. The American current account deficits gave rise to a huge foreign debt while the emerging economies accumulated more and more dollar reserves. The military expenditures and the costly wars in Iraq and Afghanistan created the financial problem of the United States which was furthermore accentuated by the rise of commodity prices partly because of the increased demand of emerging economies for oil and other commodities such as food. This increase was also generated by speculation on the commodity exchange markets and when the financial bubble bust, in conjunction with the financial meltdown, prices for oil and agricultural products tumbled.

In the conventional interpretation, the turmoil which is presently affecting the world economy is presented mainly as the result of the malfunctioning of the U.S. financial sector, i.e. the housing bubble. However as touched upon above, the current economic recession—which is starting to remind us of the depression of the 1930s—is a structural and multifaceted crisis of world capitalism. With regard to the thesis of the “end of history” and “TINA”, the current economic turbulence points to the deconstruction of the ideological hegemony of neoliberalism. Not only do we see the reappearance of poverty in advanced capitalist societies and hunger in different parts of the Third World, but also the gestation of resistance and social mobilization. The seeds of the “second movement” are germinating most prominently on the continent of South America where leftist and proto-socialist forces have come to power through democratic electoral processes. In other words, the process we may be witnessing is “the return of/to history.” Looking ahead, the signs are that the script will most likely be based on a back to the future scenario! The societal evolution of the capitalist formations worldwide will probably involve the recurrence of social conflicts confirming the Marxian axiom that: “The history of all hitherto existing history is the history of class struggles.”2 (Marx and Engels (1888) 1958:34).

---

2 Engels in a note to the English edition of 1888, added the qualification of written history in order to take into account that humans had in previous social organizations lived in classless primitive forms of communistic societies.
Chronic hunger: A man-made scourge

The second “post-end of history” reality check is the re-emergence of the age-long fight for survival. Throughout the ages, human existence was tied to the ability of obtaining the necessary nourishment for sustaining life. This expressed itself in a give and take relationship with nature as well as social relations which affected the way the food supply was produced and distributed. In the very beginning of his opus magnum *The Geopolitics of Hunger*, Josué de Castro made a point which can be still be applied as the leitmotiv for the persistent plague of hunger, famine and under/over nourishment which is affecting a large number of people in the modern world:

> The history of man from the beginning has been the history of his struggle for his daily bread. It is very difficult to understand how this pretentiously superior animal, this lord and master of the universe who has won so many battles against the forces of nature, should have failed to obtain a decisive victory in his struggle for subsistence. (Castro (1952) 1977: 49)

The evidence presented by Josué de Castro as well as more recent empirical material (Young 1997) show that the curse of chronic hunger is more likely to be man-made than the result of natural calamities. In most cases the hunger phenomenon and underdevelopment, as demonstrated by the former director of FAO, was related to the legacy of colonialism which included economic exploitation and political oppression. With the emancipation of the colonies and their incorporation into the world economy as national entities, the “extra-economic” means of surplus extraction were replaced by market mechanisms and trading relations. This type of market-led unequal exchange had previously existed in the pattern of trade relations that had been established between Latin American producers of raw materials and foodstuffs and industrial exporters from the core nations.

The capitalist mode of food production - a framework

The interpretation of the modern problem of production and distribution of food on a world scale necessitates a frame of reference specifying the object and level of analysis as well as the tools of analysis. Our point of departure is that the key to understanding the genesis and mode of functioning of capitalism lies in the basic role of agriculture. Although not in contradiction to the more conventional conceptualization of capitalism it does represent a shift of emphasis. The industrial revolution and the establishment of a world division of labour through the expansion of the capitalist mode of production to all continents gave rise to a tendency of considering agriculture as having been replaced by industrialism and therefore belonging to the realm of political-economic history. In effect, the political economic perspective is useful in understanding the transformation that
took place in landed society and its primordial importance to the origin and evolution of capitalism. However, in order to understand the functioning of the internationalization of capital accumulation and the contemporary industrialization of food production by agribusiness, political-economic history needs to be supplemented with (international) political economy. Thus in contrast to the more individualized perspective on entitlement and access offered by Sen (1981) we suggest that by bringing agriculture back into the analysis, the genesis and modus operandi of capitalism as a social system becomes more inclusive. Indeed as put by Ernest Mandel, awareness of the transformations that have taken place in food production are primordial for the conceptualization of the later evolution of the world capitalist system: “The development of agriculture lays the foundation for a real division of labour, the separation of town from country, and for generalising exchange-relations.” (Mandel 1968: 271)

The agrarian question and the genesis of industrial capitalism
The long held opinion in the West associating the rise of capitalism with cities and by implication the activities of trade and commerce is being challenged by the approach which gives priority to the social transformation in the countryside. According to this economic history perspective, the emphasis should be put on the changes of relationships in the agrarian economy which involved the dispossession of rural producers from their land and forced them onto the labour market for their subsistence; in addition the fact that farming activity became based on the production of agricultural commodities for profit on the market should also be given due consideration. Viewed in this manner, the resulting structure of agrarian capitalism is seen as having introduced the essential elements of modern capitalism. (McNally 1990: xii) As pointed out by Wood, this socio-economic arrangement was fundamentally different from what existed in other precapitalist societies. In the capitalist formation, the particular property relations between producers and appropriators were determinant and gave it its specificity: “Only in capitalism is the dominant mode of surplus appropriation based on the dispossession of the direct producers, whose surplus labour is appropriated by purely ‘economic’ means.” (Wood 2000:25) Regardless of the impressive role of the market in capitalist societies, as the main determinant and regulator of social reproduction, its emergence “presupposed its penetration into the production of life’s most basic necessity, food.” (Wood ibid.)

3 In their introduction to the volume Hungry for Profit, the editors point out the significance of bringing agriculture back in the analysis of the capitalist world system: “The purpose of this book is to help compensate for the neglect that agriculture has often suffered in political-economic literature of the late twentieth century, and to assist what is fast becoming a powerful resistance movement in the agricultural realm.” (Magdoff et al., 2000:7)
Furthermore, it should not be forgotten that the market was not a harmonious and peaceful innovation. As Polanyi remarks, the establishment of a market for labour, especially in England’s rural civilization, “implied no less than the wholesale destruction of the traditional fabric of society.” (Polanyi, 1944/1957: 77) This model of expropriation was replicated in the colonies where the natives were forced to sell their labour in order to make a living. “To this end their traditional institutions must be destroyed, and prevented from re-forming, since, as a rule, the individual in primitive society is not threatened by starvation unless the community as a whole is in a like predicament.” (Polanyi, op. cit., 163)

The process of creating a working class and centres of population concentration implied a demand for food which could only be supplied through technological innovation in the agricultural sector or by access to extra-European sources. In this relation it should be pointed out that feudalism in Europe had not been based on “a natural economy”, i.e. an economy of self-subsistence. (Wallerstein 1974: 17) In this perspective, more than the lure of luxuries, the importance of staples from other regions of the world had in fact very early been a component of the socio-political evolution of the continent. As noted by Immanuel Wallerstein, “what Western Europe needed in the fourteenth and fifteenth centuries was food (more calories and a better distribution of food values) and fuel.” (Ibid: 42) The drive into other regions of the world for these commodities contributed to expanding the territorial base of European consumption by constructing an international political economy in which the resource base was unequally consumed, that is disproportionately by Western Europe. (Ibid)

The uneven access to the world’s resources was accentuated with the phenomena of colonialism, industrialization and imperialism that came to incorporate most parts of the non-European sphere. The Eurocentric interpretation of history of the nineteenth century is ideologically speaking quite instructive. While attention has been given in literature and economic analysis to the slum conditions existing in Western European cities, the mega famines that especially took place in what came to be known as the “third world” were largely ignored by conventional modern historians. Even the proto-Marxian historian Eric Hobsbawm, who published a trilogy on 19th century history, avoids referring to the worst famines ever in China and India although mentioning the Great Hunger in Ireland and the Russian famine of 1891-92. The paradox in world history interpretation is, as Mike Davis asks, “how do we explain the fact that in the very half-century when peacetime famine permanently disappeared from Western Europe, it increased devastatingly throughout much of the colonial world?” (Davis 2000: 8-9)
It is important to emphasize that the famines in the period 1870-1914 (especially those in India and China) took place within the sphere of European capitalism, that is after they had been incorporated in the “London-centred world economy.” As put by Davis: “Millions died, not outside the ‘modern world system,’ but in the very process of being forcibly incorporated into its economic and political structures. They died in the golden age of Liberal Capitalism; indeed, many were murdered … by the theological application of the sacred principles of Smith, Bentham and Mill.” Davis 2000: 9)

In most cases the famines and hunger crises facing many of the extra-European pre-capitalist nations arose not mainly as a result of the exploitative relationship to the colonial metropole but because the village community and local production structures as those existing in India had been destroyed. This destruction took place not only through the intrusion of the foreign element, disguised as anonymous market mechanisms, but through the use of force and the opportune dismantlement of traditional networks of support after natural drought had created havoc on food production and distribution. In creating the preconditions for the expansion of European capitalism in the regions of Asia and Africa or the Americas, the “dead weight” of the protective capacity of traditional society had to be removed. As vividly noted by Rosa Luxemburg:

> A natural economy thus confronts the requirements of capitalism at every turn with rigid barriers. Capitalism must therefore always and everywhere fight a battle of annihilation against every historical form of natural economy that it encounters, whether this is slave economy, feudalism, primitive communism, or patriarchal peasant economy. (Luxemburg (1951) 1968: 369)

**The nexus between poverty and population growth**

In counterpoint to the Malthusian demographic explication of misery and starvation as the result of overpopulation, the Marxian perspective explained the massive social problems at the time of industrialization as a function of the dynamics of capitalism. The hunger and poverty that could be seen in the slums of industrializing Europe and the misery and famines that could be observed in the colonies were outgrowths of the social and economic organization of society and the mode of operation of the economic mechanisms. As put by Roger Burbach and Patricia Flynn: “Developments since Marx and Malthus wrote have only reinforced the view that social factors rather than scarcity are at the root of hunger. Over the past century the world’s food supply has in fact tended to increase more rapidly than its population.” (Burbach and Flynn 1980: 10) The fact that food production outstripped population growth didn’t however translate in resolving the problem of food scarcity and hunger. The position of what may be called “Malthusian optimism” i.e. indifference to the politics of food - so
long as food production increased as fast as – or faster than population growth, “has been indirectly involved in millions of deaths which have resulted from inaction and misdirection of public policy” (Sen 1981; 1982; 1990: 35). Considering the problem in this manner points to a conclusion arrived at by Josué de Castro that it is poverty that causes population growth rather than the reverse. He detected a cause and effect in the relationship between poverty-endangered population and increased fecundity or fertility as a defensive natural drive for survival. In other words a kind of “second movement” of the poor. The paradox is thus that while hunger as a social phenomenon increases the death rate the birth rate seems to grown even more.

It is commonly noted that the undernourished classes are the most fertile; the ancient Romans had a word for those who, on a starvation diet, had many offspring or proles –“proletarians.” There is a popular saying in Latin America that “the table of the poor is meagre, but fertile is the bed of misery ....” (Castro (1952) 1977: 282)

The thesis that there is a link between subsistence levels and survival has been confirmed by newer research (Young 1997: 3). Even conservative estimates by the World Health Organization maintain that a majority of most hunger-related deaths taking place on a daily basis and that of the some 8 million children who die annually from hunger do so as the result of poverty and poverty-related diseases. Furthermore and in an historical perspective, the number of people in a state of permanent chronic hunger or malnutrition has not decreased during the past century and will probably rise dramatically as a consequence of the 2009-worldwide depression. The implication is that the clock is turning once again. Previously the discourse centred on food supply and food sovereignty, then the focus was put on food demand and food security; presently the discussion revolves around the questions of distribution, safety, technology, climate and environmental concerns (Maxwell and Slater 2004: 2) and back to the issue of food sovereignty involving a ban on speculation in food, regulation of agriculture production and re-regulation of commodity markets; in short a de facto de-globalization of the world’s agricultural markets.

The paradox that the agricultural production regime has been able to surpass population growth in the world capitalist system without resolving the global shortage of food for especially non-European countries is a paradox that requires the attention of critical thinking. On the one hand the productivity of capitalism needs to be acknowledged while, at the same time, the question as to the reason the global market system is unable to satisfy the biological needs of the human species has to be recognized as a crucial problem. In order to approach a logical explanation for this state of affairs, it is necessary to keep in mind that the market is as much a political construction as a natural economic institution.
Refusing the classical conceptualization of the market as the outcome of the human propensity to barter, Polanyi emphasizes that the emergence of the market was not the result of the emancipation of the economic sphere from the dominance of the state. “On the contrary, the market has been the outcome of a conscious and often violent intervention on the part of government which imposed the market organization on society for noneconomic ends.” (Polanyi 1944/1957: 250)

Following this line of thought, it can similarly be said that the international division of labour based on capitalist market mechanisms was not the result of a natural and purely economic process but required political means and military force to impose and nurture it. The concept promoted ideological acceptance for the organization of production specialization on a world scale that led to the binary division of countries into two dominant categories. The historical implications were that while the colonial metropoles specialized in industrial production, the periphery consisting of colonies or semi-colonies would specialize in the export of raw material or agricultural produces making them fatally dependent upon one or two export commodities. The resulting unequal terms of trade had the impact of favouring a bias for industrialization as a path of development and viewing agriculture as a “specialization to be transcended.” (McMichael 2000: 127) The unfavourable terms of trade for commodity producers relative to industrial exporters which were encapsulated in the concept of division of labour relegated the food producing sector to an inferior position in the capitalist economic system. The irony is of course that in our contemporary world, agriculture and food production have become highly industrialized and centralized worldwide through the global reach of what has been called the agro-industrial complex. This has not made export-dependent developing economies less vulnerable to weather, climate change or fluctuations in world market prices for export commodities and imports of basic food. On the contrary the net result has been to effectively reduce the capacity these countries to feed their populations. (Young 1997: 41)

The point we are making is that the international division of labour is a power relation imposed by the strong on weaker nations in order to serve the interests of the leading countries. As Dietrich Rueschemeyer put it the power relation is camouflaged by the economic conceptualization:

Yet there is no question that the conception of international trade as market exchange in pure form—an exchange uncontaminated by power—is thoroughly mistaken. *International division of labour is shaped as much as any form of division of labour.* (Rueschemeyer 1986: 179) (His emphasis)
In our contemporary world, historically constructed political, economic and social structures continue to control access and command over food, as well as decisions relating to food production and consumption. Within countries, entitlement packages are often based upon social and economic relations established under European colonisation. “The most critical requirement for any governing élite is to secure adequate food at prices which are affordable; if it fails to do this it loses legitimacy and risks being ousted.” An initial and vital constraint upon the ability to command food for its population is predicated on the country’s status in the international political arena, because this is where crucial policies influencing development --world revenues are negotiated. (Young 1997:36-7)

Understood in this manner, it makes sense that Adam Smith’s concept of the “invisible hand” of the market and David Ricardo’s “law of comparative advantage,” as the foundation of the dominating trade theory, emerged in Britain at the zenith of its power. The British hegemonic international order required a world specialization whereby the “workshop of the world” would find markets for its manufactured exports and access to relatively cheap imports of raw materials and agricultural produce from colonies and the Americas. The pattern of this political economy was also implemented by competing European imperialist powers in their relationship to their colonies which remained tied to their former masters even after decolonization (Vernon 2007: 272). Although modernization theory as well as economic nationalism put emphasis on industrialization in a “late development” strategy, the significance of agriculture for the establishment and functioning of the capitalist world system cannot be over-emphasized. In the words of Philip McMichael:

Indeed world capitalism emerged on the pedestal of colonial agricultures, where large-scale slave plantations prefigured the rise of the factory system. Not only did slavery anticipate proletarianization, but also the colonial system generated much of the early capital nurturing the rise of modern industry. (McMichael 2000: 128)

From the very beginning the evolution of social relations in the agrarian economy (expropriation of the direct producers and their physical transfer to urban centres and factories) and the pattern of food production and consumption were primordial for the emergence of industrial capitalism in England as discussed above. This importance has not diminished since. In our contemporary age agricultural production and food trade have become a component element of the process of global capital accumulation as well as the expression of power relations. In this context, recognition of the exploitative nature of the capitalist international division of labour was recognized by both economic nationalism and dependency theory as detrimental to development.
The proposed remedies to the damage of unequal exchange on non-industrialized societies was, as far as economic nationalism was concerned, temporary protectionism from the competition of the world market by nurturing “infant industry” while on the part of the “dependistas” delinking from the capitalist division of labour was proposed accompanied by emphasis on a strategy of self-reliance which implied an agrarian sector geared to internal needs and food security understood as “access by all people at all times to enough food for an active and healthy life.” (Reutlinger 1986:1; Foster and Leathers 1999: 95).

Unequal trade and power relations
Historically, the evolution of core-periphery relations was predetermined by the changing needs of the industrial countries of Europe which thus affected the internal production structures of the colonies and semi-colonies. Another element which came to influence the later development of world capitalism was related to the fact that the modality of inclusion into the international division of labour had not been uniform for all extra-European countries and regions. In this context, it is necessary to understand that the trade pattern and composition of the exchanges encapsulated in the international division of labour was not a static relationship but prone to change and transformation. Thus the type of agricultural imports in European countries in the 19th century changed according to the industrial transformation of these societies. Imports of luxuries and spices were displaced by new agro-industrial commodities and other raw materials entering the industrializing economies of Europe for consumption by the emerging industrial working classes (sugar, coffee, tea, cocoa, vegetable oils) or for covering the demand of the production of new manufactures (cotton, timber, rubber and jute). These changes in the composition of trade did not however transform the economic and political essence of the relationship. What was most important for the transformation of the pattern of trade in the international division of labour and the political economy of world capitalism was the emergence of ex-colonial settler states (USA, Australia, New Zealand, Canada) as strong agricultural producers. According to McMichael, their emergence came to shape world agriculture in the 20th century. Not only did their exports of grains and meat to the world market supplement and then compete with metropolitan agriculture but their produce became part of the staple diet of the European labour forces.

The consequences of the transformation that was taking place in the USA were of a geo-economic and geopolitical nature. As a rapid “late-developer,” the United States early became a challenger to Britain whose world order had been based on its leadership position as an industrial and financial powerhouse. This evolution was related to the specificities of the socio-economic background
which had obtained in that former British colony. With the growth of American modern agriculture and industry, the United States acquired a dual comparative advantage giving the country the economic strength to become the leading player in the capitalist world economy and a major force in transforming the political economic structure of the colonial system. In the words of McMichael:

In the twentieth century, the United States projected an alternative model of development based on the national integration of manufacturing and agricultural sectors. Whereas the British model was viewed as “outer directed,” the U.S. model was viewed as “inner directed.” However, obscured in this latter model is the powerful role of agribusiness and food power in the U.S.-centered global political economy of the twentieth century. (McMichael 2000:128-29) (His emphasis)

While British hegemony of the world economy was based on the “workshop of the world” model, which also became “the world’s banker,” the ascension of the United States to a dominant position in the international division of labour was the result of the successful synergy between what could be called agrarian (pre)capitalism and industrial capitalism within the evolution of one economy. While agriculture in most colonies or semi-colonies suffered from monoculture and dependence on exports for the world market, the domestic integration of industry and agriculture gave the United States a comparative advantage. The specificity of American agriculture, based on family farming in the Old Northwest, took place in the context of an industrialization process. The mutual stimulation and convergence of the two sectors created the foundations of a model integral development. As observed by a student of the political economy of this period of American history:

The market for capital goods provided by the family farm system was, in part the cause of the mass production of farm machinery at reasonable prices that led to a large demand for farm machinery. Without the farm machinery, the food needs of industrialization probably would not have been met. But without the family farm system, the mass production of farm machinery probably would not have taken on. (Headlee 1991: 178)

The American civil war which pitted the agrarian South against the industrial North didn’t revolve principally around the question of slavery but the question of autocracy versus free trade liberalism. At issue was the need for expansion of the internal market for Northern industries through the mechanization of Southern plantations while the Southern ruling strata was more interested in relations to the European outlets and import of cheaper manufactures. Consequently what evolved was the combination of the strategy of economic nationalism whereby protection of “infant industry” gave the American economy a breathing space from the competition of the advanced industrial
powers, while agricultural producer (tobacco, cotton, wheat) acquired access to external markets. The pattern of agricultural production pioneered by the United States was highly capital intensive and dependent on inputs such as oil, artificial fertilizers, hybrid seeds, machinery and pesticides. The output of agriculture became the basis for the growth of the meat producing sector and its interconnected activities such as the food industry.

Seen in the perspective of the international political economy, the dialectics of the American late development based on an activated agricultural sector in correlation with the country’s industrialization process contributed to creating the “bread basket” model of U.S. hegemony that came to fruition following World War II. Contrary to the assumptions of liberalism, this evolution was not the result of purely economic mechanisms or market laws. Historically, the surge of the agro-industrial complex which played an important role in the trajectory of American capitalism had been nurtured by state interventionism not least in response to the Great Depression of the 1930s. In fact the United States from the beginning of its catching-up process pioneered economic nationalism as a strategy of shielding its industrialization process. Now in 1935, Congress passed legislation (an amendment to the Agricultural Adjustment Act) to prevent agricultural imports in order to impose the government price-support program which had set domestic prices above world market levels. The protection of agriculture was of course in contravention to the discourse of free trade which the United States would consistently champion following World War II. That is after American food production had gained a competitive edge over the other producers as noted by McMichael “…this neo-mercantilist policy of import controls eventually produced an agro-export program of global significance.”(McMichael 2000:130)

Whether by design or not, the result of this strategy contributed to a situation of agricultural overproduction thus becoming a political problem for the government as well as a tool of U.S. soft power. The granting of cheap food aid to devastated nations for gaining influence following World War II was beneficial for consolidating what has been called the American order of hegemonic stability. (Gilpin 1987:72-80) It was in the shadow of the food assistance program that the large American grain traders such as Cargill and Continental gained a foothold in foreign markets. But not only foodstuff was at play. The foreign aid program as encapsulated by the Marshall Plan and the “green revolution” also included exports of agribusiness technologies and other related inputs. “These two particular programs spawned modernizing agricultural sectors replicating the capital and energy-intensive model of American agriculture, from Europe through Japan to Mexico.” (McMichael: 2000:131-32)
The window of opportunity for the geopolitical and geo-economic surge of the United States was not only the result of the weakening of the other leading capitalist countries during the war; it was also the capacity of American capitalism to mobilize internal resources to influence the course of events during this historical period. The strategy of protecting domestic American food production which had been part of the Keynesian New Deal approach under President Franklin Delano Roosevelt continued in the post-war period. As noted by Harriet Friedmann: “At the end of World War II, only the United States had policies supporting agricultural prices through government loans which farmers paid off in grain.” (Friedmann 1990: 15) It was the combination of these trends that resulted in a relatively stable post-World War II international food regime that lasted until the beginning of the 1970s. The mechanism at work was the American farm supporting price programme which created huge surpluses held by the U.S. government. The impact on the international agricultural economy was not to be ignored. While the order of hegemonic stability reduced the problem of overproduction for the U.S. it had a destabilizing effect on other societies. The American grain stocks were used to both out-compete other producers and gain access to new markets in the newly independent former colonies. Discussing these effects on the international wheat markets, Friedmann writes:

First, they depressed prices and created problems for all other food producers in the world, enabling American farmers to displace others, in for example, Canada, Australia and Argentina, in export markets. But this depended on the second effect. The American government created new export markets in the Third World, in societies which were predominantly agrarian only a few decades ago –and in some cases still are. (Friedmann 1990: 13-14) (Her emphasis)

The stability of the international food regime that emerged under the tutelage of the United States until the 1970s contained the seeds of its transformation. The foundation of the post-war structure of agricultural production and trade was the U.S. model of capital and energy intensive agribusiness. Despite its adherence to a discourse of free trade, the United States followed a determined course of protecting its domestic agriculture from foreign competitors. The mercantilism involved behind this strategy was consistent with the interests of rural America comprising both the agro-industrial complex and the constituency of family farmers. Simultaneously with import restrictions, the U.S. food aid programmes, including the Marshall Plan as well as the “green revolution,” not only incorporated cheap American foodstuffs, but also involved exports of agribusiness technologies. Not surprisingly the U.S. strategy of import restrictions of foreign agricultural commodities promoted a similar line of defence by other states who likewise came to give priority to their own domestic processes.
agro-food sectors. This was done in a more sophisticated manner than crude mercantilism. In Europe, the agricultural protective strategy was not based on tariffs but on state support for farm prices. For other regions of the world adaptation to the U.S. model involved shifts in state agricultural regulations. Geo-economically, this meant that the American policy of state interventionism in nurturing agricultural overproduction was being replicated by its geopolitical allies. The result as Harriet Friedman points out was that: “… the postwar rules did not liberalize national agricultural policy, but created a new pattern of intensely national regulation.” (Friedmann n.d.: 32)

The acquiescence of the United States to state interventionism in the free trade of agricultural commodities on the part of European countries as well as of Japan would appear at first glance to have been contradictory to the aim of becoming the “bread basket” of the world. The explanation however is to be found in the historical context. Not only was the American government itself the pioneer of this strategy, but the general socio-political mood of the time fitted the Polanyian thesis of the “double movement” i.e. protecting society against unregulated market forces. (Polanyi 1944/57) In this connection, it should be pointed out that the point of reference for the working classes and the general populations of industrial capitalist societies in those years were the Great Depression and the Second World War. These were considered to be more than temporary shortcomings of the capitalist system’s mode of functioning. In addition, the attraction of the Soviet socio-economic model also exerted a certain influence on the political awareness of the times and socialism appeared to be on the ascendancy. The acuteness of class contradictions contributed to the willingness of the bourgeoisie and the political elite to accept an agenda of state capitalism and social welfare. The resulting compromise was described as “passive revolution” by Antonio Gramsci (1971). Just as imperative as macro-economic reconstruction was considered, the centrality of the state role had gained the ideological and political position as the “general common sense” of the era. The fact that reconstruction of war-devastated economies could not be left to the whims of market forces alone and that the New Deal regime was in force in the United States made Keynesianism and welfare strategies in Western Europe and the economic nationalism of the capitalist developmental state in Japan acceptable to the United States. In fact, the American implementation of Keynesian macro-economics may have been a determining element behind the emergence of the welfare state in Europe and the developmental state in Japan.

As argued by a leading scholar of neo-realism, U.S. hegemony may actually have “provided the basis for the development and expansion of the European welfare state.” (Keohane 1984: 16-17)

The tenacity of the U.S. government’s efforts to promote the interests of American agriculture while attempting to establish a U.S. hegemonic order on
the capitalist world would also collide with the undertaking of institutionalizing an international liberal food regime. Washington’s compact with American rural interests was thus dysfunctional to the proclaimed goal of its foreign geo-economic strategy:

US commitment to mercantile agricultural trade practices led to the sacrifice of multilateral institutions which had wide support among postwar governments, not only for regulating food, but also for the pursuit of the larger US agenda for liberal trade. (Friedmann n.d.:33)

As a result, American diplomacy appeared to be incoherent as the political agenda was dominated by the concern of preventing encroachment on U.S. agricultural interests. Consequently the attempt to establish a global supply management and food aid board by the Food and Agriculture Organization (FAO) under the United Nations was rejected by the United States and Britain in 1947. The initiative of the U.S. government in 1946 to create an International Trade Organization (ITO) as part of the so-called Havana Treaty was not even submitted to the American Congress because it was in contravention to the protectionist trading clauses of the U.S domestic farm laws. Even the General Agreement on Tariffs and Trade (GATT), because of American insistence, came to exist as a weak substitute for the stillborn ITO. Agriculture was noticeably excluded from GATT’s proscription of controls and export subsidies on the part of member countries. (Ibid.)

When evaluating the food regime which the United States imposed on the capitalist countries after World War II, it should be recalled that its origins was the pattern of relations that existed in American society. The government’s farm support policy implied the buying of crops when the world prices were below those targeted by the Agricultural Department. The generalization of variants of this agricultural strategy created the structural foundation of the problem of chronic surpluses in the advanced countries. As a result, the international trade regime became heavily subsidized as all these countries protected their agricultural sector without resolving --to say the least-- the basic problem of over-capacity. The tax burden on the people in these societies was quite large while not bringing down the consumption price.

As far as Third World countries were concerned, the American food aid regime influenced their further integration in the capitalist world market while alleviating to a certain extent the surplus problem of U.S. agriculture. Their position in the food order established through American aid was in contrast to that of the core industrialized countries. Based on the problems of Western Europe, as discussed above, these countries were able to negotiate a certain understanding with the United States. On the one hand, they would retain self-
sufficiency in wheat production and dairy products while, on the other hand, the import controls of the European Community would be relinquished with regard to American maize and soya as well as other animal feedstuffs. Consequently the loss of the European market for U.S. wheat export was made up by the import of feedstuffs to the growing meat and dairy sectors of European agriculture. While political restrictions were put on the import of certain agricultural commodities, Europe’s shortage of capital and the openness to capital investment by American corporations contributed to the integration of European and U.S. agro-food sectors through industrial inputs and processing. (Friedmann, n.d.: 36) The Bretton Woods agreement had established what has been called dollar hegemony and American capital in all forms was welcome throughout the entire capitalist world and beyond.

Food aid under the Marshall Plan was meant to speed the reconstruction of these economies and pacify the short-term basic consumer needs of Europeans. The concern for a re-emergence of these economies called forth the benevolent side of U.S. hegemony. While the American government sought to project U.S. interests in Europe it had to manage certain constraints due to socio-economic and political conditions existing in European societies and Japan. In contrast, American food aid to the Third World took place in a different context and had different outcomes in the transformation of these societies. As Harriet Friedmann put it: “It undermined local agriculture, creating new proletarians dependent on commercial food, and new nations dependent on imports.” (Friedmann 1990:17)

Being in a situation of dependency to the core capitalist nations, the countries of the periphery were placed in a predicament related to the legacy of decolonization, the emergence of the hegemony of the United States and the international food order it was in the process of establishing. Many of the regimes in the Third World were ideologically and politically motivated by class interests. The lopsidedness and weakness of their economies influenced the decision-making of the governments following the growth model of modernization. Thus while U.S. food aid alleviated the American chronic surplus problem, it eased Third World governments’ foreign exchange difficulties. The costs of subsidizing a national food production, as had been done in the European case, would have been prohibitive besides also involving higher consumer prices as well. Commercial food imports at world market prices would have been a burden on the foreign currency reserves and constrained investment possibilities as well as import of finished goods and investment goods. Given that most regimes were eager to follow a path of industrialization, they opted for cheap food policies in order to hold wage levels down. Through special currency arrangements, the subsidized U.S. food exports made it possible for the aid recipients to establish funds in their local currencies
to pay for these American imports. These funds were at the disposal of the U.S. who could then be used them to implement American strategic and military objectives in these societies.

Consequently, the limitations of American wheat exports to Europe were partly offset by a surge of exports to countries in Asia, Africa and Latin America. As practically non-existent importers of wheat, these countries’ position rose from absorbing almost half of the world imports in 1971 to their peak in 1978, when their purchases accounted for about 78 percent of U.S. wheat exports. (Friedmann 1990:29) The consequences for the internal societal development of the peripheral formations were that the domestic producers of cereals could not compete with the imported wheat. These societies experienced a demographic migration from rural areas to urban centres as many lost whatever means of subsistence encompassed in the agrarian economy. Seen in this manner, the wheat import contributed to putting a large segment of the population in the twilight zone of urban dwellers in the social categories of working class or lumpenproletariat in the city slums. Implicitly, U.S. food aid thus became a vehicle of proletarianization. (Friedmann 1990:21)

The agricultural sector in many cases came to be characterized by rural lopsided underdevelopment and dependence on food imports while being transformed to export orientation and specialization for world market. This took place in conjunction with the development of large agribusiness⁴ corporations in the developed capitalist world, first and foremost in the United States. Thus parallel to the American state’s domestic agricultural policies and the establishment of an international food regime, the evolution of the private U.S. agro-sector on the world scene contributed to the transformation of the international trading regime. Soon after World War II, the organization of food production along lines similar to the industrial sector was accompanied by the modernization of agriculture and the introduction of scientific externalities. It was especially since the mid-1960s that a new relationship between agribusiness of the advanced countries and the agrarian sectors of Third World societies took shape. The reliance of modern agriculture upon research and development of various inputs such as herbicides, fungicides, insecticides and synthetic fertilizers gave the transnationals a comparative advantage because of their petrochemical divisions.

---

⁴ The concept originated in the 1950s in the United States and is accredited to Ray Goldberg (a professor of business and agriculture at the Harvard Business School) who is considered to be the real father of “agribusiness.” Together with John H. Davis the term was used to analyze the U.S. integrated food system. (Goldberg and Davis 1957)
From food overproduction to scarcity
Until the 1960s and 1970s, the diffusion of the new inputs and methods of cultivation was principally carried out in the advanced countries. However, with the saturation of these markets, the agro-transnationals looked for markets in Third World countries. Coincidentally with this a neo-Malthusian discourse re-emerged in the attempt to frame the problem of underdevelopment. Another factor influencing the general mood was the serious crop failures in 1972-73, when world food production actually fell for the first time in many years. In addition, the grain purchases by the Soviet Union transformed the world market from one of over-abundance to that of scarcity. The spectacles of famine in Ethiopia, the African Sahel and Bangladesh morphed the “food crisis” into a “population bomb” concern. The explanation that over-population was the cause of hunger and malnutrition came to dominate within political institutions such as the U.S. and other governments in the advanced capitalist nations, international financial institutions such as the World Bank, private foundations such as the Rockefeller Foundation, and last but not least the multinational corporations. (Burbach and Flynn 1980: 11) A two-pronged strategy was promoted for dealing with the food scarcity problem: 1) a worldwide campaign to control population growth and 2) the modernization of the pre-modern agricultural sectors of Third World nations “in the mold of the capitalist world’s most efficient and productive system: namely, U.S. agribusiness.” (Burbach and Flynn 1980: 12)

Related to this it must not be forgotten that there are two striking features in the present food crisis. 1) A rapidly increasing number of people who are chronically hungry and malnourished and 2) a continued rising dependence on food imports (Platteau 1990: 279). Where the first is concerned with food security the second is related to food self-sufficiency. The centrality of food is not only illuminated by the fact that more than 2 billion people are directly employed in food and agricultural production but also by emphasizing that in 2009 more than one billion people, the hungry and undernourished, are left to the mercy of markets and donors. In this way, proximate variables like war, drought, flooding, late rains, crop failures related to global warming and climate change do occasionally affect and trigger hunger or famine but “these are only effective as triggers in specific ‘spaces of vulnerability’ …. That has emerged consequent upon historical created processes and ideologies which dictate access to power, in its many manifestations, at the international, national and local levels.” (Young 1997: 4)

Most Third World governments, eager to modernize their agriculture, also encouraged and financed the use of imported fertilizers, pesticides and hybrid seeds, thereby creating a dependence on agribusiness transnationals. Another factor influencing technological diffusion in the agrarian sector of Third World
nations was the growth of contract farming which involved the agreement of large and middle-sized farmers to conditions set by large food-processing corporations based in the core nations. A further form of incursion has been the relation of international fast food restaurant chains to cattle ranchers making them produce beef according to their instructions. The export of beef is based on a land intensive form of production which withdraws good agricultural lands from the available domestic supply. As James M. Cypher and James L. Dietz put it in their analysis of the activities of agribusiness in Third World nations, “such farming operations can contribute to deforestation, land degradation, and environmental pollution, ranging from soil erosion to global warming.” (Cypher and Dietz 2004: 356)

Last but not least the specialization of some agrarian exporting economies in catering to the high income consumption markets of the countries of the Northern Hemisphere with fresh foods was made possible by the revolution in the transport industry.

The modernization of the means of transport, including cooling systems, which are energy intensive (air shipment) makes it possible to find year-round tropical products and traditional luxury fruits in the supermarkets of advanced industrialized countries. The concept “strawberry imperialism” describes the fact that seasonal “exotic” fruit or flowers can be flown long distances to markets in North America, Europe and Japan. This implies that long and sophisticated supply chains concentrated in a few powerful transnational food manufacturers control production and marketing on a global scale. Concentration of power over the food system and contractual relationships “turns the farmer into a contractor, providing the labour and often some capital, but never owning the product as it moves through the supply chain.” (Lang 2004: 26) Another consequence of the industrialization and monopolization of food production and long supply chains is that this agricultural pattern creates enormous amounts of toxic waste which chokes wetlands, rivers and oceans and leads to the destruction of the world’s soils and forests (Hossay 2006: 144-45) while giving rise to the environmental problem of what has been called ‘food miles’.  

5 The term was coined by Ernest Feder in an analysis of the dependency of Mexican agriculture on the United States. (Feder 1977)

6 As discussed by McMichael (2009: 139) who points to our ability to continue to transport and suggests that a coherent political economy and political ecology perspective is necessary in order to understand the dimensions of the current food crisis.
Concluding remarks

Food production has become an important component of the world economy. Besides accounting for more than 10 percent of international commerce, agriculture has a significant multiplying effect on manufacturing industries, petro-chemical industry and transport. Food being a life supporting necessity, treating it as a commodity in agricultural global trade cannot but have socio-economic and political consequences for both the producers and the consumers. This applies especially to the half of humankind making up the three billion Third World peasants. The “great transformation” of agrarian societies of the periphery has been dramatic and is still an ongoing process. As Richard J. Barnet and John Cavanagh writing on this problem put it:

In the warm, poor regions where the majority of the world’s population lives, most of the arable land has been used for thousands of years for subsistence farming. But as the forces of globalization close in, acreage once used by people to raise food for themselves and their families has become too valuable to remain outside the money economy. (Barnet and Cavanagh 1994: 210)

The process behind the dispossession and uprooting of these farmers is a dark chapter of colonialism and contemporary capitalism is outside the purview of modernization theory or neoliberalism that instead focus on free trade as the path to development. While world public opinion is at times made aware of acute short-term crises like famines, long-term structural food deficiency is not given the same attention as it would bring awareness of the malfunctioning of the world economy. The inclusion of what Franz Fanon called “The Wretched of the Earth” in the world capitalist system is a process which in the best of cases would demand no less than a herculean socio-economic and political mutation. The reason for this assumption is related to the fact that the modus operandi of the system is welded to the specific modality behind the creation and division of the global economic surplus. Under “real existing capitalism” the dilemma is constantly produced and reproduced. From a perspective based on international political economy, food insecurity for a substantial part of the population of the world and the overproduction of foodstuffs are in fact component parts of the capital formation and accumulation on a world scale. Consequently, lack of production is rarely the principal reason for hunger but rather a function of institutional, organizational, and a blind faith in the market. In the United States for example, regardless of agricultural overproduction, 35 million people according to the U.S. Department of Agriculture lived in food-insecure households in 2006. In poor countries, large stocks of wasted and misallocated food can also be found in the midst of widespread and persistent hunger as has been reported in the case Indian society. (Magdoff 2008: 1-2) It also has to be taken into consideration that a lot of hypocrisy exists in the current debate. For
instance, “as on every other day, on September 11, 2001, when terrorists murdered 2,973 people in the United States, almost twelve times that number, an estimated 35,000, were killed by hunger around the world.” (Vernon 2007:1)

The new agrarian question facing contemporary capitalism revolves around the consequences of the “coexistence” of highly productive agriculture and the survival and reproduction of chronic hunger. Based on the interests of the most productive countries who have modernized agricultural sectors, international financial institutions and the World Trade Organization have endeavoured to have the member countries submit to the rules of competition in an open and deregulated global market. As Martin Khor points out the countries were required to dismantle protective measures against external exports “… the longer term reason for the decline of agriculture in many developing countries, in most cases (is) due to the structural adjustment policies of the IMF and the World Bank.” (Khor 1968: 1) The upshot of the general principle of competition for agricultural produces and foodstuffs in essence means acceptance of the elimination of billions of non-competitive producers in the periphery within a record historical limited time. The conventional argument of modernization theory has always been that the model of economic and social development of Europe represented the example to be emulated by developing countries. While the genesis and development of industrial capitalism could absorb the population shift to urban centres, this process spread over nearly two centuries. It is questionable whether modern technologies which are not labour intensive could, in the best of conditions, have a similar effect. In order to be competitive on the world market, newly industrializing countries would need to import modern technologies. Another factor which is not open to Third World nations as was the case for Europe is the massive emigration of its surplus population to the Americas and elsewhere in the colonial empires. Samir Amin (2003) who draws our attention to divergence of situations between historical capitalism in the European mould and the prevailing conditions in most of the Third World makes the point that the dispossessed farmers are condemned to become dwellers in the slums of urban centres.

The way out of the conundrum could perhaps be found in the application of a variant of a delinking strategy at the national, regional and global levels. Consequently at the national level macro policies of protecting peasant food production from the unequal competition of modernized farmers and agribusiness corporations would contribute to establish an affordable food price level that is disconnected from world market prices.

7 This section is inspired and borrows from the reflections by Samir Amin (2003: 4-5).
Similarly, another concern should be giving priority to a socially-balanced expansion of the internal market instead of prioritizing export-oriented production. Attention would thus be to nurture and ensure national food security and thus achieving an indispensable margin of autonomy and negotiating capacity. To be effective in the present world economy, international agreements and policies at regional and global levels could help move away from the doctrinaire principles of the WTO on free trade and replacing them with applicable and specific solutions for different areas, specific issues and concrete historical and social conditions.

The above reflections might seem less utopian than the conventional thinking on the world food crisis would indicate. A continuation of “business as usual” is bound to reach its limit. According Martin Khor, the global rise of food prices and shortages in some countries in the past few years is changing assumptions and expectations:

Because of this new situation, the paradigm of “food security” has shifted back to the traditional concept of greater self-sufficiency, instead of prioritizing the option of relying on cheaper imports. (Khor 2008: 1)

Although emergencies might require external food supplies to affected areas, Khor maintains that a long-term solution “must include increased local food production in developing countries. This raises the question of what constitute the barriers to local food production and how to remove these barriers.” (Khor 2008: 1) In this connection, it would be naïve to believe that the task of providing for an expanding population can automatically be implemented by non-capitalist societies. Amiya Kumar Bagchi reminds us that antisystemic regimes following liberation struggles or revolutions often experienced famines. These societies inherited low levels of productivity putting them at risk between starvation and survival. Because of the antagonism of the leading capitalist nations they were reluctant to reveal their weaknesses to the world assuming that such revelations would be used against them. Furthermore, local bureaucratic mentality also played a role in famine politics. Referring to Devereux (2000) and Drèze and Sen (1990a), (1990b), (1991) Bagchi writes that during the famines in the Ukraine in the Soviet Union in the 1930s and in the case of the Chinese famine of 1958-1961, local party officials had been reluctant to inform the higher leadership that agricultural production was not going according to the centrally planned targets. (Bagchi 2005: 315)

With the reintegration of most antisystemic countries in the international division of labour, there is a certain irony in the fact that many of what are called “emerging markets” such as the BRIC countries (Brazil, Russia, India, China) have in the past followed strategies of late development by implementing
self-reliance or import-substitution in their relationship to the capitalist world market. Now their re-emergence in the structure of international trade has contributed to the rise of commodity prices including food!

When considering the scourge of hunger holistically, one conclusion is inescapable. Perhaps the persistence or return of/to history of the agrarian question may contain the seeds of the coming clash of civilization within global capitalism. On the one side, the non-sustainability of modern agriculture in terms of ecological costs and input requirements, not least water resource, is becoming apparent. Food security is not linked only to the environment and water but also health, nutrition and energy like fossil fuels nor is the consumption pattern created by the efficient food industry to be ignored: malnutrition and obesity are affecting large sections of the populations of the world and increasing the urgency of resolving the problems of social justice, inequalities and the growing gap between North and South. On the other side, we see the emergence of new socio-economic and political contradictions in agrarian societies. This confrontation concerns the fate of half of humankind, i.e. three billion people and involves food sovereignty movements among farmers, organic farmers, food riots and new social resistance against un-sustainable and un-regulated neo-liberalist restructuring, GM food and contract-based TNC food manufacturing. The choice at hand here is political: either continuation of the process of capital accumulation which includes exclusion, marginalization, (lumpen) proletarization of the peasantry, commodification of food production or a rupture with the logic of capitalism which would entail inclusion, self-reliance, delinking and decommodification of life-supporting food production. Each alternative contains a class struggle perspective that is certain to shape the future configuration of “real existing capitalism.”
References
Feder, Ernest 1977, Strawberry imperialism: an enquiry into the mechanisms of dependency in Mexican agriculture, (Amsterdam: Institute of Social Studies)
Goldberg, Ray A. and John A. Davis 1957, A Concept of Agribusiness, (Boston : Division of Research, Graduate School of Business Administration, Harvard University)
Gramsci, Antonio 1971, Selections from the Prison Notebooks, (London: Lawrence and Wishart)
Khor, Martin 2008, “Food Crisis, Climate Change and the Importance of Sustainable Agriculture” --Presentation at FAO Food Security Summit, Rome 4 June 2008— (Penang, Malaysia: Third World Network)
Rueschemeyer, Dietrich 1986, Power and the International Division of Labour, Palo Alto: Standford University Press
DEVELOPMENT RESEARCH SERIES
WORKING PAPERS:

No. 5: Georg Sørensen: Notes on Materialism and Boredom - Western Development Ideals, 12 pp, 1984.
No. 20: Georg Sørensen: International and External Intertwined: 5 Obstacles to Development in India. 20 pp, 1986.
No. 32: Henrik A. Nielsen: Local Community Development Around the Bay of Bengal: Context, Crises and Perspectives. 27 pp, 1994.
No. 33: Johannes Dragsbaek Schmidt: Southeast Asian State Responses to a Regionalized World Economy. 21 pp, 1994.


No. 51: Li Xing: The Dynamics of East Asian Intra-Regional Economic Relations. 22 pp, 1995.


No. 54: Jacques Hersh & Johannes Dragsbaek Schmidt: Dirigisme or Laissez-Faire? - Catching-up Strategies in the Global System After the Demise of Soviet-Type Command Economies. 22 pp, 1996.


No. 56: David Harvey: Globalization in Question. 22 pp, 1997.


No. 89: Mammo Muchie: Imagining Ethiopia Beyond War and Poverty: The two-year war between two strategic allies in the Horn of Africa. 34 pp, 2000.
No. 91: Timothy M. Shaw: Development Studies at the Start of the New Millennium in South and North. 18 pp, 2000.
No. 94: Andre Gunder Frank: ReOrient Histography and Social Theory. 41 pp, 2000