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Peasant-driven agricultural growth and food sovereignty

Jan Douwe van der Ploeg

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Abstract

The concept of food sovereignty represents an important theoretical and practical challenge. The political economy of agriculture can only take this gauntlet by developing a better understanding of the processes of agricultural growth. Without such an understanding it is difficult to address the issue of food sovereignty. Developing such an understanding involves a (re-) combination of the political economy of agriculture with the Chayanovian approach. This paper gives several explanations (all individually valid but stronger in combination) as to why peasant agriculture results in sturdy and sustainable growth – it also identifies the factors that undermine this capacity. The paper also argues that peasant agriculture is far from being a remnant of the past. The different peasantries of the world are shaped and reproduced by today's capital (and more specifically by current food empires), and equally, they help to shape and contribute to the further unfolding of forms of capital related to food and agriculture. It is important to understand this two-way interaction between capital and peasant agriculture as this helps to ground the concept of food sovereignty. This article is underpinned by three assumptions. First, the debate about enlarging total agricultural production is very real. Although this debate is currently used to assess the hegemony of food empires and imperial science, we cannot throw away the baby with the bathwater. Secondly, the capacity to produce enough (at different levels, distinguishing different needs, etc.) needs to be an integral part of food sovereignty discourse. Thirdly, I am convinced that peasant agriculture has the best credentials for meeting food sovereignty and has the capacity to produce (more than) sufficient good food in a way that can satisfy the (many) objectives of producers themselves as well as for society at large.

Introduction: Some obstacles to understanding the concept of food sovereignty

The political economy of agriculture and food, as it stands today, critically lacks a set of concepts (a sub theory) that helps to study, analyze and explain the processes of agricultural growth. In this respect there indeed is an "intellectual deficit" (Bernstein, 2010:300). I think this deficit resides in a series of conceptual handicaps that together have far-reaching consequences that cannot be remedied by simply resetting some of "the limits of inherited conceptions" (ibid). I will shortly introduce some of these handicaps. These relate to the *type* and *origins* of agricultural growth, as well as the *level* on which it is realized.

Firstly, we have to take into account that agriculture needs to be understood as co-production, i.e. the ongoing interaction, intertwinement and mutual transformation of *man* and *living*

nature. Consequently, concepts such as growth, development, productivity and increases in productivity cannot be reduced, without a clear specification, to notions that just reflect one side of the complex mechanics of agriculture. When talking about e.g. productivity it is crucial to specify whether one is referring to labour productivity, the productivity of land (or, more generally, the productivity of the natural resources implied in the agricultural process of production) or the productivity of *all* these resources taken together (i.e. total factor productivity). This is important, especially since these different types of productivity are not necessarily aligned with each other. Increases in one type might very well be detrimental for another[1]. The same applies to growth. Agricultural growth may result in an increase of the total amount of food and other agricultural products being produced (this notably occurs when the agricultural frontier moves forward and/or when physical yields are improved, i.e. when the productivity of land is increased). But agricultural growth might equally go together with a stagnation or even a reduction of the total amount being produced (this is the case when growth materializes mainly or only as increases in labour productivity and associated increases in profits). It goes without saying that the *trajectory* that agricultural growth (or the development of productive forces) takes is crucial for any debate about food sovereignty. This point highlights a major weakness of agrarian political economy. As argued by Bernstein (2010:302), attention is generally strongly focussed[2] on "increases in the productivity of *labour*" (italics added) and "economies of scale", and assumes that the latter are the only possible vehicle for attaining the former. Thus, when the debates on food sovereignty (and the need to strongly increase the total amount of food being produced on the global level)[3] raise the issue of the specific agricultural development trajectory (i.e. the form or type of agricultural growth), the political economy of agriculture emerges as being ill-equipped for addressing this new and major issue.

Secondly, political economy basically perceives agricultural growth (in whatever form) as being a *derivate* of processes of technological development that originate in science and which are transmitted towards the agricultural sector through extension and/or the activities of agro-industries. Thus, the origins of growth are considered to be exogenous to the agricultural sector: they reside elsewhere. By the same token, factors *internal* to the agricultural sector are seen as impeding growth, or even blocking it completely. Examples of such thinking include

[1] Increases in labour productivity may run counter to increases in land productivity (although this is not necessarily the case). Equally, increases in land productivity may translate into increased or decreased labour productivity. The specific combinations have varied historically and geographically (Hayami and Ruttan, 1985) and their effects depend strongly on prevailing politico-economic conditions. Important examples are discussed in Geertz, 1963.
[2] Excluding some worthy recent contributions, especially from political ecology (e.g. Jansen, 1998; Feuer, 2012)
[3] This need raises the question of *what* is to be done. A question that does not preclude us asking equally important questions such as *where*, and *how* and by *whom* this is to be done. In reality the 'what' question presumes the other questions. One characteristic of the hegemonic discourse is that it does not pay sufficient attention to the questions of how, where and by whom. The hegemonic discourse simply translates the need to increase food production into the need for more capital investment.

assumptions about the 'backwardness of peasants', the nature of intra-sectoral relations (e.g. the *latifundio-minifundio* complex), the relations between a large-scale agro-export sector and a subsistence sector that contribute to 'structural involution' (Geertz, 1963), the urban bias that shapes agrarian policies (Lipton, 1977) and the 'law of diminishing returns'. Such views diminish the perceived role of farmers to that of *adopting* technological progress developed elsewhere and embodied in specific commodities being supplied by up-stream agro-industries and/or in new insights and ideas propagated by rural extensionists. Their only role in this *schema* is to slow down and minimise potential for growth by being uncooperative in getting the most out of the potentials entailed in the technologies designed for them to adopt. Hence, just as we need to introduce the centrality of *land* productivity[4] into the current debate, we also have to introduce (and to theoretically substantiate) the possibility that farmers *themselves* may very well develop the 'productive forces' - as they have done throughout the ages (Mazoyer and Roudart, 2006).

A third handicap resides in the complex micro-macro relations that characterise the agricultural sector. Single units of production (located at the micro-level) might grow considerably, whilst the agricultural sector as a whole (i.e. the macro level) is stagnating or even regressing. This might occur when, for example, the expansion (or growth) of these single units occurs through the take-over of other units that have higher levels of land productivity. This may appear to be, at first sight, an irrelevant technicality. However, it is at the core of the food sovereignty issue. It is also critically related to the land grabbing issue. To clarify this point it is important to recognize that being embedded in (and subordinated to the overall logic of) capitalism does *not* imply that *all* agriculture is capitalist agriculture. Alongside capitalist agriculture (in which all resources including the labour force are commodified and which is consequently based on capital-labour relations that are located in the heart of the process of production), there is peasant agriculture (producing commodities for the downstream markets, but grounded on low levels of commoditization of the main resources) and entrepreneurial agriculture (grounded on a far-reaching commoditization of the main resources although excluding the labour force). Generally, peasant farms have lower levels of total production (for the farm as a whole) than entrepreneurial and capitalist farms (due to their location in wider society as well as to differences in their internal logic). However, when looking at *land* productivity peasant farms generally realize higher yields (e.g. production per hectare) than capitalist or entrepreneurial farms[5]. This translates into more wealth (more value added) being generated per labour object

[4] I.e. increases in the productivity of natural resources which simultaneously translate in increases in labour productivity) Following Hayami and Ruttan (1985) this trajectory is often referred to as the 'Asian model' (as opposed to the 'American model'). The trajectory of agricultural development is China, over the last 4 decades, highlight the potentials of this 'Asian model' – which is far from exhausted.

[5] For a recent contribution see Larson et al, (2012). Whether or not peasant agriculture can unfold its productive potentials depends very much, as I will argue throughout the following section, on politico-economic conditions

(per hectare, per animal, etc.) in peasant agriculture than in entrepreneurial or capitalist agriculture (also because the cost structures are different). If considerable segments of peasant agriculture are taken over by expanding entrepreneurial and/or capitalist units of production (or swallowed up by newly created units), then the expanding or newly created *units* may record a considerable growth in production, but at the level of the *agricultural sector as a whole* there might be a decline – because the high level of land productivity achieved by the peasant units is replaced by the lower levels achieved by the entrepreneurial and capitalist farms. This is precisely what has occurred in Europe over recent decades, where the reallocation of milk quotas from small and low cost peasant units towards large, entrepreneurial farms translated as total income (realized with these quota) going down with at least 21% (Ploeg, 2003:307; 2008:123). Similar shifts from peasant towards entrepreneurial agriculture are now being proposed for the Global South.

The current hegemonic discourse has a strong focus on the possibility and the need for 'small' and 'large farms' (read peasant and corporate farms) to co-exist alongside each other (e.g. IFAD, 2010). The need to strongly increase total production of food is used to argue that both 'small' and 'large' units need room to develop in order to contribute, as much as possible, to 'feeding the world'. In reality, this proposed 'co-existence' legitimizes a situation in which entrepreneurial and capitalist farms are crowding peasant farms out of the market. As a consequence the growth of total production (at the macro level) is *slowing down*. This runs diametrically counter to food sovereignty. Such contradictions can only be unveiled by radical studies if the latter are sufficiently equipped to unravel the underlying mechanisms.

The three handicaps briefly discussed here, converge into one central conclusion: the political economy of agriculture *fails to positively identify the factors located within the agricultural sector itself that induce, sustain and/or strengthen (and thus explain) the process of agricultural growth* – let alone provide any conceptual tools that might help to distinguish and explain differentiated levels of agricultural growth. This applies to both capitalist and peasant agriculture – the two realities on which the political economy of agriculture centres most of its attention. While the search for profits (increasing the return on investments) is central to capitalist agriculture, this does not result *per se* in steady and ongoing increases of total agricultural production, for this search may well involve a relentless exploitation of man and nature. It is neither clear (not *theoretically* explained) why this search for profits sometimes goes in one direction, and at other times, in a different one. The same applies to peasant agriculture: there is no capacity to theoretically explain *how*, *when*, *why*, under *what conditions* and to *which degree* peasant agriculture can materially engage in enlarging the total amount of food (and other agricultural products) being produced.

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and the nature of technologies. It is not an ontological issue and largely depends on whether or not the 'inverse relationship' applies.

This particular blind spot evidently stems from the particular time and space bounded conditions under which the political economy of agriculture was formulated and subsequently developed, just as it stems from particular strategic orientations (which in their turn were influenced by historical and geographical conditions). Limiting myself here to the pioneering work of Karl Marx it might be noted that possible relations between demography and food production basically are external to the theoretical framework he developed. It was Malthus who focussed on the problematic relationship between demographic growth and agricultural production (and the associated provision of sufficient food) and who made the badly famous prediction about absolute overpopulation. This Malthusian view was strongly criticized by Marx who rejected the very notion of absolute overpopulation. He argued that capitalist accumulation produces, instead, a *relative* overpopulation (and does so at every historical period, albeit through highly differentiated combinations of inclusion and exclusion). This relative overpopulation might suffer hunger, there may even be famines, but all this can never be explained by referring to a failing agricultural production. Theoretically, the lack or even absence of agricultural growth is impossible, since capitalism will always develop the necessary productive forces. That was its historical mission. And *if* shortages, hunger, famines, etc., do occur (i.e. if parts of the population cannot feed themselves adequately), this is due to the double nature of the accumulation of capital. It includes parts of the labour force, just as it simultaneously excludes other parts[6].

Five reasons that explain the productive superiority of peasant agriculture – and how it is frustrated

[1] Growth is intrinsic to peasant agriculture (but it might get blocked)

Peasant farms tend to enlarge production continuously and persistently - and this occurs basically through yield increases. The search for emancipation, for ongoing improvement in their own livelihood and that of the next generation, translates into, and partly occurs through, these continuous and persistent increases in total production. Peasant agriculture is not only a system for value creation, it is also a system that tends to permanently enlarge the amount of created value.

[6] Debates on relative overpopulation were quite intense in the 1970s. This was due to the claim that 'development' (and more particularly: investment in urban industries) could end widespread marginalization. The work of José Nun (1969) was especially relevant. These debates were not external to agriculture, the issue of relative overpopulation was highly relevant to questions about land reforms and the required man-land ratio (and the issue of the social origins of material growth). Ironically, state-led land reforms strongly contributed to the production (i.e. the increase) of relative overpopulation whilst they simultaneously induced negative growth rates.

Peasant farms develop production because more production allows them to better meet their emancipatory aspirations[7]. The mechanisms on which peasant-driven agricultural growth is grounded basically come down to a continual upgrading of the natural and social resources used for agricultural production and a constant improvement in the 'technical efficiency' of the process of production. The latter means that the ratio between resources used and production realized increases: i.e. the input-output ratio is improved. Craftsmanship, peasant knowledge and the quality of the resources are decisive factors here.

Although, under specific conditions, peasants may acquire the property of some of their neighbours, systematic take-overs of the land and other resources are not part of peasant communities and they are basically absent in processes of peasant driven agricultural growth. This explains why growth at the level of the single peasant farms positively translates into agricultural growth at the macro level, i.e. into an increased supply of food (and other agricultural products)[8].

In order to be able to develop production at farm level peasant families need the means and the 'space' (Halamska, 2004) to do so. If the means and space are available a continual (if not persistent) agricultural growth will be the outcome. However, peasant-driven agricultural growth might also slow down, get blocked or even be reversed. This will usually be due to external reasons which, on the whole, have been very well documented and analyzed in agrarian political economy. But regression might be also be triggered by internal reasons, i.e. highly authoritarian relations between fathers and sons (as beautifully exemplified in the novel of Giovanni Ledda about *Padre Padrone* (1975)) which may provoke the desertion of young men. Or oppressive gender relations (often going together with religious fundamentalism) that cause mothers to advice their daughters 'to marry whomever as long as it is not a peasant' – which have led to considerable social desertification in many rural parts of the Mediterranean area.

Thus we have three sets of elements that respectively regard the *translation* of emancipatory aspirations into increased levels of production, the *mechanisms* that materially allow for and sustain such increases and the required *space* (and means, etc.) to effectively do so. I will briefly illustrate here each of these sets. If developed further and integrated properly I think that they

[7] Improved livelihood, improved prospects to face difficult circumstances whenever these emerge, more opportunities for the children, more cattle and especially 'beautifully bred' animals that will enlarge the status of their owner, abundant amounts of high quality seed to exchange with others, etc.

[8] As argued before, growth in entrepreneurial agriculture occurs as much through take-overs as through technological progress. This means that the individual agricultural enterprise may expand considerably, but that at the level of the sector as a whole growth can be zero (or even negative). The aim of capitalist farming is to achieve increases in the rate of return, which might even translate into extensification. Evidently, the possibilities for take-overs depend very much on the economic and institutional environment in which farms are located. The same applies for profit-maximization and the way it relates to total output at farm level.

can constitute the basis of the much required theory needed to explain agricultural growth (especially the peasant driven type). Such a theory would also contribute to further strengthen the food sovereignty discourse.

The best possible way to theorize the *translation* of emancipatory aspirations into increases in production (i.e. to understand resistance and cultural repertoire as drivers of agricultural production) is to seriously re-examine the work of A.V. Chayanov and to develop it further in order to meet current circumstances. The nucleus of this work is illustrated in figure 1. The uninterrupted lines represent '*utility*', i.e. the possibility to satisfy needs and aspirations (this utility diminishes per unit of product as the total level of production grows) and '*drudgery*', i.e. the energy and hardship needed to realize a particular level of production (this drudgery increases with the further growth of total production). At point E1 the two lines are in equilibrium. This point determines the level of production P1. Now, if utility is enlarged beyond the immediate consumption needs of the family (for example to include the creation of a more productive farm), a new utility curve is defined (the dotted line), leading to the establishment of a new equilibrium (E2) and, consequently, a new level of production (P2). This allows the family farm to move beyond satisfying its immediate consumption needs, and to engage, for instance, in capital formation (i.e. creating the ingredients of the more productive farm). Thus, the aspiration for emancipation translates into, and occurs through, enlarged production and material improvements to the resource base. This might also lead to a redefinition of drudgery: when knowing that current production also opens the possibility of working, in the near future, according to an improved balance, then the drudgery will be felt as less burdening and troublesome. Thus a new 'drudgery line' emerges which defines a new equilibrium and corresponding level of production. It is also possible that utility and drudgery might both be perceived differently, creating the possibility of E3 and P3[9].

In everyday life, complexities such as the ones shown in Figure 1 are governed through cultural repertoires (consisting of values, norms, shared beliefs and experiences, collective memory, rules of thumb, etc.) that specify recommended responses to different situations. Put differently: the active assessment and re-assessments of 'Chayanovian' balances involve judgements based in the *moral economy* (Scott, 1976). These are decisive. The *moral economy* is not external to the 'economic machine': it is essential in making the 'machine' perform.

[9] This is just one balance taken out of a far wider series of balances (both internal and external to the peasant farm) that are discussed in Ploeg (2013).

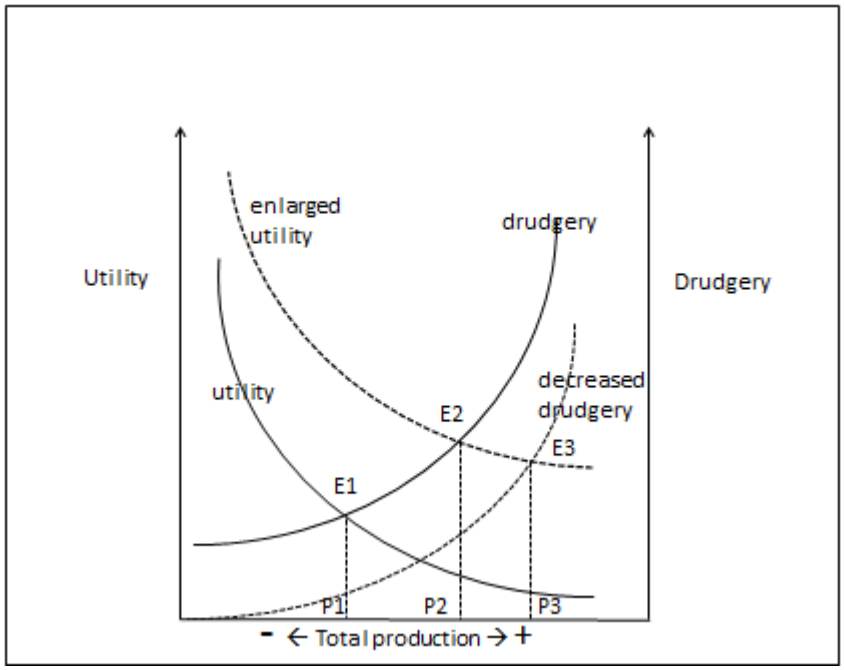


Figure 1: the balance of drudgery and utility (derived from Ploeg, 2013)

From an analytical point of view, the *mechanisms* used to enlarge production at the farm level, and which contribute to increased yields[10] (i.e. the production per unit of land, per animal, etc.) come down to the following:

1) The application of more labour, more inputs and improved tools[11] per object of labour (per unit of land, per animal, per fruit tree, etc.).
2) The fine-tuning of the agricultural process of production (i.e. bringing different growth factors in line). This involves experience, constant observation and interpretation, local knowledge, etc.
3) The systematic improvement of resources (especially the objects of labour): augmenting soil fertility, building irrigation works and drainage systems, breeding better cows, selecting plants to obtain higher yielding varieties, making better manure, building new and better buildings, obtaining more knowledge, joining existing or creating new networks, etc.
4) Novelty production, i.e. searching for and developing new insights, new practices, new seeds, new machinery, etc. Here goal oriented experimentation, an open eye for

[10] For Chayanov (1988:144) the increase of yields was part of the "development of productive forces"; he perceived yield increases as "a progressive phenomenon".
[11] The latter two, inputs and tools, are often summarized and presented as (part of) 'capital'. This is acceptable as long as one recognizes that we are not talking here about capital in the Marxist sense.

deviations and an overall ordering of the farm as a 'patchwork', allowing for unexpected interactions and surprises, are important prerequisites.

5) A specific calculus that moves peasant agriculture to yield levels that are higher than the ones that result from, and are compatible with, the search for the highest rate of return that characterizes entrepreneurial and, especially, capitalist agriculture.

Together these mechanisms result in and sustain continual increases in *land* productivity. These mechanisms are central (although not exclusive) to peasant-driven agricultural growth. In other trajectories (e.g. that of entrepreneurial agriculture), other mechanisms (such as the integral application of exogenous technological models - exemplified by the Green Revolution *package*) are central, whilst the amount of labour per object of labour is typically reduced and the 'chaos' needed for novelty production is avoided. Technologies that strongly increase labour productivity and which standardize as much as possible the labour process are at the heart of the dynamics of capitalist agriculture. Thus *different* technologies are developed and used (as convincingly discussed by Bray, 1986) and the productive forces (land, labour, knowledge, animals, machineries) implied in each constellation are moulded in concrete phenomena that are *distinctively different* as well (Ploeg, 2008).

In order to *translate* the longing for an improved life through the indicated *mechanisms* into increased production (that render more value added that will help to satisfy the enlarged needs), peasants need the *means* and *space* to do so. It is here that the political economy of agriculture, as it stands today, is important. Space (the concept was suggested by Halamska, 2004) refers to the politico-economic space needed to successfully apply the mechanisms indicated above and translate the results back into an effective improvement of one's own livelihood. More specifically, we can conceptualize this space as being composed by the reigning social relations of (and in) production[12]. To put it bluntly, if nearly all the extra value that results from yield increases is taxed or appropriated by others, there is little sense in strongly developing production (to engage in e.g. the *drudgery* of improving soil fertility). If the flow of water is diverted by landlords or large neighbouring corporate farms, the search for improved plant varieties becomes pointless. The same applies to the *means*. If prices are so low that no savings can be generated (and banks are unwilling to provide credit on acceptable terms) than the means to acquire diesel, or a tractor, or to have the old tractor repaired, are lacking. A lack of space and scarcity of means often go together: an increased volatility in markets (and insecurity about demand) is likely to translate into negative prospects that do not justify any investment in the peasant farm. Etc. etc.

[12] Here there is an interesting link with the earlier work of Chayanov. The development of productive forces, including substantial yield increases, often will require new, additional space. In this respect Chayanov *de facto* argued that increases in yields require "new relations of production"(1988:142)

Taking the different arguments and considerations together it can be concluded that peasant agriculture contributes more (just as it potentially can contribute far more in the decades to come) to total agricultural growth and, consequently, to the provision of food, than other mode of agricultural production. However, this only applies if and when sufficient space and means are available. If the required space and means are lacking, this potential for growth and increased supplies of food becomes blocked.

The possible length of this paper precludes any complete and critical discussion of all the details of this claim but one noteworthy example is China, where the peasantry has been re-establishing itself since the beginning of the 1980s and has achieved impressive agricultural growth (Gulati and Fan, 2007). This case contrasts remarkably with that of Africa: during this period China has witnessed an impressive reduction of poverty, and agricultural production has continuously grown; by contrast sub-Sahara Africa has seen a stagnation of agricultural production and an absolute increase of people living on or below the 1 dollar a day poverty level (see Li Xiaojun *et al*., 2012). It also shows that the practice of peasant farming in China defies the models used in the West (be it the neo-classical or the ones of the radical left) to explain the presumed backwardness of peasant agriculture. Previously the question of "Who will feed China" (Brown, 1995) was widely discussed in the West. The answer is now abundantly clear. So far it has been the *nong min*, the peasants from China and they are doing a remarkably good job of it[13] (Ploeg, Ye, Wu and Wang, submitted). To understand and explain this impressive result, we have to build a better understanding of peasant-driven agriculture into our theories[14].

[2] Peasant agriculture embodies resilience (although in the end it may be broken)

Peasant farms do not only go where entrepreneurial and capitalist farms never can or will go[15] – peasant farms will also face difficulties and adverse conditions and continue to produce when the others have already long before capitulated[16]. In short: Peasant farms are far more resilient

[13] Although it has to be admitted that agricultural growth in China is partly built on decay and includes a high level of environmental damage,

[14] The argument that peasant agriculture entails considerable developmental potential is also supported by the Brazilian and India experiences (Schneider and Niederle, 2010; Cunningham, 2009).Other important cases are cotton in West Africa (Tschirley *et al.*, 2010), rice in Viet Nam (Jaffee *et al*., 2012 and specific groups of Africa's rural poor (Hazell, 2004; Fraser, 2009).

[15] As for example in the difficult *baldios* in the North of Portugal, the tropical rice polders in Western Africa (locally called *bolanhas*) or, more generally, the hilly and mountainous pasture lands in considerable parts of the world. Not only is too costly (too labour intensive) for capitalist and entrepreneurial farms to operate here, they also cannot exert sufficient control (let alone control-at-a-distance). In a way 'The art of not being governed' (Scott, 2009) perfectly describes this incompatibility of control and peasant farming in complex and difficult eco-systems.

[16] In Europe we witnessed this during the agricultural crisis of the 1880s and the 1930s (Bieleman, 2010).

and more shockproof than capitalist and/or entrepreneurial farms. This makes them a far better vehicle for guaranteeing food sovereignty than other modes of agricultural production.

The resilience of peasant farming is due to the way it is structurally rooted in wider society. Peasant farms are essentially grounded on natural and social resources that are controlled by the peasant unit itself. They are relatively autonomous from the main upstream markets (Ploeg, 2010) – a feature that is currently being strongly promoted by agroecological and peasant movements. This structural feature allows peasant farms to produce for the markets, without being completely dependent on the markets. In terms of food sovereignty this is a strategic feature. By contrast, entrepreneurial and capitalist farms are to a large extent, or even completely, grounded on commodities. Consequently, they are run as a financial operation. They are basically about getting money in order to acquire the needed resources which are transformed into products to be sold. Entrepreneurial and capitalist farming are essentially about *converting money into more money*. This is in sharp contrast to peasant farms which use the available, and self-owned and controlled, natural and social *resources* to obtain money. If the benefits of operating an entrepreneurial or capitalist farm turn out to be lower than the costs, the farm enterprise will be deactivated – if possible[17]. By contrast in such a situation the peasant farm will resolutely continue.

Volatility is inherent to the world market for food and agricultural products, the more so as this market comes to be increasingly controlled by food empires. This volatility is generating a new set of unexpected effects.

Recently Oostindie *et al* (2013) analyzed data (that covered the 2007-2010 period) from a constant sample of 1,000 dairy farms. The data, which describes these farms, their economic structure and performance were collected by Alfa, one of the agencies responsible for elaborating farm accountancy records. During this period (in the second half of 2008 and in the first half of 2009) all these farms faced a dramatic decrease of the prices being paid for the milk (from an average level of some 35 to less than 25 Euro/100 kg. of milk). However, the impacts of this sudden shock were highly differentiated. Some farms could absorb this shock relatively easy (25% of the farms showed, in 2009, an average margin between benefits and costs of +14.55 Euro/100 kg. of milk), others faced a negative cash flow (25% had an average margin of -9.70 Euro/100 kg. of milk).

The authors identify that the group that was able to fare reasonably well through the period of low milk prices represented peasant agriculture, whilst the group that experienced negative cashflows showed the features of entrepreneurial agricultural. The first group was far more

[17] It might be possible that delivery contracts or obligations towards the banks coerce the farm to continue anyway.

multifunctional than the second: their farms did not depend on one single market but had diversified. Equally, the peasant farms were, on average, smaller than the entrepreneurial ones; they used less external inputs and invested less in new technologies (their depreciation was 5.61 Euro/100 kg of milk as opposed to 14,25 for the entrepreneurial farms) and finally, they were far less indebted (paying 2.19 Euro/100 kg milk as interest on loans versus 7.15 Euro for the entrepreneurial farms)[18]. In normal years (with good milk prices) the peasant farms realized family incomes equal to, if not higher than those of the (larger) entrepreneurial farms. In bad years (2008 and 2009) they were the only ones with a positive income but the entrepreneurial farms were confronted with a negative income. They were unable to meet their obligations with the banks (and other providers), the more so since they hardly had any reserves.

This huge problem was resolved by the banks who decided to refinance the debts and to provide additional credit to resolve the most immediate concerns. However, in 2012, volatility hit again (not due to a decrease in milk prices but as a consequence of sharp and substantial increases in the prices for feed, fodder, energy and fertilizers). In the meantime banks faced the need to recapitalize themselves (as formalized in the Basel III agreements). Consequently, it was no longer possible for them to refinance debts in 2012 and many large dairy farms had to be de-activated. They have stopped producing and are currently for sale.

The study by Oostindie *et al.* highlights an important reversal and shows a range of unexpected effects that might occur on a wider scale in the future, which could have serious consequences for food sovereignty. For a long time it has been thought that large, entrepreneurial farms were more able than smaller peasant units to compete on world markets (and this was the case so long as the regulatory schemes entailed in agrarian policies gave strong support to this segment – through, for example, price support and protection). However, in deregulated markets which are controlled by food empires and show high levels of volatility, this is no longer the case. Ironically, it is the peasant farms that are more able to face, and respond, to high levels of volatility and the associated insecurities and risks.

In relation to food sovereignty this discussion gives rise to three conclusions. First, the possibility of the sudden elimination of parts of the productive capacity (i.e. the part contained in entrepreneurial farming) is a considerable threat for food security and sovereignty. Secondly, peasant agriculture is more able to face up to and deal with high levels of price volatility. Thirdly, the proposal to extend entrepreneurial farming across large zones of the Global South

[18] "The highest liabilities-to-assets ratio was found in farms in Denmark and the Netherlands, with 56% and 36% respectively" (European Commission, 2010:4). The total debts of Dutch farmers amount to some 38 billion Euros. This is roughly 19 times as high as the sector's total yearly income. Debts are distributed in a highly unequal way – the highest levels (both absolutely and relatively) are found in the entrepreneurial pole of Dutch agriculture.

(as articulated by food empires and multilateral organizations) is ludicrous. It poses a very real threat to food sovereignty.

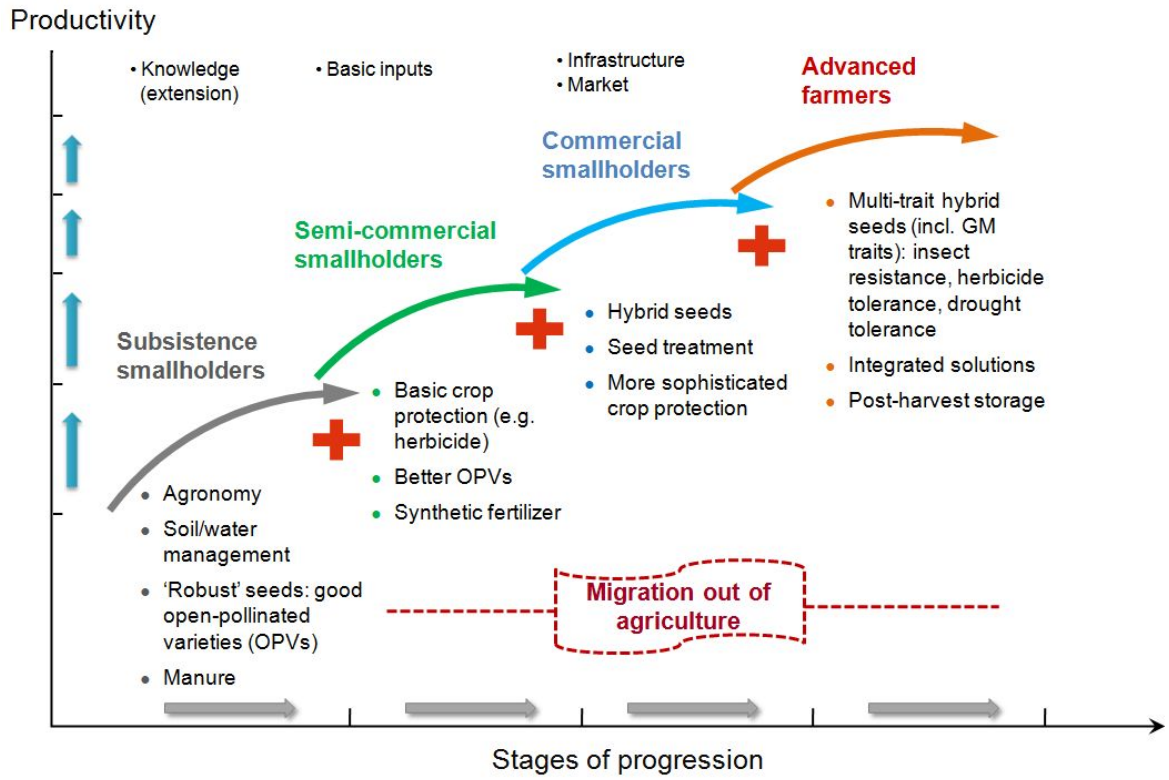
Does resilience come with a price? According to some observers the price to be paid for this resilience based on distantiation is high: "It seems hard [....] to avoid the conclusion that new peasants' 'autonomy' from markets [...] is to be achieved by relative poverty of income" (Woodhouse, 2010:418). This 'unavoidable' conclusion rests on the misinterpretation of two facts that I brought forward in The New Peasantries (2008). First: "if all resources used on the farm had to function as capital (i.e. generate at least the average level of profitability) and all labour was to be remunerated as wage labour, then nearly all Dutch farms [...] would go broke". Second, "40% of Dutch farming families derive less than the minimum income from farming" (op. cit. 448).

The reasoning of Woodhouse is based on a strange reversal. Since peasant farms in the Netherlands are indeed *distantiated* from the main upstream markets (meaning that buildings, animals, machines, etc. do *not* have to function as capital, labour is not remunerated as wage labour and no rent or lease is paid on the land) – they do *not* go broke. They function very well, provide an income that is often acceptable and they are better equipped (as discussed above) to face adverse circumstances. But they *would* go broke if they had to pay for all the factors of production and non-factor-inputs – as does a capitalist farm. Then the second observation: it is true that 40% of Dutch farmers derive less than the legal minimum wage from farming. Is this intrinsic to peasant farming? Is it the price to be paid for autonomy? Among this 40% there is a considerable sub-group that actively opts for having a small farm and to combine this with another job. Then there are entrepreneurial farmers who face very high financial burdens that almost completely 'consume' all the available income. And finally there will be many peasants who do have incomes that are too low. The point though, is that without distantiation their income would be even *lower* than it actually is. Said differently: without distantiation it would not be just 40 %, but say 80%, of Dutch farmers would have an income below the legal minimum. As said before, agrarian political economy is not always helpful for understanding peasant realities. *Peasants do not 'pay' for autonomy (and the resilience it brings), they benefit from it.*

This issue is both theoretically pertinent and of huge political importance. Institutions such as the World Bank, development NGOs, universities and the main food empires are currently developing and disseminating classification schemes that have, regardless of the many minor differences, one central point in common.. They view agricultural development as a uni-linear and selective process (see figure 2, developed by the Syngenta group, which reduces development to 'incremental stages of agricultural intensification'). This selective process favours a minority of farmers who have access to more resources than others and excludes the

majority of smallholders (see e.g. Zhou, 2010;Berdegue and Fuentealba, 2011). The future of this later group is assumed as being to have to move (or to be moved) to the cities whilst their resources are used to strengthen the minority group. The process is also selective in the sense that development for the minority group that stays on the land, consists in taking over the package sold to them by the different food empires. This makes them into 'advanced farmers'.

Figure 2: The imperial view of agricultural development



Source: Zhou, 2010:4

The problem with classification schemes like these is that they do not necessarily have to be 'true' in order to be applied and implemented. Such models currently structure the agrarian policies of nation states, the credit policies of banks, the pricing policies of agro-industries and the mechanics of bargaining by farmers' unions. When systematically applied (and/or imposed) they can do considerable damage (Ploeg, 2003).

[3] Peasant farming continuously reinvents itself, especially in periods of crisis (but rebuilding it might be too burdensome)

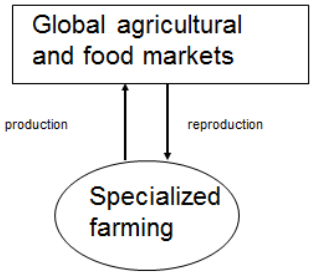
Apart from resisting difficult periods (due to their resilience), peasant farms also have the capacity to reinvent and materially rebuild farming in a way that helps to immunize themselves against the circumstances and relations induced during and by a crisis. Peasants can carve,

together with others, pathways that help them to survive and go beyond a crisis that otherwise would destroy the agricultural sector. They do so by materially rebuilding the practice of farming and by changing the patterns in which this practice is embedded.

A well-known example of this phenomenon is the agricultural crisis of the 1880s, when massive imports from cheap grain from Canada and, especially, the USA, provoked a deep crisis in European agriculture. This was met, notably in the north-west of Europe by a large scale switch from growing grains towards new forms of cattle, pig and chicken raising that were *based* on the cheap imports (Bieleman, 2010). Thus, an initial threat, cheap imports, was reversed into a benefit. Another important response was the development of farmers' cooperatives. These could, of course, not change the markets, but they definitely changed the *relations* between farming and the markets[19]. The agricultural crisis of the 1930s eventually resulted in another re-patterning of the set of relations in which farming was embedded. The first forms of national agricultural policies were agreed upon and progressively implemented. These were the forerunners of what would become the European Union's Common Agricultural Policy (CAP), although the process of getting there was far from uninterrupted.

As a consequence of the current agricultural crisis (that is partly induced by the general economic and financial crisis and partly caused by internal mechanisms) farms can no longer reproduce themselves solely through the markets. This applies especially to the large, specialized farms producing for the main commodity markets (see also figure 3). They produce *for* the market but reproduction *through* the market is becoming increasingly difficult, if not impossible. Prices are, on the whole, too low, whilst costs are too high. Their main outlets (both internal and export markets) have suffered considerable contractions; volatility means that prospects are insecure and investments are risky if not downright impossible, especially since banks have reduced the amount of capital they are prepared to invest in agriculture.

Figure 3: Specialized farms producing for global markets



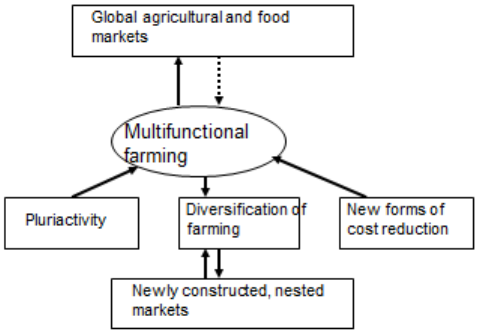
At the same time we are witnessing the emergence of a new segment that consists of redesigned and materially rebuilt farms that are able to escape from the crisis and are laying the foundations for a new, post-crisis agriculture (see figure 4). These are multi-functional farms,

(where the peasantry was marginal and *latifundia* types of erged: a massive outmigration.

mainly based on the use of their own resources (new forms of cost reduction play an important role here). They are creating new services and new products which are increasingly sold through new, nested markets – often actively and jointly constructed by farmers and consumers (Ploeg, Ye and Schneider, 2012). Pluriactivity (also known as multiple job holding) is another common feature, chosen not only for economic reasons but also because it brings social benefits.

In analytical terms this implies a major change: instead of being built on just one circuit for reproduction (a main commodity market), farming is now increasingly grounded on several circuits for reproduction. These additional circuits[20] not only reduce reliance on global markets, which offer less attractive prospects than before, they also sustain new ways of farming that include very different biophysical and socio-economic realities than specialized farming that is solely tuned to the world market.

Figure 4: multifunctional farming grounded on a wider set of circuits for reproduction



Theoretically important here is that this turn towards multi-functionality (and the associated emergence of *new* products, *new* services and *new* markets) is driven by the *constructive capacity* of the peasantry. Peasant agriculture is not just producing products, nor does it just involve the endless repetition of routines that result in such products. Peasant agriculture entails a constructive capacity: it includes mechanisms that are used to make agriculture grow and to face adverse conditions. And when the 'normal' level of resilience does not suffice, the constructive capacity is employed to re-design and materially rebuild agriculture through the development of new products, services and markets[21].

[20] Note that the newly created markets are mostly (but not exclusively) domestic ones. This helps to shift agriculture away from the asphyxiating export-orientation encouraged by neo-liberal policies. The domestic market is increasingly seen as an important arena for generating growth in the 'smallholder' sectors of agriculture (HLPE, 2013)

[21] In terms of STS (Science and Technology in Society) we are talking here about 'architectural innovations' that reconfigure an existing system (see e.g. Henderson and Clark, 1990).

The creation of new processes of production within and by peasant agriculture is a slow but constant process – but this accelerates in periods of crisis. At such time there is a more urgent need to jump over the crisis-induced limitations by designing and building new processes of production that are *superior* (more productive, generating more value added, allowing for more control by the direct producers, more flexible, etc.) to the existing ones. Theoretically, the creation and further unfolding of such new, superior, processes of production equates to the development of productive forces. For the peasants involved in this process this evidently implies a considerable burden. Thus we encounter another Chayanovian balance at the level of peasant agriculture as a whole: a balance between burden and benefits. The burden is felt now, whilst the benefits are still to come, (i.e. they are anticipated benefits). Thus, the balance spans a distance in time. And it is clear this could all go terribly wrong: if the time span gets too long, the burden starts to be too stressful and/or if benefits are too low compared to the burden involved. Despite these potential traps it is *peasants who develop the productive forces, doing so according to Chayanovian balances that link them, and others, to the politico-economic conditions under which they operate.*

[4] Peasant agriculture builds on, and enriches nature (but sometimes there is no space to do so)

Peasant agriculture can deal with, and builds upon, biodiversity. By doing so it reproduces and further enriches biodiversity. This has been abundantly and convincingly documented in the rapidly expanding literature on agroecology (for recent examples see Altieri, Funes-Monzote and Petersen, 2011; Altieri and Toledo, 2011). It is important to signal that the surge in agroecological practices is not limited to the Global South – it is equally widespread in the Global North (although often known under other names such as *farming economically, low external input agriculture, natural cycle farming,* etc.). The shift towards agroecological practices is not a one-off step, but an ongoing process that proceeds progressively. Agroecological farming is neither static, nor does it (necessarily) show lower yields than conventional farming. It is also not necessarily subject to diminishing returns[22].

The re-grounding of farming on resources entailed in local ecosystems and controlled by peasant producers themselves (or by communities of peasant producers) entails a *re-introduction of nature* into the agricultural process of production. Agriculture is, literally, being re-grounded on ecological capital (Guzman Casado et al, 2000). This re-grounding implies many different steps and possibilities. These include the development of *ecological structures* at micro and meso levels (i.e. within the farm and at local/regional level; Visser, 2000). Such an

[22] Whether agroecological practices are 'class neutral' or not (i.e. whether they are especially or only appropriate for peasant agriculture or whether they might be also incorporated in entrepreneurial and capitalist farming) is an issue that will be touched upon in section 3 of this paper.

ecological structure might be an existing (and probably extended) pattern of hedgerows, ponds, small pieces of fallow land between meadows, all of which contain specific natural values. But it might also be created anew, in a goal-oriented way (Primdahl, 1999). Another aspect is the *revitalisation of food webs*, that is the intricate 'web' of micro-organisms, worms, herbivores, parasitoids, insects, moles and birds - that provide "a network of consumer-resource interactions among a group of organisms, populations or aggregate trophic units" (Smeding, 2001:84). Such food webs improve and sustain productive capacity by, for example, enhancing the nitrogen delivery capacity of the subsoil, suppressing pests and helping to avoid diseases. But they may also sustain a range of 'higher order natural values', such as birds of prey. In his discussion on food webs Smeding argues that *"one important solution [...] for agriculture in the industrialised countries could be the development of farming systems that are economically based on [the] utilisation of biodiversity and that also harbour conservation worthy species"* (2001:131; see also Altieri 1999 and Almekinders et al, 1995). Solid food-webs, embedded in robust ecological structures can also considerably strengthen the resilience of plant-animal production systems, and reduce the levels of 'stress' which pose a major problem in today's agricultural production systems. In synthesis, through extended re-grounding, agricultural production is (once again) based on the local ecology. Re-basing agriculture on *ecological capital* restores the relation with *nature* and (re-)produces a wider array of specific natural values. The production of 'green services' (landscape, natural values, a healthy environment, clean water, mitigation of global warming etc.) and the production of agricultural commodities are no longer separated (or at best 'positioned alongside each other'), but mutually reinforcing, with one being a condition for the other and vice versa (Gerritsen, 2002).

This process of re-grounding can be understood as a further extension of the defence mechanisms discussed above. But whilst pluriactivity and farming economically are basically an endeavour to disconnect agricultural production from *financial capital* and the circuits controlled by it, extended re-grounding takes this process further by firmly re-establishing *ecological capital* as the bedrock for agricultural production.

Extended re-grounding can result in a range of mutually re-enforcing economic benefits. The more that agriculture is grounded on food webs, the more variable costs (especially those related to fertilization and crop-protection) can be reduced. This allows a further unfolding of the style of farming economically, whilst maintaining levels of productivity (for an exemplary case see Brussaard et al, 2003). Increased resilience and reduced stress in the plant and animal systems generally translates into fewer harvest losses, diseases and pests and a reduction in expenditure on herbicides, pesticides, veterinary services and medicines. Equally, there is generally a positive effect on the longevity of livestock, which again translates into increased benefits and reduced costs together with a significant improvement in food quality. Thus,

through making a turn towards agroecology, peasant agriculture is consistently increasing the contribution it makes to food security and food sovereignty.

A theoretically important point here is that living nature, as shaped and re-shaped within and through the process of co-production, comes here to the fore as a major productive force. It is a productive force that can be moulded in different (and partly contrasting) ways and directions (Visser, 2010).

[5]. Peasant agriculture can strongly contribute to society at large (but its capacity to do so might be weakened)

Although any estimation is seriously hindered by conceptual problems and by inadequate data-bases – it is not too bold to claim that there are, on a world-scale, some 0.6 billion peasant units of production[23]. In OECD countries their number is declining, although large interregional disparities might be noted; in developing countries the absolute numbers are increasing. In developing countries many people depend partly or even completely on peasant agriculture.

China alone has at least 200 million small-holder units (a small part of which is currently engaged in processes of up-scaling towards larger, often co-operative, enterprises). Although these Chinese peasant farmers only utilize 10% of the total amount of the world's agricultural land, they produce 20% of all food in the world. This is an important indication of the productivity that might be realized through smallholder agriculture.

Brazil, another major agricultural powerhouse, has a dual agricultural structure. Alongside large holdings (capitalist and entrepreneurial units) there is an extensive smallholder sector consisting of nearly 4.4 million peasant units (some 85% of the total farm units). Brazilian agricultural census data shows that, between 1996 and 2006 , the number of small holdings increased by some 400,000 units (MDA, 2009). These newly created peasant farms cover a total area of 32 million hectares, "which equals the total agricultural area of Switzerland, Portugal, Belgium, Denmark and the Netherlands taken together" (Cassel, 2007). The peasant units cover 24.3% of Brazil's total agricultural area, while the large corporations control 75.7% of all land. Despite this, the smallholders produce 38% of the total value of production. Expressed in absolute terms: corporate agriculture produces an average of 358 Reais per hectare per year and smallholder agriculture 677 Reais/ha/year. Moreover, such smallholder agriculture makes a strategic contribution to food security, producing 58% of all milk 50% of all chicken and 59% of pork. They also grow 38% of the county's coffee, 46% of its maize, 70% of the beans (an important popular dish) and 87% of the cassava (MDA, 2009).

[23] IFAD (2010) indicates that worldwide some 450 million small-scale farmers provide a livelihood to around 2 billion people. However, it can be argued that IFAD's definition of smallholder is too limited: it only takes into account units of production equal to 2 hectares or less.

Evidently, the data from China and Brazil cannot be generalized. In other countries and regions quite contrasting constellations might exist. When it comes to agriculture and food production, *heterogeneity* is, both between, and within, countries, overwhelming. Nonetheless, when it comes to *numbers*, *productivity* and *contribution to food security* smallholder agriculture repeatedly emerges as a significant reality that should not be ignored.

Peasant agriculture can also contribute considerably to overall economic growth; directly through increases in production and productivity and indirectly by forming a large (part of the) internal market, especially in developing countries (Delgado, 1998; Mazoyer and Roudart, 2006). When producing sufficiently and achieving increasing incomes peasant farmers will considerably spur the sale of the 'wage goods' produced by urban industries. In periods of economic crisis this is a strategic feature. If, alongside the need to increase total agricultural production, there is *also* a considerable need to enlarge rural employment and/or to raise rural incomes then peasant agriculture definitely has more potential than entrepreneurial and capitalist forms of agriculture. For Brazil, for example, the peasant sector (which only uses 24% of the available land) generates 74% of all agricultural employment.

Peasant-driven agricultural growth can also be "the engine of rural non-farm growth" (Haggblade *et al*., 2007). The Chinese experience is a case in point (Zhang *et al*., 2006; Mohapatra, 2006). The different growth linkages (the mechanisms that link agricultural growth and overall development) are strong in countries where peasant agriculture dominates. It has been shown that 'estate-led agricultural growth' generates the weakest 'consumption linkages' (Haggblade *et al*., 1989; Janvry *et al*., 1993), but that these linkages are strong in peasant agriculture.

The role of peasant-driven agricultural growth in poverty alleviation has already been mentioned (in the comparison of China and Africa). Worldwide there are 1.4 billion poor people (living on less than 1.25 US$ a day). 70% of them are located in the countryside and dependent, in one way or another, on farming (IFAD, 2010). The amelioration of their situation represents a moral duty in itself. Beyond this, substantial improvements in these *rural* people's purchasing power can have a substantial and significant effect on the dimensions of the internal market and thus help to alleviate the effects of the current economic crisis. The performance of China is again a case in point.

When smallholder agriculture plays a central role in contributing to the required increases in overall production, it, *simultaneously*, makes an important contribution to poverty alleviation and the consolidation and strengthening of internal markets.

Smallholder agriculture is, on the whole, more energy-efficient than other forms of agricultural production (Netting, 1993; Pimentel, 2009 a&b). The following figures, that translate the

consumption of carbon energy into calories, illustrate this point. 'Peasant type' smallholder agriculture generates 4 to 10 calories of food for each calorie of energy consumed.. In 'Green Revolution type' smallholder agriculture the figure is 2-5 calories of food per calorie of energy consumed. By contrast large-scale corporate agriculture of the 'hi-tech type' only produces $1/10^{th}$ to $1/20^{th}$ calorie per calorie consumed (Rajesware S. Raina, 2011: Table 1). These figures are supported by earlier studies that compared energy-use efficiency in meat production in Italy (Ventura, 1995) and water-use efficiency in the North of Portugal (Dries, 2002).

Peasant agriculture is, in many places, essential for natural resource management and, in other places, strongly contributes to the maintenance of natural resources (soil productivity, landscapes, water, biodiversity, carbon-capture, etc.). Under the right conditions it does so in highly efficient ways. These characteristics can contribute to avoiding major geo-hydrological problems (land or mudslides), help to mitigate climate change and preserve sweet water reserves.

One of the major ecological distortions linked to the current organization of agricultural production at global scale is the abandonment of meadows and pasturelands for extensive grazing in hills and mountains coupled with the use of fertile arable land to produce grains for fattening cattle, concentrated in large feed-lots (Weis, 2013). The concentration of cattle in these feedlots (and the use of cheap grains) exerts competitive pressure on smallholder herdsmen, provoking the abandonment of meadows and pastures. Supporting these peasants would help remove such a distorted structure.

Alongside the (classical) points discussed so far, there is a *new* generation of benefits generated by today's peasantries. These cannot easily be grasped in economic terms – they mostly relate to the way society is patterned and they promise attractive and resilient alternatives to the regulatory systems imposed by state apparatuses, supranational bodies and large corporations. Take today's markets. These are extended and rigid systems for making commodities flow in specific ways. The major features of these market systems include articulated centre/periphery relations, command centres that exert control-at-a-distance over extended spaces and large areas of social life, multiple sets of dependency relations, and a centralized appropriation of the generated value added[24]. In contrast to these features, the nested markets that are emerging in many places represent an emerging alternative that goes far beyond their current mechanics and impact. Nested food systems are the equivalent of *smart grid systems* which offer a promise for energy production and consumption and their interrelations. They are locally centred but can be mutually connected whenever the need to do so arises. They are also flexible, have low losses and high efficiency levels. Above all they offer the promise of including

[24] I have illustrated some of these features in my analysis of the Parmalat empire (now part of the French Lactalis group) (Ploeg, 2008, chapter 4). See also Russi, 2013 and Clap, 2012

and benefiting more than just small minorities of producers and consumers (as is currently the case). They have the potential to include all producers and all consumers.

Secondly, one should also refer here to the fact that new forms of peasant agriculture and the newly emerging nested markets are to a degree, 'self-governing spaces' that are able to distantiate themselves (at least partly) from the impact of asphyxiating regulatory schemes. They allow far more room for the involved actors to realize their aspirations in a more fully fledged way. With a further unfolding of peasant agriculture the possibilities for self-government might be rolled out over far larger areas of social life (just as in the past the networking capacities of Italian *mezzadri* 'travelled' to other sectors of the economy).

Capital and labour, food empires and peasantries

Capital and labour are mutually entwined with each other. There is not just a one-sided set of relations between capital and labour (independent/dependent, exploiting/exploited, powerful/powerless, leading/following, dominant/subordinate). Labour shapes and impacts upon capital as much as capital shapes and impacts upon labour. And what applies to capital and labour generally, applies to food empires and peasantries specifically. Food empires and today's peasantries are mutually entwined with each other through the many interactions in which they both engage: sometimes these are cooperative, at other times they involve conflict. Capital does not necessarily have a privileged role in these encounters, nor are the peasantry merely dependent or always the losers within the equation. Instead, sometimes specific peasantries take the lead and capital has to react and try to reconquer lost terrain. Peasantries and food empires are the two opposing poles in a relationship characterized by many-sided struggles (Cleaver, 2000)[25].

Generally speaking food empires create and reproduce peasantries[26]: without a relatively autonomous resource base and without work being structured as self-valorizing activity it is impossible to produce and to keep producing under the conditions currently imposed by capital (the squeeze on agriculture, volatility, etc.). But as much as capital creates today's peasantries, it also simultaneously tends to destroy them. More specifically[27], food empires currently relate to the peasantries through (1) the intent to systematically *disassemble* the resource base on

[25] The *operaismo* tradition goes a step further by claiming that labour classes (including the peasantries) are the dynamic motor of capital; capital is just a 'function' of labour (Tronti, 1979; Moulier, 1989; Hardt and Negri, 2000). My own position is that it is, according to historical circumstances, it is sometimes labour and sometimes capital that takes the lead.

[26] Just as they are destroying, at this moment in time, the entrepreneurial segments of the agricultural sectors (see previous section).

[27] Here, one would need to take history into account and to systematically discuss the co-evolution of agro-industrial capital and banks, on the one hand, and peasants and workers in agro-industries on the other. Such a task, though, goes beyond the scope of this paper.

which peasant farming is grounded[28], (2) intensified *extraction processes*[29] and (3) the *takeover of strategic resources,* such as land, water, genetic material, market outlets[30], etc. Together these relations place a constant pressure on income levels and ongoing threat to the continuity of the farm (as discussed above, farms can no longer be reproduced solely through the markets), an elimination of the possibility to run the farm independently and a denial of the dignity of those working on the farm. Food empires induce redundancy within agriculture. Food products become anonymous, processes of agricultural production and food processing become footloose, and areas of production become interchangeable, whilst the peasantries working in them might suddenly find that they are superfluous. Instead of being proud and independent producers with an autonomous resource base, there is the real possibility of farming being reduced to a simple conversion (governed by an alien script) of purchased commodities (inputs) into commodities to be sold (produce) or even a complete dismissal of farming[31].

Thus, *food empires induce the aspirations for emancipation* discussed in the previous section, which, in turn, translate into the search to (1) augment production, (2) increase resilience, (3) re-invent farming in order to face up to the crisis, (4) build upon nature and (5) positively contribute to society at large. The aspiration for emancipation is not a 'divine' trait, it is not solely a subjective notion – it is an effect induced among the peasantries by capital and its influence. Ironically, this effect helps the peasantry to develop strategies to effectively counter capital[32]. The aspirations of the peasantry for emancipation from the redundancy, poverty and insecurity induced by capital, are *denied* and subsequently *translated* in responses. This is what John Holloway refers to as "negation-and-creation" (2010:18) which involves "moving against-and-beyond" (op. cit.:19). It is here that the *constructive capacity* of the peasantry (which I referred to in the previous section) comes to the fore and which clearly entails "the

[28] Such a process has been unfolding, through different mechanisms, for a long time. Seeds are currently one of the most contested foci of the disintegration of previously 'organic' constellations as their production and distribution is externalized from farming and new forms of control are established (Kloppenburg, 2010)

[29] The social wealth produced in the primary sector is increasingly appropriated by, and centralized in, food empires. Food processing is one of the most profitable industrial sectors, which explains why large chemical groups as DSM have moved into food processing.

[30] Food empires control and conditions entire markets partly, at least, because they own the infrastructure of these markets. The points of entry, exit and of conversion are all controlled by food empires. Consequently they can, through a temporary or permanent closure of one particular entry point cut large groups of producers out of the market. The fear of this happening can be a powerful weapon influencing the relations between food empires and peasantries.

[31] This is exactly what the scheme of classification (in Figure 2) both illustrates and hides. The fear to be dismissed from farming figures here as 'migration out of agriculture', whilst the other fear (of losing the autonomous resource base and being reduced to just an 'entrepreneur') is entailed in the move from 'semi-commercial smallholder' to 'advanced farmer'. The loss of the autonomous resources base figures here as the change from 'robust seeds' to 'multi-trait hybrid seeds (including GMOs)'.

[32] This is notably the case when it comes, e.g., to creating new products, services and new, nested, markets for selling them.

counterposing of a distinctly different logic here and now to the logic of capitalism" (op. cit.:26). Food empires disrupt the continuity of peasant production (through extraction, grabbing, etc.); this is countered, by the peasantries, through productive increases that follow a different logic (not aiming at maximizing rates of return but more on securing the own subsistence), just as disassembling of the resource base is countered by rebuilding farming on nature, etc., etc.. In the words of Cleaver: "Many peasant struggles quite self-consciously set out to elaborate new ways of being, new relationships among people and between humans and nature" (2000:17)[33].

Just as capital impacts upon the peasantries, the peasantries impact upon capital. "Studies[34] on peasants in Mexico, Nigeria and elsewhere [have] demonstrated how their unwaged work contributed to the expanded reproduction and how their struggles, often autonomous of those of waged workers, had the power to rupture such accumulation" (Cleaver, 2000:17)[35].

Shaping capital, or more specifically, shaping food empires occurs at many different levels and through a range of mechanisms. I briefly refer to some of them here. A first, widely known mechanism centres on the takeover (and appropriation) of symbols and practices developed in peasant struggles. The development of organic farming was, in the first pioneering decades, the object of sturdy endeavours from peasants who believed this was the only way forward (Hollander, 2012). They effectively developed what capital and imperial science declared to be impossible and irrelevant: farming without addiction to chemical inputs. Nonetheless, they succeeded – only to see their emblems[36] increasingly taken over by large entrepreneurial farms, food processing industries and large retail organizations. Now we have 'green' supermarkets, and a wide range of organic products are processed by the food industries. However, without the increasingly successful sub-sector of organic peasants such phenomena would not have become a reality[37]. In more general terms: the development of multifunctional farming and the associated construction of new, nested markets, constrain food empires to engage in venomous campaigns against the emerging alternatives and the promises they entail, whilst copying, at the same time some of its symbols and methods. This demonstrates *anyway*

[33] "Positive forms of struggle [...] not just resist capital but [...] create alternatives to it" (Cleaver, 2000:18).
[34] Cleaver refers here to Ann Lucas de Rouffignac, 'The Contemporary Peasantry in Mexico' (date?) and Ezilen Agbon (1985), 'Class and economic development in Nigeria 1900-1980', Ph.D. dissertation, University of Texas, Austin.
[35] Together with other 'autonomist' Marxists, Cleaver proposes a broadened notion of the 'working class' that includes the peasantries.
[36] Other emblems that are systematically taken over are those that refer to artisanality, genuineness, animal friendliness, etc. These are features that food empires cannot materially produce, but which they need to maintain their relations with consumers. As such they take these over (or 'rob' them, as some say).
[37] I leave here aside the question whether or not peasant struggles to develop organic farming have been in vain. I only note that many of the original organic peasant producers have re-invented their farms and networks (whilst continuing to produce in an organic way) and thus continued their search for emancipation.

that (1) peasant movements often have the lead whilst capital is obliged to follow and (2) that due to this particular dynamics socio-material realities are definitely shaped differently.

A second mechanism (now becoming increasingly more important) is the design and development of novelties that *cannot* be taken over. A case in point is the System of Rice Intensification (SRI), "a set of practices and principles [originally developed in Madagascar] in response to diverse agroecological and socio-economic conditions faced by farmers" (Stoop 2011:445; see also ILEIA, 2013). "SRI emerged in relative isolation from the international mainstream of rice agronomy" (Maat and Glover, 2012:132). Each *single* practice intuitively seems to be counter-productive – SRI involves planting very young seedlings, widely spacing individual tillers, alternating between wet and dry soil moisture regimes (instead of permanent flooding), the use of organic rather than mineral fertilizers and frequent weeding. However, *together* these changes have produced spectacular jumps in yields that are accompanied by considerable cost decreases (together these factors explain the wide dissemination of SRI, which is now practised in many countries). SRI is a disembodied technological change. It does not involve inputs that can be sold. Neither is it a script that can be standardized. Instead it requires to be intelligently adapted to local ecological circumstances. SRI differs, as all other agroecological practices, fundamentally from Green Revolution technologies. Like, agroecology it is a definite move away from the model which views *more* plants per hectare and *more* fertilizer as the ways to achieve *higher* grain yields. In contrast to the varieties promoted by the Green Revolution, the cultivars used in SRI are selected according to their tillering features, with the emphasis on their ability to develop an abundant root system[38]. These larger and more active root systems increase drought tolerance, as well as efficiency in nutrient uptake – and thereby reduce fertilizer use (Stoop 2011, 448). At the same time, building a healthy supply of soil organic matter strengthens the beneficial associations between the roots and soil biota. By building in this way on nature (see also the previous section) peasants have a definite effect on major food empires who face actual and potential decreases in the sale of 'miracle seeds', fertilizers, pesticides, etc. Peasants 'advance' in a way that definitively differs from the trajectory outlined in figure 2 and by doing so they slow-down accumulation by agro-industries.

A third mechanism through which the peasantry affect and partly re-shape capital might be found in the phenomenon of 'milk-strikes'. This type of peasant struggle (not only restricted to milk but also including other food products) has been used to put pressure on the food industry to which the product was delivered and to (re-)negotiate the farm-gate price and other

[38] This is an important contrast with the photo-*in*sensitive short-straw cultivars that were at the heart of the Green Revolution. 'Modern' rice cultivation, as defined in and by the Green Revolution, involved a shift *away* from solar energy and human labour *towards* a strongly increased use of fossil energy in the form of chemical fertilizers. SRI builds again on soil biology, solar energy and local knowledge.

conditions. This type of struggle started in the late 1960s in France[39] and swept across all of Europe in the following decades. It was one of several factors triggered the policy of seeking interchangeable food production areas. In this respect peasant struggles unwittingly contributed to the very creation of food empires. Peasant struggles, aiming to obtain better terms of exchange, can trigger new modes of accumulation that offer worsened terms, thereby triggering new struggles. Evidently, this cannot be repeated endlessly. At a certain moment the last resort will be reached.

Fourthly, new accumulation modalities might also occur through operations at the level of the (supra-national) state. The explicit objective of the Mansholt Plan (that aimed at a large scale modernization of European agriculture) was to replace peasant farms by newly created, large scale entrepreneurial farms. One of the underlying, but hidden motivations was that peasant farms were considered to be far too intensive and should be replaced with large entrepreneurial farms that produced more extensively, thereby slowing down the overall growth of production and the increase in associated financial support provided by the European Community. Thus, the high intensity of peasant agriculture triggered a policy that aimed to eliminate (or at least greatly reduce) this sector. Ironically, this policy failed in two respects. From the 1970s onwards new technologies appeared on the market that simultaneously augmented intensity levels and labour productivity. These technologies fitted very well into the newly emerging entrepreneurial farms and thus contributed to enormous overproduction. In addition, the peasantry was far too resilient to disappear. Today, more than ever (although in an indirect way) the peasantry has a major imprint on the Common Agricultural Policy[40].

A few conclusions

Empirically, peasant agriculture plays a major role in the national economy of many countries, particularly (but not only) in less developed countries. Delgado (1997) notes that "smallholding farming is sub-Saharan Africa is thought at present to account for 70% of total employment, 40% of total merchandise exports, and 33% of GDP on average, although the shares are much higher in many countries of the region. One-third to two-thirds of value added in manufacturing depends on the supply of agricultural raw material, mostly from smallholders. Furthermore,

[39] Earlier expressions of the phenomenon emerged in World War 2 when milkstrikes were used, in e.g. Frisia in the Netherlands, to resist German *razzias* against Jewish people.

[40] This same mechanism can be found in areas were the peasantry was able to gain and to combine both economic and political strength (as in Catacaos in Peru in the 1970s and 1980s and the Algarve in Portugal in the second half of the 1970s). Although impressive growth was realized in these areas (in employment, incomes, investments, production, etc.) this newly created strength was broken and the newly developed productive structures dismantled. Since then regression and underdevelopment have been the rule – which is highly detrimental for the process of capital accumulation. The historical parallel is clear. In 1917 Chayanov wrote that "the peasant farm is to be the basis for the construction of a new agriculture in Russia (Chayanov 1988:137). However, the Russian peasantry was nearly eradicated and Russia paid a very high price for this – until today.

primary agricultural commodities account for large shares of total merchandise exports in the region, again mostly from smallholders [....]. Despite these achievements, economic conditions for smallholders in sub-Saharan Africa have been especially tough". If we turn our attention from sub-Saharan Africa to (say) Europe, we also encounter situations in which peasant agriculture is important – for a variety of reasons, most of them different from those that exist in Africa, but the peasantry remains an important phenomenon. The same holds true in Asia, Latin America and, for that matter, in America[41].

If the analysis contained in the previous sections is correct then that the different peasantries of this world are *politically* far stronger than normally is suggested and/or believed to be the case. They control, *trotzdem Alles*[42], significant parts of agricultural production and the food supply. This is potential power. In addition, they are as we have seen engaged in a struggle to enlarge their autonomy. In this respect Cleaver refers to the "hitherto neglected autonomous activity of workers and peasants" (2000:15), in which "self-valorization" occurs and "newness and otherness" are being created (ibid.:18).

The importance and potential strength of the peasantries of the world increasingly reside in their capacity to establish and secure *food sovereignty*. The stronger they become (i.e. the more they actively engage in different social struggles), the more they will be able to ensure food sovereignty. And in so doing they will transform agriculture and have a positive effect on considerable parts of wider society.

The struggle for food sovereignty is not just starting now. It has historical roots that run deep. In the years preceding the Russian Revolution, Chayanov developed, together with radical political movements such as the *narodniki* a transitional project for Russian agriculture that had three clear objectives[43]: 1) increase agricultural production as much as possible, thus contributing to the overall growth of the national economy;[44] 2) strive to maximize the productivity of agricultural labour; and 3) distribute national income more equitably. In

[41] According to the definitions used by the USDA there are 1,995,000 *small farms* in the USA. This corresponds to 91% of all American farms. Their number is increasing (by 118,000 between 2002 and 2007). The *USDA's Commission on Small Farms* stated; "we are convinced of the necessity to recognize the small farm as the cornerstone of our agricultural and rural economy" (quoted in HLPE, 2013:28).

[42] This expression was used by Rosa Luxemburg and Clara Zetkin to characterise class struggle, and more specifically, the relation between personal dedication and class struggle. Literally translated it is close to 'in spite of everything'.

[43] In the Anglo-Saxon world the work of Chayanov is known mostly through the 1966 Thorner edition. German translations of his work (from 1923 and 1924) and the highly valuable Italian edition (1988) of his work on the '*Economy of labour*' (from 1917) have rarely been used (see Ploeg, 2013). Here I use his work from 1917.

[44] "The entire future of our country [….] depends on the rapid and energetic progress of our agriculture and especially whether or not it is able 'two cultivate two spikes of grain wherever just one spike is growing now'" (Chayanov, 1988: 154).

Chayanov's view this transition critically needed to be driven forward by the peasantry itself[45]. Nowadays this appears to be merely of historical interest. However, some 90 years later China defined almost exactly the same principles in its *San Nong* policy (the 'three rural principles' that guide agricultural policy). The first principle is *Nong Ye* which means to produce as much as possible in order to satisfy the national needs for food. It is identical, although the wording is somewhat different, to the first objective of Chayanov's transitional project. Improvement of *land* productivity is central here. *Nong Ming*, the second principle, refers to peasants and their incomes – incomes that are to be increased through improvements in *labour* productivity (i.e. objective 2 of Chayanov). *Nong Cun*, finally, refers to the liveability of rural villages, to the quality of rural life and it is an evident echo of objective 3: the equitable distribution of national income.

Chayanov's transitional project is thus not only of historical interest. It is alive and kicking today in the Chinese *San Nong* policy (and the many contradictions and conflicts that surround it). It also present in many other initiatives located elsewhere. The struggle for food sovereignty has been a long one and it will certainly be with us for many decades to come. There will be many changes– just as in the past. But one thing will remain constant: that is the strategic centrality of the peasantries of this world. Without them there will be no food sovereignty.

[45] "Before us there are millions of peasants, with their own habits, their own ideas about farming. These are men that nobody can command. They do whatever they do according to their own willingness and according to their own concepts" (Chayanov, 1988:155).

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Food Sovereignty:
A Critical Dialogue

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FOOD SOVEREIGNTY: A CRITICAL DIALOGUE INTERNATIONAL CONFERENCE PAPER SERIES

A fundamentally contested concept, food sovereignty has — as a political project and campaign, an alternative, a social movement, and an analytical framework — barged into global agrarian discourse over the last two decades. Since then, it has inspired and mobilized diverse publics: workers, scholars and public intellectuals, farmers and peasant movements, NGOs and human rights activists in the North and global South. The term has become a challenging subject for social science research, and has been interpreted and reinterpreted in a variety of ways by various groups and individuals. Indeed, it is a concept that is broadly defined as the right of peoples to democratically control or determine the shape of their food system, and to produce sufficient and healthy food in culturally appropriate and ecologically sustainable ways in and near their territory. As such it spans issues such as food politics, agroecology, land reform, biofuels, genetically modified organisms (GMOs), urban gardening, the patenting of life forms, labor migration, the feeding of volatile cities, ecological sustainability, and subsistence rights.

Sponsored by the Program in Agrarian Studies at Yale University and the Journal of Peasant Studies, and co-organized by Food First, Initiatives in Critical Agrarian Studies (ICAS) and the International Institute of Social Studies (ISS) in The Hague, as well as the Amsterdam-based Transnational Institute (TNI), the conference "Food Sovereignty: A Critical Dialogue" will be held at Yale University on September 14–15, 2013. The event will bring together leading scholars and political activists who are advocates of and sympathetic to the idea of food sovereignty, as well as those who are skeptical to the concept of food sovereignty to foster a critical and productive dialogue on the issue. The purpose of the meeting is to examine what food sovereignty might mean, how it might be variously construed, and what policies (e.g. of land use, commodity policy, and food subsidies) it implies. Moreover, such a dialogue aims at exploring whether the subject of food sovereignty has an "intellectual future" in critical agrarian studies and, if so, on what terms.

ABOUT THE AUTHOR

Jan Douwe van der Ploeg is currently professor of Transition Studies at Wageningen University in the Netherlands and adjunct professor in Rural Sociology at China Agricultural University in Beijing. He worked with peasant organizations in Peru, Colombia, the Netherlands and Italy. Recently he co-authored an HLPE report on 'Investing in smallholder agriculture for food security' that was written on request of the Committee for World Food Security of the FAO. His most recent book is *Peasants and the Art of Farming: A Chayanovian Manifesto* (2013, Fernwood).