

Diverse agri-food practices and their transformative potentials

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Abstract There is an upheaval in reconsidering the socio-cultural dimensions of “agri-culture” as resources for creating alternative geographies of food. At the same time discourses returned to reactivate a productivity agenda stressing the need of “feeding the 9 billion in 2050” promoting technological solutions such as GMOs, reactivating the imaginary of the Green Revolution, organizing farming within global food chains and fighting against hunger based on scientific principles. Others emphasize, however, that the dominant entrepreneurial model of farming within global food chains has not been successful in reducing but rather increases the longstanding social and ecological contradictions of the capitalist models of organizing food production. It is stressed that the breakdown of local food systems caused by the globalization of food production and distribution has not only caused a food crisis that now reaches over more than 700 million people, but has also caused widespread ecological damage, a loss of peasant cultural diversity and increased poverty. New forms of agrarian resistance, exemplified by the peasant movement La Via Campesina’s call for food sovereignty, create a potential to reframe and rethink agri-food futures. Reflecting on the diverse forms and trajectories of various struggles for alternative agri-food practices, four transformative potential domains can be identified through which “food geographies of care and responsibilities” may be realized. The four domains of social struggle for integrating diversity related to social movements efforts are to: re-territorialize agri-food systems (Van der Ploeg, 1991, 2008, 2013); apply the Diverse Economies Approach (Gibson-Graham, 2006, 2008) and to read rather for difference than for dominance; develop a critical-reconstructive (bio)technology approach; The case of tailor-made biotechnologies; de-couple the productive relationship of diversity from a cognitive capital-centric framing.

1. Foreword

Multitudinous experiences are emerging in various regions of the world in which peasants, farmers, scientists, food providers, consumers, environmentalists and other human and non-human stakeholders cooperate to create social spaces for establishing new forms of

living, working and being, also applied in the domain of producing and consuming food. There is an upheaval in reconsidering the socio-cultural dimensions of “*agri-culture*” as resources for creating alternative geographies of food. At the same time discourses returned to reactivate a productivity agenda stressing the need of “feeding the 9 billion in 2050” promoting technological solutions such as GMOs, reactivating the imaginary of the Green Revolution, organizing farming within global food chains and fighting against hunger based on scientific principles. Others emphasize, however, that the dominant entrepreneurial model of farming within global food chains has not been successful in reducing but rather increases the longstanding social and ecological contradictions of the capitalist models of organizing food production. It is stressed that the breakdown of local food systems caused by the globalisation of food production and distribution has not only caused a food crisis that now reaches over more than 700 million people, but has also caused widespread ecological damage, a loss of peasant cultural diversity and increased poverty. New forms of agrarian resistance, exemplified by the peasant movement La Via Campesina’s call for food sovereignty, create a potential to reframe and rethink agri-food futures (Wittman, 2009). Reflecting on the diverse forms and trajectories of various struggles for alternative agri-food practices, four transformative potential domains can be identified through which “food geographies of care and responsibilities” may be realized. These four domains of struggles for integrating (and/or changing) diversity within agri-food practices will be further discussed at the seminar on “diversity as a resource”, to which I would also like to add the question “a resource for whom and for what”? The four domains of social struggle for integrating diversity into agri-food practices are:

1. Re-territorialize agri-food systems (Van der Ploeg, 2008);
2. Apply the Diverse Economies Approach (Gibson-Graham, 2008) and to read rather for difference than for dominance;
3. Develop a critical-reconstructive (bio)technology approach; The case of tailor-made biotechnologies (Ruivenkamp, 2008);
4. De-couple the productive relationship of diversity from a cognitive capital-centric framing (Hardt & Negri, 2004, 2009; Virno, 2004).

The contribution to the workshop and seminar will be concluded with some reflexive remarks on “Diversity as a resource for whom and for what?”.

2. Re-territorialization of agriculture

An important domain of the social struggle on “difference as a resource” takes place around the *social organization* of agri-food systems. The social and ecological crisis of the industrialized and globalized food system have stimulated many peasants, farmers and other stakeholders to *reorganize* agri-food systems. Instead of continuing a de-territorialization of agri-food systems – separating agriculture from its natural environment, distancing agricultural production and food consumption and uncoupling agricultural products from its intrinsic food qualities – efforts are made to *relink* agriculture to its natural environment, to *shorten* producer-consumer relations and to *re-qualify* the agri-food products (Ruivenkamp 1989, 2008; Van der Ploeg, 1991, 1995, 2008). In short: efforts are made to go beyond a place-less food scape and to relocate food as a key vehicle in societal development (Marsden & Morley, 2014). A territorial embedded agri-food production (Wiskerke, 2009) is re-proposed in which the diversity of natural, social, cultural aspects are considered as basic resources on which sustainable food production and consumption can be organized. Despite the social relevancy of these efforts to *re-territorialize* agri-food systems, these efforts are hardly taken up seriously and just “read” as illustrations of small, marginal initiatives, which “would never be able even to feed partly the world” according many (so-called) “experts”. So, it is not only necessary to go beyond the (social) industrialized organization of agri-food practices but also to develop a new lens, *a new way of reading* which enables us to broaden our vision and particularly to see what remains invisible in the dominant capital-centric reading of agri-food practices.

3. Reading for difference

An important contribution to develop a broadened interpretation of agri-food practices can be found in the work on “*diverse economies*” developed initially by Gibson-Graham (2006, 2008). They employ the ‘iceberg metaphor’ to show that capitalist relations are a visible, yet small portion of economic life and that a whole range of invisible economies “lies below water” (see figure 1). So, there is more than just capitalist enterprises in which surplus value is produced, appropriated and distributed on the basis of waged labour, private property, production for the market and mainstream market-finance modes. A large number of hidden and alternative economic activities evolve which can no longer be read as just subsystems of the dominant capitalist economy. These diverse economies include for instance unpaid labour in households or ventures such as consumer, producer and

worker cooperatives, community-supported agriculture, local and complementary currencies, voluntary organisations and foundations, social and non-profit enterprises, movements such as squatter, slum dweller, co-housing or fair-trade movements and their related consequent activities (Gibson-Graham, 2008). The theoretical proposition of the Diverse Economies Approach is that economies are intrinsically *heterogeneous spaces* composed of capitalist, alternative capitalist and non-capitalist relations which together form an economic mosaic in which capitalism is but one version of economic relations. So, there is huge need to go beyond an exclusive reading for dominance in which the linear development of global capitalism is interpreted as an all-encompassing reality, rendering the variety of other alternative or non-capitalist economic forms invisible. Instead of such a linear and even binary thinking (mainstream versus alternative) we have to enable scholars to read for difference instead of dominance and becoming able to unravel the potentials in these neglected socio-economic spaces through which another way of being and producing and consuming food are experienced and realized.

4. Critical-reconstructive vision on technology development: The case of Tailor-Made BioTechnologies (TMBT)

Another key domain for the struggle to bring in diversity in agri-food practices concerns the design of technologies and particularly the specific visions about society-technology interactions to which technology designers and receivers refer. It is evident that living in a technological culture (Bijker, 1995) it becomes crucial to reflect on the question whether and if so in what forms technological developments can be intertwined with the diverse, transformative processes of increasing human well-being, freedom and happiness (Lemmens, 2008). In the context of agri-food production there has already been an intensive debate about the pros and cons of biotechnology perceived as either a solution for poverty and hunger or rather as part of these problems. In general four different conceptualizations about the human-technology interaction can be discerned in which different approaches to “diversity as resource” can be discerned. The most dominant vision – in which also the pro-con biotech debate evolved – is the anthropocentric, instrumental understanding of technology. In this vision technology and humans are perceived as two separate entities, split from each other, in which the human is conceived as the center of technology development (anthropocentric aspect) using the technology as a means for furthering his/her well-being (the instrumental aspect), which – after its implementation –

can be assessed as a technology to be deployed for the benefit or to the detriment of the human and society. A vision that perceives technology development as “a given” and hardly stimulates a reflection on the socio-spatial possibilities for re-designing and implementing different (diverse) (bio)technological artifacts, de-coupled from its agro-industrial context and framing (Ruivenkamp, 1997).

A second understanding of technology emphasizes that technology has advanced to a stage in which technology is developing according to its own dynamics. The intrinsic dynamics vision on technology stresses that there is (now) an inescapable evolution of technology which is related to the specific way in which the human relates to nature as a stock of raw materials to unlock and exploit for mankind. It is this relation that represents the essence of technology. In short it is this instrumental rationality of technology that contributes to a further spreading of technology and that needs to be problematized, particularly whenever this instrumental logic is presented as something natural and inevitable. In this vision the diversity of (bio)technological developments are only related to the internal evolution of the technology itself and remains therefore – to a certain limit – outside the grip of human.

A third rather different understanding of technology is based on the intrinsic interrelation of the human and technology stressing that human and technology are co-evolving. In this vision, the human is not perceived as sovereign entity and dichotomously opposed to (separated from) technology. On the contrary, it is precisely the intermingling of the human and technology that forms the starting point of this “weavers” approach (Ruivenkamp, 1997). It is exactly the *human-techno interaction* that is perceived as the core dynamic interrelation, which has stimulated the “empirical turn” in Science & Technology Studies focusing on the diverse intermediated roles of technologies in day-to day practices.

A fourth vision is the *critical-reconstructive* approach, which just like the co-evolutionary or interrelational approach, regards technology as a condition for (enabling) human freedom and autonomy (traditionally understood as independent from technology). It goes, however, one step further than the weavers approach by emphasizing that technology developments always occur within power structures. It stresses that some interest groups of actors and actants have more influence than others on technological developments - technology as a decisive factor in shaping the human condition is historically and socially located within its current historical context of asymmetrical social power relations – with the likely effect of negatively affecting the freedom and autonomy of less influential and/or

powerful actors (Ruivenkamp, 1997, 2008). This implies that for taking on board the transformative potentials of (bio)technological developments a long-term trajectory is needed, composed of a twin process of *un-ravelling* the unequal power relations inscribed in agro-food biotechnologies and developing concrete practices of *rewriting* the embodied political content that biotechnological artifacts contain. It is the development of what I have called “tailor-made biotechnologies” (Ruivenkamp, 2008) that may play a key role in the furthering of integrating diversity as a resource in the design of new biotechnological artifacts stimulating for example heterogeneous instead of homogeneous practices of farming. Concretely, it means that instead of developing the uniform, hybrid and high-yielding varieties (as the agro-industrial biotechnology is still doing), tailor-made biotechnologies can be applied to increase the local crafts for rotating diverse crops to improve food sovereignty in a region, strengthening the heterogeneous and location-specific practices of farming. Whether or not tailor-made biotechnologies may become a facilitator in the spreading of agro-bio diversified practices will depend on how much focus social movements will lay on reconstructing (bio)technological innovations and become able to integrate other social-codes such as diversity in the design of biotechnological artifacts, shaping new agri-food futures.

5. Cognitive capitalism and the productive encapsulation of diversity

There is a widespread debate among various authors about the emergence of cognitive capitalism (Hardt & Negri, 2004, 2009; Virno, 2004; Gorz, 2010) based on the cooperative, communicative, affective forms of labour for the manufacture of immaterial products such as images, ideas, knowledge and symbolic meanings. Immaterial aspects that are registered in the material products (plants, shoes, cars) and are becoming increasingly important for the determination of the economic value of these combined material/immaterial products. In addition, the production of these immaterial parts of the products can no longer be measured in specific time units (so many hours of work) nor attributed to the activities of a few individuals. The production of the intangible goods takes place in *networks* in which communication is shared and production cooperatively developed both during work and in “free time”. In short, in networks in which the social life of communication, interaction and innovation takes place and in which the life and lifestyle of the immaterial worker have become parts of production. For example, the skills of the immaterial worker to set up networks, accept people on their ideas and share information, the capacity to learn, to

adapt within different networks, to integrate different scientific disciplines, to getting used to mobility, to be communicative; all these elements, which can no longer be separated from the person himself, are used as forces for the production and are *decoupled* from what could also be used from other perspectives such as other forms of living, working and being. The interweaving of life and work is so intense that the immaterial worker sees his/her work as his/her life, but also accepts that his/her life (s style) has become a crucial part of his/her work. A practical consequence of this is that the dividing line between working hours and free time fades, where it is impossible to find out when the idea, thought, where and when is made during work or leisure. This implies not only an expansion and intensification of working time, but also a change in the relationship between working time and the life of the immaterial worker, in the sense that the *personal lifestyle of the producer forms the basis* from which he/she is /does its job and that the life of the intangible worker forms the basis from which the intangible content of new products is manufactured. It also implies that another relation with diversity or pluriformity emerges; namely a productive relationship.

For the production of intangible products it is becoming increasingly important that each individual can express "its specificity", because that specificity represents its "value" in the production process. In short, immaterial production scans a social liberation process in which, for example, racial and gender differences are no longer partly ignored or uniformed through hierarchical and commercial subdivisions, but in which everyone is encouraged to express themselves "freely from their differences" (Hardt & Negri 2004). In doing so, these differences are in fact encouraged to jointly create new forms of cooperation, based on a recognition of and respect for the diversity that forms the basis for the cooperative immaterial production. On the other hand, this liberation process of "freeing out from diversity" can be reversed by reiterating the discipline and regulation of these differences and channeling and exploiting these differences (racial, gender, generation) by introducing them into activities exclusively aimed at capital accumulation.

The social struggle over the interweaving of life and work "beyond the activities aimed at capital accumulation" takes place in a collective space that moves between initiatives, which focus on the further development of multiformity and expression of diversity, and initiatives in which this diversity has become a resource and is primarily linked to exclusively commercial relationships. A way-out may be found in exactly the common foundation of the cooperative and innovative forms of labour to produce the immaterial

products in which individuals and organizations attempt to retain the goods and services that have been produced jointly from co-operation and which enable a reproduction of communality as common interests. Although much life and labor in the manufacture of immaterial products merge and become entangled, there is always a margin left in the life of the immaterial worker who is not used as part of the production. After all, not all aspects of life can be reduced to productive actions and not life in its totality can be subordinated to capital-accumulation-oriented activities (Hardt & Negri, 2004). There is always a part of life and work that is *excessive* with regard to the life and work that takes place in commercial relations. So there is a surplus of energy that individuals possess and what makes it possible for them to use that excessive energy also to realize a reality that is “beyond the existing” and to use for recovering socio-cultural diversified aspects of life. I consider this *excessive capacity of living labor* in relation to the capacity of labor used as labor power in the production process as a material basis in cognitive capitalism from which a re-orientation on diversity as a resource may be launched. In short, the social struggle on recovering diversity takes place, *inter alia*, in this social space between the surplus of creative and innovative labor capacity with respect to the energy used exclusively for capital accumulation. This excessive capacity of work manifests itself in many different forms, such as setting up new (peasant) forms of agriculture and food production (Van der Ploeg, 2008), working on new trade relations, setting up new forms of regional political governance but also caring for others and other invisible activities. It is even the case that this energy - which is often set up from cooperation between different individuals and organizations - is larger than the work done in multinational companies (Gibson-Graham, 2008), which shows how much a reorganization of labor takes place and how optimistic we can be in the opportunities to realize forms of living working and being which go beyond the actual neoliberal and capital-centric framing of life.

6. Diversity a resource: For whom and for what?

Four domains of struggle on diversity have been shortly described. It concerns domains through which social movements aim to incorporate and/or modify diversity as a resource in their ways of living, working and being, particularly assessed in the ways they apply diversity in creating their forms of producing and consuming food.

In the first paragraph I reflect on agrifood practices and refer to the social struggle between the entrepreneurial and peasant model of producing and consuming food,

stressing that *social movements* are oriented to integrate and re-conquer diversity through their efforts to re-territorialize agri-food practices, i.e. to re-unite what has been separated in the industrialized organization of farming within global food chains and especially to enhance the diverse socio-cultural aspects of the locality through which they (re)organize spatially their agro-food practices.

In the second paragraph I stressed the relevancy of the *diverse economies approach* and particularly their plea to apply a different way of reading economic phenomenon. The diverse economies approach takes distance from a capital-centric gaze on food production and provisioning with its well-known dualism between alternative-good-local-embedded and conventional-bad-global-disembedded. Going beyond this binary thinking the diverse economies approach stresses the importance of making visible what is neglected within the capital-centric gaze and stress the importance of gaining insights in the specificities of diverse agro-food practices. In contrast to the well-known statement of Marx of “not interpreting the world but change it’ the diverse economies stress the importance of “changing the world by thinking it differently”.

The third paragraph shows that there is a diversity in thinking on *human-technology interactions* (discerning four different human-technology conceptualizations), and that there is also a hierarchy in the social acceptance of these visions which render difficult to integrate diversity as a resource in the design of biotechnological developments. In view of the adherence of the anthropocentric-instrumental vision on technology in leading economic and policy-making circles this vision is socially still the most dominant one, while the co-evolution vision is the most respected one particularly in Science and Technology Studies. Personally, I take a different position and make a plea for the critical-reconstructive conceptualization stressing that simultaneously two different activities need to be carried out: unravelling unequal power structures and secondly rewriting another (diverse) social code in biotechnological artifacts. It is only through these activities – which I called “politics in biotechnological artifacts” (Ruivenkamp, 1997, 2018) – that new and diversified forms of living, working and being may be realized and applied within agri-food practices.

The fourth paragraph differs from the three previous one in the sense that it does not look at the struggles to integrate diversity as a resource in sustainable forms of living and working but reflects on the trends of cognitive capitalism in which the *human, cultural diversity* (of being and lifestyles) already appears *as a productive relation*, as already being part of

and encapsulated in new capital-centric activities. In this paragraph I indicate that such a human cultural diversity has already become a resource of the cooperative form of immaterial labour, in which the diversity of different lifestyles is exploited. However, I also stress that still some aspects of life and life styles are “beyond commercialized spheres” and that in these excesses of living labour potentials for social transformation are present. Only through a de-coupling of the excesses of living labour from exclusive productive orientations and coupling these surpluses to the creation of new forms of living, working and being, the dispossession of diversity as a resource (Harvey 2006:90) may be challenged and new horizons of reconquering and enhancing diversity in agri-food practices may be realized, particularly by attuning the knowledge and technology base (the general intellect) to more just, equal and sustainable social relations, here and now.

References

- Bijker, W. E. (1995). *Democratisering van de technologische cultuur*. Inaugurale rede uitgesproken aan de Rijksuniversiteit Limburg 24 maart 1995. Faculteit der Cultuurwetenschappen, Rijksuniversiteit Limburg, Maastricht.
- Carolan, M.S. (2013). The Wild Side of Agro-Food Studies: On Co-experimentation, Politics, Change and Hope. *Sociologia Ruralis*, 53(4).
- Gibson-Graham, J.K. (2008). Diverse economies: performative practices for “other worlds”. *Progress in Human Geography*, 32(5), 613-632.
- Gibson-Graham, J.K. (2006). *Postcapitalist Politics*. Minneapolis: University of Minnesota Press.
- Gorz, A. (2010). *The immaterial*. Calcutta: Seagull Books.
- Gritzas, G., & Kavoulakos, K.I. (2016). Diverse economies and alternative spaces: An overview of approaches and practices. *European Urban and Regional Studies*, 23(4), 917-934.
- Hardt, M., & Negri, A. (2004). *Multitude: War and Democracy in the Age of Empire*. New York: The Penguin Press.
- Hardt, M., & Negri, A. (2009). *Commonwealth*. Cambridge, Massachusetts: The Belknap press of Harvard University press.
- Harvey, D. (2006). *Spaces of global capitalism. Towards a theory of uneven geographical development*. New York: Verso.
- Kristensen, D.K., Kjeldsen, C., Hvarregaard Thorsoe, M. (2016). Enabling Sustainable

- Agro-Food Futures: Exploring Fault Lines and Synergies Between the Integrated territorial Paradigm, Rural Eco-Economy and Circular Economy. *Journal Agricultural Environmental Ethics*, 29(5), 749-765.
- Lemmens, P. (2008). *Gedreven door techniek. De menselijke conditie en de biotechnologische revolutie*. Oisterwijk: Box Press.
- Marsden, T., & Morley, A. (2014). *Sustainable food systems: Building a new paradigm, earthscan food and agriculture* (p. 230). New York: Routledge.
- Massey, D. (2004), Geographies of Resonsibility. *Geografiska Annaler*, 86(1), 5-18.
- McClintock, N. (2010). Why farm the city? Theorizing urban agriculture through the lens of metabolic rift. *Cambridge Journal of Regions, Economy and Society*, 3(2), 191-207.
- Ruivenkamp, G. (1989). *De Invoering van Biotechnologie in de Agro-Industriële Productieketen. De overgang naar een nieuwe arbeidsorganisatie*, Utrecht: Jan van Arkel Uitgeverij.
- Ruivenkamp, G. (1997). Biotechnology as a socio-technical ensemble – closings remarks and reflections. In J. Wirtz & E. Lammerts van Bueren (Eds.), *The Future of DNA*. Dordrecht: Kluwer Academic Publishers.
- Ruivenkamp, G. (2003). Biotechnology: The production of new identities. In W. Koot, P. Leisink & P. Verweel, *Organizational Relationships in the Networking Age*. Cheltenham: Edward Elgar Publishing Ltd.
- Ruivenkamp, G. (2008). *Biotechnology-in-Development: Experiences from the South*. Wageningen: Wageningen Academic Publishers.
- Ruivenkamp, G. (2018). Genetically Modified Organisms as Politicizing Products? In A. Isoni, M. Troisi & M. Pierri (eds), *Food Diversity Between Rights, Duties and Autonomies* (pp. 37-55). Cham: Springer International Publishing.
- Van der Ploeg, J.D. (1991), *Landbouw als mensenwerk. Arbeid en technologie in de agrarische ontwikkeling*. Muiderberg: Coutinho.
- Van der Ploeg, J.D., & Van Dijk, G. (1995). *Beyond Modernization. The impact of endogenous rural development*. Assen: Van Gorcum.
- Van der Ploeg, J.D. (2008). *The new peasantries. Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London: Earthscan.
- Van der Ploeg, J.D. (2008). *I nuovi contadini. Le campagne e le risposte alla globalizzazione*. Roma: Donzelli Editore.
- Van der Ploeg, J.D. (2013). *Peasants and the art of farming. A Chayanovian Manifesto*. Canada: Fernwood Publishing.

- Virno, P. (2004). *A Grammar of the Multitude. For an analysis of contemporary forms of life*. Mass and London: MIT Press Cambridge.
- Wiskerke, J.S.C. (2009). On places lost and places regained: Reflections on the alternative food geography and sustainable regional development. *International Planning Studies*, 14, 369–387.
- Wittman, H. (2009). Reworking the metabolic rift: La Via Campesina, Agrarian Citizenship and Food Sovereignty. *The Journal of Peasant Studies*, 36(4), 805-826.