

## **Polen, September 2005: Rural Property-Workshop (Part 1) und ESA-Konferenz (Part 2)**

### **Part 1: Materiality of property and its different forms of social embeddedness**

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Our everyday understanding of "property" is formed by a certain mode of appropriation and a certain type of goods: It is the private appropriation of material commodities. I bought myself a toothbrush, a pair of shoes, and a bottle of beer for individual and exclusive use and consumption. One can say that goods of this type – tooth brushes, shoes, bread, beer and so on – are *material mobilities*, and material mobilities are the paradigm for commodification and private property in the consumer society that we live in. But there exist other types of goods and property as well: On the one hand *immobilities*, i.e. more or less cultivated land with fields, houses and other installations which are spatially fixed and cannot be transferred to other places in the world. On the other hand there are *immaterial* goods, i.e. images, sounds and linguistic information, which are not bound to a specific material medium but can be transferred and copied to other media as well. These three types of goods – immobilities, material mobilities and immaterials – are typical for different modes of production, valuation and appropriation, which are situated in corresponding social structures and historical settings. Or putting the central idea another way: Different objects have different material properties, which to a certain extent determine the social institutions of property regulation. The now conventional notion in the Social Sciences that the social totally determines the material is partly wrong as the social and the material are constantly interacting (Latour 1995). Social structures and property regulations may shift the conception of objects but the main transformation takes place when societies change the type of objects they centrally and dominantly rely on.

In this way I will extend my typology of world views as modes of valuations, as sketched out in the Berlin workshop in this spring, to the notion of property. In the Torun workshop of our Rurprop network I will discuss this idea in more conceptual terms, whereas in the research stream of agricultural sociology at the ESA conference I will apply this idea to current conflicts in rural regions. The presently increasing significance of immaterial assets can be observed in two often opposing tendencies: On the one hand technologically enhanced mechanical and chemical inputs, on the other hand the reinvention of the land as an ecological and recreational resort for urban dwellers. Genetically modified crops are standing for the first tendency. Herbicide or insect resistant plant varieties need only a reduced amount of pesticides; thus a large amount of the agro-industrial value added is shifted from the chemicals to the seeds. Therefore new conflicts arise between seed companies and farmers, which have many parallels with the debates on software or music copyrights, because seeds have their own naturally copying mechanism. "GMO free zones" are standing for the opposite tendency, that the romantic longing of post-industrial urban dwellers drives the demand for food, housing and tourism with an ecological and authentic aura.

## Some methodological preliminaries

Before I sketch out my typology let me start with some methodological clarification. The Rural Property Network mainly draws on the theory of Keebet and Franz von Benda-Beckmann (2005). Their main point is the difference between crude everyday, ideological and even disciplinary assumptions about the properties of property and the very fine grained and differentiated 'bundle of rights and obligations' which is shown by empirical research. Let me make two remarks on this point.

Firstly, the Benda-Beckmanns are certainly right that *rural* property deviates to a large extent from our everyday assumptions or from neoliberal notions of the form and functions of private property. But this follows – in my view – not only from the general differentiation between the ideological, the legal, the social and the practical level. This differentiation makes sense for rural property insofar as rural property mainly consists of immobilities, and it also makes sense for immaterial goods – as is convincingly shown by Keebet and Franz. These two types of goods have properties and functions which cannot be easily understood and grasped by the paradigm of property of material mobilities in which our everyday thinking was educated during the still ongoing industrial age. But for tooth brushes, shoes, bread and beer – as material mobilities which are strongly personal or instantly consumed – the conventional notion of private property seems to be adequate, or at least far more adequate than for land as immobility or for music as immaterial good.

Secondly, the theory, or let me better say the methodology, of Benda-Beckmann seems to imply that all generalisations about property are necessarily wrong and should be replaced by empirical research. I can follow this point, but it is right in a trivial way: A detailed picture is always more "true" than a more general one. But theory in the sense of generalisations is nevertheless necessary. This follows from the restricted information capacity that we have in different situations. The detailed picture may be interesting for the very specialist, but not so much for the colleague in the neighbouring field and less so for a general audience. If science is to have a function beyond convincing a handful of specialised colleagues, generalisations are necessary. Deconstructing the wrong ideology cannot mean replacing it by a very fine grained picture of empirical detail, but rather giving the public other ideas about the real and the possible. Thus empirical research is always necessary but is only half of the way to a better understanding.

If I am right that generalisations are necessary, one has to be aware of two meanings of the term. In my view generalisations can never be "true" in a Popperian sense; all generalisations can be "falsified". Thus the acceptance of generalisations depends to large extent on practical and political interests, aesthetical predispositions and the "Zeitgeist" in the research community and the wider public as it is broadly accepted today in the Sociology and Anthropology of Scientific Knowledge (c.f. e.g. Knorr-Cetina 1984, Latour 1995, Bloor 1976) and in the Philosophy of Science (c.f. e.g. Kuhn 1967, Rorty 1981, Feyerabend 1976) – not only for the social but even for the physical sciences. Hence the intention of my typology is not to give a clear cut and final answer to all empirical questions or to subsume all existing empirical detail. I am well aware that empirical research always shows more complicated pictures. Thus my generalisations aim at stimulating

research and discussion by opening wider horizons and alternative political interpretations.

### **Immobilities**

"Immobilities" – used in English this sounds like an artificial term, but in the German language the word "Immobilien" is commonly used and means "Real Estate". Why are immobilities different? People are socially related to other people and to things. Things are functionally attached to other things and to people. Immobilities are things that are socially embedded and cannot easily be disembedded. I can give you my bread and beer which would have served for my meal with my social relatives and you can take it with you and consume it with your social relatives. But I can't give you my apartment in the same way. Because it is immobile you could only use it if I would leave it together with my social relatives. Today in urban settings where neighbourhoods are anonymous, families are small, and single-households are abundant, this may even be possible. Whereas in pre-industrial settings where the family is deeply embedded in the neighbourhood, production takes place in the field as work of the household and sometimes of the whole village, and large scale transport is slow, the web of social relations and the property structure of land are more fixed in themselves and more firmly connected to each other (Bell 1998, Aries 1978, Mitterauer 1979).<sup>1</sup>

The same is true for the ecological embeddedness of land property. Bread and beer as commodities have ecological prerequisites and consequences as well, but they are disembedded and therefore diffuse in time and space. The usefulness of the land directly depends on the ecological relations in which it is situated; this means that the availability of water, air, sunshine, sediments and helpful fauna and flora on the one hand and the protection against flood, storm, ice, sunburn, erosion and pests on the other (Seymour/Girardet 1985). And the ecological conditions are interrelated with the social conditions as well: If your neighbour does not take care of pests your land will probably be affected as well.

Bread and beer can be stolen, a piece of land not. Theft is clandestine and the robber has to be quick on the escape. Expropriation of individual pieces of land could only take place when the neighbourhood would accept the invader. Because this is not very likely, expropriation is usually the result of collective endeavours – feud or war. This means that land cannot be protected individually, but has to be defended by the community or society (c.f. Polanyi 1971).

In view of ecological, social, economical and political relations, it becomes quite clear why land cannot be private property in the sense that one individual has *full* control over its use – including alienation rights – without any obligations. This does not necessarily mean that the land is communal or state property but that rights and obligations are subject to continuous debate between the individual, the family, the community and the state. It follows that land in this context cannot be sold to strangers on anonymous markets – i.e. in ideal markets – because the community has a strong interest in maintaining and protecting its social and ecological relationships. Thus the normal way of transferring the land from one person to another is by heritage.

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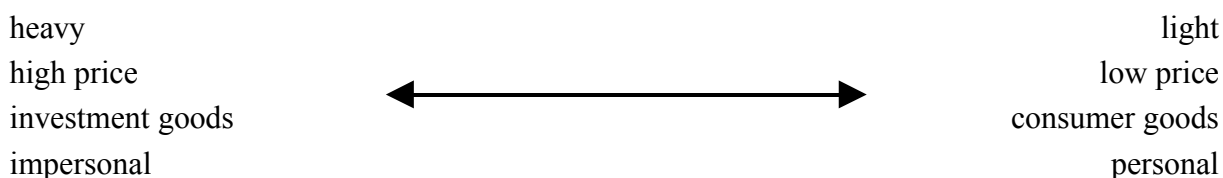
<sup>1</sup> Clearly this picture is more true for sedentary than for nomadic forms of living.

From this perspective it becomes also clear that social cohesion is the prerequisite for the prosperity of the land. The land as such is worthless unless it is ecologically well situated, unless it is in the reach of a dwelling, unless it is protected against invaders, unless there are traditions and rules to stimulate cooperation, and unless there are institutions to settle conflicts. At least for anthropologists this may sound trivial, but it is not trivial with regard to market ideology with its conventional understanding of private property.

### Material Mobilities

When we talked earlier of "tooth brush, shoes, beer", we have shown just some examples, but not given a comprehensive definition. Material Mobilities lie in a continuum between heavy, high price, investment goods on the one pole and light, low price, consumer goods on the other. The former are mostly impersonal, the latter often personal things (see figure 1).

**Figure 1: Properties of material objects between two poles**



Heavy things like buildings, large machinery and other installations are obviously not easily transportable. In this sense they tend to be immobilities. Light things like tooth brushes are far more mobile, but they are still material. Only information – inasmuch as it can really be de-materialized – tends to be transportable with zero effort of time and energy. To be immobile means "bound to the land" and "bound to the social relations of the land" (insofar as the latter still exist). To be mobile means to be available everywhere - at least in the physical sense.

Expensive objects, where the production is labour and resource intensive, are often shared, because it is seldom that one person has the means to afford them. They are not necessarily owned by the state or a large community, but if they are "private", they are more often than not in the possession of a large company with many shareholders. Clearly there are not only ideological differences between communal and private property, but in a sense they are far less severe than the differences between large and necessarily bureaucratic organisations – be they public or private – and the "privateness" of personal belongings and personal autonomy which is often invoked to a mass audience to legitimate capitalism (cf. Coleman 1982). The cheaper things are the more they become available as compounds of everybody's privateness. As such they may be object of emotional investment – they may help to constitute personal identities in a room of personal intimacy (Campbell 1987).

Investment goods are things that are used to produce other things – other investment goods and consumer goods at the end of the chain. At one end of the scale, as simple tools they may be owned

by everybody, but at the other end, as large machinery typical since the coming of the industrial age, investment goods are mostly owned by the state or large companies. What we said above applies inasmuch as large machinery tends to be expensive. This is true at least since large corporations began to dominate the economy and set an end to the earlier stage of liberal capitalism when business tended to be still small and depending on the personality and the virtues of an individual entrepreneur – as celebrated by Schumpeter (#). With labour as a necessary complement, property rights on investment goods are restricted indirectly by labour market regulation which exists everywhere, even within the most liberal forms of capitalism (Polanyi 1971, Hirsch 1993).

It would be interesting to discuss why – at least at the farm level – agricultural enterprises did not transform themselves into large companies with many employees, other than the plantations in the European colonies and the farming cooperatives in the Eastern socialist countries. In Western countries the farmer continues to be an entrepreneur, probably because in agriculture the spatial and ecological relations of the production process matter much more than in the manufacturing industries, prohibiting the differentiation of very specialised working skills. But obviously the farmer becomes ever more dependent on technical and chemical means of production on the supply side and on distributional channels on the demand side, both of which are controlled by large companies. That he or she is "squeezed" between the two sides is not only a result of the shifting of the value added from agriculture to manufacture as proposed by the 'three-stages-theories' of economic development but also of the very fact that the farming sector with its lower concentration got less market power than the supply and the demand side.

The consumption of things was embedded for a long time in traditional forms of living with detailed rules for different social groups on how to choose and how to furnish the apartment and what to eat and what to wear on different occasions (Beck-Gernsheim 1994). With industrialisation began a long and still ongoing process of commodification of consumer goods. With the developing concept that everybody should stylise explicitly his or her individual feelings and invent an explicitly individual manifestation of oneself, consumer goods were used as scenery, requisites and costumes. Commercial marketing became vital where more authentic ideas for the staging of oneself are lacking (Brooks 1981; Campbell 1987). Thus "consumer sovereignty" became the core of the ideology of private property after the "entrepreneurial sovereignty" ceased to exist for most people with the uprising of the large companies.

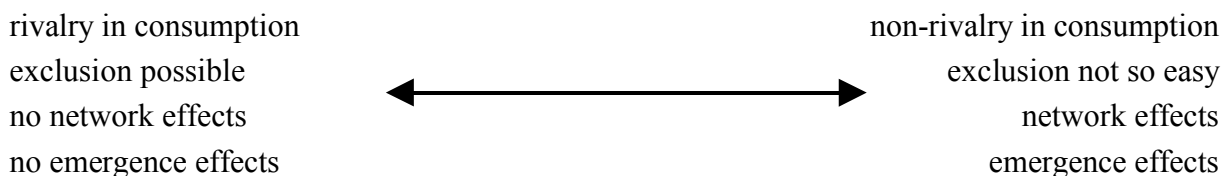
### **Immaterialities**

So far we have seen, that immobilities tend to be socially embedded whereas mobilities became disembedded in the sense that they could be used or consumed anywhere. Hence mobilities are not necessarily related to a specific social network of neighbours as immobilities are – at least to a certain extent, even when people are more mobile and individualized and therefore physical neighbourhoods are becoming more anonymous. During the ongoing globalisation mobilities will be distributed around the whole world, making social and ecological responsibilities very abstract

and more or less futile, even if they may be still evoked from time to time by the media and by media driven consumer boycotts (Beck 2002).

In this sense there is a continuum between the heavy materiality of immobilities at the one end and the lightness of immaterialities at the other end of the spectrum. But this continuum exists only from the physical and hence transportability point of view. From another perspective there is another dimension of gradual distinctions between material objects – immobile or not – on the one hand and immaterialities on the other (figure 2).

**Figure 2: Gradual differences between material and immaterial objects**



Before we plug in these differences, one clarification before: Matter and mind always exist in conjunction in the real world. E.g. beer is a material good, but it incorporates also the recipe for brewing beer, i.e. technical knowledge. A sports shoe from Nike is a material artefact, but from this perspective probably trivial – unless there is inscribed the "Swoosh" from Nike which gives the shoe its famous marketing aureole in the eyes of the kids around the world. The information that I get from a book or from the Internet is material in the sense that it needs a material carrier – e.g. paper or electronic copies. If we distinguish nevertheless between material and non-material goods, then this means that we place emphasis on one or the other aspect: For the beer the recipe and for the book the paper, both may be trivial.

Non-rivalry is perhaps the most interesting property of information goods. Whereas the material beer is consumed and gone after it is drunk, the immaterial recipe is not. We can both read the same book because reading does not take the letters from the pages. Perhaps there may be a time conflict or the book will be worn if too many try to read the same copy. But this is a problem of the material carrier and not of the immaterial content. The problem ceases to exist when copy costs tend to zero.

Non-rivalry is the main reason for the problem of excluding people from information. Clearly I could guard a message as a secret but why and when should I do so? Commercial, political and military competition may prohibit disclosure of recipes, insider knowledge and secret service information. But in most cases the commercial interest of the producer – e.g. of a newspaper, a software programme or a piece of music – lies in the wide distribution of copies against a fee to get the return on investments which were necessary for producing the knowledge. But because the recipient takes up the knowledge without "consuming" it, he or she may give it to others – friends or strangers – just for free. A further complication for the commercialisation of knowledge lies in the intransparency paradox of informational goods. If you do not "have" the information you cannot assess whether it is useful or not. If you "have" it you will perhaps not pay for it because you already know it. This is the reason why many computer programmes are distributed for free at least in a

basic version.

Network effects arise when the consumer is better off if other consumers use the same products – e.g. telephones, software and social theory. If only a few people have a phone this may seem exclusive but is not very useful, whereas if everybody has one you can reach everybody. If only a few scientists develop and use a new social theory as shared language they may get a standing as a distinguished and innovative group but they also risk to be seen as sectarians investing a lot of time in an idiosyncrasy, whereas others using more commonplace theory may get far more interesting and distributable results with far less effort.

Emergence effects result from cooperation in cultural production. "Standing on the shoulders of giants" means that every producer is using the products of others to improve his or her own work. This is clearly more true for science and technology than for arts because science is not so much used as an end product for consumers as music, literature or films. But in general it is clear that cultural production and reception is to a large extent a collective endeavour with only a very restricted part being individual creativity – already, because too much creativity as deviation from common places would probably mean that nobody would understand the creation (Holtgrewe 2005).

These complexities of the commercial appropriation and commodification of knowledge are not new. Since the beginning of the Industrial Age, patent law, copyright law and trade mark law have sought checks and balances between the interest of commercial competitors in relation to each other, the innovation process as a whole, and the public interest in maintaining and reproducing the common heritage of culture. But there are two developments which are aggravating the tensions between private property and open access. With novel technologies copying is becoming cheaper, easier and omnipresent in the hands of the recipients. There is a strong social movement emerging to propagate open access to scientific literature, software, and music - which can all be distributed through the Internet (Bödeker et al. 2005). On the other hand the commercial interest in knowledge goods is increasing because the amount of capital needed and the profit margins for conventional material goods are decreasing. Therefore we currently see a strong lobbying for wider possibilities for the private appropriation and commercialisation of knowledge products.

Looking at the question of increasing significance of immaterialities in rural regions we can see two often opposing tendencies: On the one hand technologically enhanced mechanical and chemical inputs, on the other hand the reinvention of the land as ecological and recreational resort for urban dwellers. Genetically modified crops are representative of the first tendency. Herbicide or insect resistant plant varieties need only a reduced amount of pesticides; thus a large amount of the agro-industrial value added is shifted from the chemicals to the seeds. Therefore new conflicts arise between seed companies industry and farmers which have many parallels with the debates on software or music copyrights, because seeds have their own naturally copying mechanism. "GMO free zones" are representative of the opposite tendency, that the romantic longing of post-industrial urban dwellers drives the demand for food, housing and tourism with an ecological and authentic aura. (This will be the subject of part II of this paper, which I will present tomorrow at the ESA-conference)

## **Conclusion**

Property forms are not only a result of social conflicts and social institutions, but also a consequence of the materiality of the goods which should be appropriated. As Karl Polanyi has shown, private property rights and market exchange have for a long time existed in the long-distance trade of materials. Capitalism as a historical complex of social institutions is trying to extend these private property rights and market exchange forms from material goods to many other things and processes: To land, to labour, to money, to knowledge – and perhaps to body parts, to the environment, to autochthonal cultures. But all these things either cannot be totally controlled by an individual owner or cannot be handed over totally to other individuals, depending on the material (or immaterial) properties of the respective type of things.

Each type of property described above therefore develops and conserves affinities to typical social structures and institutions (see table 1). Owners of cultivated land have a strong motivation and mentality to search for strong social cohesion. Entitlements are seldom changed, but if so, most often because of benefits for the community. Social capital is the dominant value because in sparsely populated regions the dwellers are dependent on mutual obligations and communal self-organisation and self-help even if State authorities may formally exist – in each case they are far more distanced than in urban areas. Owners of material goods live in the cities and extensively use markets to exchange labour, real capital, commodities and money. The State regulates and protects their markets and their lives. Rationality is the most important virtue to maximize utilitarian welfare, which is seen as the most important mission of life. Owners of knowledge live in the libraries, the newspapers, the Internet – or other forms of Cyberspace. The currency to be paid is attention, i.e. the time of the recipient. Because boredom lurks after utilitarian needs are satisfied the accumulated wealth of a person is the reputation for novel, authentic and expressive messages.

Every time has its dominant type of property, whose social institutions are then extended beyond their realm. Land was the dominant type during feudalism, real capital was the type during early and consumer goods the type during late capitalism. If I am right, and a new knowledge society is on the verge of emerging, this will explode or at least escape the social institutions of capitalism.

**Table 1: Material type of property and respective social context**

	Immobilities	Material Mobilities	Immaterialities
Usual form	Cultivated land	Investment goods, consumer goods	Information, knowledge
Social environment	Rural communities with strong social cohesion and without much mobility.	Towns with markets, anonymity and mobility, State as regulator and protector.	Worldwide Web, even more anonymity and virtual mobility, legal pluralism.
'Currency' to be paid for property	Honour	Money	Attention
Value form	Social capital	Economic capital	Cultural capital (reputation)
Most important virtue	Moral responsibility	Objectivity and competence	Authenticity, originality, expressiveness
World view	Identity orientation	Utility orientation	Alterity orientation
Dominant Setting	Pre-industrial	Industrial	Post-industrial

## Part 2: Different world views as different forms of constructing rural wealth

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Taking the perspective of Cultural Theory as proposed by Mary Douglas (1970), inequality is primarily a consequence of cultural definitions: Differences in the access to resources are only relevant insofar as there is some consensus about the value of these resources. Which substances, properties and relationships are regarded as valuable assets depends on the respective *cosmologies* or *world views* held in a given social and historical context. With historically changing or regionally different world views, we can observe different dynamics and structures of social inequality.

In the following I will (1) propose a general typology for these cosmologies in Western Societies, their forms of valuation and the respective form of economic property. I then want to exemplify this typology for current tendencies in rural development, especially the conflict on “green biotechnology” (2 + 3): The introduction of biotechnology will probably occur mostly in rural regions with large scale agro-industrial production, increasing the trend to cheaper food commodities and escalating the dependencies of farmers on the Life Sciences Industry on the one hand, and food producers and retailers on the other (2). The non-introduction of biotechnology in the sense of Identity-preserved non-GM crops and of the declaration of "GM free zones" will probably occur mostly in rural regions with marketing efforts to endorse the settlement of near urban dwellers, to attract landscape oriented tourism, and to promote traditional or ecological food products (3). Finally I want to ask what trends in regional and individual inequalities we can expect from the described tendencies which are driven by different forms of valuation and the corresponding economic processes (4) .

### 1. Cosmologies as systems of valuation

Cosmologies in the sense of Social Anthropology are world views in which the basic ideas about the society, the natural environment, the supra-natural and the personal self – and its mutual implications – are constituted. According to my research in cultural sociology three different world views can be distinguished in western societies (Gill 2003):

- In the *concept of identity*, nature is regarded as given by God as the place to live for the family and the tribe for all time. In this sense, nature and society are strongly interconnected. Social capital, that is social belonging and social cohesion, is primarily valued. The family and family-like social relationships are the basic institutions. Accordingly, morality is the greatest virtue. As one did not put oneself first, the family group and metaphysical salvation are more important than individual death; accordingly, excommunication is a stronger sanction than the loss of life. Economic activity is secondary to and supporting family cohesion and expansion. In times and social contexts where the concept of identity is reigning, the land and the house, interconnected with and worked by the family, is the central asset. The workforce, whether family members or not, belongs to the household both in- and outside of their working hours. Property institutions are shaped correspondingly. Central is not the individual control and anonymous transmission as

in market societies. Since the land and the house are interconnected with the neighbouring social and ecological structure the rights and obligations of the property are complexly distributed among different stakeholders, among them often the hierarchy of landlords (gentry) with their function to protect the land in the case of war. The land and the house, for it is interconnected with the family, normally must not be sold, neither by the family which uses the land nor by the landlord (if the latter exists). Transmission takes place as entailment within the family (Bell 1998). This *concept of identity* was dominant in pre-industrial societies, but it is still strong today, especially in rural communities. Even today most farmers have come to their occupation by parentage or marriage and not by applying for a position, as is meanwhile usual in most other professions. The farm and family are often still seen as a whole and as a destiny (Canenbley et al. 2004). Yet with industrialisation this way of life has to compete with the *utilitarian view*, which evaluates the world and with it farm life primarily under the measure of profit and convenience.

- Within the *concept of utility*, nature is seen as mere material without a moral or aesthetic dignity. The “laws of nature” are then simply regularities which are observed for the better scientific understanding and technological mastering of the material environment. In contrast the societal and the personal life are seen as governed by self-imposed legal and moral laws, the following of which is a question of subjective consent and not a mere consequence of physical constraints. Correspondingly in modern and industrial contexts, ‘status’ – that is social belonging – is replaced by ‘contract’; land, labour, capital and copyrights can now be individually possessed and exchanged on the market, which was formerly the case only with material commodities (cf. Polanyi 1971). The state guaranties the value of the money and secures personal property, enabling and making acceptable the accumulation of personal wealth without the need for collective self-protection and self-help (Weber 1996). The priorities of utilitarianism, the accumulation of material wealth and the advancement of technology are together the leading principles of development. The family economy is displaced by the concentration of economic capital in large firms, with the simultaneous emergence of paid labour. The male individual steps outside of the family circle and develops a separate, family-independent professional carrier. The same is true for socialist societies, the only difference being that the allocation and distribution of assets is more governed by state intervention and less by market rule. The rural communities were and still are strongly transformed by the utilitarian concept. Less so perhaps on the social side – here the traditional family conception is still strong – but on the economic side, insofar as technologically induced productivity gains together with the saturation of demand have led and still are leading to ever larger farms with ever fewer people working on them.
- The *concept of alterity* constructs nature or culturally exotic contexts as the space for romantic longing. In this sense, natural environments or other cultures are the scenes of the wild, authentic and adventurous life that we imagine was lived in the past, or something to which we hope to escape to in the future, but which we do not have now, as prisoners of the artificial and boring everyday life in the (post)industrial cities. Therefore, original knowledge, particular human ability and the authenticity of landscapes, cultural spaces and natural products are increasingly valued in urban, well educated milieus. Instead of traditional family forms in these milieus there

is a strong tendency for individualisation and so called self-experience. But the "self" that is sought for is not the continuity of an already existing self-identity; it is rather some sort of "otherness", the transcending to the unknown in the search for novel sensations. This form of valorisation exists at least since the Romantic Era, but formerly it was only the mindset of a few literate people in more or less wealthy social environments. Hence with the generally increasing economic strength and the expansion of higher education this becomes a strong trend in post-industrial settings. That does not mean that industry as a mass-producer of standardised products is disappearing, rather it is becoming trivialised. Through the increasing rationalisation, everyday goods, and with them the real capital, are being produced with ever decreasing labour input and are becoming devalued (early recognised by Fourastié 1954). Many observers now believe that information and knowledge are taking over the central position once occupied by real capital (e.g. Bell 1985). However, one must examine more closely in what way knowledge contributes to a new form of capital creation. In my perspective, knowledge which is used for the rationalisation of conventional mass production needs not be qualified as "cultural capital". Only knowledge and imagination which creates novel products and novel sensations should be classified as such. Research and Development and the marketing of novel products are immaterial inputs with increasing economic significance. Non-commercial cultural production through public education, mass media, the Internet and face-to-face encounters contributes to the formation of cultural capital as well. One may even ask whether in the long run such a thing as "culture capitalism" may be feasible as dominant and sustainable because culture, i.e. non-material objects are not as easily and as functionally appropriated as private property. Indeed we observe intensive lobbying from industry to expand and strengthen copyrights, patents and trade mark laws, yet its practical consequences and its legitimacy are contentious (Bödeker et al. 2005, Gorz 2004). Thus the formation of cultural capital may work probably better in the form of voluntary contribution and open access as it is the case for instance with Wikipedia or Open Source Software, though many mixtures and compound products of private, state, communal and open production and distribution are under trial and error, i.e. practical experimentation (Holtgrewe 2005). When looking at the increasing significance of immaterial production in rural regions we can see two opposing tendencies: On the one hand technologically enhanced inputs to further agro-industrial developments, on the other hand the reinvention of the land as an ecological and recreational resort for urban dwellers. Genetically modified crops are representative of the first tendency. Herbicide or insect resistant plant varieties grow with a reduced amount of pesticides; thus a large amount of the agro-industrial value added is shifted from the chemicals to the seeds. Therefore new conflicts arise between seed companies industry and farmers which have many parallels with the debates on software or music copyrights, because seeds have their own naturally copying mechanism. "Identity preserved crops" and "GM free zones" are representative of the opposite tendency that the romantic longing of post-industrial urban dwellers drives the demand for food, housing and tourism with an ecological and authentic aura. This will be outlined in the next two points.

Table 1: Three world views and its corresponding modes of valorisation

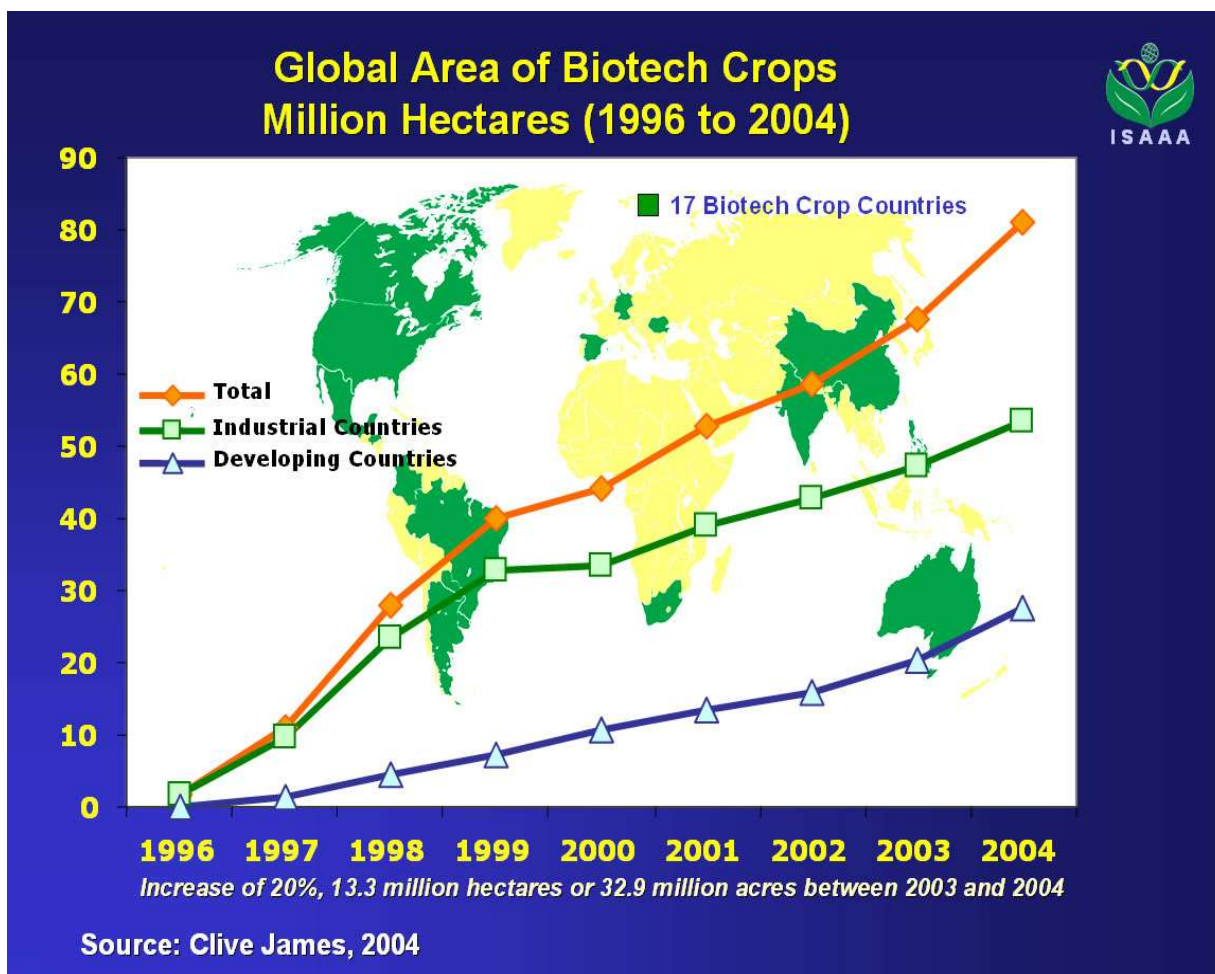
	Concept of Identity - pre-industrial	Concept of Utility - industrial	Concept of Alterity - post-industrial
Valuation	continuation & expansion of social relations	instrumental control over the physical and social environment	excitement from novel and seemingly authentic experiences
Resulting Capital	social capital	economic capital	cultural capital
Production	parentage, family and neighbourhood	achievement (♂)	achievement (♀♂)
Reproduction		family (♀)	individualisation
Dominant concept of property	common property in land, houses and other immobile installations	private property in investment capital and consumption goods	mix of open access and property rights in immaterial objects
Life and production forms in rural regions	Formerly dominant life form, partially still continued in rural regions	Industrialisation of agriculture, but normally still small firms	Re-valorisation of traditional life forms through urban dwellers

## 2. Genetically modified crops – utilitarian strategy with appropriation problems

At present, industry is trying to introduce the so-called first generation of genetically modified (GM) crops to farmers' fields and the supermarkets. This first generation – herbicide and insect resistant plants – is conceptualized to save labour costs and pesticide inputs or to gain higher yields per acreage. Thus it can be seen as the continuation of the agro-industrial revolution, which began in the 19<sup>th</sup> Century and has already reduced the agriculturally active population from about 80 percent to roughly 2 percent in most industrialised countries. With increasing labour productivity less people were needed to work on the fields, while at the same time the supply for a larger population and for meat and fresh vegetables – food that needs more inputs than staple crops such as cereals and oilseeds – was growing constantly, at least until the 1970's. Despite the growing demand, it was possible that meagre or peripheral fields were abandoned, this loss of supply easily being compensated by higher yields on more fertile and more convenient grounds.

Studies on GM crops are contentious with regard to savings, yields, and profitability (ECC 2001, Benbrook 2002, Matheson 2001). Nevertheless the area planted with GM crops is fast growing, especially in the United States (59% of world GM crop area), Argentina (20 %), Canada (7 %) and Brazil (6 %), where large scale farming prevails - see picture 1 (ISAAA 2005). Supposing that this expansion is at least partly driven by productivity gains on labour or land and not simply due to propaganda and market power of oligopolistic agro-industrial companies, then the question arises how the profits are distributed. As long as the GM seeds are protected by patents the biotechnology companies are charging a "technology fee", i.e. a higher price for the seeds, to get returns on their R&D-investments. The high investments to develop GM plants have driven the biotech and seed

industry in a strong and ongoing concentration (ECC 2001; Kuyek 2005).<sup>2</sup> But not all profits go to the agro-industrial companies. The farmers that move into GM crops first get some profit from saved input costs or higher yields, while as time passes the commodity price will fall, thus bringing down the first mover advantage and reducing GM using farmers gains to zero. The farmers that do not go into the GM business will be the effective losers with falling farm gate prices, whereas the distributors or consumers in the long run – when patents are expiring – theoretically will capture the full advantage of the technology (Price et al. 2003; Demont 2005). Altogether the farmers' space in



Picture 1: The growth of GM plantation, according to the GM lobby organisation ISAAA

<sup>2</sup> Kuyek 2005: 21

Table 1. Global pesticide and seed sales and rank of top companies

Company	Rank - Pesticides	Sales – Pesticides (US millions)	Rank-Seeds	Sales – Seeds (US millions)
Syngenta	1	\$5,260	3	\$937
Bayer	2	\$3,775	9	\$250
Monsanto	3	\$3,088	2	\$1,600
BASF	4	\$2,787	?	\$145*
Dow	5	\$2,717	10	\$200
Dupont	6	\$1,793	1	\$2,000

the value adding chain will be further squeezed between the producers of agro-industrial inputs and the food industry. With the productivity gains and no new products or expanding demand in sight, occupation on farms will be further reduced.

But because the decision to plant GM seeds is not bound to large and indivisible investments it is not necessarily determined by the scale of the farm. That GM crops are indeed mostly introduced on large scale farms has perhaps more to do with the fact that the large scale farmers are younger and have more formal education than with farm scale as such (ECC 2001; Alcalde oJ; PGE 2003). Thus inequality would be further increased between the modern and the traditional farmers. This familiar picture of the ongoing rationalisation prevails at least within the US agro-economic literature. But the utilitarian perspective is challenged by appropriation problems with immaterial goods and by valuation shifts in Europe and Japan.

One problem comes from the fact that with genetic modification agro-industrial inputs shift from chemicals to the seeds. Whereas chemicals are consumed by application, seeds are naturally self-reproducing, enabling the farmer to save a part of the yield for planting in the next year. This is clearly not new but with more private R&D and more value added to the seed this is a problem for commercialisation. Former seed protection law allowed breeders to use the seeds of other breeders for their own breeding programme and it allowed farmers to reuse the seeds in the next year. Only for *new* seeds they had to pay a license fee. But since a few years, single plant genes have become patentable. Breeders now have to pay royalties for the use of the genes, thus speeding up their vertical integration into the biotech companies. Furthermore, the biotech firms are selling the GM seeds with contracts prohibiting the use for replanting in the next year and the transfer to other farmers. Inspectors from the firms are observing the fields and are suing farmers which they suspect of sowing seeds without licenses. Nonetheless pollen is flying from one field to the other, thus disseminating the patented genes unintentionally.

The Monsanto contra Percy Schmeisser case in Canada became highly publicised for the claim of the farmer that the Monsanto herbicide resistance gene came into his Canola fields as pollen contamination. Probes found Monsanto genes in 30 to 98 % of Schmeissers' plants, a percentage so high that deliberate use seems perhaps more probable than contamination. Yet the judges – with 5 to 4 votes in the highest Canadian court – did not base the conviction of Schmeisser on evidence for deliberately using the patented gene but on the fact that he had not informed Monsanto about the contamination as other farmers had done. This case is only one, but maybe the most prominent example of many ongoing conflicts surrounding the appropriation of seeds. More generally we can see a more and more privatized and concentrated seed industry which lobbies for stricter property rights in the parliaments, in the courts and on the fields and against the common law of the commons.<sup>3</sup> Here we can see many parallels to the conflicts in the information sector or more generally the new enclosure struggle of knowledge capitalism. But what complicates the situation

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<sup>3</sup> In Germany, there is an ongoing struggle whether seed companies can take royalties on *replanted* crops and whether they can withdraw seeds after the license is expired.

even more is the fact that the distribution of GM seeds not only happens deliberately but also naturally, which is seen by many people as bad – depending on another valuation perspective.

### 3. Identity preserved crops and GM free zones – alterity moves to the centre (in the EU)

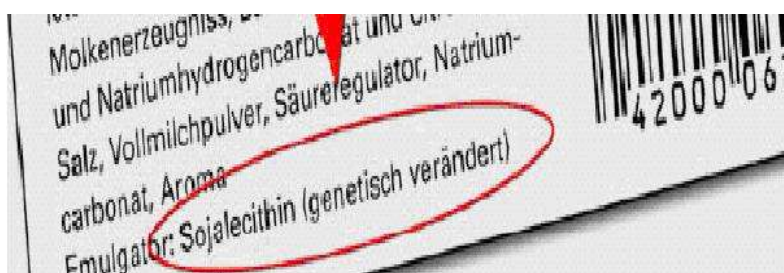
Prior to the existence of GM products, the non-GM attribute had no economic value. Once GM products were introduced, however this was no longer the case because many consumers in the EU and Japan are preferring the non-GM attribute. Large supermarket chains in Europe boycotted GM food on their shelves thus pressuring producers to segregate GM and non-GM crops and products. This, even for economists, complicated the idea, developed above in describing the utilitarian perspective, that productivity gains through biotechnology would necessarily increase social welfare



Picture 2: Most of Poland as GM free zone

(Schmitz 2004). For determined non-GM consumers and farmers alike the introduction of GM crops is not seen as a benefit but as a contamination, first by pollen flow and seed drift on the field, and then by intermixture on the long and complicated way from the farm gate to the private consumer.

To resolve the first problem, GM free zones are being established by consent of the participating farmers or by authoritative decision of local governments, preventing the planting of GM crops. For instance most regions of Poland have declared themselves "GM free" – see picture 2. To overcome the second (intermixture in the food chain), there has been a long argument between the GM and the non-GM camp on who should carry the costs of segregation and labelling – on the meaning and wording of the labels, on the implementation throughout the food chain, and on the contamination thresholds. This too can be seen as a property issue: Who owns the common trade mark "corn", "soja", "cotton" etc. – the GM or the non-GM protagonists (Gray et al. 2004)? GM proponents were taking the position that non-GM food may be labelled as such, with the implication that the non-GM preferring consumers would be bearing the transaction and segregation costs of identity preservation. In the European Union however, mandatory labelling was imposed on GM crops and on many products which are derived from them (Levidow/Carr 2005; Boschert/Gill 2005) – see picture 3. Since many supermarkets – in putative obligation to the consumer will – do not distribute GM labelled food, a large market for identity preserved non-GM food ingredients was created.



**Picture 3: Mandatory GM-label in Germany**

How was this possible, given that the rigorous eco-freak with his or her "deep ecology" is a rare species – overall in this world, and even so in Europe? First we have to recognize that boycotting GM food ingredients in most cases makes no large difference in the consumers (or supermarkets) purse. As it is commonly known among rural sociologists, the farm gate price is only a tiny part in the value adding chain of most food products. With premiums for non-GM crops around 10 percent, in most end products the difference is no longer visible. Only avoiding GM feed in meat production is not so easy, given the large amount of corn and soya needed to rear livestock under agro-industrial conditions. And significantly, up to now the anti-GM-lobby was not so successful in forcing supermarkets into boycotting meat from GM fed animals. Second, we can observe that something like a "green hedonism" spreading since at least the 1970's amongst the more educated and younger urban population, often alongside post-materialistic values (Gill 2003). "Green

hedonism" does not mean a very ascetic ecological attitude and a consequent ecological lifestyle. On the contrary, it partly contradicts ecological requirements. However it is common among urban middle classes and leads to a revalorisation of rural areas in a twofold way.

First, it values "natural", this means more ecologically and/or traditionally produced food. Food should transport the image of nature as a contrast to the artificial and unhealthy city. Clearly, food trends show a more ambivalent picture, with industrialised convenience food on the advance due to changing family structures. Or people are saving money on food to invest it in goods with more prestige value for conspicuous consumption – i.e. in more powerful cars and larger apartments (Gill/Nikutowski 2005). This is the real everyday behaviour, where other preferences, e.g. for time saving and individual careers are stronger than green attitudes. Only on Sundays – Sundays in the real or more literal sense – is behaviour following the green attitude. However the food ideology is pretty green since a long time. Look at the advertising! Even the most artificial fast-food is shown in a bucolic idyll and not in the context of its real provenance, i.e. test tubes and industrial plants. This is only talk, but talk matters insofar as it provokes indulgence payments – the first European supermarkets which boycotted GM crops were British, searching for a scapegoat at the height of the BSE crisis when they had been on the defensive for pressuring farmers into cheaper and more industrialised production (Gill 2003). Nevertheless, even if the symbolic revalorisation is stronger than the real, the economic demand for ecological or traditional food ingredients is rising.

Secondly, many people and especially families with children want to live in privately owned and individually situated houses with their own gardens rather than in rented apartments in larger buildings (Dt. Bank Research 2003). Lower accommodation prices outside the cities may play a part, but they are often compensated by higher transportation costs. Besides other motives – e.g. the morally dangerous city - the mentality of green hedonism seems to contribute, seeing the city as a smoky, noisy and unhealthy place in contrast to the gardens, fields and forests in more rural regions. Ironically for the green mentality this urban sprawl– with boosting car traffic and heating wastage – destroys the environment more than city life does, but in certain regions it may compensate or over-compensate the depopulation of rural regions in consequence to agro-industrialisation. The same is more or less true for tourism, with the difference being that the suburban housing is within the reach of large settlements, whereas tourism is taking place on larger distances and with more flexibility in its choice of the region. Housing and tourism activities in some places may compete with farming. But tourism and housing, and especially with the motive of green hedonism, is more attracted by regions where agro-industrial farming is not possible: Take for example regions in the mountains where landscapes and traditional farm life since the 19<sup>th</sup> Century are culturally constructed as beautiful and where farming is economically on the edge since productivity gains are almost impossible. Here tourism, together with the premium prices for ecological and protected origin products, is the only way of maintaining the livelihood of farms and the possibility of rural settlement as a whole.

What are the property forms of this revalorisation of the land? Partly trade mark regulation and certification come into play: for ecological food, for culturally preserved products (denominations of protected origin), for non-GM crops, which under certain circumstances can be labelled as such.

In other respects, identity preservation within the EU works indirectly, with mandatory labelling imposed on GM crops - this means that both parties must know what they sell, keeping the production spaces and distribution channels separate. Up to now, GM free zones within the EU except for Spain are more a sort of political manifestation (remember the "nuclear weapon free zones") than an economic decision, because until now most farmers would not grow GM plants anyway. In general, marketing of the region plays an essential role, giving it a certain image on the food, tourism and real estate markets. These images are often spontaneously created through the everyday behaviour of farmers, landlords and restaurant owners and the cultural consent they have developed over time, while sometimes they are willingly influenced through communal decision on rural development perspectives. Most of this property is immaterial in the sense that it creates imaginations and not things, but in contrast to intellectual property, most of it is not privately owned. It is common cultural property, which then can be commercialised by members of the community in form of material goods: food products, accommodation, restaurant meals, transportation services or real estate.

#### **4. Consequences for social inequalities between and in rural regions**

The term "inequality" normally refers to the distribution of goods, taken for granted the valuation of these goods. I have tried to demonstrate that different modes of valuation exist which we can study, perhaps richer in contrast on the periphery than in the centre, because in the centre there is more economic pressure for homogeneity. Firstly, we can still observe in rural regions strongholds of the valuation of social identity which may explain why people hold on to living in their mountain villages and continue with scarce farming even if their financial income is as a result far below the average for industrialised regions. Secondly, we can see in other rural regions the development of high tech farming which may end up with very little labour needed and totally artificial food (Busch/Lacy 1988). Thirdly, we can investigate new valuation and life forms, which do not continue the faster-bigger-higher motives of saturated utilitarianism, but are in deliberate contrast to it.

If we accept the argument that there may exist different forms of valuation, then we have ask how we can measure inequality. The usual measurement within the utilitarian world view is income or property in money terms. Though this measurement is widely used throughout society, one may wonder whether it is adequate across the different valuation forms. For the older forms which rely on social coherence and on subsistence economy it is clearly inadequate – thus e.g. making the poverty measurement of the World Bank in terms of dollar-per-capita income nearly meaningless. For the newer forms there exist similar problems because knowledge and culture will not or can not always be commercialised, since appropriation does not work in the usual form of market exchange. Therefore better criteria may be derived from population surveys. For regions one can look at the development of settlement over time: If a region is depopulated, this will mean that people do not want to live there anymore; if it becomes repopulated, some attractions must exist which are subjectively valued by the new dwellers. A second criterion may be the mortality within the region. If the life expectancy is above a comparable average this should be indicative for the sustainability of the corresponding life forms from a more objective point of view.

But anywhere, even from the perspective of the money criterion many rural regions in Europe seem to be better off with less agro-industrial farming and more green hedonism attractions. And within the region, income inequality is probably less severe since the commercialisation of green hedonism attractions is not necessarily based on business concentration as it is the case with agro-industrial farming. However this does not mean that all regions could shift now to green hedonism – the demand for this in terms of money and leisure is restricted and it depends to a good part on wealth and thus on productivity gains (but these in turn lie not necessarily in agriculture). Hence we should see regions which will prosper in money terms on the agro-industrial path (and with GM crops), we may see regions which will expand green hedonism, and – perhaps regrettably – we will see regions further depopulating. Until perhaps a hedonistic prince, bored and horrified by the meanwhile overcrowded Tuscany, will discover them and kiss them awake.

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