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## Neo-Endogenous Development and the Revalidation of Local Knowledge

*Abstract:* This article is about rural development. This theoretical concept encompasses the perspective of neo-endogenous development, i.e., a developmental idea rooted in the assumption that two different types of resources should be utilised side by side: internal resources, unique for a particular community, and external resources, offered by the state, non-governmental organisations and supranational institutions and organisations. The combination of two major types of knowledge plays an important role in this mechanism: so-called external, expert knowledge contributed by experts and representatives of the said institutions and local knowledge, contributed by members of the local community and based on experience and tradition. The main idea of the article is that only the combination of both types of knowledge will guarantee success, i.e., specific change. This process is empirically illustrated by a case study of the reintroduction of the “Polish red cow” in one of the local administrative districts of the Małopolska voivodeship. This study was conducted in 2005 by a group of sociologists from the Jagiellonian and Łódź Universities within the framework of the CORASON Project (*A Cognitive Approach Towards Rural Sustainable Development*), part of the European Union Sixth Framework Programme.

*Keywords:* expert knowledge, local knowledge, neo-endogenous development, rural communities.

### Introduction

This article is about rural development, a problem area which is rapidly becoming a central issue in contemporary rural sociology. This rapid process began in European rural sociology when a debate on the outcomes of the LEADER program was published in *Sociologia Ruralis*, the leading journal of the European Society for Rural Sociology (cf. van der Ploeg et al., 2000). For sure, this problem area is value-laden and it does not limit the developmental mechanism to one type of factors or the developmental process to one aspect or area of change. In order to acquaint readers more closely with this problem area we shall now present the basic elements of the discussion on rural development which is currently taking place in the sociological community. Finally, it is worth concluding these introductory remarks with the observation that the ongoing discussion among European rural sociologists concerning rural development processes has a distinct practical and applied aspect. Solutions at the level of models and developmental perspectives have one major purpose: to help to construct and implement optimal developmental strategies.

In order to present our contribution to this discussion we have decided to structure our article in a specific way. We would like to begin with a few general remarks on the ongoing debate on social development. Next we shall take a closer look at selected aspects of the discussion in the rural sociologists' community on various models of rural development in contemporary society, paying particular attention to the concept of so-called sustainable rural development. We shall try to focus on one aspect of this concept in particular—one which is related to co-operation among various agents or social actors and utilisation of their different types of knowledge. This discussion will be illustrated with a case study of a developmental project which is now being implemented in the Małopolska voivodeship.

### **Developmental Processes—Basic Considerations**

Before we move on to a more specific discussion of rural development we would like to stop for a moment to consider a more general issue, i.e., what should the developmental process actually involve and what is its major outcome to be. In other words, what criteria can we adopt to judge whether we are dealing with development or regression, which of the observed phenomena are a sign of genuine development and which are merely a sign of ostensible development.

It is worth reminding readers that this problem was taken up, for example, by the United Nations Organisation and particularly by one of its agendas, the United Nations Development Programme, using a special Human Development Index. This index is an estimate of countries' level of development and is reported annually. It also helps to make international comparisons.<sup>1</sup> Without going into details and deliberations on the complex construction of this index, it is worth stopping for a moment to consider the essence and meaning of the phenomenon called development, a phenomenon which—according to the UN philosophy—cannot be reduced solely to the problems of economic growth. It is worth mentioning three concepts in this context, concepts which—we are deeply convinced—outline the fundamental idea which social scientists associate with development.

First we would like to quote one of the biggest authorities in contemporary economics, Nobel Prize winner in this discipline in 1998, Amartya Sen, the man who created the aforementioned index. In one of his works, Sen (2002) defined development as *development as freedom* and said that it is more important for people to be free than to be rich. The well-known American sociologist Philip McMichel (2004 of Cornell University agrees and points out that developmental processes should enable every man and woman to take full advantage of material resources, civil liberties, religious freedom etc. Rural researcher Katar Singh (1999) also apparently endorses this opinion and says that the success of developmental programs can be measured mainly in terms of the opportunities they provide not only to improve the physical human condition but also to realise such values as pride, autonomy and respect in the eyes of

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<sup>1</sup> This philosophy was adopted to prepare the report on rural development in Poland for the UNDP Bureau in this country (cf. Gorlach [ed.] 2000).

others. Therefore, when endeavouring to evaluate different developmental strategies and their various goals and consequences, we ought to keep these opinions in mind because what they really say is that development should further the emancipation of humankind.

### **Models of Rural Development**

The European Union and its predecessors, the European Community and the European Economic Community, have a rich tradition of various developmental strategies addressed to the rural areas. Without going into detail it is worth bearing in mind that these strategies were rooted in several different models of rural development. Historically speaking, the first model was the so-called agri-industrial model based on the philosophy of agricultural modernisation and increased agricultural productivity. For a number of decades this model provided the basic framework for the Common Agricultural Policy. However, despite its many advantages, such as growth of production, increased productivity, increased farm area, relative stability of farmers' income etc., it also had a number of disadvantages. The most important negative consequences were: gross overproduction, elimination of less productive farms, depopulation of the countryside, increasing costs of storing surplus farm produce and subsidising its export. Transformation of a multitude of farms into a much smaller number of "food factories" led to the increasing dependence of agriculture on external resources in the form of subsidies and subventions, production quotas etc. Worse still, rather than encouraging rural development, this model led to rural marginalisation. The countryside was becoming merely the sight of shrinking agriculture production (in terms of number of farms and farm employees). Did this process increase the freedom of those who persisted at the cost of their less fortunate peers on this technological treadmill? The answer must be negative. It led to their enslavement, made them dependent on external resources, on food processing firms which dictated the rules on the food market, on governments bickering over the size of subsidies and subventions.

It is also worth mentioning the basic developmental mechanism responsible for—so to say—the realisation of the agri-industrial model. This is clear example of exogenous development. Exogenous factors (transfer of technologies and other solutions) and external actors (experts, engineers, managers) are the basic agents in this model. The philosophy of agri-industrial development involves the implementation of one, universal model (the industrial model of agriculture) in various local contexts. Regional specificity is ignored leading to marginalisation of the role of local social and economic resources. The central element in this model is the assumption that only the transfer of external resources to the countryside can stimulate rural development.

The reaction to the negative consequence of agricultural "industrialisation" was a series of CAP reforms which began in the 1980's. Without going into the details of this ongoing process, suffice it to say that a new philosophy of rural development based on the so-called post-productivist model emerged in the early nineties. This model resulted from the complete negation of the modernisation paradigm.

Basically, it focused on other functions of the countryside than production, mainly recreational and residential ones. In its extreme version the model actually claimed that agricultural production was an undesirable form of activity which collided with the “green service” sector. Attempts to implement this developmental model usually led to conflict between farm producers and those who strove to alternatively utilise the picturesque and environmental assets of the rural areas. It also turned out that sole focus on extra-productive functions led to reduction of the importance of the countryside and to its marginalisation because it radically reduced its developmental potential to recreational or residential functions for people who treated the village as sleeping quarters. Once again, the failure to utilise countryside resources fully and comprehensively did not encourage social emancipation. The vernacular countryside population was dominated by newcomers and could not fully realise its aspirations.

The mechanism in this vision of transformation is rooted in a specifically understood notion of endogenous development. The purpose of course is not to isolate or even shut off the countryside community from any external influence as in the radical de-linking development strategies (Szczepański, Krzysztofek 2002). It is worth noting, nevertheless, that as far as countryside inhabitants or communities are concerned, the situation presents itself as a conflict with the surrounding world. The village or the local community become a land conquered by newcomers. The latter recognise the enormous value of local resources and want to make them a base of development monopolizing the way in which they are used. Endogenous resources (usually reduced to natural resources such as lack of pollution, unspoiled landscapes etc.) are supposed to satisfy the needs associated with a comfortable life or recreation. In practice this leads to the marginalisation of traditional village communities whose existence is based on farming. For this reason the terms “social marginalisation” and “social exclusion” seem to be permanently associated with the post-productivist model. In its radical version this model boils down to a uni-dimensional image of the village and, paradoxically perhaps, replicates the extremity of its agri-industrial antithesis.

Critique of both the aforementioned development models has led to the emergence of a third model called *sustainable development* (Marsden 2003). We must remember that this last model is in no way limited to the countryside and agriculture. It has also found a legitimate place in widely-understood socio-economic development strategies.

We will not go into the critical presentation and discussion of the whole debate on sustainable development here. It is worth mentioning, however, that this concept is used not only, or not even mainly, in scientific publications. It is much more common in various program documents produced by European and world developmental agencies. A look at the relevant literature will reveal that particular attention is given to the fact that sustainable development is a process which takes place on several different planes simultaneously. Let us just quote Robert Goodland’s model which distinguishes three dimensions of sustainable development. The first dimension is the outcome of “(...) systematic community participation and strong civil society” (Goodland 1995: 3). This, in other words, is a participant development strategy, i.e., an approach which assumes participation of interested parties themselves in the

formulation or implementation of development strategies. The second dimension is related to economic matters. Economic transformation is conceived as sustainable development and is based on the assumption that economic capital must be stable. The widely-accepted economic balance concept focused on capital maintenance (i.e., its upkeep in an undiminished condition) has been in use since the Middle Ages, Goodland (1995: 3) explains, and has helped merchants to calculate the level of consumption of sales profits which will not restrict their trading potential. In other words, one of the elements of sustainable development is a non-expansive economic strategy which limits consumption and profit in order to reduce the risk of being left without sufficient initial means. The third dimension of sustainable development has to do with the natural environment. Here, the concept is based on the idea that environmental sustainability is a matter of human choice. "Environmental sustainability seeks to improve human welfare by protecting the sources of raw materials used for human needs and ensuring that the sinks for human wastes are not exceeded, in order to prevent harm to humans" (Goodland 1995: 3). This "environmental" model has been traditionally identified with the "desirable" type of development and is the most classical element of the "balancing" of economic and social transformation.

The main postulate of the concept of sustainable development therefore suggests the need to adopt a transformation strategy which will not destroy the natural, economic and social resources of a particular territory and will therefore encourage development in the future as well. In this sense balance means equilibrium of interests of present and future users. This is the first element of the concept of sustainable development and its focus is on sustainability. By ensuring sustainability we make sure that future generations will also be able to emancipate and be free.

The next dimension of sustainable development involves the balance between various directions of transformation. For example, care is taken to ensure the simultaneous increase of existing economic potential, development of local human resources and conservation of the natural and cultural environment. In this sense the idea of sustainable development is the antithesis of ideas which promote intensive, one-sided and uni-dimensional transformation. We can call this second element of sustainable development self-support. The various directions of transformation protect one another. An agricultural slump will not be a catastrophe if reduced income can be compensated for by, e.g., agritourism or other services, such as artistic handicrafts. Hence the range of freedom is wider and people do not depend on one direction of development alone or one type of economic activity.

Thirdly and lastly, the idea of sustainable development rests on the balance between utilisation of the resources available on a given territory and means obtained from external sources. In this sense sustainable development resolves the controversy between two developmental strategies, exogenous and endogenous. One-sided and exclusive dependence on external resources (exogenous development) or internal resources (endogenous development) is rejected. Sustainable development is essentially about the utilisation of one's own resources in order to source external resources for the optimal enhancement of local resources. Hence the third element of the idea is integration. Integration of these two types of resources provides a more solid

foundation for development, expands the available choices and therefore helps to realise the principle of freedom.

In order to give a more detailed account of the concept of sustainable rural development one must draw attention primarily to such specific issues as: the need to preserve the natural environment, heterogeneous economic development including non-intensive and non-industrial farming, valorisation of local resources (landscape, conditions for classical tourism, agritourism, recreation), obtaining external resources (project participation, obtaining grants), development of local government, local civil society etc. This complex developmental strategy should ensure continuity of the processes of change and their long-term maintenance. This means that it is necessary to avoid the risks involved in basing one's developmental strategy on one, dominant factor (e.g., only intensive farming or only the special qualities of the natural environment) because, were this strategy to be blocked (e.g., due to decreased demand for a given farm product or withdrawal of interest of potential tourists), development would come to a standstill.

To summarise this part of our discussion we must say that the sustainable development model means development which is long-lasting, self-supporting and integrated. This last characteristic applies to the type of mechanism responsible for such development. The combination of utilisation of local (endogenous) resources, their valorisation (frequently mentioned in the literature; cf. e.g., Marini & Mooney 2006) and the securing of external resources creates an innovative, "neo-endogenous" developmental mechanism. The defining feature of this mechanism is participation of the interested parties in the formulation and application of the developmental strategy in co-operation with other social actors. Hence Goodland's already quoted observation concerning sustainable development as the outcome of the efforts of civil society and its representatives. In the next section we shall take a closer look at the nature of the neo-endogenous mechanism.

### **The Nature of the Neo-Endogenous Developmental Mechanism**

In the context of analyses relating to thus conceived sustainable development and its mechanism called neo-endogenous development, we would like to signal two issues which, we feel, are of utmost importance. First and foremost, we would like to draw attention to the fact that this particular developmental mechanism requires the presence and, more importantly, the co-operation of various social actors, both at the stage of construction of the developmental strategy and at the stage of its implementation. This is discussed, for example, by the Australian sociologist Geoffrey Lawrence who draws attention in this context to the increasingly widespread phenomenon called "governance." According to Lawrence, governance involves five basic characteristics (Lawrence 2005: 167):

- a so-called 'bottom-up' approach to decision-making, with local communities being encouraged to take ownership of development and natural resource management problems

- the devolution of responsibility to the regional level. As an element of this, the desire to ‘empower’ citizens both to understand the issues and to act collectively to overcome them—that is, to raise their capacity to act for themselves
- a more responsive bureaucratic response to community plans and needs—particularly ‘whole of government’ approaches and an alteration to the organisational culture of ‘stove piped’ government agencies. The state becomes an ‘enabler’
- creation of a community—initiated action plan, with clear goals and timelines
- a series of (often complex) measures for accountability in the expenditure of funds, and in the monitoring and valuation of sustainability applications

It is noteworthy that such an approach to the concept of development also enforces at least some modifications in the functioning of involved institutions. Let us quote Geoffrey Lawrence once again. He mentions the importance of three processes here. First, he draws attention to the need to change the action logic, at the national and regional level, of those institutions which must switch to long-term action strategies in order to enlarge their mandate and ensure better understanding and co-operation with citizens and local communities. These long-term strategies are generally incompatible with the short-term perspective determined by 3–4-year electoral cycles. Second, adoption of such a developmental mechanism encourages the development of mutual trust between citizens and governmental institutions. Third, it creates the opportunity to discard formalistic, unidirectional “social consultations” on behalf of more open and flexible forms citizen involvement in more permanent participation in public life (Lawrence, 2005: 165).

Note, however, that the mechanism of neo-endogenous development by no means invalidates or pushes aside the institution of the state or regional levels of government and administration. In this case, the goal is to achieve partnership and long-term co-operation among various social actors. Other writers who discuss these problems have pointed out that ‘engagement with development implies that external institutions, both national and international, should intervene in the activities of local people’ (Bicker, Sillitoe & Pottier 2004: XI). Neither the state nor global institutions are bystanders. They both have a very important partnership role to play in the support of local developmental processes. This principle is to be realised through the supplementation of the inner potential of different areas with any missing elements so as to keep the process of positive change in motion.

When considering co-operation among various social actors we must mention another crucial question in this context, i.e., the question of the different perspectives (different consciousnesses, value systems, action logics) adopted by the social actors responsible for development. In other words, we must consider the various types of knowledge which different groups of partners bring to the situation. Bearing in mind the definition of the mechanism of neo-endogenous development, we must take into account the perspectives of all the actors involved, i.e., to be more precise, the entire existing knowledge spectrum.

Three major types of knowledge merit our particular attention. Each type can be important for the processes we are discussing. The first type of knowledge is scientific knowledge, the product of scientific research produced by designated people (researchers) and then disseminated throughout society and passed on to the repre-

sentatives of various social groups. This knowledge is felt to be “objective,” verified and applicable in various settings and conditions. It is specialised knowledge, either related to a specific scientific discipline or interdisciplinary, created according to specific methodological rules, documented, publicly accessible in books and scientific journals, taught in public institutions within their syllabuses. Scientific knowledge is formally legitimate, i.e., it has a specific, institutional certificate and is impersonal (i.e., neutral with respect to the personal features of its producers and scholars such as sex, age or organisational affiliation).

The second type of knowledge is the type often referred to as managerial, administrative or even political. It has all the major characteristics of scientific knowledge but is obviously and closely related to the processes of decision making and the execution of power. What makes it unique is the inclusion of normative criteria which delineate the principles and contents of decisions and the nature and contents of applied schemata and procedures. This knowledge is not always public or published. It is sometimes based on the individual or group experience of officials or decision makers.

The third type of knowledge is so-called local knowledge. As opposed to scientific knowledge, it is rooted in the local social, cultural and economic context. It is the result of long-term experience and is often transmitted orally from generation to generation by informal familial or neighbourly channels. It is often related to the age, sex or social affiliation of the transmitter and the recipients. This type of knowledge does not usually circulate in writing and therefore it functions as “hidden knowledge” which is relatively inaccessible for outsiders. One of the noteworthy features of local knowledge is its lack of formal legitimisation—it is not based on inter-subjectively recognised certificates or normative regulations. It rests on two pillars, tradition and every day experience. This is why it is sometimes called *lay knowledge* or *practical knowledge*. We must point out, however, that local knowledge is not a homogeneous, consistent system, fully shared by the community in question. It is rather a pluralistic current of “collective wisdom” in which multiple threads are held together by shared references to local reality. It includes for example “social” knowledge of functioning within a particular rural community and knowledge of a traditional craft or the ability to farm the land in local climatic conditions.

As far as the role and significance of these three basis types of knowledge in contemporary society are concerned, we must point out their different presence in the developmental models listed earlier. To begin with, in the practice of social change, different types of knowledge intersect thanks to various actors. It is usually possible to identify all three categories in a particular developmental program/project although the nature of this pluralism is dynamic. Due to quite major differences, the different types of knowledge may mix but they may also conflict. Depending on the specific relations among them the transformations will have a different course, direction and outcome. Interestingly, the knowledge dynamic is different in each developmental paradigm.

Scientific (expert) knowledge dominates in the agri-industrial model. Economists and representatives of the agricultural sciences (biology, chemistry etc.) but also the



social sciences are the party which indicates the optimal solutions regarding the most effective type of farm, production specialisation or level of productivity. In this model the developmental strategy is basically rooted in the transfer of expert knowledge to farmers and the local community. Local knowledge is degraded to the level of insignificant or totally meaningless tradition which—at best—is a barrier to modernisation. There is a clear opposition between the potential of external knowledge resources and the deficit of internal, local resources which are seen as the “backwater of archaic solutions.” In this logic, the specific local reality has minor significance vis-à-vis the assumed universal applicability of the modernisation paradigm. Hence universal scientific knowledge becomes all-important and, with the help of managerial knowledge, it is supposed to lead to the planned marginalisation of the “obsolete” local knowledge.

The knowledge dynamic is rather different in developmental strategies based on the post-productivist model. In this case, however, despite the allusion to the endogenous model postulating the utilisation of internal resources, the primacy of local knowledge is not at all evident. This is because in this paradigm the most important rural local resources are natural (environmental) whereas other (socio-cultural) resources are definitely secondary. Therefore the value of local knowledge is only utilised to the extent that it can help to conserve the environment or sustain the “rustic landscape.” This limited utilisation of local knowledge is also the result of the fact that, according to the post-productivist model, farming is a niche. The knowledge of traditional local communities centres on activities relating to cultivating the land and breeding animals and therefore, almost by definition, it is thought to be useless in the new reality. More significance is attributed to managerial knowledge which helps to develop and manage the “green service” sector. Expert knowledge is also recognised for its capacity to protect the cherished natural environment.

Yet another picture emerges when we look at the sustainable development paradigm. In this model all types of knowledge provide the basis for construction of transformation strategies. This is highlighted by the fact that sustainable development is sometimes defined as “a set of practices based on knowledge” (Bruckmeier 2005). Hence significant weight is given to both scientific knowledge and local knowledge. Moreover, so-called managerial (administrative) knowledge is also highly regarded as a potentially effective instrument for the integration of the two previously mentioned types of knowledge and for the organisation of co-operation among various social actors. The sustainable development strategy is based on the co-operation of external actors (experts, researchers, various specialists) who mainly represent expert (scientific) knowledge and individuals who apply such knowledge to develop transformation strategies on the one hand and local actors who have their own local knowledge and are deeply rooted in the specific local community on the other hand.

This paradigm validates local knowledge which it seen here as an important resource, the result of the experience of many generations which helps to successfully implement innovative solutions in local reality. Only by skilfully building bridges between the general project rationale laid out by the specialists and the specific locality is it possible to encourage the genuine and lasting rural development and improve the

quality of life of the countryside community. Geoffrey Lawrence points this out in the conclusion of his discussion when he says that [this approach to development—T. A. and K. G.] “gives legitimacy to local knowledge and the sharing of values, with local people not only having a voice in regional planning, but also helping to shape the process of change” (Lawrence 2005: 165).

Bicker, Sillitoe and Pottier seem to endorse this opinion in their book, significantly entitled *Investigating Local Knowledge. New Directions, New Approaches*. The authors first accept the basic assumption that local knowledge is becoming increasingly important and infer from this assumption a number of directives concerning how this knowledge should be applied. Its application in developmental processes is—they argue—usually viewed as a helpful way of tackling technical problems (Bicker, Sillitoe & Pottier 2004: X).

This way of utilising local knowledge should help to trigger the mechanism of neo-endogenous development (the combination of internal and external resources) by means of the following interface model: “Local knowledge needs to interface with global scientific knowledge, each drawing on the other to effect sustainable adaptation to changing natural and socio-economic environments” (Bicker, Sillitoe & Pottier 2004: XI). This approach to organising developmental projects, say many writers, should improve their effectiveness and implementing institutions are becoming increasingly aware of this.

These observations highlight the importance of the knowledge contributed by members of the local community to the adoption and implementation of developmental strategies. Various elements of local knowledge are very useful in the creation of a sustainable system of land management in the countryside. Local knowledge is also the key to effective development of civil society in rural territories and to conservation of the natural environment and biodiversity. It greatly contributes to the development of non-agricultural rural economy and “regional” food production. Finally, local knowledge can be used to plan strategies of sustainable resource management in the broad sense.

### Case Study

In 2004–2006 the aforementioned issues were subject to research within the project “Cognitive Approaches Towards Rural Sustainable Development: The Dynamics of Expert and Lay Knowledge.” This project, better known under the code name CORASON, was part of the European Union Sixth Framework Programme. This was a cooperative project realised by sociologists, economists, political scientists and geographers from 12 countries: Ireland, United Kingdom, Portugal, Spain, Greece, Italy, Germany, Norway, Sweden, Czech Republic, Hungary and Poland. Poland was represented by a group of sociologists from the Jagiellonian University (Krzysztof Gorlach and Tomasz Adamski) and Łódź University (Andrzej Pilichowski, Paweł Starosta and Krystyna Dzwonkowska).

The CORASON objectives were based on a discussion of the mechanisms of rural development presented earlier in this article. The main goal was to determine the extent to which co-operation among the various actors who contribute different types of knowledge determines the success of rural developmental projects. In particular, we strove to demonstrate the relative contributions of local knowledge/tradition on the one hand and scientific, expert knowledge and administrative knowledge represented by the regional and local authorities or nongovernmental organisations on the other hand. It was hypothesised that only if these different actors co-operated and applied the various types of knowledge would the projects succeed, i.e., trigger processes of sustainable rural development.

In order to gather the material which would later be used to test this hypothesis, a selection of projects of rural development implemented in the countries listed above, i.e., CORASON participants, was analysed. These projects focused on such issues as land use management, development of civil society, sustainability of natural resources and biodiversity, non-agricultural rural economy, local food production, innovation and sustainable rural resource management strategies. In each case the goal was to target the participants of the particular projects (regional and local authorities, nongovernmental organisations, local leaders, experts etc.). Using the methods of observation, in-depth interviewing and document analysis, we tried to discover how each of the project participants contributed to the project and to determine the signs of co-operation with other participants and problems therewith. In particular, we wanted to know if experts and representatives of the authorities (who have access to scientific and administrative knowledge) utilise the knowledge and experience of local communities and local conditions.

In Poland the study was conducted in two voivodeships (provinces): Małopolska and Łódź. We must say that this choice was not dictated by any advanced and refined procedure because national or regional representation was not determined by the research objectives or strategies. Instead, each national team had to analyse deliberately selected rural development projects in order to illustrate, above all, the mechanism of co-operation among the different project participants and their utilisation of the different types of knowledge at their disposal. It is worth mentioning, however, that the decision to designate the Łódź and Małopolska voivodeships as so-called regional research areas was based on a more general rationale. Because of the heterogeneous nature of its rural territories, the Łódź province is "very typical" for Poland. In other words, data on e.g. the agrarian structure, soil, types of crops, area of woodlands, the lie of the land etc. in this region resemble the national characteristics very closely. Małopolska province, on the other hand, is very untypical. For example, this region has a very fragmented agrarian structure and heterogeneous lie of the land and a large portion of its territory is submitted to special conservation laws. In each of these voivodeships we analysed the method of implementation of various developmental projects in selected local administrative districts/communities, i.e., so-called local implementation areas.

For the purpose of illustration we have decided to select just one of the projects we analysed to present in this article. In our opinion, this case is a particularly good

illustration of the complex mechanism of utilisation of the rural community's local knowledge. This project is devoted to conservation of the genetic resources of the Polish red cow and is part of a larger project whose purpose is to conserve natural resources and biodiversity in this country. The project was implemented in the Jodłownik district which is situated in the middle of the Małopolska province. To facilitate the understanding of the socio-economic determinants of this project we shall begin with a brief presentation of the district. The Jodłownik district consists of eight villages and has a population of eight thousand. It is a traditional rural area and also has a long history of breeding the Polish red cow, reaching into the nineteenth century. In the '70 this tradition lost its significance and gave way to the cultivation of apples and currants. In 2002 nearly 900 orchards were specialising in the production of apples and slightly over 200 were producing currants. Considerable expanses of land were also devoted to the production of rye, wheat and oats (over 1200 ha in 2002) as well as potatoes and vegetables (332 ha and 149 ha respectively). The farms in this district are still relatively small and fragmented and the quality of the soil is usually poor. Farmland still occupies the relatively largest portion of the entire area of this district. The largest farm, in Szczyrzyc, belongs to the Cistercian monks and has belonged to them since the mid-thirteenth century. The Cistercians cultivate 112 ha and lease over 64 ha to other users. The farm was nationalised during the communist regime. The Cistercian monks regained it in 1993 and from then on it has been the largest participant of the program of revitalisation of the Polish red cow in the district.

When analysing the project we interviewed many people: employees of the Institute of Animal Science in Cracow, the project scientific co-ordinator, representatives of the provincial authorities of the Małopolska voivodeship and the local authorities of the Jodłownik district. We also interviewed the director and employees of the farm adjoining the Cistercian monastery in Szczyrzyc (Jodłownik district). We analysed many documents prepared by the Institute of Animal Science and the local authorities. We also asked the breeders themselves to share their opinions with us.

As far as the project for conservation of the traditional cattle breed, the "Polish red cow," is concerned, this project involves many actors: national and provincial authorities, research institutions, the local authorities and the local community, mainly the farming community. In this sense the project may be viewed as a unique combination of different types of knowledge. This approach to rural development is largely fuelled by research institutes' determination to conserve the unique genetic material of animal breeds and by the economic interests of farmers pursuing effective albeit extensive forms of breeding. It is worth adding that this project is being implemented in an area which has a rich tradition of breeding the Polish red cow, harking back to the nineteenth century. The first association of breeders of Polish red cattle was established in southern Małopolska province in 1894, long before World War I. In the inter-war period (1918–1939) this breed of cattle accounted for nearly 25% of the entire cattle population in Poland. In the nineteen-sixties this proportion dropped to 18%. The population rapidly diminished, however, due to two major factors. First, the communist regime began to implement the policy of intensive development of large-scale and industrial farming, and Polish red cow was replaced with other breeds being

allegedly more “productive” in terms of milk and meat yields. It also strove to limit the breeding of the red cow to just part of the Małopolska region. However, with a little help from the state, some farmers in the region made an effort to maintain this breed of cattle and in the mid-seventies they led to the establishment of a reserve of the Polish red cow in south-east Małopolska. But in 1982 the Polish government decided to discontinue all regional breeding projects and all forms of financial assistance.

The state authorities returned to the idea of breeding the Polish red cow once again in 2000. Three basic goals were indicated at this stage of the project: 1) to reproduce the basic herd of 750 pure-breed Polish red cows; 2) to preserve a genetic bank and 3) to reproduce the specific features of the Polish red cow, i.e., adaptation to mountainous terrain, high fertility, high calf vitality and high milk yield. All these factors are important determinants of the breed’s economic utility.

Currently the project has a clear framework of state financial support. Each year farmers who adhere to the project receive a subsidy of 1300 PLN per head of cattle from the Ministry of Agriculture and Rural Development. Additional financial support comes from European Union funds.

The Institute of Animal Science is the national co-ordinator of the project. Special structures have been created within the Institute (an advisory committee and work force). These structures are responsible for evaluation of all operations undertaken within the framework of the project. Project management is an example of close co-ordination of scientific knowledge (representatives of the Institute of Animal Science), local knowledge (local farmers) and managerial knowledge (local authorities, representatives of the Institute of Animal Science). Two large animal farms are now operating in the Jodłownik district within the framework of the contract (the monastic farm is the leading one). Each farm has about 30 pure-breed cattle. Several smaller farms with about 10 cattle apiece are also contracted.

Although scientists were responsible for the implementing of the project involving preservation of the Polish red cow, the project is actually a revival of a long, rich breeding tradition in this part of Poland. It can be viewed as an example of a larger, integrated approach to the preservation of scarce breeds of fauna and flora. As far as the Polish red cow is concerned, the goal is to propagate a more extensive breed which is better adjusted to the natural local conditions.

Not only researchers, local authorities and farmers are involved in the project. So are monks from the Szczyrzyc monastery. Each of these social actors represents a different set of motives and these motives can be analysed as indicators of different “types of approach.” The first one is “purely scientific” and is most obvious in the researchers who are focused on “conservation” and “documentation” as well as the “revival” of almost extinct genres of fauna and flora. The second, “economic,” one can be found in representatives of the local population (the local authorities, farmers etc.). As far as the Polish red cow revival project is concerned, the researchers applied a specific “economic incentive” and emphasised the economic advantages of breeding in local conditions.

This project is an important contribution to the implementation of the idea of sustainability and biodiversity. It also challenges the model of specialised, intensive,

industrial farming. If we assume that intensive, industrial farming is essentially about the breeding of selected “meat” or “milk” cattle, then breeding of a local breed of cattle obviously represents a different approach to agriculture. Another significant aspect of the presented project is the importance ascribed to the popularisation of the principles of organic, environment-friendly farming. Meetings with farmers and exhibitions of cattle have as their focus, among other things, the need to preserve local varieties of flora and fauna and reduce the intensity of production.

So far at least, the presented case is an example of a successful developmental project. If so, let us attempt a closer look at the factors responsible for the successful realisation of the project objectives. Two types of factors can be identified. The first one is associated with co-operation among the different project participants (researchers, farmers, monks, local authorities, representatives of nongovernmental organisations etc.). Thanks to this co-operation, the project is a dynamic joint venture rather than the implementation of top-down preconceptions (cf. the neo-endogenous, sustainable model). The second factor is economic. As far as the “Polish red cow” project is concerned, the interests of farmers, financially supported by the state and breeding cattle in harmony with local conditions, as well as the interests of the local government of the Jodłownik district who are determined to revive the breeding of cattle on their terrain, are important determinants of success. In other words, successful realisation of the “Polish red cow” project seems to closely link scientific values (protection of natural resources) and economic values (extensive breeding which is profitable for the farmers) as well as the strong support of the local authorities.

One of the conditions of effective utilisation of the different types of knowledge involved in the realisation of the project is apparently close, direct co-operation between representatives of the scientific community, managers responsible for realisation of the project in situ and members of the local community. This shows how important it is to develop a co-operation network of project initiators and participants.

Not everything in this organisational network is functioning smoothly, however. The researchers involved in the conservation of the Polish red cow pointed out several problems in their co-operation with national association of cattle breeders and its regional branch. One senses a deficit of communication between the initiators of the project and those breeders (association members) who want to breed intensively, on a mass scale. The contrast between the idea of extensive breeding of a traditional breed and intensive production, the association’s main focus, is making co-operation difficult. It will not be possible to overcome this disagreement without changing the mentality of breeders affiliated in the association and attached to the agri-industrial model of animal production.

The case of the Polish red cow highlights the importance of the mutual impact of various social actors in the realisation of sustainable development projects. This impact leads to the confrontation of different mentalities and different perspectives. Adequate communication helps to overcome these differences and to foster a more complex and generally comprehensible vision of a specific community’s development. Poor communication, on the other hand, leads to a collision of mentalities and perspectives and this in turn may lead to half-hearted participation of the individuals,

communities and organisations involved in developmental projects. We may also say that co-operation between various individuals and communities helps to encourage closer bonds between agricultural production and a particular local environment and local community. Polish red cows, bred by the Szczyrzyc monastery in the Jodłownik district and several lesser breeders, are not just another lot of “milk cows” or ordinary meat cattle, they are “our cows,” a traditional element of the natural environment and landscape.

Co-operation among different social actors contributes to the sustainable character of development process in the rural areas. Revival of the Polish red cow has encouraged new interest in pastures and meadows in the farming community. As the director of the monastery farm in Szczyrzyc told us, “According to the principles of organic farming, there should be at least two hectares of meadow and pasture per head of cattle. It doesn’t really matter that these cows (the Polish red cows) give less milk than the artificially bred “milk creatures.” What really matters is that they are healthier, stronger and have no problem moving about our hilly terrain without breaking their legs.”

Besides, these and other similar extensive farming practices make it possible to take advantage of the farm as a tourist attraction. Tourism, in turn, is an additional source of income for the farmers. Generally speaking, the Polish red cow project is an example of the effort to place farming in its natural context once again and this is the essential feature of the alternative approach to both the agri-industrial model and the post-productivistic developmental model which eliminates farming from the countryside because it is viewed as a threat to its residential and recreational functions.

### **Concluding Remarks**

To conclude our discussion we would like to pay particular attention to two crucial aspects of neo-endogenous development. First, the neo-endogenous model is based on the logic of validation of local knowledge. The collective experience of rural dwellers, rooted in tradition and collective practice, is not seen as a “barrier to modernisation” (*vide* the agri-industrial model) or a rather useless “frill” or addition to farming which is becoming a niche form of activity (*vide* the post-productivist model). Local knowledge, and in the presented case this meant the tradition of a special type of breed, is elevated in this paradigm to the status of a strategic resource, all the more valuable that it facilitates the optimal utilisation of all the other resources on a given territory. Only thanks to familiarity with specific local reality is it possible to assess and take full advantage of local developmental potential. Moreover, local knowledge acts as an intermediary because it catalyses adjustment to new solutions in specific communities. Thanks to such “mediation,” the mistakes so often made when routinely implementing “universal” projects can be avoided and the danger of dysfunctional solutions minimised. In other words, skilful application of abundant local knowledge facilitates the effective collaboration of internal and external resources and hence the implementation of sustainable development. It is worth mentioning at this point

that when the importance of local knowledge is appreciated, the rural community itself is validated. For, as the writers quoted several times here said, “Local knowledge research promotes grass-roots decision-making at the community level through indigenous structures” (Bicker, Sillitoe & Pottier, 2004: XII). In this approach the local community is not an object of a top-down strategy and neither is it a “troublesome niche.” It is a significant partner to the process of development, one which is directly influenced by the course and consequences of transformation. Christopher Ray emphasises this aspect particularly strongly when he says that neo-endogenous development is essentially about grass-roots development, the underlying philosophy of many EU development programs (Ray 2006). Hence the neo-endogenous (sustainable) model is clearly focused on culture, subjective feelings and above all the quality of life of the rural population. The second crucial aspect of the neo-endogenous model is its focus on the applied nature of sociological deliberation. This paradigm does not limit itself to theorising about the merits of local knowledge or tradition. It applies them both, viewing them as a significant element of the developmental strategies it strives to construct.

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