

# Homo habitus: agency, structure and the transformation of tradition in the constitution of the TRB foraging-farming communities in the North European plain (ca 4500–2000 BC)

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**ABSTRACT** – *The current generally accepted view of the dispersal of farming into Europe is that farming groups in the eastern Mediterranean colonised selectively optimal farming areas. The role of contact between indigenous hunter-gatherers and incoming farmers was very important to the operation of this process. This general view of the spread of farming at a broad inter-regional scale gives us our understanding of the origins of the Neolithic but merits closer examination at the local and regional level, as increasingly it is becoming apparent that the causes and motivations may have differed. In this paper, Mesolithic to Neolithic communities with evidence of the transition from hunter-gatherer to farmer will be examined at a regional scale, in the central part of the north European plain, focussing on Kujavia. Additionally, the theory of structuration will be applied in order to elucidate the transition process at this level.*

**IZVLEČEK** – *Trenutno splošno sprejet pogled na širitev kmetovanja v Evropo je, da so poljedelske skupine v vzhodnem Sredozemlju selektivno poselile najboljša področja za poljedelstvo. Stiki med lokalnimi lovci in nabiralci ter priseljenimi poljedelci so igrali pomembno vlogo pri poteku tega procesa. Ta splošen pogled na širitev kmetovanja v obsežnem medregionalnem merilu nam omogoča razumevanje začetka neolitika, vendar ga je potrebno natančneje preučiti na lokalnem in regionalnem nivoju, saj postaja vedno bolj očitno, da so bili vzroki in motivacije tu drugačni. V tem članku bomo na regionalni ravni preučili mezolitske in neolitske skupnosti ter dokaze o prehodu iz lovcev in nabiralcev v kmetovalce. Osredotočili se bomo na centralni del Severnoevropske ravnine, poudarek bo na Kujaviji. Poleg tega bomo s teorijo strukturizacije pojasnili proces prehoda na tem nivoju.*

**KEY WORDS** – *Hunter-gatherer; farmer; structuration; agency; north European plain*

## INTRODUCTION

Today, there is a broad agreement that the dispersal of farming into Europe involved both the resident hunting and gathering communities and exogenous farming groups, originating in the eastern Mediterranean, who colonised selectively optimal farming areas. For the more widespread adoption of farming, the role of contact between foragers and farmers was very important, as was perhaps the greater demographic potential of farming communities either as

incoming east Mediterranean/ Anatolian farmers, or foragers-turned-farmers within Europe.

This gives us a picture of the origins of the Neolithic at a broad, inter-regional scale but what was the motivation for the transition to farming at a local and regional level? What processes enabled the transition and the coeval development of a new cultural tradition? Could it be that causes and motivations

operating at the regional level may well have differed from the more general and diffuse conditions operating at broader geographical scales? In order to illuminate this, Mesolithic to Neolithic communities with evidence of the transition from hunting-gathering to farming will be examined at a regional scale, in the central part of the north European plain, focussing on Kujavia as the region in question (Fig. 1). The theory of structuration will be applied as a way of elucidating the course of this transition.

### STRUCTURE, AGENCY AND THE CULTURAL INHERITANCE

At a regional and community level of discourse and decision-making, individual and collective motivations – reasons and justifications for doing things – must have been formulated into strategies by people who had a certain level of knowledge about their social and natural environment ‘knowledgeable social actors’. The outcomes of such strategies must have been contingent on and validated by structural principles and dialectical social relationships within which such a community operated. The broad application

of structuration theory helps comprehension of this complex process of discourse and strategic implementation of decisions, if the following conditions are considered.

**Structural conditions:** ecology of the area; the structure of relationships between humans and their resources; between people and categories of people themselves; systems of symbolic order. As Barrett notes, these structural conditions ‘do not in themselves do anything’ (Barrett 2000.65)

**Structural principles:** an activation of the overarching system of beliefs and norms informing human behaviour and motivation, acknowledged codes of practice, ‘expressed in the agents’ abilities to work on structural conditions in the reproduction and transformation of their own identities and conditions of existence. Structuring principles are therefore created in the active maintenance of traditions of knowledgeability whereby experiences are read with reference to the opportunities and constraints within which agents operate... Such a penetration of conditions is partial and prejudiced, coming as it does from specific history which main-

tains certain traditions of knowledge through discourses of social constraints, and the agents’ own biographies’ (Barrett 2000.65).

**Routine practice or habitus:** unthought performance of tasks, ‘embodied’ within human habitual environment and physical self, so that as people go about their daily tasks, they may learn rules and constraints through movements of the body, or the reactions of others. The rules become ‘embodied’ in the sense that ‘social rules and dispositions become embedded within mundane bodily practices, often non-discursively’ (Hodder and Cesford 2004.18). ‘Habitus is neither conscious, nor unconscious, but is expressed (and reproduced) through embodied and routinised social practices’ (Jordan 2004.114). Rules so created through routine practice – habitus – can help in the negotiation of disputes over movement, ac-

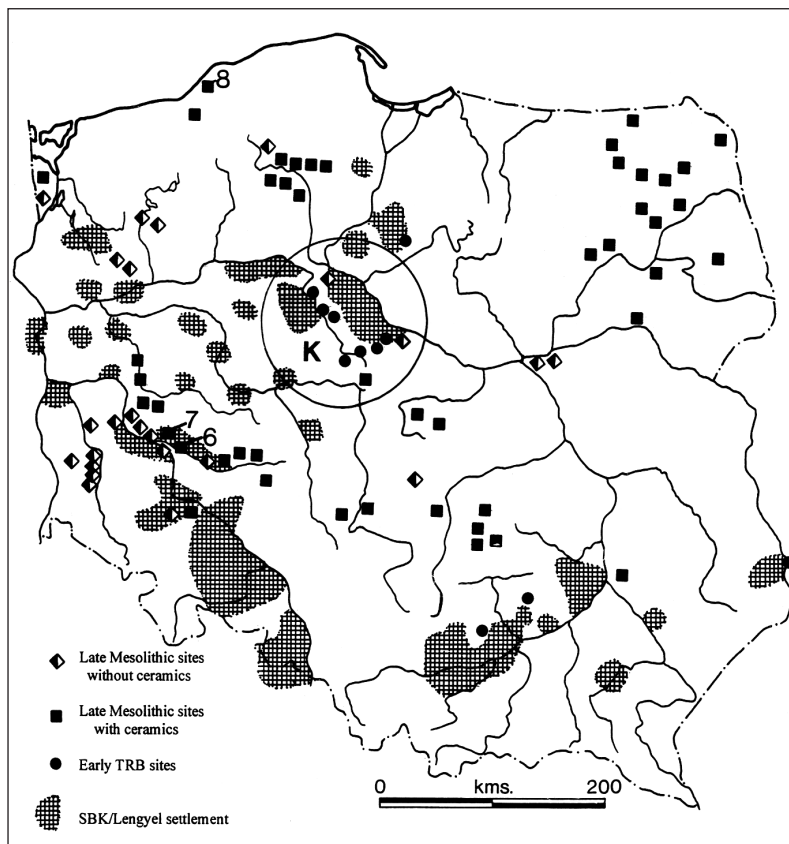


Fig. 1. Forager-farmer coexistence in Poland during the post-LBK Neolithic 4800–2800 BC. Kujavia marked by a circle. After Nowak 2001 and other sources.

cess and rights in the community, and provide guidance in social reproduction of knowledge and traditions (Bourdieu 1977; Giddens 1984; Parker 2000; Jordan 2004).

An important dimension of social practices is the relationship with the past and the extent to which (routine) practices repeat earlier practices as a form of memory of them (Hodder and Cessford 2004: 18). This is especially so in non-literate societies.

**Agency:** 'is the means by which things are achieved' (Barrett 2001:141). This is defined as a deliberate and motivated human action, undertaken individually and collectively, and sometimes undertaken to modify structure. Agency is 'inhabited' in the sense that it requires both the physical matrix of a human body and human cognition to occur 'Agency is always situated in structural conditions which facilitate its actions because agency requires a medium through which to work' (Barrett 2001:149). Actions then are the work of knowledgeable human agents whose comprehension of their place in the world and their ability to implement them influences the course of action taken and its outcome both upon the world and upon the agent. It follows then that agency is historically and spatially contingent and that the concept of agency must therefore be conceptualised in terms which are historically situated and embodied. Spatio-temporal contingency and contextualisation within the available 'stocks of knowledge' represents then a key element of 'inhabited' agency (Barrett 2001; 2000).

At the same time, agency can be implemented by collectives as well as individuals: 'Certainly individuals act as agents and certainly agency operates through the bodies of individuals, but agency must also include the operation of collectives extending beyond the individual's body and their own lifespan' (Barrett 2001:149). The notion of 'collective agency' is potentially of great use to archaeologists (see e.g. Jordan 2004) for it may be used to comprehend much variation in cultural repertoire that hitherto fell under the 'ethnic' explanation of material cultures (i.e. the normative principle of perceiving archaeological cultures as signatures for 'peoples'). At the same time, the potential conflicts between individual agencies and a collective agency of a community may complicate our attempts at understanding (Parker 2000; Jordan 2004:114-115).

**Historical constraint:** these are sets of pre-existing conditions, either in terms of structure, routine

practice or agency, within which individuals and communities operate and which form the temporal aspect of 'inhabitation' of agency.

**Tradition and social memory:** these are structural conditions which may be effectively activated as structural principles through agency: the deliberate and conscious employment and manipulation of cultural practices constituted in the past to perform task, to validate relationships, to claim or to negotiate for power and resources, to select and validate the reproduction of all aspects of cultural inheritance (social reproduction).

**Cultural inheritance and intergenerational transmission of knowledge:** social action is 'understandable in the context of knowledge and knowledge is something which is built, sustained and revaluated through interpretation' (Barrett 2000: 66). Material conditions are apprehended, recognised and put to practical use through available stocks of knowledge (*idem*: 66-7). Knowledge and material culture are forms of cultural inheritance that passed on through learning intergenerationally or between individuals and communities, and modified by innovation. This process is socially embedded structurally, modified by routine practice, agency and historical constraint, and generates material culture signatures and patterns as the outcome. It follows then that archaeological material culture could be 'read' and understood in part at least as a consequence of processes of learning and implementation of knowledge.

## THE CONSTITUTION OF NEOLITHIC COMMUNITIES IN THE SOUTHERN BALTIC REGION (NORTH EUROPEAN PLAIN)

Throughout Late Glacial and Postglacial prehistory, the north European plain acted as a gateway for the dispersal of cultural traditions, human populations and languages to northern Europe. It is here and along the adjacent southern shores of the Baltic that major cultural traditions emerged, which then went on to influence the cultural, genetic and linguistic history of northern Europe as a whole.

The emergence of the TRB (Trichterbecker or Funnel Beaker) culture in Poland and north Germany, at the beginning of the Neolithic, was no exception. Focussing on this region more closely it is possible to identify events and processes that were active in the constitution of this cultural tradition, but their

relative contribution is a matter of some dispute. Some researchers regard TRB as essentially an intrusive cultural tradition, constituted under the influence of episodic migrations of Michelsberg/Chassey/Cerny farming groups from west Atlantic Europe eastwards into north Germany, Jutland and Poland. There, as a result of cultural fusion and gene exchange with local population, TRB tradition takes shape. The local population is variously regarded as Rossen farming groups in north Germany or Lengyel farmers in Poland, but the contribution of local Mesolithic communities is thought to have been on the whole limited, even in Jutland, where farmer migration rather than local development is held to account for the emergence of TRB (*Klassen 1999; 2003; Skak-Nielsen 2004; Rzepecki in Larssen and Rzepecki 2002–2003; Rzepecki 2004*). According to other scholars, TRB is mainly a local development from earlier farming traditions – Rossen in Germany, Lengyel or related Danubian traditions (Stroke-Ornamented Ware, Polgar), brought about by gradual adaptation to local conditions. Hunter-gatherer groups played only a limited role in this process (*i.e. Czerniak 1988; 1994; 2002; Domańska 1995; Bogucki 2000; 2003*). A third view accords hunter-gatherer communities of the North European Plain a major role (*i.e. Sherratt 1990; Midgley 1992; Nowak 2001; Whittle 1996; Thomas 1996; Bogucki 1987; 1996*) to the point where they are regarded as the main cultural and genetic element in the constitution of the TRB at least in some areas of its distribution, as in Kujavia, Schleswig-Holstein, Zealand, or Scania (*i.e. Andersen 1973; Rowley-Conwy 1984; Niesiowska-Śreniowska 1998; Zvelebil 1996; 1998; 2004; Fischer 1982; 2002; Price 2000; 2003; Larsson 1985; 1988; Hartz, Heinrich and Lubke 2004*).

One of the most striking features of the conditions prevailing on the north European Plain was the long co-existence of farming and hunting-gathering communities. As Nowak notes

‘During the LBK and post-LBK period, the Mesolithic communities were living in territories between the old-agricultural enclaves.... Such communities were characterised by microlithic flint tools and foraging subsistence. Their survival until 3500 BC is taken for certain by many scholars (*e.g. Kozłowski 1998.201–22*) in the whole region, not just in a few ‘Polish’ Ertebølle sites (*Galiński 1990; Ilkiewicz 1989; Kobusiewicz and Kabacinski 1998*). The main territories of the late Mesolithic settlement were lowland areas of Pomerania, the Masurian Lake District, northeast Masovia, Great Poland, Lower Si-

lesia and some regions of central Poland ... Therefore, it was neither the LBK nor post-LBK groups but the TRB ones that made the Neolithization of east-central Europe almost complete.’ (*Nowak 2001. 582*).

In some areas, such as Kujavia or Pomerania, hunter-gatherers and farmers, first of the LBK and later of the TRB cultural traditions, co-existed only a few kilometres apart throughout the Neolithic, *i.e.* between 5400 and 2200 CAL BC. Figure 1 maps out the mosaic of contact zones in the Polish (*i.e.* central) section of the north European Plain between foragers and farmers during the Neolithic. One way to characterise events and processes occurring throughout this period (5400 to 2200 CAL BC) can be as follows:

● **Availability phase cooperative: LBK/Mesolithic – 4500–4000bc, 5400–4800BC**

During this period, the people of the first Neolithic culture in central Europe, the LBK, colonised targeted areas of more fertile soil on the north European plain (*Midgley 1992; Bogucki and Grigiel 1983; Bogucki 1996; 2000; 2003*). It is generally agreed that this was a case of colonisation by immigrant farmers, which has recently been shown as more extensive than previously thought (*Bogucki 2000; 2003*). The arrival of the first farming communities initiated contacts with the local Mesolithic groups, who inhabited the region in distinct territories (*Kozłowski 1973; Kozłowski and Kozłowski 1986; Balcer 1986; Midgley 1992; Nowak 2001; Czerniak 1994*).

Evidence for forager-farmer coexistence can be found throughout the central part of the North European Plain, in Pomerania and Silesia, this includes for example the site of Dabki, in Pomerania, a coastal settlement which spanned the period between 4900 and 4000 BC (4200–3300 bc). The economy was based on fishing (pike, perch and bream); wild fowling (duck, goose); hunting (red deer, elk, aurock and beaver); marine fishing (salmon, sturgeon) and sealing. Domestic animals were mainly cattle, 6% at the beginning of the occupation, 23% at the end. Pig, possibly domesticated, was also present. Ertebølle-type pottery was found on the site as was imported late LBK pottery. In Lower Silesia, Chobień, is a sand and gravel terrace near Kopanica Lake. About 100 pieces of pottery were found, including Ertebølle-type pottery as well as imported LBK ware. The sherds were associated with Mesolithic flintwork of Komornica tradition (*Kobusiewicz and Kabacinski 1998; Gumiński 1998*).



**② Availability phase competitive: Lengyel/comb ceramic/Mesolithic – 4000–3500 bc, 4800–4400 BC**

This period is marked by the gradual erosion of hunter-gatherer symbols of identity, by the ‘symbolic Neolithisation’ of the hunter-gatherer communities, and by the commercialisation of economic strategies as hunter-gatherers continued to live side-by-side with the Neolithic farming communities (now of Lengyel cultural tradition – a cultural development from the LBK). This is marked by the gradual adoption of lithic technology typical of Neolithic farming communities, such as long-bladed industry, the importation of artefacts of social significance, into hunting-gathering contexts, such as shell ornaments and polished stone axes. That there was exchange between the communities was marked by the delivery of materials and food produce of hunting and gathering, such as fur and seal blubber, to farming communities (Nunez 1997; Zvelebil, Dennell and Domańska 1998). All these processes have one common theme: the adoption and transformation of originally a farming identity into a hunter-gatherer context (Hodder 1990; Sherratt 1999; Thomas 1996).

**③ Substitution phase: Late Lengyel-Polgar/Early TRB – 3500–2800 bc, 4400–3600 BC**

The genesis of the TRB culture east of the Odra (Oder) river in the eastern part of the north European plain shows patterns of change and continuity. The coalescence of the hunter-gatherer traditions on one hand and of Danubian (LBK, Rossen and Lengyel) farming traditions on the other, gave rise to the TRB culture in the lowland region between lower Elbe (Labe), Oder and Vistula between 4400 and 4200 BC (3500–3200 bc) (Midgley 1992, 194; Balcer 1986; 1988; Czerniak 1988; 1994; Rzepecki 2004; Kosko 1980; Niesiolowska-Reniowska 1987; Nowak 2001; Price 2000). There is clear evidence for regional variations in the emergence of the TRB, reflecting relative contributions of the ancestral farming and hunting-gathering communities in its constitution, as well as regional differences in the processes responsible for its formation. (i.e. Midgley 1992; Larsson and Rzepecki 2002–03).

Examples of forager-farmer coexistence, covering the period 4800–3600BC (i.e. competitive availability and substitution phases), include the site of Deby and other hunter-gatherer sites in Kujavia. Deby, located on dunes in a marshy area, contained Mesolithic Janislawice-type flintwork, domestic animals e.g. caprines, pig, cattle, imported chocolate flint

from Holy Cross mountains in southern Poland (250–300 km away), and a fragment of a Lengyel vessel. The site has multiple episodes of occupation and is dated from the sixth to the end of the fifth millennium BC, (Domańska 1998). Similarly at Podgaj 32, located on sands along a river, there is LBK pottery and Mesolithic Chojnice-Pienki flintwork, and similar association was found on several other sites (Domańska 2003; Czierniak 1994). Some of this evidence must be treated with caution, since there is some doubt about the stratigraphic integrity of the cultural layers within sandy deposits (i.e. Kozłowski 1998; Schild 1998, but see Domańska 1998; 2003).

**④ Consolidation west – substitution east: Later TRB/Combed Ware/Globular Amphorae/ Ceramic Hunter-Gatherers: 2800–1800 bc, 3600–2200 BC**

This is a complex period, marked by two geographically distinct developments. In the western part of the area – broadly west of the Vistula basin, TRB eastern group continues to flourish. This is marked by the developed pottery, rich flintwork, the introduction of wheeled transport, and by further expansion of the culture (even though not necessarily the people) into areas hitherto occupied by hunter-gatherer communities.

The eastern part of the south Baltic zone of the north European plain – broadly east of the Vistula – experienced quite a different development. Instead of generations of separate coexistence and creolisation, we can identify the slow and staggered adoption of cultural traits and innovations, traditionally associated with the Neolithic by communities of indigenous hunter-gatherers. The use of ceramics was adopted first, between 7000 and 4800 BC (6000 and 4000 bc; see Timofeev 1990; 1998; Dolukhanov 1979; Zvelebil and Dolukhanov 1991). Elements of agro pastoral farming were adopted at a very slow rate over the following 2000 years (Zvelebil 1981; 1993; Dolukhanov 1979; Zvelebil and Dolukhanov 1991) and, in some regions, such as parts of Lithuania, even more recently (Janik 1998; Antanaitis 1999). Despite the presence of a low number of domesticates on archaeological sites from c 3000 BC, or 2500 bc and despite a major change in material culture marked by the Globular Amphorae and Corded Ware cultural horizon c 3000–2200 BC, 2500–1800 bc, the decisive shift to an agro pastoral economy in north-east Poland and the East Baltic began between 2600–2200 BC, or 2200 and 1800 bc in north-east Poland, but was not completed until the

first millennium BC (1500–700BC, 1200–500 bc) in the more remote parts of East Baltic (Lithuania, Latvia, Estonia). The rate of change to a farming economy was clearly very slow.

Between these dates, during the third and second millennium BC, there was a society based principally on hunting and gathering for subsistence, yet making some occasional use of domesticates and possibly cultigens from about 3000 BC, 2500 bc (*Rimantiene 1992; Vuorela and Lempiainen 1988*). The presence of domesticates in such low numbers has been explained as a result of wide-ranging trading networks, operating within the context of the Corded Ware/Boat Axe culture (*Dolukhanov 1979; Zvelebil 1993; Lang 1998*); while their limited use, which continued in some regions until the end of the second millennium BC, fits with the notion of their ritual and symbolic, rather than economic, significance (*Hayden 1990; 2003*).

Examples of forager-farmer co-existence are common east of the Vistula. This is not surprising, given the mosaic of foraging and farming communities and landscapes generated through co-existence over some 2000 years (consider for example, finds from Dudka in north-east Poland, or Sventoji sites in *Gumiński 1998; Rimantiene 1979; 1992; 1998*). But even west of the Vistula, hunter-gatherer sites remain

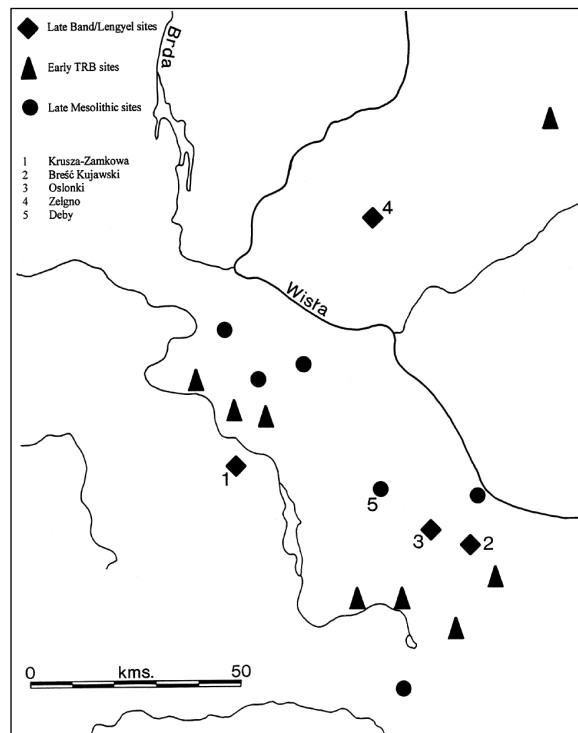
operational alongside late Neolithic farming settlements. Chwalim, in lower Silesia has preboreal and sub-boreal layers, the latter dated to 3000–2200 BC (2500–1900 bc). Typologically and technologically there is a Mesolithic flint industry (Stawinoga points, scalene triangles, trapezes), and faunal remains include red deer, elk, bison; horse, otter, beaver, waterfowl, pike, catfish, turtle. The ceramics is similar to Globular Amphorae culture.

In summary, we can identify long-term coexistence between communities which can be characterised as hunting-gathering in terms of economic practice and traditions, and farming communities characterised by several cultural traditions. Viewed over the broad zone of central and eastern parts of the North European Plain, this social tradition lasted for more than 4000 calendar years, from 5400 to 700 BC (4400–500 bc), although regionally the duration was a good deal more limited and it can be separated into several phases defined by the nature of contacts between foragers and farmers.

## INSTRUMENTS OF CONVERSION: CHANGING TRADITIONS IN KUJAVIA

Focusing on a single region within the Polish plain, Kujavia (Fig. 2), the evidence we have so far is:

- ① LBK sites in the region from 5400 BC
- ② Lengyel/SBK sites, also known as Late Band Ceramic or Brzesc Kujawski Group sites in the region 4800–4000 BC (4500–4000 BC according to *Czeraniak 2002*).
- ③ Mesolithic sites in the region contemporary with farming settlements, 5400–3700 BC, involving two traditions: Chojnice-Pienki (north-west Poland) and Janislawice (south-east Poland).
- ④ TRB sites in the region, including the initial Sarnowo phase from 4400 BC, later Nowy Mlyn phase from 4100 BC (Nowy Mlyn c-14 dated to 5150–4950 bp) and the Pikutkovo phase from 4000 BC. Larssen and Pole Rzepecki (*2002–2003, see also Rzepecki 2004*) divide the TRB in Kujavia into two phases: TRB 1a, dated 4400–4200 BC, and TRB 1b, dated 4200–3800/3700 BC. TRB gradually replaces all other traditions including Mesolithic sites by ca. 3700 BC.



**Fig. 2. Last Mesolithic, Lengyel and first TRB sites in Kujavia.**

Within this region, direct evidence for exchange and contact between farming and foraging communities

can be found through, for example, cattle, pig and ovicaprid bones at the site of Denby in Kujavia (*Lasota-Moskalewska 1998*), on Mesolithic sites in Kujavia with replicated LBK pots (*Czerniak 1994; Domańska 1995; Kosko 1980*), in local Mesolithic flintwork and microlithic tools found in LBK sites (*Balcer 1986; 1988*), within a broader corpus of data indicating contact (see below, also *Midgley 1992; Zvelebil, Domańska and Dennell 1998*).

The emergence of the TRB between 4400 and 4000 BC (Sarnowo and Pikutkowo phases in Kujavia) marks the beginning of the widespread adoption of farming and the generation of a new cultural tradition. Here it is suggested that this represents a signature of a **dual process of change**: the Lengyel farming groups going 'native' and merging with local hunter-gatherers culturally and genetically, and of the local hunter-gatherers adopting farming practices along with modified elements of the old (Danubian) farming culture. In the end, it is possible to detect erosion of Lengyel cultural traditions and their symbols of identity among the remaining earlier farming communities. This is evident for example in final phases at Brzesc Kujawski and Osłonki, between 4200 and 4000 BC. How was this process accomplished? It is at this point that structuration theory can be effective.

### ① Agency by hunter-gatherers evident in trade and exchange

From about 4800 BC, we can detect:

a) an exchange system in operation, involving local hunter-gatherer communities, Brzesc Kujawski Lengyel farmers, and farming communities in southern Poland (Fig. 3), where the BK farmers acted as middlemen in a complex trading network;

b) the ending of this system in the late BK phase, after 4200 BC. This is evidenced by an end to Spondylus shell exchange and copper completely disappears from the graves. There is a decline in flint imports of chocolate flint from Holy Cross mountains and of Jurassic flint from the Cracow region.

c) an increase in the presence of exotic flint traded from these regions in southern Poland on contemporary Mesolithic sites and on sites of the earliest TRB.

Both the Late Mesolithic and Lengyel communities used chocolate flint as a part of their exchange networks. Within the earliest, so-called 'Sarnowo' TRB

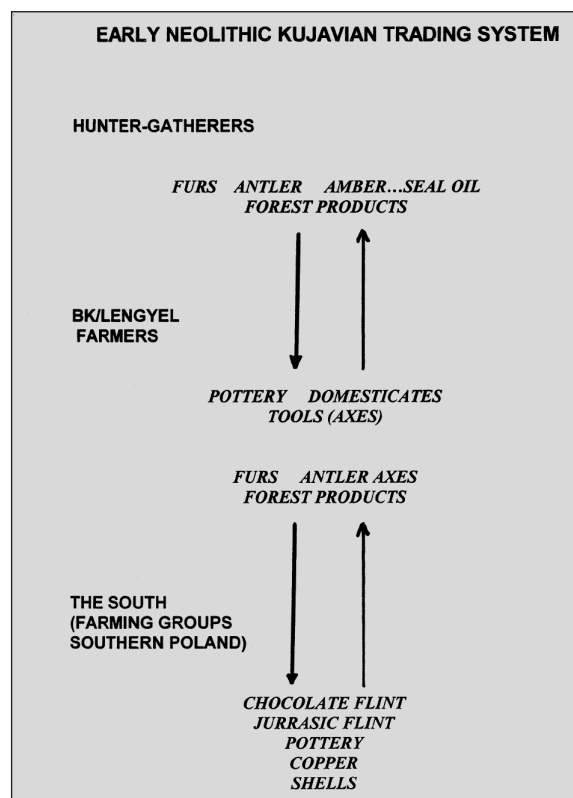


Fig. 3. Exchange system operating during the Lengyel period in Kujavia.

industry, that characterises the first two (ceramically defined) phases of the TRB in the region in Kujavia, the imported chocolate flint seems of greater importance than the local Baltic flint. For example, chocolate flint tools make up 85% of the tool assemblage at Sarnowo itself, elsewhere the numbers fluctuate between 40 and 60%. There is lack of debris from tool production, suggesting that the flint was acquired as semi-products or even as finished tools (*Midgley 1992.239–240; Larsson and Rzepecki 2002–2003*).

The question then arises, did the local hunter-gatherers establish direct routes of exchange, by-passing the Lengyel middlemen?

### ② Agency by hunter-gatherers evident in the infiltration of BK Lengyel settlements

a) Working of antler into T-shaped antler axes, technologically, functionally and stylistically regarded as a late Mesolithic activity (*Midgley 1992; Zvelebil 1994*) has been identified in the 'antler workshop house', no. 56, at Brzesc Kujawski (*Grygiel 1986; Midgley 1992*). On the basis of a whole range of associations, Grygiel argued that the manufacture of antler axes was carried out by craftsmen who came

from outside the Brzesc Kujawski community, probably from the TRB cultural tradition (1986.261). But as Midgley notes: 'The manufacture of antler axes has a long and well-established tradition in the north European Mesolithic and this field opens up the possibility of investigating an important area of the Mesolithic contribution' (1992.399). Was this then a case of itinerant Mesolithic specialists, or specialised Mesolithic craftsmen invited to join the Lengyel settlement, to perform specialised production of tools for the Neolithic community?

b) Associated with the same house 56, one pit, no. 893, contained pots decorated with ladder ornamentation typical of the TRB Pikutowo phase, but also of the Mesolithic ornamental patterns, dated into 5260±190 BP (ca. 4100 BC). Is it possible that these pots were decorated by individuals from outside the community, belonging to a Mesolithic tradition (*i.e. Grygiel 1986*)?

c) Bones of cattle appear to have been the main domesticate present on hunter-gatherer sites across the north European Plain (*i.e. Fischer 2004; Hartz, Heinrich and Lubke 2004; Zvelebil, Domańska and Dennell 1998*), and cattle later becomes the main domesticate on TRB sites. Ethnographic analogies describe San hunter-gatherers acting as hired labour tending cattle for Bantu pastoralists in southern Africa and receiving payment for their services in cattle too (*i.e. Gronenborn 2004; Fewster 2001; Wilmsen and Denbow 1990*). This suggests a mechanism for an interesting social transformation that would account for the presence of cattle on hunter-gatherer sites, the development of a prestige role of cattle as a resource associated with wealth, and the consequent shift to predominantly cattle husbandry in the TRB cultural tradition. Within this transformation, hunter-gatherers might have played an active role first as social actors infiltrating Lengyel farming settlements, and then developing an element of the Lengyel farming tradition – cattle breeding – in response to their own social and economic needs (*Zvelebil 1996; 1998; 2004, see also Bogucki 1996; 1998* for cattle acquisition through 'porous frontier' between foragers and farmers).

d) Hunter-gatherers (especially women) as partners in marriage to farmers (especially men).

The condition of hypo/hyperhyny – caused by women from hunter-gatherer communities departing to settle in farming communities as wives or partners of farmer men is well documented ethnographically

(*i.e. Spielman and Eder 1994; Speth 1991; Bailey and Anniger 1989; Zvelebil 1996*). Hypo/hypergyny can be a powerful vehicle of social and economic change. Forager-farmer exchanges in the across the North European Plain and in the Baltic region unfolded in the world of core-periphery relations, where the symbols of status were primarily or exclusively those associated with the farming societies. The argument for the female departure to farmers is based on the perception that life in farming communities was easier for women as food producers and childbearers, and/or that symbols of status and social position they confer on women can be easier to come by living with farmers rather than foragers (*Zvelebil 1996; 1998; Zvelebil and Lillie 2000*). At the same time forager women that would join the farming community would introduce their own cultural traditions and patterns of social behaviour that would be negotiated and reproduced within the new community through routine practice or through agency.

In Kujavia, Bogucki (1996.304–05) argued for exogamous relationships between farming communities, and such exchanges may have involved partnerships between forager women and farmer men. A study by Bentley et al (2003) of strontium isotope signatures among the Neolithic farmers in south-west Germany indicated that the first LBK farmers received their partners from a wide catchment, were patrilocal and inter-married with hunter-gatherer women along the agricultural frontier. While such study is yet to be carried out on the skeletal material from Kujavia, the appearance of Mesolithic motifs on the first TRB pottery, and of other elements in the material culture attributable to Mesolithic cultural code can be adduced in support of this hypothesis.

### ③ *Agency by hunter-gatherers: subversion of the BK-Lengyel cultural code*

This is evident in the following aspects of material culture:

a) Houses: in BK Lengyel tradition, the construction of longhouses was strictly normative in terms of size, shape, (trapezoidal), orientation (north-south, north/west-south/east) with the trapezoidal end facing north or northwest. In the late phase of BK and Osłonki, houses also show variation greater than previously, with significant variations evident from the standardised trapezoidal structures of the previous period and from their orientation. This is in-



terpreted as subversion of the hitherto dominant cultural code, which, as Bradley argues, may have been determined by houses acting as mnemonic devices, built to face the LBK ancestral lands to the south or south-east, ('they seem to acknowledge an area of origin that had been settled in the past' idem 2002.28). Bogucki, on the other hand, argues that the narrower end was facing the prevailing winds, thereby determining orientation (*Bogucki 1996; 1998, for broader discussion, see Coudart 1998.88–90 and Bradley 2002.26–28*).

b) Burials: there is a change in the burial rite, marked by the abandonment of the previous standardised burial rite – a symbol of Lengyel identity – towards individuals interred in a variety of positions and orientations, including rubbish pits (*Bogucki 1998*). The same situation occurs at another Lengyel site, Racot, where the final burial is also 'untypical' of the Lengyel structural code (*Czerniak 2002*). While the standard form of burial in a Lengyel community was a flexed position, the burials towards the end of the occupation of Brzesc Kujawki included a variety of positions, including extended interments (*Bogucki and Grygiel 1993; Bogucki 1996; 1998*) – a practice prevalent among several Late Mesolithic forms of burial in north temperate Europe (*i.e. Zvelebil 2003; Larsson 1993; Stutz 2003; Brinch Petersen and Meiklejon 2004; Zagorskis 1987, etc.*). The first TRB interments are likewise in an extended position (*Midgley 1992; Larssen and Rzepecki 2002–2003; Rzepecki 2004*), although the cultural inspiration for the shift in practice from flexed to extended burial is a matter of debate (*i.e. Rzepecki 2004.227*).

At the same time, a reference to the earlier Lengyel social tradition, and appropriation of the status it conferred, can be seen in the burial of a woman at Pikutowo, an early TRB site in Kujavia, following the Lengyel symbolic code and buried with goods typical of the LBK and Lengyel traditions, such as *Unio* shell beads (*Czerniak 2002; Midgley 1992*). Is this a case of social memory employed at the foundation of the settlement claiming ancestral links with the Lengyel community? Or is this alternative personal identities, expressed at the foundation of first TRB settlements, some with links to the Lengyel tradition, others to the Mesolithic element within the emergent TRB?

c) subsistence practices: there is a sharp increase in faunal remains of wild species, especially fish, waterfowl, shellfish and turtle after 5150 bp (*Bogucki 1996; 1998*).

d) raw materials: there is a shift to local sources with which local Mesolithic communities were familiar, but there are also southern Polish flint imports.

### ④ *Instruments of conversion – conversion of the LBK (Danubian) tradition and its transformation into TRB through agency, routine practice and structural transformation*

This is evident in the following aspects of material culture:

a) subsistence: is marked by the economic Neolithisation of hunter-gatherer communities, evident in the presence of two kinds of TRB sites: those with high percentage of domesticates, and those in earlier phases with low percentage of domestic animals (*Midgley 1992*). Sites with domestic animals show a shift from a cattle/caprines/pigs husbandry of the Lengyel period to a heavy dependence on cattle. Both changes may have been brought about through routine practice by hunter-gatherers turned farmers, the latter because it followed earlier routines from their time in a client-patron relationship as cattle herders with Lengyel farmers, a practice further enhanced by having social and symbolic value.

b) settlement shift: abandonment of earlier Lengyel permanent settlements (and their symbolic burial – see below) and their replacement by more seasonal single homesteads. For example, Brzesc Kujawski was abandoned ca. 5050 bp (ca. 4000 BC) (*Bogucki 1998*). This too follows earlier hunter-gatherer routines from the period of co-existence with Lengyel farming settlements, although there was also an element of deliberate social agency aiming at the transformation of Lengyel structural code, embodied in the construction and the regular form of Lengyel houses.

c) settlement shift: agricultural settlement extends to areas outside the fertile loess soils, loess/sandy soil ecotones, such peatlands, sandy soils, and glacial meltwater valleys. As many as 98% of the TRB sites may have been located on a hitherto uninhabited terrain (*Rzepecki 2004.219*). This can be seen as a functional response to economic changes (*i.e. Bogucki 1996; 1998; Nowak 2001*), but such changes in subsistence altered the structural conditions under which the new subsistence could operate.

d) Changes through agency and routine practice can be also detected in the lithic industry: the flint-

work shows at least three, possibly more, regionally constituent aspects, derived from the Lengyel Neolithic tradition and from the regional Mesolithic traditions (*Balcer 1980; 1988; Domańska 1995; Niesiolowska-Reniowska 1987; Nowak 2001; Larsson and Rzepecki 2002–2003*). These changes appear to reflect three kinds of activities:

- (i) novel patterns of mobility and raw material procurement by the TRB communities
- (ii) continuation of routine practice in the manufacture of stone tools,
- (iii) selective adoption of LBK/Lengyel elements in tool type (sickles, reaping knives) and the technology (long-blade industry) through agency.

e) The same process of retention of routines and institution of change applies to ceramics: TRB vessels resemble in shape and form Lengyel/Late Band Ceramic vessels, but motifs are different, and similar to those of the decorated Mesolithic items. This may reflect a dual process is in operation – retention of earlier Neolithic form and shape for practical reasons, through routine practice (*habitus*), but an imposition of a new symbolic code – a hunter-gatherer one – through a deliberate act of enculturation and through agency. Unlike shape or form, decoration became an emblematic statement by hunter-gatherers-turned-farmers who, by this symbolic shift, adopted the Neolithic ceramics as a part of their cultural identity.

f) houses and burials: TRB houses were small rectangular structures or semi-subterranean houses which was a radical change from the preceding long-house tradition. At the same time, there is the first construction of long barrows.

The shift from longhouse to long barrow is a much debated issue. Was this an ‘instrument of conversion’ (*Sherratt 1999*) – a strategy by incoming farmers intended to draw the local hunter-gatherers into their cultural tradition, by bringing ‘domus’ into ‘agrios’, (*Hodder 2000*), and employed effectively as a monumental metaphor with which to seduce the natives into compliance with a farmer worldview (*Sherratt 1990; 1999 in Rzepecki 2004*)? Bradley suggests that this was an outcome of a shift in routine practice, the process of decay of an abandoned longhouse will resemble a long mound, suggesting the idea of a long barrow, while at the same time the abandonment forms a memorial to its inhabitants. This is entirely credible; people were buried within longhouse ditches at abandonment. Long

mounds then, instead of longhouses, would keep this practice of a memorial, but in a different place, in situations where houses could not serve this purpose, probably because they were continuously rebuilt and maintained (*Bradley 2002*).

To take this argument a step further, we may be dealing here with a case of organised forgetting of the old Danubian tradition – a deliberate break with the social memory of the Danubian tradition by hunter-gatherers-turned-farmers in an effort to establish new cognitive principles and codes of symbolic behaviour. In practice, this involved a symbolic burial of the longhouse and with it the earlier tradition, by turning the house into a long mound and bringing the dead within it.

Thus the construction of the TRB long barrow instead of a long-house (or over a house as at Sarnowo, literally) represents the dead entering the house, thereby producing a tomb, and their entombment symbolizes the death of an earlier tradition. This is expressed in several features, notably in the differential, often reversed orientation between longhouses and long barrows (*Bradley 1998: 44–48*). At the same time, as Barrett notes in another context, the TRB people ‘by sharing a common architectural frame of reference’, in this case the long house transformed into a tomb, acknowledged the ancestry and continuity with the earlier Danubian tradition (*Barrett 2001*).

## CONCLUSIONS

Despite the coarse spatial and temporal resolution of the evidence available today, the conditions described here suggest a very gradual incorporation of foraging communities with those of farmers after an extended history of contact, occurring within a structural framework of conditions and principles. Different frameworks were operated by hunter-gatherers and farmers, of which the structural principles were more incompatible between the two communities.

In the situation of contact, hunter-gatherers were responding to the needs of the farming settlements and to their own social needs by commercialising their operations. Within such a framework, hunter-gatherers would play the role of suppliers of specialized goods and services, such as products of hunting, fishing, and sealing, and act perhaps as herders in client-patron relationships.

At the same time, hunter-gatherers maintained their cognitive principles. The inter-marriage between the two communities would result in the breakdown of the early farming (LBK and Lengyel) social and ideological structure, witnessed, for example, in the final stage of the Brzesc Kujawski and Oslonki settlements in Kujavia (*Bogucki 1996*), and a subsequent development of a new foraging-farming community, identified archaeologically as TRB. This process was accomplished inter-generationally, as one generation replicated and combined the cultural traditions of earlier foraging and farming generations, in an act of cultural creolisation.

In this process, the role of agency as a historically and regionally embedded action by individuals and collectives was imperative. People as agents of change engaged in deliberate effort to manipulate conditions of possibilities set and operated by the farmers of the Lengyel cultural tradition and to change them. This was a dialectical process involving both communities. At the end they did so by:

- adopting practical, technological innovations;
- subverting and enculturating existing practices and routines of daily life and introduced new structural condition and principles in the process;

- rejecting symbolic codes and structural principles of the Lengyel community and imposed a cognitive structure more familiar to the indigenous hunter-gatherer community;

- validating and retaining certain earlier routine practices operating in the ancestral cultural traditions, both in Lengyel Neolithic and the Mesolithic.

The replication of this pattern in different parts of the Polish Plain during some 2500 years between 4400 and 1800 bc may account at least partly for the cultural variability of the TRB horizon and of the later, Globular Amphorae and the Corded Ware traditions. A significant consequence of the repetition of this process in time was that in the more remote sandy areas, the lakelands and peatlands in Pomerania, Kujavia, Lower Silesia, Masovia and Mazuria (i.e. north-east Poland), the last hunter-gatherer communities continued to operate as culturally distinct and coherent communities until 2200 BC, 1800 bc, when they finally became a part of the Globular Amphorae and Corded Ware cultural horizon at the threshold of the Bronze Age.

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