THE ROLE OF BALTIC-BLACK SEA ROUTES IN THE
DEVELOPMENT OF LUSATIAN CULTURE SOCIETIES IN
THE DECLINE BRONZE AND EARLY IRON AGES

The question of transit routes, taken to mean "mechanisms of cultural pattern
circulation along the borderland between the East and West of Europe" [Kośko,
Klochko, in this volume], seems to be one of the basic issues in the study of cultures
in the period of transition from the Bronze to the Iron Age. For this period, the
regional borderland should concern, on the one hand, the eastern reaches of the
tradition identified with the Polish branch of the Urnfield culture complex (Lusatian
culture, LC) and, on the other hand, the western reaches of influence by the
forest-steppe cultural environments of the Pontic Area. The border in space be-
tween these phenomena is not linear, though, and it is hard to define, relying on
available sources. To make matters worse, it is difficult to visualize archaeologically
as we need to answer at least one fundamental question: what are we to look for in
the borderland? Also, can it be an assemblage of sources, having a single, common
denominator? One can venture an opinion that from the point of view of issues
discussed in this paper, any manifestations of cultural contact, identified through
archaeological sources, will be meaningful.

The question of route thus should not be taken literally as a road along which
moved the alleged makers of discovered objects. What should be attempted here
instead is an identification of possible external inspirations observed against a local
cultural background. The genetic context of such inspirations can bring us closer to
explaining the role and function of the contact, but it will not allow us to identify
beyond any doubt the route it took.

The literature has supplied already several interpretations of the course of cul-
tural processes in the borderland, focusing specifically on the area lying between the
Malopolska and Volhynia-Podolia uplands (closer to the European zone of mixed
forests and the eastern forest-steppe zone [Kondracki 1988: 243, 248]). The inter-
interpretations stress the role of regional contacts in the zones [Czopek 2003, 2007d, 2007c, in this volume; E. Kłosińska 2005, 2007a, 2007b] and focus on cultural diversity in the eastern part of the Lublin and Western Volhynia uplands [Kłosińska 2005: 161], and in the Sandomierz Basin (to be specific its part known as the Przemyśl Gate [Czopek, in this volume]) and well as the Sańsk-Dniester Plateau [Kondracki 1988: 400].

In each aspect, the interpretations adequately describe the issue referred to in the title. However, they should be elaborated on to answer a more general question about the nature of relationships and contacts taking place on the Polish Lowland as well.

1. CONTACT THROUGH THE PRISM OF NATURAL ENVIRONMENT

The interpretations of cultural pattern dissemination in the borderland between the East and West of Europe, presented so far, refer to natural terrain features, verified on the basis of natural data. The resulting picture of preferred routes within the oecumene of prehistoric societies clearly determines locations of contact zones. The picture may be modified only by historical verification, which is, however, hard to perform in respect of the period in prehistory under investigation.

Currently, our knowledge admits of two basic ways along which cultural impulses spread: the Dniester-San Route crossing the Przemyśl Gate that extended between Roztocze and the Carpathians [Czopek, in this volume] and the Boh-Bug Route traced via the Volhynia Gate [Makohonienko, in this volume; see earlier suggestions on the existence of the route: Kłosińska 2005, 2007].

Since the first of the routes is discussed in a separate paper [Czopek, in this volume], I shall concentrate on the other one. Its presumed role has already been appreciated by an interpretation of the flow of movable finds and its potential natural advantages [Kłosińska 2005: 161, 2007: 241]. If one takes into account phytogeographical divisions, then, the route crossed the border between two provinces: a steppe one, known as Pannonia-Pontic, and a forest one, called Central European Lowland-Upland [Makohonienko, in this volume]. The zone where the incidence of eastern cultural elements was the highest along the route covered the western portion of the Volhynia Upland. It is there that the westernmost range of the Pannonia-Pontic Province is found. It is characterized by the domination of steppe vegetation and forms an ecological extension of the ecosystem typical of the Northern Pontic Area, being a natural bridge between the East and West. Hence, the area has clear advantages for the circulation of cultural elements.
A point of departure, or rather a prologue, for further discussion is a definition of the easternmost range of phenomena related to the Lusatian culture (or more broadly: Urnfield culture complex). Relying on the range of direct inspirations clearly seen in the pottery style, one can plot it in present-day Volhynia as far as the upper tributaries of the Pripiet River [Pavliv 2008: Fig. 17; cf. similar approach Czopek 2007d: Fig. 6]. The area seems now to be the easternmost fringe of the LC oecumene. One can hardly speculate on the nature of this 'Urnfield' infiltration on the basis of single ceramic sources, but in the light of the most recent findings undermining the legitimacy of distinguishing the so-called Ulwówek group within the LC [Czopek 1997: 220-221; Klosińska 2005: 171-183], they testify rather to the possibility of existence of a contact zone between the societies of the LC and those of the Wysocko (Vysotsk) culture (WyC) [Dąbrowski 1972: 211-212]. The contacts may not have lasted long but they fit into the general picture of interactions on the LC fringes [see the interactions between the Tarnobrzeg LC and WyC – Czopek 2007c: 214-216] and perhaps we should underline their relation to the migration of groups of people manifested by the presence of ceramic sources. An attempt to explain the material (source) aspect of this phenomenon may be the stressing of the role of exogamy in the societies of those times and the identifying of women as major pottery-makers [Mierzwinska 2003: 88-99; Klosińska 2005: 177]. Strictly speaking, a certain amount of traits would be disseminated by migrating groups of people.

From the point of view of periodization of borderland cultures, appropriate propositions of the 'eastern exodus' of LC societies in the Bronze Age have already been made, chiefly in the context of the absolute chronology and temporal sequence of cultural patterns [Ignaczak, Ślusarska-Michalik 2003: 394-395, Fig. 4]. A problem of a slightly higher order would be to define the nature and intensity of these interactions as well as their historical import for successive cultural phenomena. However, solving these issues is not simple because conclusive evidence is supplied only by the dissemination of the Ulwówek beaker, a relatively rare form in LC contexts [Purowski 2003: Fig. 58; Pavliv 2008: Fig. 17], and all the other cultural traits seem to be not sensitive enough to analyze such interactions. A case in point here may be the widespread criticism of Tadeusz Sulimirski’s conception of the LC’s presence in the east, developed taking advantage of the discoveries of metal objects of the so-called ‘Lusatian’ provenance [Sulimirski 1936b].

What is only uncontroversial in the conceptions of LC's eastern impact is its assumed route, keeping to the Vistula and the area between the Bug and Wieprz rivers. What’s interesting, most intercultural contacts would follow the drainages of the Vistula and Bug rivers at that time. The contacts should be distinguished from entirely different processes observed in the Tarnobrzeg LC and the WyC (i.e. in the
drainages of the Dniester and San rivers), where the coincidence of cultural indicators would be an effect of peculiar common origins of these two groups [Czopek 2005, 2007d, 2007c].

3. EAST → WEST CONTACTS. EARLY IRON AGE STAGE

The Vistula-Bug (Wieprz) route plays a considerable role in the ‘reverse’ (east-west) cultural trend whose origins are traced to the Pontic forest-steppe zone and whose patterns appear in the Early Iron Age. Sources attributed to the trend have been discussed in detail in the literature under the name of ‘Brześć Kujawski type pottery’ [Ignaczak 2008: 143]. The descriptions given there make it possible to specify rather dearly traits characteristic of genetically foreign pottery found within cultural complexes on the Polish Lowland. In short, as alien to the local (Lowland) cultural environment, the following pottery ornaments were recognized: pricked (impressed)\(^1\) pits going around the vessel lip, pseudo-corded impressions arranged in gablelike motifs, reliefs in the form of strips decorated with finger impressions. What is also important is the fact that the stylistic value of the vessels is closely related to the technology of their manufacture. The latter is considerably inferior to the standards known from the Early Iron Age. This is seen, for instance, in the layered fracture of the pottery resulting from poorly worked body and an intentional admixture of grog to temper it.

The list of sites where these pottery styles are found on the Polish Lowland keeps on extending, with new sites being found as far as the Oder River (Fig. 1), and there are no indications that it might be closed at this stage. Any transformations of this tradition are being observed in a very discreet manner. As a kind of distinguishing characteristic of western complexes (in the drainages of the Oder and Warta rivers) one can consider a diminished share of ornaments, namely, pricked and impressed pits. Detailed investigations permit researchers to tentatively include metal sources in the discussion (they co-occur with pottery in shared contexts or are found nearby). In this connection, one should mention so-called nail-like ear bands and Scythian ice axes of eastern (forest-steppe?) provenance.

Apart from the ‘hard’ source evidence, some light on the question of dissemination of alien cultural patterns is shed by post-consumption remains [see Ignaczak 2008: 161]. I shall discuss this issue later in this paper.

\(^1\) At present, the incomplete (inaccurate) description should be supplemented by a perforated ornament, frequently constituting the main stylistic element of the assemblages.
3.1. CONTACT THROUGH THE PRISM OF SOURCES

In prehistory, a contact zone refers to two possible situations: (1) a coming into contact of two or more groups arriving from different centres or (2) an arrival of a group of people at a new area (unsettled?) away from their homeland [Marciniak 2006].

A coming into contact of two or more different groups of people should bring about a specific, syncretic complex of sources. Hence, assemblages of the Brześć Kujawski type, dated to the Early Iron Age on the Polish Lowland, seem to exemplify the first of the possible situations. This is so because the contact points mentioned earlier, from the perspective of archaeological sources, are characterized by uniqueness of cultural indicators and, at the same time, maintenance of relations with the local world. The relationships were co-created by a probable proximity to LC populations. Absence of any good verification criteria of the so-called close neighbourhood makes us consider as such also the settling of remains of abandoned set-
tlements, respecting, however, their spatial structure. This can be observed on many settlements containing cultural elements originating on the Pontic forest-steppe. Relevant post-residential (post-settlement) remains are frequently located there next to compact LC layouts, frequently at their peripheries. The structures make up closed systems defined by the presence of a house (any hypothetical dwelling structure) and several household pits.

This kind of behaviour is observed at a majority of well-preserved settlements containing eastern sources. As examples may serve relics from Brześć Kujawski, site 3 [Grygiel 1995], Piecki, site 8 [Głogowski, Ignaczak 2004], Sławsko Wielkie, site 16 [Głogowski, Ignaczak 2004], Kołuda Wielka, site 13 [Andraič 1993], Drohiczn, site Kozarówka I and Kozarówka II [Węgrzynowicz 1978], Transbor, unnumbered site [Orlińska 2007], Dziecinów, site 22 [Andrzejewska 2008], or Kowalewice, site 6-7 [Marchelak, Tyszler 2003]. Presumably, reminders of similar situations, ceramic finds unearthed in the cultural layers of LC settlements with their position within stratigraphic arrangements indicate each time a younger age than that of the other settlement materials (chiefly LC of the Iron Age). Such discoveries have been made at Komorów, site 1, [Malinowski (Ed.) 2004; Malinowski 2006], Glazów, site 8 [Ignaczak, Affelski 2009] and Wyszków, site 1 [Ignaczak 2007].

Assuming that the finds are results of contact or a cultural interaction, their stylistically (in terms of meaning) cohesive character could have been a result of the search for common denominators by migrating groups of people. Quoting Marciniak, one can conclude that "elements of material culture that have the character of a sign or incomplete sign are actively used (mobilised) to build a group's identity" [Marciniak 2006: 16]. The search for identity applies to all artefact types, beginning with dwelling structures and ending with material objects such as pottery.

A claim may be ventured that the potters of this period lived in small insular enclaves located in areas actively used by earlier (partially contemporaneous) LC populations. The reason for such arrangements could have been the ecological characteristics of the areas that probably met exactly settlement preferences of the populations.

Only to a slight degree can the conclusions following from the pottery analysis be supplemented by the observations of metal sources. Two types of artefacts encountered in contexts of interest to us here, namely nail-like ear bands and Scythian-type iron ice picks, have other connotations both in terms of their manufacture and function.

The ear bands, owing to the fact that they occurred with the Brześć Kujawski pottery type [see settlements at Brześć Kujawski – Grygiel 1995, and Bielawska Wieś, site 5 – Michalski 1986; Ignaczak 2008] or were discovered in settlement contexts close to it [Grygiel 1995], gain attractiveness as objects of interpretation. Their detailed genetic analysis yielded several important observations. Their Early Scythian variety (formally the closest to specimens from the Polish Lowland) is encountered
above all in the drainages of the Boh and Dnieper rivers [Gawlik 2007: Fig. 1]. Surprisingly enough, they are common virtually only in the forest-steppe zone [Gawlik 2007: 229]. In the east, they occur also in the Late Bronze contexts, specifically in the younger phases of the Chornoles culture [Krushelnytska 1998; Daragan 2004].

The literature provides even extreme interpretations, linking the ear bands to the forest-steppe Chornoles culture and ignoring the role of the Scythian culture in their dissemination [Kaposhina 1956: 181]. Such views, however, are, in the light of current knowledge, considered as rather unfounded because of the absence of any prototypes—ear bands characteristic of the early phases of forest-steppe cultures [Gawlik 2007: 231]. What else may be interesting for us here is the division of this group of finds into several subsets and a relatively little resemblance of forms encountered on the Polish Lowland to the group of artefacts belonging to the Tarnobrzeg Lusatian culture (TLC). The latter have a massive form and large cones at the end of the ring [Gawlik 2007: 232]. This may correspond to a certain opposition between ‘Tarnobrzeg’ artefacts, which probably were manufactured in local centres [Czopek 2007d, 2007a] and show no links to the forest-steppe zone broadly understood [Gawlik 2007: 232], and artefacts from the Lowland that may manifest some eastern connotations [see specimens from Brześć Kujawski and Gustorzyn – Grygiel 1995: Figs. 28, 30]. The question, however, calls for a thorough consideration, in particular in the light of the latest TLC finds unearthed at site 22 at Grodzisk Dolny [Czopek 2007a: 179, Fig. 166] and other specimens from the Lublin province [Bukowski 1977]. Yet, the thesis, tentatively put forth, referring to the possibility of ear bands originally spreading from the area on the middle Boh holds in the light of current knowledge.

Another type of data is supplied by weapons, namely iron ice picks of the ‘Scythian type’. They are evidence of contacts of similar provenance to that of the ear bands but their incidence is lower. Curiously enough, the ice picks are not found in areas immediately adjacent to the borderland. They occur only between the Oder and Vistula rivers and the context of their occurrence does not coincide with the Brześć Kujawski type pottery although in a few cases it is close to it. Cases in point are the relationship of finds from Bielawska Wieś [Michalski 1986] and a hoard from Bąków Dolny [Michalski 2002]. However, the evidence is too weak to construct any broader interpretation on it. What is important though is the bearing out of the thesis claiming that such finds occur in deposits of other cultures than those related to the armed presence of Scythian populations on the Lowland.

The last category of sources improving our knowledge on the East-West contacts is bone deposits from the assemblage found at site 3 at Brześć Kujawski [Grygiel 1995]. Obtained by detailed analyses, the picture of animal consumption at this site is rather typical [Makowiecka, Makowiecki 2005: 352, Fig. 2]. What draws our attention is the balance between domestic consumption species, a rare occurrence in settlement materials, and a high disproportion between the ages of slaughtered animals, mainly the cow and horse. In the case of both species, it was found that
very old animals had been eaten. In the case of the cow this means individuals even 14 years old and 15-20 years old in the case of the horse. A high share of horse bones, indicating a high position of the horse in the diet of the people inhabiting the settlement, may be indicative of an impact by peoples from the south-east [Grygiel 1995]. Indirectly though, this is borne out by the results of archaeozoological determinations for Scythian settlements where the share of the horse in the diet equals 31 per cent [Benecke 1998]. Small amount of data for the Polish Lowland prevents us, however, from generalizing the conclusions; the more so as the economic exploitation of the horse, especially on the steppes, is far more complex [Levine 1999]; besides its use for consumption extended probably to the ritual sphere [Marciniak 2004]. A higher chance for actual use may be enjoyed by conclusions concerning the populations of other species. Of equal importance may be the population of the pig. Being an animal of a relatively high breeding value, owing to the fast growth of individuals in a herd, it may be reared in periods of unstable economy [Lasota-Moskałewska 1997: 198-200].

3.2. CHRONOLOGY OF CONTACTS IN THE LIGHT OF $^{14}$C ANALYSES

The absolute dating of Brześć Kujawski type materials relies on dates obtained for two areas of their occurrence: the Polish Lowland and western Ukraine. With respect to Poland, a detailed profile can be made of three regions: Mazowsze, central Poland and Kujawy [Ignaczak 2008]. For Ukraine, we have fewer dates; nevertheless, the most inspiring ones concern a Chornoles culture settlement at Subotiv [Klochko et al. 1998], which is one of the presumed departure environments of Brześć Kujawski type assemblages. The significance of the dates for the questions discussed here lies in the verification of the temporal sequence in the occurrence of the cultural patterns and the definition of their hypothetical departure and destination areas.

Special attention is, therefore, merited by the seniority of eastern assemblages, verified by calibration. They are dated to the interval of 1200 to 800 BC [Klochko et al. 1998: 667-673; Ignaczak, Ślusarska-Michalik 2003: Tab. 2]. For Polish Lowland sites, the probability of an event is the highest in two intervals: (a) first, surprisingly early for Mazowsze and central Poland, i.e. 800-660 BC, and (b) second, dated to the period of 750-400 BC, obtained for Kujawy assemblages$^2$.

An effect of general knowledge, a necessary (?) earlier dating of sources originating from Mazowsze and central Poland was attempted by building a sequence

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$^2$ New dates for site no. 3 at Brześć Kujawski have considerably broadened the scope of interpretation presented in earlier publications [Ignaczak 2008]. Proper samples have been sent for analysis through the goodwill of Prof. Ryszard Grygiel, for which I am extremely grateful.
of $^{14}$C dates (using OxCal v3.10 calibration software). In the sequence, a priority of occurrence was given to the results from Mazowsze and central Poland. The obtained results (see Figs. 2 & 3) lend plausibility to the claim that elements from the east appeared gradually. The most credible intervals obtained by this method would look as follows: Mazowsze – from 560 to 390 BC, central Poland – from 600 to 360, Kujawy – from 510 to 340 BC. The results show that the cultural patterns spread from the east and their presence on the Lowland is secondary at least in respect of the Chornoles culture.
Fig. 3. Calibration sequence of \(^{14}\)C dates (using OxCal v3.10, B. Ramsey 2005) from sites containing Brześć Kujawski type artefacts.

4. CONCLUSION

It seems that the possibility of contacts between the forest-steppe societies of the Pontic Area and those of the decline LC must be necessarily accepted now. Presumably, the relations can be dated to Hallstatt D, which is indirectly shown by the obtained \(^{14}\)C dates. The dating of the temporal sequence to 650-510 BC seems rather certain, with dendrochronological data supporting it as well [Trachsel 2004]. What we most probably deal with in this period is a dwindling away of LC patterns and a weakening of settlement processes. This, in turn, could have led to the infiltration of the Polish Lowland by forest-steppe societies (pressed by nomads inhabiting the steppes?). As regards the genetic aspect, it is worth mentioning that the cultural patterns appear on the Polish Lowland only in decline LC assemblages and disappear together with the culture.
The views on the impact of the forest-steppe societies in the areas located first in the drainages of the Vistula and then the Oder rivers have recently been associated with the hypothesis of the Neuri migrations [Czopek 2007c and in this volume; Kłosińska 2007]. One cannot help feeling that they best describe the reality created by archaeological sources. For quite apart from the proper carriers of the eastern tradition (populations of the Chornoles, Cherepino-Lagodivsk or Leżnica cultures), it is hard to resist an impression that cultural contacts followed several routes at that time, with their common denominator being the forest-steppe as the departure area. A strong demographic stimulus could have spawned many routes of which two: Dniester-San and Boh-Bug-Vistula had a supraregional significance mainly because they ran through two natural passages: the Przemyśl and Volhynia gates.

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