## **Summary of the PhD dissertation**

## "Trzciniec Culture in South-East Poland"

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Doctoral dissertation written at the Institute of Archeology of the University of Rzeszów, under the supervision of prof. dr hab. Sylwester Czopek and auxiliary promoter dr Katarzyna Trybała-Zawiślak

The objective of the dissertation titled "Trzciniec culture in the south-eastern Poland" was to study and interpret the cultural phenomena taking place during nearly the entire second millennium BC in the San, Wisła and Wisłoka interfluve areas. Particular aspects related to the dissertation's topic were achieved in six chapters, including consecutively such notions as: chronology and periodisation, economy, funeral ceremonies as well as genesis, decline and cross-cultural contacts (chapter 6 – implementation of the cultural process). The specified part of the dissertation was preceded by preliminary notions (chapter 1) and completed by the "conclusion".

## **Chronology and periodisation**

The main focus of the dissertation was the systematisation of sources and their precise positioning in the timeline. The intended purpose was achieved by examining the chronological variation of pottery in two blocks, i.e. local and regional. Local observations were aimed at reproducing the dynamics of the development of selected Trzciniec culture settlements and determining the local change trends. The scope of the relevant studies also covered broader deliberations on land development. The obtained results were compared on a case-by-case basis with the results of absolute dating measurements (TL, C<sup>14</sup>) to confirm or negate the directions of inventory changes. This resulted in the separation of several synchronisable concept units that became the proposed framework method of dividing the sources of pottery in the Trzciniec culture of the San, Wisła and Wisłoka interfluves. This proposal included two stylistic perspectives ("classic" and "younger") as well as four development stages. The latter part of the analytical program featured an attempt to verify the obtained results. The purpose of this procedure was to determine the extent to which the direction of inventory changes in the observed, selected settlements resulted from local specificity and to which it was a reflection of a broader phenomenon encompassing the entire

area of south-eastern Poland. The analysis of the monument variation in a regional framework was based on statistical methods. The paper featured the use of such tools as the multiple correspondence analysis and the Kendall Rank Correlation Coefficient. This enabled the maintenance of the Trzciniec culture's four-element division. The particular units constituting this system were specified as Ia, Ib, IIa and IIb type groups. Materials with the "classic" style features and a dominant share of engraved ornamentation were deemed as representative for the Ia type groups. Sets exemplifying the Ib type were characterised by a similar set of elements, but in contrast to the preceding materials, the dominant role was played by crockery decorated with horizontal fillets. Engraved motifs were scarce. The last two taxons – the IIa and IIb type groups, were materials devoid of "classic" cultural determinants. The following features were deemed as representative for those sets: predominance of thin edges over thickened edges, presence of crockery with a so-called girdle and the lack of complex ornamental patterns created by combining the engraving and plastic techniques. The vertical fluting motif was deemed as the element "dividing" these two groups of artefacts. The aforementioned ornamental element was only observed in the IIb type materials. Based on pottery analogies, it is possible to propose the following dating of the distinguished types: Ia type groups - end of stage A2 of the bronze era or the turning point of stage A2/the BB1 period of the era; Ib type groups – partially "overlapping" chronologically with the Ia type. According to the Małopolskie analogies, the Ia-Ib sequence should end in the BB1 and BB2 period; IIa type groups – stage C of the bronze age; IIb type groups – stage D of the bronze age.

### **Settlement**

The area analysed in the paper covered a territory with clearly highlighted natural borders. Its western part is designated by the Wisłoka river line, eastern part – by the San river line, and the northern part is designated by the lower San and Wisła interfluve. The southern border is designated by Pogórze Karpackie. This vast surface features areas with various environmental parameters (loess areas, Pogórze Karpackie sections, Kotlina Sandomierska's dune zone, large river valleys). These conditions contributed to the disproportions in the settlement of the analysed area by the Trzciniec culture communities. Based on the information available today, it appears that the Trzciniec culture's ecumene was limited basically to the loess strip and the valley zone of large and medium watercourses. As much as 68% of all of the Trzciniec culture's spots are grouped there. Other regions can be deemed as zones of scattered settlement or even desolations. The land settlement strategy of the

Trzciniec culture's population residing at the San, Wisła and Wisłoka river interfluves is also characterised by the tendency to exploit the lower area sections (location of settlement spots in a 1 km radius from contemporary watercourse beds) and the concentration of settlement into agglomerated territorial structures, i.e. so-called micro-regions. Clear regional distinction is observed in the scope of the settlement network organisation. Two primary land occupation models can be proposed: the "stable" settlement model consisting of central settlements with a decisive economic significance and smaller affiliate settlements as well as the model made of smaller seasonal settlements and so-called staging areas, characteristic for lowlands.

## **Comments related to the economy**

The food sector of the Trzciniec culture community can be described as double-track. Agriculture and livestock were the basic strategies for gaining food in all Trzciniec culture settlement centres, nevertheless what the listed branches strictly depended on was the potential productivity of the settled area that played a decisive role in the structure of the economy. The situation observed in the area between the San, Wisła and Wisłoka interfluves does not show deviations from this rule. Data on the geography of settlement suggest that the population living in the loess zone preferred farming aimed at crop production. This condition also confirms the presence of large, long-lasting settlements in this zone. However, in the areas of Tarnobrzeg Plain, Kolbuszowa Plateau and in the valley zone of the Wisłok and San rivers, the basic strategy for gaining food was probably breeding. It is necessary to postulate greater stabilization of structures and the presence of garden-type crops in the valley zone of the Wisłok.

#### Remarks on the funeral rite

From the areas of south-eastern Poland, we currently know eight certain or alleged sites within which objects of a sepulchral character have been documented. These discoveries, although their number is not yet large, emphasize the considerable variety of burial forms typical of the entire Trzciniec community, even in such a small area. There are single and collective, flat as well as barrow, skeletal and crematory graves. The analysis of stock (style of pottery) discovered in these burials may indicate the existence of two chronological horizons in the funeral rite of local Trzciniec communities – the older, in which the deceased were buried in the skeleton rite and the younger one in which the dead were cremated.

## Implementation of the cultural process

The beginnings of the settlement of the Trzciniec culture in the area between the San, Wisła and Wisłoka interfluves should be combined with the migration of small groups of people from the Lowland zone. According to the review, many distinctive features for the oldest Trzciniec culture stocks from the San basin clearly "gravitate" towards the broadly understood north. These facts, combined with the lack of formal connections between the Trzciniec culture materials and sources representing the older, local base (Mierzanowice culture), call for the former to be an alochthonous and inflow-type unit. The origins of these traditions probably date back to the 18th century BC. There are many indications that the Trzciniec culture appears in the area of south-eastern Poland during the time when the settlement of the late cultural groups of Mierzanowice culture was still under way. Data on broadly defined settlement geography document the lack of territorial "overlapping" of Mierzanowice and Trzciniec cultures sites, which proves the possibility of temporary coexistence of these cultures. The radiocarbon chronometry indications also support this concept. The general similarity between the studied areas and the areas of Miechowskie loess is suggested by the analogous settlement scenario – allochthonous Trzciniec culture, through gradual infiltration into places abandoned by early brown groups or those outside their sphere of interest, gradually increases its ecumenism.

During the long development of the Trzciniec structures in the interfluve of San, Vistula and Wisłoka rivers, there were various intra- and extra-system contacts. This state manifests itself in the reception of specific cultural patterns and ideas at various stages of the development of the "Nadsań" settlement cluster. At this point, it seems necessary to indicate the relations between the Małopolska and Podkarpacie regions, visible even in the form of the temporal sequence of subsequent stylistic phases. Briefly speaking, within the local sequence of inventory changes, we find the presence of groups corresponding to virtually all phases allocated for the Małopolska region. This state may suggest a parallel development of the structures of the southern part of the Komarowska culture range, with a slightly separate rhythm of changes in its north-eastern part.

Potential evidence of cultural contacts between the Trzciniec culture settlement complex in south-eastern Poland and the "eastern" wing of the Komarowska culture concern only the convergences recorded on the level of material culture. Inspirations drawn from the Komarowska culture are reflected in the morphology of some vessels, in ornamentation (e.g. motif of checker and so-called angular wefts) and through the tendency to cover the entire bottom surface of the vessel with an ornament. Connections of the discussed territorial organism with the zone culturally related to the Zakarpacie areas may, however, be

documented by single examples of tall, empty legs, vessels decorated with vertical plastic motifs or numerous cannons found in this zone.

The disappearance of the group that is the subject of this study is connected with the evolutionary changes that occurred in its structure under the influence of an external impulse. This process consisted in taking over by the population of the declining Trzciniec culture phase of the funeral rite and the proliferation of long-used collective necropolis. The analysis of the oldest metal products of the Lusatian culture and the few absolute age markings suggest a chronological "contact" and the possibility of partial parallelisation of the youngest Trzciniec culture groups with the early phase of the Lusatian culture. Such a conclusion imposes a specific way of perceiving the phenomenon of declining the Trzciniec culture as a long-spreading process of taking over the early Lusatian features of the local communities of the Trzciniec culture. The phenomenon of cultural transformation took place within the framework of unchanged settlement structures.