

Neolitizacija Evrope. Slovenska perspektiva. Prispevek k diskusiji

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Izvleček

Avtor analizira Veluščekovo kritiko pojasnitve procesa neolitizacije na območju Dinarskega krasa Slovenije. Kritiko interpretativnih nastavkov zavrne in ugotovi, da kljub kritičnim zapisom podatkov o procesu neolitizacije na področju Dinarskega krasa Slovenije ni prav nič manj, le bolj očitni so.

Abstract

The author analyses Velušček's critical views on the interpretation of the Neolithisation process in the Karst area of the Dinaric Slovenia. He rejects Velušček's criticism of his interpretative propositions as unfounded, and concludes that in spite of the existing criticism evidence on the Neolithisation process is not scarcer, on the contrary, it has been made more prominent.

UVOD

V diskusijo o slovenski perspektivi študija procesov neolitizacije Evrope vstopamo zaradi petih razlogov. Prva dva sem kot interpretativni izhodišči predstavil že v eni prejšnjih razprav (Budja 1993, 173-174).

Prvi razlog se namreč nanaša na oceno, da periodna paradigma, ki vsebuje "... podmeno o kronološkem, kulturnem in prostorskem izključevanju mezolitskih in neolitskih vsebin, pri čemer so bile slednje prepoznane le s pomočjo lončenine in glajenih orodij." (ib. 173-174), ni nastavek, ki bi omogočal relevantne pojasnitve procesov neolitizacije. V premislek smo ponudili moderne multidisciplinarnе pristope k študiju prazgodovinskih gospodarstev, upoštevaje model prehoda na kmetovanje in koncepta poljedelske meje ter selektivnega prevzemanja posameznih elementov pridelovalnega gospodarstva. Zapisali smo, da so pri tem ključni regionalni konteksti in da je z vidika neolitizacije Evrope dogajanje na območju Caput Adriae vpeto v dogajanje v Sredozemlju (ib. 171-172, 174).

Drugi razlog je vezan na neprijazne okoliščine arheoloških raziskav. Opozorili smo, da bo "...

predstavitev našega razumevanja procesov neolitizacije na področju Caput Adriae fragmentarna..." (ib. 174). Zaradi nesistematičnih in nekonistentnih raziskovalnih pristopov imamo namreč na voljo le malo podatkov o mezolitskih in neolitskih gospodarstvih. Upali smo, "... da bo naš poskus aktualiziral pomen stratigrafskih izkopavanj, tehnik mokrega in suhega sejanja, analiz gospodarskih prostorov, C14 datacij, analiz sledi uporabe, ki so se ohranile na kamenih orodjih in seveda analiz paleookolja s posebnim poudarkom na študiju rastlinskih in živalskih ostankov, deponiranih v mezolitskih in neolitskih naselbinskih depozitih." (ib. 174).

Tretji razlog se navezuje na nespregledljivo dejstvo, da je Dinarski kras Slovenije eno najbolj prekopanih arheoloških področij. Toda, noben spodmol, nobeno jamsko najdišče pa ni bilo izkopano stratigrafsko. Na voljo ni C14 datumov, ne sistematičnih študij razvoja paleookolja. Podatki o "artefaktnih skupkih", ki jih je mogoče navezati le na mersko določene izkopne plasti in na retrogradno pojasnjene profile izkopnih polj, so mnogo premalo. Površinski pregledi okolice jam in spodmolov niso bili opravljeni. Zaradi nesistematičnih raziskovalnih pristopov in arbitrarnih iz-

kopavanj so v arheoloških palimpsestih dokončno izbrisani podatki o kulturnih in naravnih procesih. Žal smo izgubili možnost študija mezolitskih in zgodnjeneolitskih zapisov tudi v ključnih najdiščih, kjer je sicer dokumentirana celovita poznopleistocenska in holocenska stratigrafska sekvenca.

Četrty razlog povezujemo z relevantnostjo teme - neolitizacija Evrope, ali drugače, s prehodom na kmetovanje. Z njeno pomočjo želimo oblikovati multidisciplinarni raziskovalni pristop tudi v slovenskih prazgodovinskih študijah. Te morajo prestopiti kataloški deskriptivizem, poseči po modernih konceptih in analitskih postopkih ter se vključiti v živahne evropske prazgodovinske raziskovalne tokove. Ker se želimo izogniti ponovnemu nerazumevanju, še enkrat ponujamo v presojo nekaj osnovnih in lahko dostopnih primerov (*Hunters in Transition. New Direction in Archaeology*, 1985; *The Neolithisation of the Alpine Region*, Monografie di "Natura Bresciana" 13, 1990; *Transitions to Agriculture in Prehistory*, Monographs in World Archaeology 4, 1992; *Archäologische Informationen* 16/1,2, 1993; Neolitske študije, *Por. razisk. pal. neol. eneol. Slov.* 22, 1995).

Peti razlog. Pri njegovi predstavitvi si bomo pomagali z analizo poznomezolitskih in zgodnjeneolitskih arheoloških vsebin v Crvenih stijenah. Najdišče smo v že citiranem delu zaradi njegovega izjemnega interpretativnega pomena večkrat omenjali (ib. 163-164, 177-178). Tokrat predstavljamo izključljivost arheoloških interpretacij. Vsebinska je poučna tudi zato, ker so pri izkopavanjih sodelovali slovenski raziskovalci. Prvi del je težko, morda celo nemogoče dokumentirati. Temelji namreč na ustnih informacijah dr. Mitje Brodarja o nezanesljivem razmejevanju pleistocenskih in holocenskih plasti ter nejasnih holocenskih stratigrafskih superpozicijah. Drugi del govori o domestikatih v poznomezolitskih plasteh in njihovi stratigrafski superpoziciji z zgodnjeneolitsko plastjo z *impresso-cardium* keramiko. Pri tem sta nam na voljo dve pojasnitvi. Po prvi so bile v mezolitski IV in zgodnjeneolitski III plasti odkrite le kosti divjih živali. Gospodarstvo naj bi temeljilo predvsem na lovu. Gospodarske strategije naj se ne bi spreminjale (Benac 1975, 127). Po drugi so v mezolitskih in neolitskih plasteh odkrili kosti udomačenega kratkorogega goveda in balkanske koze (Malez 1975, 159-160). Pri tem velja opozoriti še na kostne ostanke ovce in domnevno udomačene svinje že v mezolitskih plasteh (Rakovec 1958, 69; Basler 1983, 41). Podatki o udomačenih živalih so nam torej na voljo. Vprašanje je le, ali res v mezolitskih kontekstih. Morda lahko arheološ-

ki zapis v plasti V in IV interpretiramo kot fazo dosegljivosti (Zvelebil 1990, 10-13; 1994, 109-120, 130-139). Podatek, da v teh plasteh ni bilo lončnine, ne pomaga kaj dosti. Nemočni smo tudi ob dejstvu, da C14 datumov ni na voljo in kronološko koreliranje s poznomezolitskimi ali zgodnjeneolitskimi zapisi na Peloponezu, Balkanu in jadranski obali zato ni mogoče.

In sedaj k bistvu petega razloga. Primerljiva stratigrafska sekveca in podoben arheološki palimpsest sta bila odkrita tudi na slovenskem Dinarskem Krasu v Podmolu pri Kastelcu. Dosegljivi niz podatkov je zelo dragocen. Na podatek o domestikatih v predneolitskem kontekstu (plast 13) se namreč veže nespregljivo dejstvo o pašništvu in zgodnjem antropogenem vplivu na gozdno vegetacijo (Turk et al. 1993, 70-71; Velušček 1995, 330, 336; Culiberg 1995, 205, 207). Toda tudi na tem najdišču ostajamo brez C14 datumov in podatkovna baza je v tem delu primerljiva s podatkovno bazo Crvenih stijen, izkopanih leta 1955 in 1956! V našem delu smo opozorili še na Stenašco in Malo Triglavco, najdišči s podobnima stratigrafskima sekvencama in arheološkima vsebinama nedaleč proč na Tržaškem in Divaškem krasu (Budja 1993, 178, 190). V kontekstu podatkov iz Istre smo dostopne arheološke vire iz Podmola pri Kastelcu in Stenašce uporabili pri oceni relevantnosti modela neolitizacije, temelječega na ideji sekundarnih centrov neolitizacije in predpostavki o postopnem širjenju t. i. neolitskega paketa iz južne Dalmacije na podočje Caput Adriae. Kljub fragmentarnim podatkom smo ugotovili, da ideja o Tržaškem Krasu kot "pribežališču lovcev" in teza o regionalni vlaški skupini, s katero naj bi se to področje neolitiziralo šele v srednjem neolitu, nista realni (ib. 167, 176-177, 183, 188-189). Podobno velja tudi za hipotezo o tisočletje dolgem zamiku med pojavom pridelovalnega gospodarstva na južnem in severnem delu vzhodno jadranske obale (ib. 176-178, 188-190). Žal se interpretativnih vrednosti podatkov iz zgodnjeholocenskih plasti v Podmolu pri Kastelcu izkopavalca nista zavedala.

INTERPRETATIVNO OZADJE DISKUSIJE IN KRITIKA VIROV

Čeprav je Velušček začel s kritiko pojasnitev procesov neolitizacije in prehoda na kmetovanje na področju kraške Dinarske Slovenije, ni prepoznal interpretativnega pomena podatkov iz Podmola pri Kastelcu. Za resno kritiko pa je poleg tega potrebno tudi poznavanje in razumevanje in-

terpretativnih modelov in analitskih pristopov.

Velušček kritiko "Slovenskega vidika procesov neolitizacije Evrope" začinja z interpretativnim nastavkom, ki ga zameji s tradicionalnim arheološkim opisom sedimentov in njihovim arbitrarnim primerjanjem v različnih jamah in spodmolih. Ta opis mu služi kot pripomoček pri razmejevanju pleistocena in holocena ter mezolitika in neolitika. Kljub veliki ambiciji njegove ugotovitve niso drugačne od naših. Glede na objavljene podatke in neopravljene analize je plast 13 v Podmolu pri Kastelcu mogoče interpretirati kot "pleistocensko ali holocensko, vsekakor pa predneolitsko" (Velušček 1995, 328,334; Budja 1993, 177,189). Nespremenjeno ostaja tudi dejstvo, da je po mnenju izkopavalcev pleistocenske in holocenske plasti mogoče razmejiti s pomočjo lončenine, kajti "... glede na to, da je bila keramika v skoraj vseh plasteh, razen v zadnjih dveh (12 in 13), lahko vse druge plasti pripišemo holocenu." (Turk et al. 1993, 50)! Resna diskusija bo mogoča šele potem, ko bodo opravljene sistematične sedimentološke in pedološke analize ter analize procesov oblikovanja paleotal, povezane s prepoznavanjem naravnih in antropogenih procesov, ki so povzročali obsežna odlaganja in nalaganja plasti v jamah in spodmolih kraške Dinarske Slovenije. Pri tem seveda ne smemo spregledati očitnih sprememb naravnega okolja v borealu in atlantiku, ki so se dogajale v regiji in blizu nje (Boschian, Montagnari-Kokelj 1984, 40-50; Shackleton, Van Andel 1985, 7-20; Marocco 1989, 87-110; 1991, 1-26; Cremaschi 1990, 71-89).

Drugi nastavek se navezuje na Müllerjevo tipološko razvojno shemo vzhodnojadranskega zgodnjega neolitika, prisotnost impresso keramike v jamskih depozitih na Tržaškem Krasu in na koreliranje metličaste in impresso ornamentike (Velušček 1995, 328-330,334-336). Müllerjevih argumentov ne bomo ponavljali (Müller 1991, 317,327; 1994, 117,119,126-127,143; Budja 1993, 178,190). Dodali jim bomo še podatek o jamskem najdišču Spila, v katerem je bila v najstarejši zgodnjeneolitski plasti 7 (faza Ia) odkrita keramika, okrašena v impresso, impresso cardium in metličasti tehniki (Marković 1985, 21, t.1,2). Veluščkovi "upravičeni razlogi" proti povezovanju metličaste okrašene keramike z impresso kulturo, so torej neupravičeni. Neupravičen je tudi dvom o razprostranjenosti impresso cardium keramike na Tržaškem Krasu. Na voljo so nam namreč preverjeni podatki o najdišču Pejca v Lašci, Pečina na Leskovcu in Pečina pod Muzarji (Müller 1994,141-142,310-311). Pri tipoloških in kulturno-razvojnih analizah je Velušček žal spregledal še eno pomembno

podrobnost - diskusijo o najstarejši neolitski fazi s keramiko na vzhodni jadranski obali. Po Parzingerju to ni faza z impresso ali impresso cardium keramiko, ampak, podobno kot na Vzhodnem in Južnem Balkanu, Peloponezu in Anatoliji, monohromno keramiko (Parzinger 1993, 53,77-79; Müller 1988, 219-235; 1991, 338; 1994, 124-127; Budja 1993, 167,182). Spregledal je tudi podatek, da je bila v Stenašci skupaj z geometričnimi orodji (pozni castelnovienski kontekst) deponirana neokrašena (monohromna) keramika (Biagi et al. 1993, 48,61; Budja 1993, 178,190). Popolnoma zgrešena pa je njegova ocena: "Glede na radiokarbonske datacije je keramika iz plasti 3a Stenašce mlajša od impresso keramike, "najdene" v Pejci v Lašci" (Velušček 1995, 329,335); nespregledljivo je namreč dejstvo, da iz Pejce v Lašci pač nimamo nobenega C14 datuma. Žal je neresno tudi sklicevanje na primerljivost C14 datuma iz Stenašce z datacijami impresso A stopnje, ki jih objavlja Müller (Velušček 1995, 329,335). Velušček je očitno spregledal, da je Müller C14 datume kalibriral na 1 σ ali 1. velikost standardne deviacije, ki zagotavlja le 68,2% statistične verjetnosti srednjih vrednosti objavljenih datumov. Če k temu dodamo še koledarske razmike objavljenih datumov, se C14 datum iz Stenašce prekriva z datumi omenjene zgodnjeneolitske stopnje (Müller 1994, 346-352). O uporabni (ne)vrednosti modela neolitizacije vzhodnojadranske obale, ki temelji na zaporedju C14 datumov, smo že govorili (Budja 1993, 176-177,188-189).

Tretji nastavek se nanaša na domestikate v predneolitskih kontekstih. Tu Velušček upravičeno korigira našo trditev, da so bile v predneolitski plasti 13 v Spodmolu pri Kastelcu odkrite tudi kosti "na pol udomačene svinje". Te so v resnici dokumentirane šele v plasti 10 (Turk et al. 1993, 72). Za boljše razumevanje procesov udomačitve divje svinje v evropskih mezolitskih in neolitskih kontekstih pa Veluščku predlagamo pregled Beneckejeve razprave (Benecke 1993, 19-30). Še vedno pa ostaja nespremenjen podatek o kosteh drobnice, deponiranih v omenjeni predneolitski plasti (Turk et al. 1993, 72, Tab. 5,6).

Četrty nastavek je zamejen z najdbo inciziva ovce ali kože v mezolitskem kulturnem horizontu na najdišču Pod Črmukljo pri Šembijah (Velušček 1995, 331,336). Ostanki drobnice so bili v arheološkem kontekstu najdišča odkriti in dokumentirani (Pohar 1986, 16; Brodar 1992, 25). Kasneje so bili iz artefaktnega zbira na interpretativni ravni izločeni. Arbitrarna odločitev je temeljila na naslednji oceni: "Ker pri nas niti koza niti ovca v mezolitiku še nista bili udomačeni, je zob kasneje na

kakršni koli način (npr. obdelovanje zemlje) zašel globlje v tla in se pomešal s starejšimi najdbami" (Pohar 1986, 16). Podobno velja tudi za keramiko. Čeprav je bila odkrita v mezolitskem kulturnem kontekstu (Brodar 1992, 25), je bila kasneje iz njega izločena. Tudi ta odločitev je arbitrarna: "Edina kulturna plast je torej humus in globlje raziskavanje ni potrebno. V humusu so sicer vidne neke barvne spremembe, ki pa jih ne smemo razlagati kronološko, ker vemo, da je bil humus mnogokrat prekopavan. Zaradi tega tudi ne moti nekaj kosov keramike, saj je izključeno, da bi šlo za istočasne kulture. Prazgodovinsko gradišče je bilo neposredno nad našim najdiščem na platoju nad skalno steno. Pojav keramike torej ne preseneča, z mnogo starejšimi mezolitskimi najdbami pa se je pomešala pri obdelovanju." (Brodar 1992, 25). Veluščku svetujemo, da namesto opletanja z gojenjem "...zeljnih sadik, ki so jih pozneje presajali na njive..." (Velušček 1995, 331,336), preveri trditev o primerljivosti neobjavljenih keramičnih fragmentov z železnodobno lončenino. Postopki določanja tehnoloških tipov so mu na voljo.

Peti nastavek ali "rožene kopače sekirastih oblik" iz Male Triglavce. Očitek, da Budja navaja paralele, ne da bi citiral literaturo (Velušček 1995, 331,337), je neresničen. Na voljo sta citata in opomba (Budja 1993, 178,190), v kateri smo navedli paralele tudi za druge koščene artefakte. Pri tem smo opozorili na pomen povezav z mezolitskim

kompleksom Riparo Gaban v Severni Italiji. V presojo smo ponudili možnost, da "... so se tudi na področju Caput Adriae razvile t. i. kompleksne mezolitske skupnosti, ki so vzpostavljale kontakte na dolge razdalje in selektivno (prestižno) prevzemale elemente pridelovalnega gospodarstva." (Budja 1993, 178, op. 14). Pri objavi četrte kopače se je Veluščku zapisala še ena nedoslednost: "V primerjavi z doslej neobjavljenim kosom se zdi, da so trije kosi le polizdelki, čeprav je to izključeno." (Velušček 1995, 332,337).

Šesti nastavek in Breg pri Škofljici. Tudi namig o Budjevi manipulaciji z "...datacijo oglja iz plasti 3a Brega pri Škofljici..." (Velušček 1995, 332,337) ni resničen. V tekstu namreč opozarjamo na težave, ki jih pozročajo nedosledne objave C14 datuma z Brega pri Škofljici. V obtoku so namreč preveč različne koledarske vrednosti datuma, nekatere celo brez oznak štetja, druge z napačnimi oznakami, da bi ga lahko jemali resno (Budja 1993, 175,187, op.8). Objave različnih koledarskih vrednosti istega vzorca predstavljamo še enkrat: 6830 ± 150 (Pohar 1984, 19); 4880 ± 150 BC (Frelj 1986, 32); 4880 ± 150 BC in 6830 ± 150 BP (Josipovič 1992, 38); 5650-5390 (5535) BC in 6630 ± 150 BP (Müller 1991, 355; 1994, 351).

Na koncu lahko ugotovimo, da kljub kritičnim zapisom podatkov o procesu neolitizacije na področju kraške Dinarske Slovenije ni prav nič manj, le bolj očitni so!

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Neolithisation of Europe. The Slovene Aspect. Contribution to the Discussion

Translation

INTRODUCTION

There are five basic points I would like to make in my contribution to the discussion on the Slovene aspect of studying the Neolithisation processes in Europe. Two of them were extensively dealt with as interpretative propositions in my original study (Budja 1993, 173-174).

The first point is my statement that the chronological paradigm dwells on the following assumptions (a) "the chronological, cultural, and spacial exclusion of Mesolithic and Neolithic contexts" and (b) "The Neolithic ones could only be identified on the basis of pottery items and polished tools" (O.c. 173-174, 187). In my study this idea was backed with modern multidisciplinary approaches to studying of prehistoric economies, taking into account the model of transition to agriculture, as well as the concept of the agricultural frontier, and selective adoption of individual elements of food production economies. It was also stressed that regional contexts were of key importance, and from the point of view of Neolithisation of Europe, the Caput Adriae area was linked with changes in the Mediterranean (O.c. 171-172, 174).

The second point is related to the unfavourable conditions of archaeological research. I noted that "the presentation of our understanding of the Neolithisation processes in the Caput Adriae area will only be fragmentary" (O.c. 174). Due to unsystematic and inconsistent approaches the evidence for Mesolithic and Neolithic economies is scarce. I hoped "that this attempt will renew interest in the role of stratigraphic excavations, flotation techniques, the analyses of site catchments, 14C dates, the analyses of traces of wear preserved on stone tools, and naturally the analyses of the paleoenvironment, with a special emphasis on the studies of plant and animal remains intrusive in Mesolithic and Neolithic settlement deposits." (O.c. 174).

The third point concerns the fact that Slovene Dinaric Karst is one of the most excavated archaeological areas. However, not a single rock shelter or cave site was excavated stratigraphically. There are neither 14C dates available, nor systematic studies of the development of the paleoenvironment. The data on "artefact assemblages" which can only be correlated with metrically determined excavated horizons, and with a hindsight interpretation of the profiles of excavated areas, do not suffice. Surface examinations of areas surrounding rock shelters and caves have not been performed. Because of unsystematic research and arbitrary excavations, the evidence about cultural and natural processes of deposition have

been ultimately erased from archaeological palimpsests. The possibility to study Mesolithic and early Neolithic records in key sites which otherwise would have offered complete late Pleistocene and Holocene stratigraphic sequences, thus no longer exists.

The fourth point is related to the topic itself: the Neolithisation of Europe, i.e. the transition to farming. It offers an opportunity in the sphere of Slovene prehistoric studies to establish a multidisciplinary approach. Descriptive cataloguing should be replaced by modern concepts and analytical procedures, thus making Slovene archaeology a part of contemporary trends in European prehistoric research. In order to avoid further misunderstanding of the problem, the following list of studies can additionally highlight the problem: *Hunters in Transition. New Direction in Archaeology*, 1985; *The neolithisation of the Alpine Region*, Monografie di Natura Bresciana 13, 1990; *Transition to Agriculture in Prehistory*, Monographs in World Archaeology 4, 1992; *Archäologische Informationen* 16/1, 2, 1993; Neolitske študije, *Por. razisk. pal. neol. eneol. Slov.* 22, 1995.

The fifth point focusses on the analysis of late Mesolithic and early Neolithic archaeological contexts in Crvene stijene. Due to its major interpretative potential, the site was mentioned several times in my study (O.c. 163-164, 177-178). In here, I use it as an illustration of how archaeological interpretations exclude each other. On the one hand, according to verbal communication by Mitja Brodar, it is difficult or even impossible to document stratigraphic distinctions and stratigraphic superpositions of the Pleistocene and Holocene layers. On the other hand, there is evidence for domesticated animals in the late Mesolithic layer, and for its stratigraphic location under the early Neolithic layer with Impresso-cardium pottery. There are two interpretations possible. According to the first, the Mesolithic IV and the early Neolithic III strata contained only bones of wild animals. This suggests the predominance of hunting economy, with unchanged subsistence (Benac 1975, 127). According to the second, however, bones of domesticated short-horned cattle and the Balkan goat (Malez 1975, 159-160) were also present both, in the Mesolithic and Neolithic layers. There were bone remains of sheep and supposedly of domesticated pig found already in the Mesolithic layers (Rakovec 1958, 69; Basler 1983, 41). Data on domesticated animals are at our disposal. However, it is questionable whether they really belong to Mesolithic contexts. Archaeological record in strata V and IV may be interpreted as the availability phase of the transition to farming (Zvelebil

1990,10-13; 1994 (1995),109-120,130-139). However, these two layers contained no pottery. Besides, there are no 14C dates available, so that chronological correlation with late Mesolithic or early Neolithic records in Peloponnesus, the Balkans, and along the Adriatic coast is rendered impossible.

And now to the main issue. A comparable stratigraphic sequence and a similar archaeological palimpsest were discovered also in the Slovene Dinaric Karst, namely in Podmol near Kastelec. The available series of data is extremely valuable. The fact that there is evidence for domesticated animals in the pre-Neolithic context (stratum 13) inevitably presupposes keeping of livestock and an early anthropogenic influence on forest vegetation (Turk et al. 1993, 70-71; Velušček 1995, 330,336; Culiberg 1995, 205,207). However, there are no 14C dates available, although data basis from this part correlates with that from Crvene stijene, excavated in 1955 and 1956! In my study Stenašca and Mala Triglavca are also mentioned as two sites with similar stratigraphic sequences and archaeological contexts, which are located in the nearby Trieste and Divača Karst (Budja 1993, 178,190). In the context of the evidence from Istra, the available archaeological sources from Podmol near Kastelec and Stenašca were used to evaluate (a) the relevance of the Neolithisation model based on the idea of secondary centres of Neolithisation, and (b) the hypothesis on the gradual spread of the so called Neolithic package from Southern Dalmatia to the Caput Adriae area. Although the available evidence was fragmentary, I came to the conclusion that the idea of the Trieste Karst as a "refuge for hunters", and the notion of the regional Vlaška group introducing the Neolithic into this area as late as the middle Neolithic, cannot be considered real (O.c. 167,176-177,183,188-189). This can also be said for the hypothesis about a millenium long interval between the appearance of food production economy in the southern vs. the northern stretch of the East Adriatic coast (O.c. 176-178,188-190). Unfortunately the excavators were not aware of the interpretative value of the data from the early Holocene layer in Podmol near Kastelec.

INTERPRETATIVE BACKGROUND OF THE DISCUSSION AND CRITICISM OF SOURCES

Velušček criticises my interpretations of Neolithisation processes and transition to agriculture in the Slovene Dinaric Karst, not recognizing the interpretative meaning of the data from Podmol near Kastelec. A true criticism, however, implies a good understanding of interpretative models and analytical approaches.

Velušček opens his criticism of "the Slovene aspect of Neolithisation processes in Europe" with a proposition framed by the traditional archaeological description of sediments, and their arbitrary comparison from different caves and rock shelters. This description serves him as a help to draw the boundary between Pleistocene and Holocene, as well as Mesolithic and Neolithic. In fact, his conclusions do not differ from mine. In keeping with the data published, and the unperformed analyses, stratum 13 in Podmol near Kastelec can be interpreted as "Pleistocene or Holocene, in any case pre-Neolithic" (Velušček 1995, 328,334; Budja 1993, 177,189). Excavators are also of the opinion that the Pleistocene or Holocene layers can be recognized on the basis of pottery: "Considering the fact, that pottery was contained in almost all strata, except for the last two (12 and 13), all other strata can be attributed as Holocene" (Turk et al. 1993, 50)! A true discussion will be possible when systematic sedimentological and pedological analyses will have been performed, as well as analyses of the processes in the formation of paleosurfaces; they will have to be connected with recognizing natural and

anthropogenic processes that caused extensive sedimentation and deposition of layers in caves and rock shelters of the Slovene Dinaric. The obvious changes in the natural environment that took place in this region in the Boreal and Atlantic periods should also not be overlooked (Boschian, Montagnari-Kokelj 1984, 40-50; Shackleton, van Andel 1985, 7-20; Marocco 1989, 87-110; 1991, 1-26; Cremaschi 1990, 71-89).

His second remark addresses Müller's typological developmental scheme of the early Neolithic in the East Adriatic, the presence of the Impresso pottery in cave deposits in the Trieste Karst, and the correlation of whisk and Impresso ornamentations (Velušček 1995, 328-330,334-336). I will not repeat Müller's arguments here (Müller 1991, 317,327; 1994, 117,119,126-127,143; Budja 1993, 178,190), but, rather, I will supply information on a cave site Spila where in the oldest early Neolithic layer, stratum 7 (1a phase), pottery decorated with Impresso, Impresso cardium and wisk ornamentation was found (Marković 1995, 21, Pl. 1,2). This makes Velušček's "justified reasons" against relating wisk ornamentation with Impresso culture unjustified. His doubt in the distribution of the Impresso cardium pottery in the Trieste Karst seems likewise to be unjustified. There is enough evidence from the following sites to confirm the contrary: Pejca v Lašci, Pečina on Leskovec and Pečina under Muzarji (Müller 1994, 141-142,300-311). In the existing typological and cultural-development analyses Velušček unfortunately overlooked yet another important issue, namely the discussion on the oldest Neolithic phase containing pottery that was registered along the East Adriatic coast. According to Parzinger this phase was not characterized by either Impresso, or Impresso cardium pottery, but, rather, similar to the situation in the East and South Balkans, Peloponnesus, and Anatolia, by monochrome pottery. Velušček also took no notice of the fact that in Stenašca together with geometric tools (late Castelnavian context) undecorated (monochrome) pottery was found (Biagi et al. 1993, 48,61; Budja 1993, 178,190). Besides, his opinion "In terms of the radiocarbon dates, the pottery from stratum 3a is later than the Impresso pottery "found" at Pejca v Lašci" (Velušček 1995, 329,335) is completely ungrounded. Namely: there exists no 14C datation for Pejca v Lašci. His comparison of 14C datation from Stenašca with datation of Impresso A phase quoted by Müller (Velušček 1995, 329,335) cannot be taken seriously, as he obviously overlooked the fact that Müller's 14C dates were calibrated to 1 σ or to 1st grade of standard deviation, which renders possible only 68.2% of statistical relevance. If calendar intervals of the quoted dates were taken into consideration, the 14C date from Stenašca would overlap with the dates of the above mentioned early Neolithic stage (Müller 1994, 346-352). I have already emphasized the applicable value(lessness) of the Neolithisation model based on the 14C dates sequence for the East Adriatic area.

Velušček's third remark refers to domesticated animals in pre-Neolithic contexts. Here he justifiably corrects my statement that in Spodmol near Kastelec, bones of "half domesticated pig" were found in the pre-Neolithic stratum 13. They were in fact documented in stratum 10 (Turk et al. 1993, 72). However, in order to obtain a better insight into the domestication process of wild pig, I suggest Velušček reads Beneke's study (1993, 19-30). Evidence on small cattle bones deposited in the above mentioned pre-Neolithic layer, however, remains a fact (Turk et al. 1993, 72, Tab. 5,6).

The fourth proposition deals with a sheep or goat incisor found in the Mesolithic cultural layer at Pod Črnučje site near Šembije (Velušček 1995, 331-336). In the archaeological context of the site, remains of small cattle were found and documented (Pohar 1986, 16; Brodar 1992, 25). However, they were later excluded from the artefacts to be interpreted.

The arbitrary decision rested on the following opinion: "Because in our part of the world in the Mesolithic neither goat nor sheep were domesticated, the tooth must have been redeposited (e.g. tilling of soil) deeper into the ground and mixed with earlier finds" (Pohar 1986, 16). The same happened when it came to pottery. Although it was found in the Mesolithic cultural context (Brodar 1992, 25), it was later excluded from it. This decision was also arbitrary: "The only cultural layer is therefore humus, deeper excavation is not necessary. Humus shows certain changes in colour, however, they should not be interpreted chronologically, as we know that humus has often been dug. A couple of pottery fragments are no evidence, as it is impossible to consider them to belong to contemporary cultures. A prehistoric hillfort was located immediately above ours, on a plateau above a cliff. The appearance of pottery is therefore not surprising; it got mixed with much older Mesolithic finds during soil tilling." (Brodar 1992, 25). Velušček is strongly advised - instead of pondering over cultivating cabbage plants which "were later transplanted into fields" (Velušček 1995, 331,336) - to check Brodar's suggested comparison of the excluded pottery fragments with the Iron Age pottery; there are several procedures for determining the technological types at his disposal.

The fifth proposition concerns "horn hoe of an axe-like shape" from Mala Triglavca. Velušček's charge that Budja draws parallels without quoting literature (Velušček 1995, 331,337) bears no ground. There are two quotations and a footnote (Budja 1993, 178,190) where parallels are drawn also for other bone artefacts, and a correlation with the Riparo Gaban

Mesolithic complex from Northern Italy was made. In fact I contemplated the possibility "that also in the Caput Adriae area the so called complex Mesolithic societies established long and short distance contacts and selectively adopted elements of production economy." (Budja 1993, 178, footnote 14) and offered it for consideration. When dealing with the fourth hoe, Velušček falls into yet another inconsistency: "In comparison with the example unpublished to the present, these three pieces appear to be only semi-finished products, although this must be excluded" (Velušček 1995, 332,337).

The sixth proposition relates to Breg near Škofljica. The hint about Budja's manipulation with "the charcoal datation from stratum 3a from Breg near Škofljica ..." (Velušček 1995, 332,337) does not bear grounds. In my study attention was focussed to the problems caused by the inconsistent values of ^{14}C date for Breg near Škofljica. There are several differing calendar values of the date in circulation, some of them even without designation, others with wrong ones, so that they cannot be considered serious (Budja 1993, 175,187, footnote 8). Let me list them again: 6830 ± 150 (Pohar 1984, 19); 4880 ± 150 BC (Frelj 1986, 32); 4880 ± 150 BC and 6830 ± 150 BP (Josipovič 1992, 38); $5650-5390$ (5535) BC and 6630 ± 150 BP (Müller 1991, 355; 1994, 351).

As a conclusion I can say that in spite of all the criticism, evidence on the Neolithisation process in the Slovene Dinaric region has not become scarcer, it has only come out more strongly.

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