## RELATED STATISTICS TO HABITATION IN TRANSYLVANIAN BASIN DURING NEOLITHIC – LATENE PERIOD

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**Abstract:** Related Statistics to Habitation in Transylvanian Basin during Neolithic – Latene Period. During geographical history (human and landscape) of Transylvanian Basin one of the visible phenomena was that of habitation. Landscape typology, landscape specificity imposed specific evolutions of the nations bearing the culture, immigrated in Transylvanian territory. Cultural mixes grafted on the basin landscape produced the emergence of cultures or local cultural groups. Beginning with Neolithic, one of the cultural specificity is the settlement type. Location of settlements is a product of a cumulation of factors, including, accessibility in territory, the presence of different types of resources, according to necessities, processing and uses possibilities. According to appearance so understood we are talking about the final housing stage. They eventually determine the settlements location and migration over time. Senior final stage creates high density housing, easy to interpret as "peripheral" areas and those of junior determine "center" areas. The center of gravity of the territorial system overlaps the "periphery". During prehistoric time these centers of gravity migrated in Transylvanian Basin. This present study tries to determine regularities of the migration of these centers of gravity.

**Rezumat:** Statistici referitoare la procesul locuirii în Bazinul Transilvaniei din Neolitic – *Perioada Latene.* În decursul istoriei geografice (umane și peisagistice) a Depresiunii Transilvaniei unul din fenomenele vizibile a fost cel al locuirii. Tipologia peisagistică, specificitatea peisagistică a impus evoluții particulare ale popoarelor purtătoare de culturi, imigrate pe teritoriul Transilvan.



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Mixajele culturale grefate pe peisagistica depresiunii a produs apariția unor culturi sau grupuri culturale autohtone. Începând cu neoliticul una din specificitățile culturale este tipul de așezare. Locația așezărilor este un produs al unui cumul de factori printre care se pot aminti, accesibilitatea în teritoriu, prezența resurselor de diferite tipuri în funcție de perioada preistorica despre care discutăm, precum și alte elemente de peisaj(sol, biogeografia regiunii). Toate acestea reprezintă într-o abordare sistemică fluxul energetic oferit de mediu și accesat în funcție de necesități și posibilități de prelucrare și utilizare. În funcție de faciesul astfel înteles discutăm de climaxurile de locuire. Acestea determină în final locația așezărilor, precum și migrația lor de-a lungul timpului. Climaxul de rang superior creează densități mari de locuire, ușor de interpretat ca fiind areale de "periferie" iar cele de rang inferior determină areale de "centru". Centrul de greutate al sistemului teritorial se suprapune peste "periferie". In decursul timpul preistoric aceste centre de greutate au migrat în Depresiunea Transilvaniei. Studiul de față încearcă sa determine legități ale migrației acestor centre de greutate.

**Key words:** Transylvanian Basin, Prehistorically Cultures, Centers of gravity, Regionalization of Transylvanian Basin, prehistorically settlements, "center", "periphery", migration factors of prehistorically settlements.

**Cuvinte cheie:** Bazinul Transilvaniei, culturi preistorice, centre de gravitate, regionalizarea Bazinului Transilvaniei, așezări preistorice, "centru", "periferie", factorii migrației așezărilor preistorice.

#### **1. INTRODUCTION**

Transylvanian Basin represents a complex territory in geographically terms, both addressed as territorial system and landscape view. The complex landscape and typologically diverse imposed a specific socio-economic evolution and even specific ethnographic behaviors in the Romanian ethnographic landscape.

Territorial system has a genesis and development related to the initial socioeconomic "revolution" of the humanity in Neolithic period. Systemic energy of the basin imposed a certain anthropogenic development, offset time as historical periodization from other Romanian areas. The same energies imposed specific developments in alien cultures but also genesis of cultures specific for the basin. Geographical communication gates of migration, dispersion of cultural information being limitated as a number (Somesan Gate, Muresan Gate) but also morphologically narrow determined an information filter adapted and adaptable to the evolving requirements of the bearing populations of Neolithic, Eneolithic cultures during Bronze and iron Age or transition periods. Positioning of these input informational gates and location of the resources used by different cultural societies adapted to the civilization level or stage determined migration of the socio-economic center of gravity in the basin. Interaction of systemic type between the natural compound of the landscape ant the anthropogenic one determined migrations of the same center of gravity on different geographical morphologies with a low degree of natural or anthropogenic hazard. Bearers of different cultures in Neolithic-Iron Age had different capacities and skills formed or transmitted by collective memory, of exploiting the resources in the basin according to prehistoric period they have lived in. And this last fact determined migrations of the population centers and socio-economic activity in the basin. These mentioned centers, the migrations, have been decisive in the spatial organization way till now. This aspect argues in fact also the stability type of regionalization of the basin till present.

The easier expression to analyze these resettlement housings, the density of housing, is the settlement number from Neolithic to Iron Age.

A detailed analysis of these migrations has been built on statistical data archived on criteria as the relief unit<sup>1</sup>, historical period<sup>2</sup>, and types of cultures.

#### 2. INVENTORY OF PREHISTORICAL SETTLEMENTS IN TRANSYLVANIAN BASIN

Prehistorically settlements have been identified up to the bibliographic information of the year 2006. It have been identified as settlements only the mentions based on clear traces of habitation as traces of hearth housing, traces of different structural compounds of houses (traces of poles and adobe, etc), traces of waste pits or food storage. It were not used informations about bronze deposits, graves or even cemeteries. Evidences resulted as perigheze have been identified as far as density and the type of the objects clearly marked settlement traces (household equipments, vessels, etc).

As a spatial reference system we reported to the present localities and the areas belonging administrative of these settlements.

The cultures which cover the analyzed period are characterized by specific features, we are referring here to the alien cultures, or they are creations, as we said, of the Transylvanian space. For the Neolithic, described and mentioned cultures are Starcevo-Cris, Vinca, Ceramica linear, Tisa, Precucuteni, Petresti, Cucuteni-Arisud or local facies of the type of Iclod and Turdas groups. For the transition period there were notified the cultural settlements Cotofeni. The cultural settlements Otomani, Wiettenberg or Noua were archived for the Bronze period. For the Iron period the marked cultural unit imposed only an analyze for Lathene or Hallstatt settlements, without detailing the groups, the object of the analyze not imposing such details.

For conclusive eloquence, of course, it was imposed comparison with present situation of the settlements in the same relief subunits (Table 1).

<sup>&</sup>lt;sup>1</sup> For this kind of analysis in determination the agglomeration settlements centers I have used regionalization for Transylvanian Basin, formulated by G. Pop in his work TRANSYLVANIAN BASIN.

<sup>&</sup>lt;sup>2</sup> Besides the hierarchy used now by the historians (Neolithic, Eneolithic, Bronze, Iron) I have used, on reasons imposed by an analysis of the subject, another scale that uses three subdivisions for Neolithic (Early Neolithic, Middle Neolithic and Late Neolithic, also the transition period Bronze - Iron.

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RELIEFUNITS		RELATIVE AGES									TOTAL	
		NTI	N <sub>MI</sub>	N <sub>TĂ</sub>	T <sub>NB</sub>	Вті	B <sub>MI</sub>	$B_{T\hat{A}}$	н	L	PREHISTORIC SETTLEMENTS	PRESENT SETTLEMENTS
TRANSYLVANIAN PLAIN	C. MUREŞANĂ	CC3 Sc1	P <sub>R</sub> 1 T <sub>U</sub> 1 I 4 T <sub>S</sub> 1	Р <sub>Е</sub> 1 С <sub>А</sub> 1 В <sub>К</sub> 1	Cr 17	01 S <sub>K</sub> 3	W14	N11	H17	L11	88	291
	C. SOMEŞANĂ	S <sub>C</sub> 2 CC 2	T <sub>s</sub> 4, 19 T <sub>U</sub> 1	P <sub>E</sub> 5 C <sub>A</sub> 1 B <sub>K</sub> 2	Ст 29	02	W31	N27, S1	H48	L23	187	146
	TOTAL	CC5 Sc3	P <sub>R</sub> 1 13 T <sub>S</sub> 5 T <sub>U</sub> 2	P <sub>E</sub> 6 C <sub>A</sub> 2 B <sub>K</sub> 3	Ст 46	03 S <sub>K</sub> 3	W44	N38	Н55	L34	275	437
TRANSYLVANIAN SUBCHARPATIAN	BISTRIȚA AND REGHIN BASIN	S <sub>c</sub> 2 T2 CC1	I 1 Tul Ts 2	C <sub>A</sub> 4 P <sub>E</sub> 4	Cr 13	Sκ 1	W48	N32 81	H44	L28	193	131
	HOMOROADE AND ODORHEI BASIN	Sc2 T1 V1	II T <sub>S</sub> 2	P <sub>E</sub> 3, C <sub>A</sub> 13 B <sub>K</sub> 2	Ст 13	$S_{\rm K}2$	W18	N9	H24	L23	116	95
	SÂNGEORGIU DE PĂDURE – SOVATA BASIN	V1	Ts1	Сл 3	Ст 9		W9	N6	H12	L18	59	82
	TOTAL	Sc4 T3 CC1 V2	I 2 T <sub>U</sub> 1, T <sub>8</sub> 5	С <sub>л</sub> 20 Р <sub>Е</sub> 7 В <sub>К</sub> 2	Ст 35	8 <sub>K</sub> 3	W77	N47 81	H80	L69	368	308
DEPRESIUNILE SUDICE	FAGARAŞ BASIN	S <sub>c</sub> 2 CC1		P <sub>E</sub> 2	C <sub>T</sub> 2	Sк 14	W11	N5	H15	L16	68	80
	SĂLIȘTE-SIBIU BASIN	S <sub>c</sub> 2	T <sub>U</sub> 3 T <sub>S</sub> 1 P <sub>R</sub> 1	P <sub>E</sub> 8 B <sub>K</sub> 1	Ст9	S <sub>K</sub> 1	W7	N2	H6	L5	46	21
	APOLD BASIN	Sc 5 V1 C <sub>L</sub> 1	T <sub>U</sub> 7, T <sub>S</sub> 1 P <sub>R</sub> 2	P <sub>E</sub> 12 B <sub>K</sub> 1	C <sub>r</sub> 11		W4	N3	H4	L9	59	16
	TOTAL	Sc 9 V1 CC1 C <sub>1</sub> 1	$\begin{array}{c} P_{R}3, \\ T_{U}10 \\ T_{S}1 \end{array}$	P <sub>E</sub> 22 B <sub>K</sub> 2	C <sub>T</sub> 22	Sк 15	W22	N10	H25	L30	173	117
WESTERN HILLS CORRIDORS BASINS AND MASSIVES	TURDA-AIUD CORRIDOR	S <sub>C</sub> 7 CC 2	$ \begin{array}{c} T_U 2 \\ I 3 \\ P_R 1 \\ T_S 1 \end{array} $	$P_B 8 B_K 4$	C <sub>T</sub> 25	S <sub>K</sub> 3 O4	W29	N7 S1	H19	L12	139	46
	AIUD-ALBA IULIA CORRIDOR FELEAC	S <sub>C</sub> 7 CC3 C <sub>1</sub> 1	T <sub>U</sub> 6 I5 P <sub>R</sub> 2	P <sub>E</sub> 9	C <sub>1</sub> 41		W32	N4	H22	L10	140	84
	FELEAC MASSIVE IARA HĂȘDATE	CC2 CC1	T <sub>s</sub> 4 11	P <sub>E</sub> 4	C <sub>T</sub> 12		W5		H4	L1	33	13
	IARA HAŞDATE BASIN PĂNICENI	S <sub>c</sub> 1	п	P <sub>E</sub> 1	C <sub>T</sub> 2		W3	N3	H1	L2	13	28
ORS, S	PANCENI PLATEAU AND HUEDIN BASIN		T <sub>s</sub> 1				W1		H1		3	36

### Table 1. Statistics of settlements of Neolithic-Lathene actual period on relief units in the Transylvanian Basin

	AGRIJ-ALMAŞ BASIN	S <sub>c</sub> 3 CC1	T <sub>s</sub> 5		C <sub>T</sub> 1	S <sub>K</sub> 1					11	80
	TOTAL	S <sub>C</sub> 18 CC 9 C <sub>L</sub> 1	T <sub>U</sub> 8,I 10 P <sub>R</sub> 1, T <sub>S</sub> 11	$\begin{array}{c} P_E 22 \\ B_K 4 \end{array}$	C <sub>T</sub> 81	S <sub>K</sub> 4 O4	W70	N14 81	H47	L25	339	287
PL	TÂRNAVA MARE CORRIDOR	Sc3		P <sub>E</sub> 11 C <sub>A</sub> 1	Cr22	SK3	W15	N4	H17	L13	89	28
	TÂRNAVA MICA CORRIDOR	S <sub>c</sub> 2 CC1	T <sub>U</sub> 2	P <sub>E</sub> 9	C <sub>T</sub> 12	01	W8	N5	H13	L7	60	
	SECAȘELOR BASIN	Sc 3 CC1	T <sub>U</sub> 2 P <sub>R</sub> 1	P <sub>E</sub> 13	C <sub>T</sub> 13		W8	N1	H7	L8	57	49
	HÂRTIBACIU PLATEAU	Sc1 V1	Tu1, P <sub>R</sub> 1	PE 9 CA 1	C <sub>T</sub> 15	$\begin{array}{c} S_K 2 \\ G_L 1 \end{array}$	W9	N5 81	H4	L6	57	80
	SOUTH HÂRTIBACIU PLATEAU	Sc3 CC1	B1	P <sub>E</sub> 3	C <sub>T</sub> 2	$S_{\rm K}2$	W8	N2	H8	L12	41	52
TĂRNAVA Plateau	VISA CORRIDOR			P <sub>E</sub> 2	C <sub>T</sub> 2	$S_K 2$				L1	7	5
U/A	TÄRNAVA MICA HILLS	8 <sub>c</sub> 3	P <sub>R</sub> 1 T <sub>S</sub> 1	Р <sub>Е</sub> 8 С <sub>А</sub> 1 Вк1	C <sub>T</sub> 18		W14		H10	L10	67	115
	TÄRNAVA MARE HILLS	S <sub>c</sub> 1	11	Pe 1	C <sub>T</sub> 1			N1		L2	7	76
	TÂRNAVA CORRIDOR	V1	II Ts1	P <sub>E</sub> 2	C <sub>T</sub> 4	$S_{K}1$					10	4
	TOTAL	Sc16 CC3 V2	T <sub>U</sub> 5, P <sub>R</sub> 2 T <sub>S</sub> 2 12 B1	Р <sub>Б</sub> 59 С <sub>А</sub> 3 В <sub>К</sub> 1	Ст89	Sк 10 О1 G <sub>L</sub> 1	W62	N19	H59	L59	355	448
MUREŞ CORRIDOR		T2 V4 Sc 12 CC5 CL 2	T <sub>U</sub> 7 T <sub>8</sub> 4 B1 P <sub>R</sub> 2	В <sub>К</sub> 7 Р <sub>Е</sub> 10 С <sub>л</sub> 4	Ст 40	$S_K 5$	W40	N16 S1	H44	L25	231	45
LĂPUŞ BASIN, CURMĂTURILE DEPRESSION BASINS							W1	83	H1		5	37
	CLUJ AND DEJ HILLS	S <sub>C</sub> 8 T6 V2 CC 2	T <sub>U</sub> 4, 17 T <sub>8</sub> 11	P <sub>E</sub> 14 C <sub>A</sub> 31 B <sub>K</sub> 2	C <sub>T</sub> 28	05	W15	N1 81	H16	L11	164	97
	SIMIŞNA-SURDUC HILLS	CC1		P <sub>E</sub> 1						L1	3	48
SOMESAN PLATEAU	PURCĂREȚ-BOIU MARE PLATEAU, BREAZA CORRIDOR AND SĂLĂTRUC HILLS				C <sub>T</sub> 1					L1	2	67
	SOMEŞUL MIC CORRIDOR	CC3 Sc3 T1 V1	115 T <sub>U</sub> 4 Ts4	P <sub>E</sub> 3	C <sub>T</sub> 17	02	W11	N4	H16	L5	79	22
	SOMEŞUL MARE CORRIDOR	Sc 1			Ст4	SK1	W8	N4 S4	H6	L5	33	34
	SOMEȘ CORRIDOR	S <sub>c</sub> 1	Ts2 Tu1 I1				W2		HI		8	22
	SOMEŞUL MARE HILLS						W1	N1	H1	L2	5	44
	TOTAL	Sc13 T7 V3 CC6	$T_{\rm U} 9$ 123 $T_{\rm S} 17$	Pe18 C <sub>4</sub> 31 B <sub>K</sub> 2	C <sub>1</sub> 50	07 S <sub>K</sub> 1	W37	N15 85	H40	L25	294	314

Related Statistics to Habitation in Transylvanian Basin during Neolithic - Latene Period

#### 3. COMPARATIVE ANALYSIS OF THE HILLS AREAS AND CORRIDORS IN TRANSYLVANIAN BASIN

Following Table 1 (Initials means settlements for Cultures S-Starcevo-Cris, V -Vinca, T-Tisa, CC-Cluj-Cheile Turzii, Tu-Turdas, Ts – Tiszapolgar, I – Iclod, CL – Linear Ceramics, PR - Precucuteni, B - Boian, CA - Cuteni-Arisud, BK - Bodrogkeresztur, PE -Petresti, Ct - Cotofeni, O - Otomani, SK - - Schneckenberg, W - Wiettenberg, N - Noua, H - Hallstatt, L - Lathene) we can make a first finding and according to this we can consider a direction for analyzing. Consideration refers to oscillatory evolution of the settlement number, different (development) in the corridor areas from those in the hills or plains (in fact hilly formations of low altitude). Of course a first preliminary argument can be made saying or confirming high geographical sensibility of the corridors areas and equally the high degree of favorability for the human dwellings. Corridors are areas of maximum expressiveness of the whole environment changes (climate, hydrographic) or socio-economics (access ways of time invasions, complementary economic contact areas). This sensibility marking moments of sharp declines of dwelling alternating with those of maximum population. Is seen in this context the way in which the sinusoidal numerical changes (cyclical) influences the development of the settlement system, the settlements, the type of the housing, development situation versus numerical attenuated sinusoids of hills type.

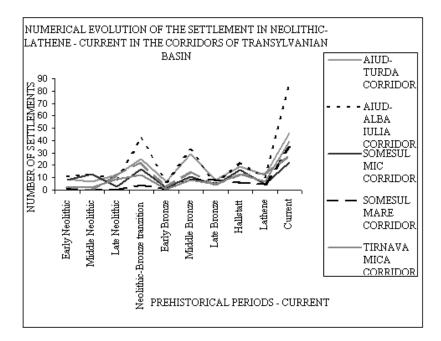


Figure 1: The number and evolution of settlements in the Transylvanian Corridor

Related Statistics to Habitation in Transylvanian Basin during Neolithic - Latene Period

Figure 1 reflects the initiation basis of this king of analysis. In can be observed the existence of numerical maximums during transitions periods of Neolithic-Bronze, Middle Bronze and Hallstatt. Peaks can be explained by socio-economic conditions, but we think of medium too. The socio-economic might have as embryo the technological changes, as transition period and the Iron Age, and those of environment due to the climate changes that allowed living in plains and low terraces in corridors. We mark in another study shifting to the level of the period of transition between Neolithic and Bronze form the worm and moist period in Atlantic to the Suboreal, worm and dry. Same effects it seems that appeared in the case of transition to the Subatlantic period and as economy, to the Iron Age.

For hill areas (Figure 2) we observe maximum located at transition period and Hallstadtt with the same environmental causes and probably mentioned economics. There is still a feature to be mentioned and analyzed as such namely thus that in hill areas there is a previous increase (lags) in the corridors in Middle Bronze Age, imposed, we think, by economic causes and maybe climate (imposed by altitude). Sub boreal period, with moderate dry climate is mitigated by altitude. Interesting is the situation of Cluj and Dej Hills we notice a lag of maximum, explained by migrations imposed by climate or social group behaviors of migration type. Is likely about migrations from corridors on interfluves and backwards. Such migrations can relocate prehistorically populations in landscape situations, other than those forming ethnographic behavior. These situations can lead to cultural changes such as emergence of local cultures.

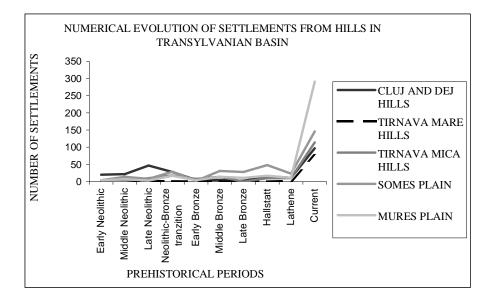


Figure 2: The evolution of settlements on hill area from the Transylvanian Basin

Generally we can observe that the number of settlement situated in hill area is smaller than in each prehistorically period, Hallstatt moment being not so good marked in hill area, as a result of lower sensibility to climate changes of those landscape structures. We can preliminary conclude that climate oscillations, even small, amplify or diminish according to relational complexity of the system, adaptability, self-regulation of the input. Was the settlement system in the corridor primitive, relational? Remains to answer this question in another study. Comparative to actual values we can see a smaller numerical difference for settlements in the corridor, which can be explained by maximum energetic exploitation of the systems in the corridors since period.

# 4. COMPARATIVE ANALISYS OF SETLLEMENTS IN CENTRAL AND BOUNDEAD PLATEAU AREA IN CORRIDORS AND BASINS

Another important and significant numerical evolution in demonstrating the existence of continuity, regional perennial ties is the comparative one between central plateau area and the coronary one in the basins and boundary corridors. Differences exist, at least genetic ones, in terms of natural systems. Such approach is different from above, since it is about corridors of different regional rank form enterplateau corridors so in view of landscape (genesis, climate, hydrograph, etc.), as well as in terms of socio-economic role. They are in fact limits of the plateau area, represented in west by Alba Iulia-Turda Corridor and some basins and hill massifs. South stands elongated basins and in east sequence of hills and basins, named by Mac I<sup>1</sup>., Subcarpatii Transilvaniei. In North o complex association of hills, basins, dominated by Lapus Basin and Salatruc hills completes the peripheral crown of Transylvanian Plateau.

Observations about the comparison of Figures 3 and 4 can be summarized as:

• cyclicality manifest in both mentioned areas.

• last numerical decrease in Lathene is not specific for Transylvanian Plane and Subcarpatii Transilvaniei. Cause, for Subcarpatii Transilvaniei could be complementarily of the natural systems in contact areas in three major landscape compartments hill – basin – mount. Such contact areas generate solid systems of conservatory settlements to economic changes and even climate. For Transylvanian Plane it could be the functions of environmental and settlement potential, namely predominantly agricultural. This kind of contact zone are generated by solid systems of conservative settlements to economic and even climate changes. This constrain provides stability to settlements and economic behavior of the population. It can't be missed the possibility of numerical decrease of settlements because of the domination of semi-nomadic cultures with short-term settlements.

• In this context a complex analysis is imposed for Subcarpatii Transilvaniei, especially for Bistrita and Reghin Hills, the reason being the possibility of specific uncompromised evolution of spontaneously cultural or technological energy flows, brutal, of systemic thresholds type. Area is away of from ordinary diffusion gates in the basin, southern ones, south-east or western, south-west. In the same time subunit position is one of landscape constancy.

• Comparing prehistorically evolution with the current one, we can see, as in the previous graphs, a pronounced increase of the number of settlements now.

Related Statistics to Habitation in Transylvanian Basin during Neolithic - Latene Period

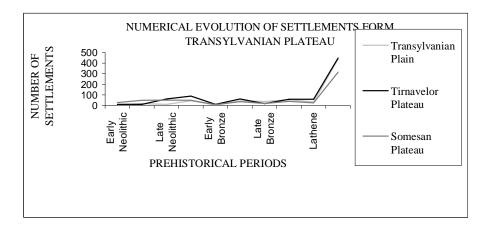
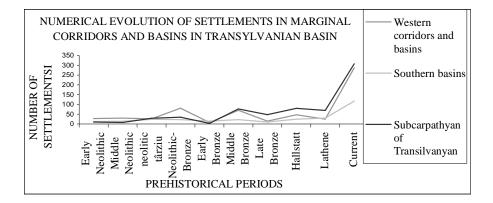
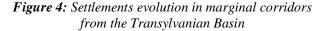


Figure 3: Settlements evolution in the Transylvanian Plateau





#### 5. MIGRATION OF GRAVITY CENTERS OF HABITATION DENSITY IN TRANSILVANIAN BASIN DURING PREHISTORICAL CULTURES

Figure 13 that contains statistical dates can serve to define areas of center and periphery role in a possible regularization on ethnographic criteria. Such regularization cannot represent the object for a geographical study, because we consider the system, even the entropic one, very complex, especially considering it overlapped the natural one.

Natural system, its structure, relations which defines it, gives specific behaviors of the population, even from the same group. Of course an analysis of ethnographic

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regularization type has its relevance, but we believe it is suitable for historical studies. Purpose of such statistics use is to establish types of evolution for central areas, respectively of cultural periphery, for settlements, settlements systems of habitation type. A great number of settlements will define (possible with a well-organized settlement system) with certainty the cultural center, and the low number the periphery one.

Analysis suggestions are for Starčevo-Criş, Vinča-Turdas, Petreşti, Coţofeni, Wietenberg and Hallstatt habitations. For Starčevo-Criş (Figure 5) it seems that exists (taking into account the relative position of subunits of relief) two different rank centers. The first one is overlapping Mures Corridor, Tirnava Plateaus and Western Corridors, the second one the Somes Plateau and Subcarpatii Transilvaniei. Periphery would be Transylvanian Plain and Southern basins. The above observations support option for these subunits (Tirnavelor Plateau and Western Corridors) for a detailed analysis, as we set above. In the senior center high values are found in Alba Iulia\_Turda Corridor and on Tirnavelor Plateau distribution is homogeneous. In terms of cultural periphery, we shall analyze Sibiu-Saliste Basin.

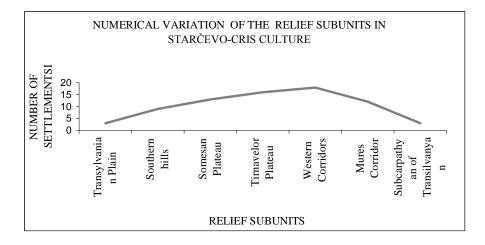
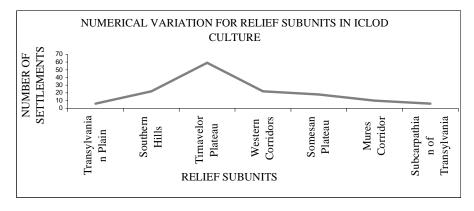


Figure 5: Settlements distribution in Starccevo-Cris Culture time

The end of Neolithic, through Petresti Culture reiterates the Early Neolithic situation with two poles of the center in which again Tirnavelor Plateau is on top of the Gauss bell, besides Western Corridors, Southern basins, on one side and Somesan Plateau on the other side (Figure 6). Peripheral role is Subcarpatii Transilvaniei and Transylvanian Plain.

Neolithic-Bronze transition period has the same central two poles and the same suburbs in terms of relief subunits, and in Tirnavelor Plateau the gravity center is positioned in Tirnava Mare Corridor. Periphery is centered in Southern Basins. Probably the steep of Southern Carpathians acts like limit, orographic barrier and striking distinctions altitude only serve a small extent of the complementary factor, which would give progressive valences for human settlements. Cotofeni Culture specific for this period has, as we said, the center again in those two subunits. Subcarpatii Transilvaniei and Southern Basins are peripheral centers (Figure 7).



*Figure 6*: Numerical distribution of settlements in Petrești Culture for the *Transylvanian Basin subunits* 

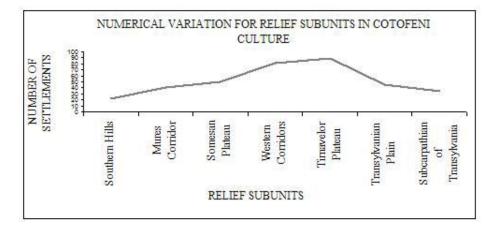


Figure 7: Numerical distribution of settlements in Cotofeni Culture in the Transylvanian Basin subunits

Important for Bronze period are Wietenberg and Noua Cultures. The first one is an autochthonous continuance of Cotofeni Culture under North Pontic influences, and the second one has Northern Pontic origins. We recalled this descent in order to correlate it with the preliminary observation related to the centers of gravity from the basins related to the distribution of cultures. We question the problem of the center and cultural periphery in a regional meaning, but of course the question is if this dualism works on the socio-

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economic level in this period. Regardless of the zone type, the center and periphery problem manifest itself. Yet we remark it by numerical variation of the settlements.

Wietenberg Culture specific for Middle Bronze has as center type zone Tirnavelor Plateau (Figure 8), Western Corridors, plus Subcarpathian of Transylvania. Being about a shepherd population, things are explained by high altitudes of the above subunits.

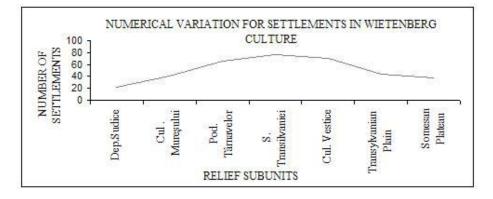
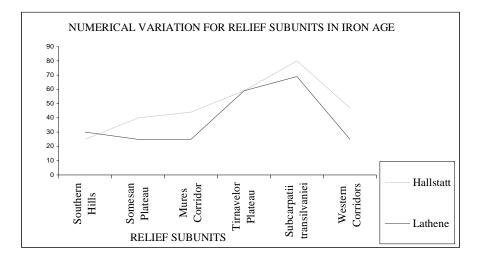


Figure 8: Numerical distribution of settlements in Wietenberg Culture in the Transylvanian Basin subunits

Periphery overlaps again Southern Basins, Somesan Plateau. Again we question uneven surfaces of the relief subunits, which influences the number of the settlements. Expressive in this way would be habitation densities, values which will be used to as. In preliminary observation stage we can say that the above analysis which focus the most expressive relief subunits, likely the case studies, are objective, fact supported by the ratio of current settlements, from, for example Tirnavelor Plateau and Southern Basins, which is about 3.88, for Starčevo-Criş is 1.77 or 2.68 for Petreşti Culture. So, the value of the current ratio is much more higher than in the mentioned prehistorically periods, situation which gives eloquence to this approach. The surface of Tirnavelor Plateau compared with other central plateau subunits is approximately equal.

Wietenberg and Noua Cultures are stages of cultural homogenization of the basin and birth for Dacian people. Noua Culture has the same center, specific for the Bronze in the basin, namely Subcarpathian of Transylvania . Diagram presents the transition of Tirnavelor Plateau to the periphery and maintains Subcarpathian of Transylvani as the center. Transylvanian Plain plays the role of the center or periphery of the center.

For Iron Age situation is in terms of this way of approaching changed statistics towards Bronze Age. Playing the center role are Subcarpatii Transilvaniei, Tirnavelor Plateau and Transylvanian Plain. For the eloquence of the observation we shall display graphically comparative this situation (Figure 9). We can observe the position of the Subcarpathyan of Transylvania and Tirnavelor Plateau in the center. This is a very important observation given that we know the political center of the Dacian State was in the SV part of the basin. This is an analytical challenge of the researched topic.



*Figure 9:* Numerical distribution of settlements in Iron Age in the Transylvanian Basin subunits

Very important seems to be change of the center of gravity and periphery during studied period, obviously compared to current situation (Figure 10).

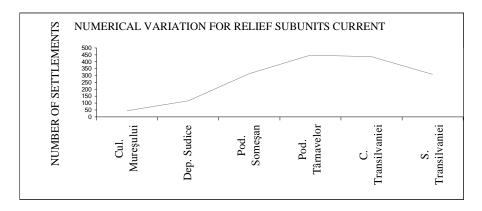
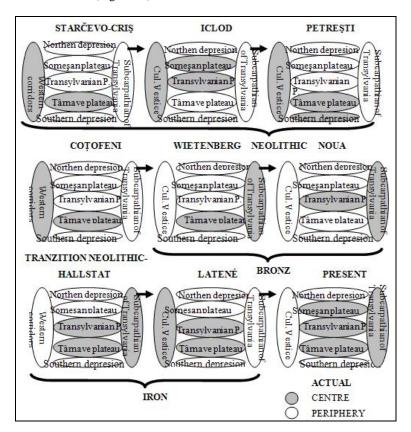


Figure 10: Numerical distribution for settlements in the Transylvanian Basin

It is observed now location of numeric center in Tirnavelor Plateau, Somesan Plateau, Transylvanian Plain and Subcarpatii Transilvaniei. Now only Somesan Plateau has a polarizing center of rank I, which is Cluj-Napoca. Probably is about o functional dispersion increasing the number of settlements, polarizing centers of junior rank. So is to watch the suggested subunits to analyze this aspect of the settlement system too, the hierarchies and the kind of relationship between them.

Back to "center" and numerical "periphery" we believe it is suggestive to follow a schematic representation of the change of their center of gravity in prehistorically times, this change representing, as we think, one of the systemic evolutionary keys, sub systemic for settlements in basin (Figure 11).



*Figure 11*: The evolution of the position for the numerical center and periphery of the settlements in the Transylvanian Basin

We can see the change of center-periphery poles during prehistorically evolution, with transition of the center positions predominantly to the West in Neolithic (corridors and western hill massifs plus Tirnavelor Plateau) to Subcarpatii Transilvaniei and Tirnavelor Plateau during transition from Neolithic to bronze, respectively Bronze.

During Iron Age the center moves in Subcarpatii Transilvaniei, Transylvanian Plain and Tirnavelor Plateau. Apparently situation is paradoxical, knowing that one of the extraction and manufacturing iron center is in Apuseni Mountains and imports were oriented on the same axis West-East. It is about structuring the system of territories similar to the current one, numerical center being in the plateau area of the basin, but the polarizing center of rank I situated in Cluj-Napoca.

Continuity of habitation considered to macro-meso-microscale can be the cause for a certain current status of the settlement system, for settlements and even for houses.

On macro scale, continuity refers to regional occupations, regardless what kind of type these zones could be. One of the aberrant theory in scientific world is that of "housing void", that would motivate a habitation discontinuity on the basin territory. Scientific data marks the existence of drastic declines of the habitation traces reaching even to their lack. We can illustrate with Somesul mare Hills for Neolithic - transition period or Simisna-Surduc Hills for Hallstatt transition. There are more explanations in these situations, provided by historical data. One of them refers to the mainly occupation, namely shepherds, with temporary or rudimentary houses, not preserved in time. It may be brought to attention the case of settlements belonging to a culture having evolutive paroxysm in a certain period, marked in historical period for some ages, circumventing the possibility of habitation continuity in the area, in retardation phase of the culture. We can speak about, according to these considerations, of permanent regional habitation, with steady settlements, respectively unsteady ones (temporary) or of increasing of regional settlement density (yet we refer to natural regions). Observing, for example Subcarpatii Transilvaniei, Western Corridors, Tirnavelor Plateau, Transylvanian Plain (Figure 12) the above are supported.

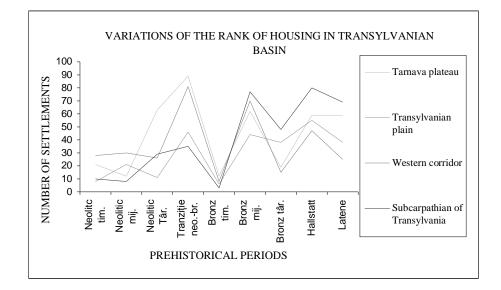


Figure 12: Rank of housing for relief subunits in the Transylvanian Basin

Tirnavelor Plateau, Western Corridors can take a change of the habitation rank in Early and Late Bronze, probable cause being the presence of Schneckberg population (shepherd population) or Ottoman, Glina population which can still be found in cultural

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peripheral areas of their position in this relief subunits. Transylvanian Plain and Subcarpatii Transilvaniei have an attenuated decrease during Late Bronze, being probably cultural centers for the carriers of Noua Culture.

Focusing observation to second rank subunits we find examples as Visa Corridor, Tirnava Mare Hills, Tirnava Mica Corridor, Secaselor plateau. Following Visa Corridor and Secaselor Plateau (Figure 13) we can see at critical (Early Bronze, Late Bronze) a lag of the habitation maximum. Correlated with the neighbourhood of the two subunits, the question is about suboicumenic territories, of pastoral and oicumenic of habitation for prehistorically populations.

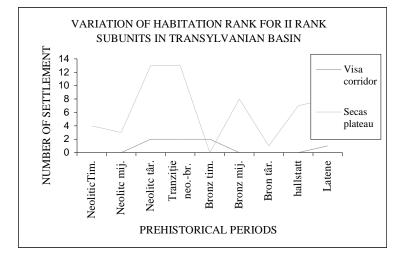


Figure 13: Settlements evolution in second rank corridor

Specific positioning of Schneckberg population settlements is possible in the corridor and the use of high terraces and interfluves for grazing, and in Late Bronze stage is about habitation optimum on the Secaselor Plateau hills for the culture of the shepherd population for Noua Culture.

#### 6. CONCLUSIONS

Regardless of natural (climate) or socio-economic causes, there is a significant numerical variation of the settlements during Neolithic-Lathene, based on the mainly relief units of Transylvanian Basin.

Between corridor and hill units there is a lag, caused by the main reason of the migration of housing, namely the climate one (transition from sub boreal climate – subatlantic).

Carriers of Neolithic cultures, during Bronze or Iron Age, mainly occupied especially bidding energy for the level of manufacturing units of estimated cultures.

Current situation is configured since Bronze Age, when the habitation center of gravity is established in the South-East an East part of the Transylvanian Basin.

Certainly, for Petresti Culture the concept applies in respect for mittelpunkt, cultural and socio-economic coordination center.

Accuracy of the conclusions can be doubt because of the low percentage of inventoried settlements, towards the current ones. But regardless of the relationship between current settlements and the prehistorically ones, the above analysis, it is an observable further analysis base.

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