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THE PRE-AFRASIAN COMING OF R1b-V88 HAPLOGROUP OF Y-CHROMOSOME TO AFRICA: A BRIEF SUMMARY

CZU:572.028

<https://doi.org/10.52603/rec.2024.35.13>

Rezumat

Ipotеза penetrării pre-afroasiatice a haplogrupului cromozomului Y R1b-V88 în Africa: o scurtă digresiune

Articolul prezintă un rezumat al rezultatelor unui studiu despre contextul istoric al apariției haplogrupului cromozomului Y R1b-V88 în Africa. Au fost analizate ipotezele propuse anterior despre timpul și circumstanțele migrației care au adus R1b-V88 în Africa (ipotezele „arabilor-baggara”, „ciadic” și „ceramica cardială”). O analiză a distribuției haplogrupului R1b-V88 în Africa duce la concluzia că niciuna dintre acestea nu poate fi acceptată. Aparent, în încercarea de a explica răspândirea R1b-V88 în Africa, trebuie să adoptăm modelul „substrat” ca principal explicativ. Adică să pornim de la antichitatea foarte semnificativă a apariției R1b-V88 în Africa. Autorul susține necesitatea de a accepta ipoteza penetrării pre-afroasiatice a R1b-V88 în Africa. Având în vedere problema localizării patriei ancestrale a afrasienilor, autorul ajunge la concluzia că formarea comunității lingvistice afrasiene a fost un proces mult mai neliniar, consumator de timp și a avut loc, printre altele, sub formă de migrații repetate și multidirecționale (precum și în cadrul „sistemului de interacțiuni sociale pe distanțe lungi”) în perioada de 20.000–12.000 de ani în urmă pe un vast teritoriu, care includea Levantul și Africa de Nord.

Cuvinte-cheie: haplogrupuri, cromozom Y, Africa, patrie ancestrală afroasiatică, comunitate lingvistică afroasiatică.

Резюме

Гипотеза о до-афразийском проникновении гаплогруппы R1b-V88 Y-хромосомы в Африку: краткий экскурс

В статье представлено краткое изложение результатов исследования исторического контекста появления гаплогруппы R1b-V88 Y-хромосомы в Африке. Были рассмотрены предложенные ранее гипотезы о времени и обстоятельствах миграции, которая принесла R1b-V88 в Африку (гипотеза «арабов-баггара», «чадская» и «кардиальной керамики»). Анализ распространения гаплогруппы R1b-V88 в Африке приводит к выводу, что ни одна из этих гипотез не может быть принята. Мы, по-видимому, пытаемся объяснить распространение R1b-V88 в Африке, должны принять «субстратную» модель в качестве основной объяснительной, то есть исходить из значительной древности появления R1b-V88 в Африке. Автор обосновывает необходимость принятия гипотезы о до-афразийском проникновении R1b-V88 в Африку. Рассматривая проблему локализации прародины афразийцев, автор приходит к выводу, что формирование афразийского

языкового сообщества было гораздо более нелинейным процессом, длительным по времени и проходило, помимо прочего, в форме повторных и разнонаправленных миграций (а также в рамках «системы социальных взаимодействий на больших расстояниях») в течение периода 20000–12000 лет назад на обширной территории, включавшей Левант и Северную Африку.

Ключевые слова: гаплогруппы, Y-хромосома, Африка, афразийская прародина, афразийская языковая общность, пре-афразийский.

Summary

The pre-Afrasian coming of R1b-V88 haplogroup of Y-chromosome to Africa: a brief summary

The paper presents a brief summary of the results of studying of the historical context of coming of R1b-V88 haplogroup of Y-chromosome to Africa. The previous hypotheses about the time and circumstances of migration that brought R1b-V88 to Africa, such as “Baggara Arabs”, “Chadic”, and “Cardial ceramics” were considered. The analysis of haplogroup R1b-V88 distribution in Africa leads to the conclusion that none of these hypotheses can be accepted. We, apparently, in trying to explain the distribution of R1b-V88 in Africa, must accept the “substrate” model as the main explanatory model. That is, based on the very significant antiquity of the appearance of R1b-V88 in Africa. The author substantiates the need to propose the pre-Afrasian penetration of R1b-V88 into Africa. Considering the problem of localization of the Afrasian homeland, the author suggests that the formation of the Afroasiatic linguistic community was a much more non-linear process, lengthy in time, and took place, among other things, in the form of repeated and multidirectional migrations (as well as within the framework of the “long-distance” system of social interactions) over the period of 20000–12000 BP in a wide area that included the Levant and North Africa.

Key words: haplogroups, Y-chromosome, Africa, Afrasian homeland, Afroasiatic linguistic community, pre-Afrasian.

The recently published book (Романчук 2024; see also: Romanchuk 2024; Романчук 2024a) studies the historical context of coming of R1b-V88 haplogroup of Y-chromosome to Africa. To make this book more visible, I would like to publish the English summary (Романчук 2024: 91-99) of this book as a single article.

Starting from the issue of the early formation of the World System (Zinkina, Ilyin, Korotayev 2017;

Korotayev, Grinin L., Grinin A. 2022), the first chapter (Романчук 2024: 17-21) presents arguments in favor of the need to shift the beginning of the formation of the World System to an even earlier date, to the Late Upper Paleolithic of Eurasia and North Africa.

We should consider large-scale migrations of late prehistory (i.e., in the Late Pleistocene-Early Holocene, or, using archaeological periodization, in the Late Upper Paleolithic (starting from the time of 20000–18000 BP), Mesolithic and Early Neolithic) of Eurasia and North Africa as the initial stage of the formation of the World System. The migrations, during which the formation and subsequent settlement of speakers of Dene-Caucasian (concerning the East-Eurasian localization of Dene-Caucasian homeland see: Романчук 2015; Романчук 2019; Романчук 2019; Козинцев 2023; Козинцев 2023a), Nostratic and Afroasiatic languages took place throughout Eurasia and North Africa.

Thus, the initial formation of the World System within Eurasia and North Africa occurred as a result of not only large-scale, but also (the key point!) multidirectional (from Eastern Eurasia to the west and south, and later on an even larger scale in the opposite direction) migrations in the Late Pleistocene-Early Holocene. These migrations were also accompanied by a large-scale transmission of cultural (and genetic) information. This, adjusted for the significantly lower speed of historical time in that era, allows us to consider these migration processes as a way of existence and functioning of the initial World System within Eurasia and North Africa.

The second chapter (Романчук 2024: 23-34) addresses hypotheses about the time and circumstances of migration that brought R1b-V88 to Africa, such as “Baggara Arabs”, “Chadic”, and “Cardial ceramics”. The analysis of haplogroup R1b-V88 distribution in Africa leads to the conclusion that none of these hypotheses can be accepted. Because, when discussing the genetic connection of certain populations, we must take into account the structure of their gene pools as a whole, rather than selectively appealing to certain components.

That is, in relation to the “Baggara Arabs” hypothesis, we must proceed from the fact that the Arab expansion inevitably had to be expressed in the expansion of the most popular haplogroup in the Middle East (and especially among the Arabs of the Arabian Peninsula), i.e. haplogroup J1. Accordingly, if R1b-V88 (which is extremely rare in the Middle East) was brought to Africa by the Arabs, then a correlation of increased frequencies of both haplogroups, J1 and R1b-V88, would inevitably be

observed in the corresponding African populations. And this is precisely what is not observed.

On the contrary, increased frequencies of R1b-V88 in Africa are observed precisely in those populations that exhibit very low frequencies (or complete absence) of haplogroup J. Therefore, one should think that among the Baggara themselves, the appearance of R1b-V88 is explained by their substrate in the form of a certain local, African population (or populations). Apparently, from among the speakers of Chadic languages.

At the same time, in my opinion, today we can already be firmly confident that the penetration of R1b-V88 into Africa was not associated with the speakers of the Chadic branch of Afroasiatic languages. Speakers of Chadic languages received it, I believe, already in Africa, from a local pre-Afro-Asiatic substrate.

This conclusion is again supported by the distribution of R1b-V88 among the peoples of Africa (D’Atanasio et al. 2018; Elkamel et al. 2021). It is represented both among the Chadian peoples and the peoples of the Nilo-Saharan, Niger-Congo, Bantu and other linguistic families and macrofamilies of this region.

Moreover, in, for example, Adamawa (Niger-Congo macrofamily of languages), some samples demonstrate R1b-V88 frequencies of more than 60% (D’Atanasio et al. 2018), i.e. no lower than those of the Chadic peoples (and sometimes significantly higher). The evidence for interaction between the Adamawa and Chadic languages is “surprisingly limited” (Blench 2012). Which, apparently, indicates that the Adamawa R1b-V88 clearly did not appear from the speakers of the Chadic languages. The opposite is equally true, among the speakers of the Chadic languages, its source could be anyone, but not the Adamawa.

Thus, there is no specific, intrinsic connection between R1b-V88 and the Chadian peoples. Moreover, if you consider that R1b-V88, although much less frequently, is represented in Northeast Africa, including even among the Khoisan peoples of East Africa. That is, far beyond the hypothetical area where the neighbors of the Chadian peoples could receive R1b-V88 as a result of contacts with them.

It is worth emphasizing, that it is not only a huge area (compared to the territory occupied by the Chadic languages) but also about hundreds, if not thousands of populations (even if we only remain at the macro level), which represent a corresponding number of languages (belonging to many different language families and macro-families (the Niger-Congo macro-family alone includes about 1.5

thousand languages and 12 linguistic families; the Chadic family consists of over 150 independent languages and dialect groups) and peoples (the history of many of them has not intersected in the last couple of millennia even according to the “chain” model, or the model of “indirect contacts”).

Accordingly, this picture serves as an argument not only specifically against the “Chadic” hypothesis, but also in general against the “superstrate” model as a possible mechanism for the spread of R1b-V88 in Africa. Even for the era of the appearance of Chadic languages in Africa (not to mention later times), we do not have a single, even hypothetically possible, candidate for the role of such a “superstrate” that could become the source of R1b-V88 for this entire range of populations.

We, apparently, in trying to explain the distribution of R1b-V88 in Africa, must accept the “substrate” model as the main explanatory model. That is, based on the very significant antiquity of the appearance of R1b-V88 in Africa.

At the same time, both the genetic and linguistic data make us think that the Chadian peoples arose on a powerful Nilo-Saharan substrate (Ehret 2006; Fan et al. 2019). But, R1b-V88 seems to have been a substrate for the speakers of the Nilo-Saharan languages too.

This is evidenced by the available data on the Nilo-Saharan peoples, who have no R1b-V88 at all (Dinka, Nuer, Shilluk; the list can be significantly expanded), and the distribution (albeit with very low frequencies) of R1b-V88 in North Africa, far outside the Nilo-Saharan range. It is worth to emphasize that the initial area of settlement of the speakers of the Nilo-Saharan languages was apparently Sudan, and it is precisely the Dinka of Sudan who exhibit to the highest degree the genetic portrait that characterizes Nilo-Saharan populations (Fan et al. 2019).

Thus, from these data (and speaking in archaeological terms) we obtain a stratigraphic column, or system of relative chronology, for the process of penetration and spread of R1b-V88 in Africa and, specifically, in the Central Sahel. The initial link of this system of relative chronology, as it is obvious, is older not only than the appearance of the speakers of the Chadic languages in the Central Sahel, but also of the Adamawa and Nilo-Saharan languages.

The development of this system of relative chronology allows us, among other things, to obtain a tool for independent verification and critical assessment of the absolute dating proposed by geneticists for certain events in the evolution of haplogroup R1b-V88. I think it's hardly possible to overestimate the relevance of this tool.

Also, I believe, this gives us an additional tool for assessing not only previously formulated, but also new hypotheses about the time and circumstances of the appearance of R1b-V88 in Africa.

And, in particular, the hypothesis of the “Cardial ceramic culture” does not stand up to critical analysis, taking into account the conclusions presented above. In my opinion, it can neither be accepted as an explanation for the appearance of R1b-V88 in Africa.

The third chapter (Романчук 2024: 35-42) substantiates the need to propose a hypothesis about the pre-Afrasian penetration of R1b-V88 into Africa. And, among other things, it is demonstrated that haplogroup R1b-V88 in its distribution in Africa does not show any positive correlation not only with haplogroup J1, but also with another one, which is also generally considered as a marker of Afro-Asian migrations, i.e. haplogroup E-M78 (Keita 2008). In Africa, haplogroup R1b-V88 does not reveal such a connection with haplogroup E-M78, which would indicate their joint penetration into Africa (or the establishment of such a connection already in Africa) and then the early, in pre-Afrasian times, joint spread in the region.

Moreover, somewhat exaggerating, one can even say: where in Africa R1b-V88 dominates, or is at least somewhat noticeably present, E-M78 is absent, or almost absent. And vice versa.

The fourth chapter (Романчук 2024: 43-54) examines the problem of localization of the Afrasian homeland in the light of odontological (Turner 2008; Irish 1997; Irish 2000; Irish 2013), archeological, and genetical data (as well as the consequences of this problem for the question of the time and circumstances of the penetration of R1b-V88 into Africa).

In my opinion, one should agree with researchers (primarily C. Turner) who consider the emergence of the so-called “North African odontological complex” (its origin is obviously associated with Western Asia and shows particular closeness to the odontological complex of the Natufian speakers) as a result of the migration of speakers of Afroasiatic languages from the Middle East to Africa. Accordingly, it is more appropriate to attribute the coming to Africa of R1b-V88, associated today with another, the so-called Afridont complex (which is characteristic for the populations south of Sahara (Irish 2013)) to the time preceding the emergence and spread of the North African odontological complex in North Africa.

And, accordingly, to the time preceding the emergence of the Capsian culture of the North-Western Africa.

That is, the migration of R1b-V88 to Africa should be attributed to the time of the Iberomauru-

sian culture of North-West Africa (its emergence today is attributed by researchers to the time of about 25000–22000 BP, and is associated with an impulse from the Middle East (Barton et al. 2013; Hogue, Barton 2016)). And, rather, to the time of its early stage, before 15000 BP.

Moreover, among the variants for dating the time of occurrence of R1b-V88 proposed by geneticists today, there are also those («the African and Eurasian R1b lineages diverged 17,900–23,000 years ago» (Haber et al. 2016: 1322)) that correlate well with the proposed scenario.

Considering the problem of localization of the Afrasian homeland, it is necessary, I think, to change our approach to interpreting the entire set of available facts. This different approach requires, first of all, to accept that the formation of the Afroasiatic linguistic community was a much more non-linear process, lengthy in time, and took place, among other things, in the form of repeated and multidirectional migrations (as well as within the framework of the “long-distance” system of social interactions proposed by T. Richter) over the period of 20000–12000 BP in a wide area that included the Levant and North Africa. That is, at the level of the Kebaran and related Epipaleolithic cultures (in the Levant), and the Iberomaurusian and other Epipaleolithic cultures of North Africa. And, accordingly, the formation between these two cultural areas of a system of interactions similar to that formed between the Epipaleolithic cultures of the Levant and Zagros.

Apparently, it was precisely in the process of such interactions between the Epipaleolithic cultures of the time of Kebaran in the Levant and Iberomaurusian in North Africa that the penetration of the “African” autosomal component into Western Asia, as well as the haplogroup E-M78, occurred.

Accordingly, postulating the formation of the Proto-Afrasian language within the framework of the system of intensive interactions between the Epipaleolithic cultures of the Levant and North Africa that developed in the period 20000–12000 BP, we then have two options for the linguistic interpretation of this scenario.

The first is to consider that the Proto-Afrasian language had already developed within the framework of this system of interactions. And that the Afrasian homeland occupied a vast area, including both the Levant and North Africa.

That is, when accepting this version of interpretation, we move from the paradigm (consciously or subconsciously often accepted as an axiom) of “the split of the proto-language as a result of the resettlement of its speakers from the territory of a narrowly localized

homeland” to the paradigm “the formation of the proto-language as a result of convergent processes over a fairly vast territory and its subsequent split as a result of the severance of ties due to historical reasons”.

The second option of interpretation, an intermediate one, a compromise between the two paradigms, assumes that within the framework of the designated system of interactions, the formation of the Afro-Asian proto-language had not yet been completed. And its final formation occurred precisely in the Natufian culture, the subsequent migrations of its speakers meant the split of the Proto-Afrasian language (that is, as A. Yu. Militarev suggests (Militarev, Nikolaev 2020)).

In the same chapter, special attention is paid to an important problem associated with the Capsian culture (which, as far as I can tell, is not recognized by anyone, neither by the supporters of A. Yu. Militarev’s hypothesis, nor by his opponents). Namely, a contradiction arises: on the one hand, the emergence of the Capsian culture (and the North African odontological complex) is obvious and indisputable (with the same indisputability of the substrate participation of the Iberomaurusian culture in this process) and is associated with an impulse from the Middle East and, apparently, specifically from the area of the Natufian culture. That is, from the obviously Afrasian area (in conformity with the logic of A. Yu. Militarev’s hypothesis). And, therefore, the carriers of the Capsian culture should have also been carriers of some of the ancient Afroasiatic languages.

But, on the other hand, none of the ancient Afroasiatic languages of North Africa, neither “Proto-Berber-Chadic” nor “Proto-Berber-Canarian”, is suitable for the role of “Capsian” language.

There seem to be only two options for resolving this contradiction.

The first one is that in relation to the Capsian culture we should be talking about an ancient Afroasiatic language, which subsequently disappeared (more or less without a trace). And, the second one (and also the one I prefer) is that, perhaps, in the area of the Capsian culture we should localize the homeland (or one of the intermediate homelands) of the Cushitic-Omotiic proto-language (or, Cushitic and Omotiic proto-languages (according to another version of the interpretation of the degree of their relationship), or, finally, only one of them, Cushitic).

The fifth chapter (Романчук 2024: 55–64) examines the problem of the absolute chronology of the evolution of R1b-V88 in the light of the history of haplogroups E-M81 and C2*-ST.

Since the relative chronology of the distribution of R1b-V88 in Africa built on the analysis of the

historical and archaeological context points to the absolute necessity to propose an earlier date of its African subclades than the one proposed by the geneticists today, in this chapter I draw attention to the haplogroups E-M81 and C2*-ST, which demonstrate similar and very expressive cases of discrepancy between the dating proposed by the geneticists and the historical and archeological data.

Thus, a very instructive example here is the well-known story of the so-called “Genghis Khan Star Cluster” (Zerjal et al. 2003), haplogroup “C3*-Star Cluster”, which was recently proposed to be designated as C2*-ST. The dating of the origin of this haplogroup “about 1,000 years ago” proposed by geneticists in 2003 and the idea of linking its subsequent spread in Eurasia with the formation of the Mongol Empire, with the activities of Genghis Khan and his descendants, received general acceptance and was revised only five years ago.

As it turned out, in fact, the C2*-ST dating should be almost three times older, to an age of “about 2,600 years ago” (Wei et al. 2018). That is, it turned out to be even much older than the earliest mentions of the Mongols in Chinese historical sources.

Similarly, haplogroup E-M81 is now proposed to be dated around 2000 BP (Solé-Morata et al. 2017). However, an analysis of the historical context strongly argues against such a late dating. Apparently, this haplogroup, which shows a pronounced connection with the speakers of the Berber-Libyan languages, arose at the dawn of their formation, but after the separation of the Berber-Libyan languages from the Chadic (in whose speakers E-M81 is completely absent). Taking into account the calculations of the linguists on the dating of these linguistic processes, the emergence of E-M81 should be attributed to the time shortly after 8,000 BP (Романчук 2024: 63; Романчук 2024a). Apparently, we are talking about the Neolithic (Late Neolithic, or even earlier).

The sixth and final chapter (Романчук 2024: 65-70) examines the question of the correlations and cause-and-effect relationships I proposed earlier between the distribution of haplogroups R1b-V88 and T in Africa with some historical, archaeological and linguistic phenomena of the region.

Today, it seems to me that the conclusion about the initial connection of the African cluster of the “Object-Verb” model with the Sahel is still obviously correct (or, taking into account the shift of the areas of languages and peoples to the south due to aridization, initially with more northern regions, i.e. Sahara) in the late Pleistocene – Early Holocene era. And, accordingly, the initial connection of this cluster with the area of the oldest ceramics in Africa.

Also, it still seems most likely that the starting reason, the trigger that determined the emergence of the African cluster of the “Object-Verb” model, was an external impulse, an impulse from outside Africa.

It can be assumed that the formation of the African cluster of the “Object-Verb” model nevertheless occurred from two sides. From the west of the Sahel (and, initially, the Sahara), its source were the original (at the time of penetration into Africa) languages of R1b-V88 bearers. From the east, from the territory of the Horn of Africa and East Africa, it were the original languages of the carriers of haplogroup T. And, apparently, a little later, the other languages of this region, which experienced a significant influence from the carriers of haplogroup T; the populations of whose speakers were characterized by the dominance of certain subclades of haplogroup E-M35, and more precisely – the subclade E-M78.

These, in the most general form, are the main conclusions of the book (Романчук 2024).

Acknowledgments. I would like to express my sincere thanks to Iulia Timotina. It took a lot of efforts on her behalf to check and correct the English version of this text.

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