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Cultural Change and Ethnic Change in the Early Middle Ages – the Example of Central and Eastern Europe¹ in the Context of Contemporary Biological Studies of the Continent's Past Populations

Zmiana kulturowa i zmiana etniczna we wczesnym średniowieczu – przykład Europy Środkowo-Wschodniej w kontekście współczesnych badań biologicznych dawnych populacji naszego kontynentu

ABSTRACT

The author of the article aims at revealing the serious difference that has emerged between the traditional interpretations of the history of Central and Eastern Europe,

| PUBLICATION INFO | | | |
|---|---|--|--|
|  |  |  | e-ISSN: 2449-8467 ISSN: 2082-6060 |
| | |  | |
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| SOURCE OF FUNDING: Project of the National Centre for Science/Narodowe Centrum Nauki, funds allocated pursuant to the decision no. 2018/31/B/HS3/02083, titled Mutual stereotypes of Poles and Germans and their influence on the historiography of both nations in the 19th and 20th centuries | | | |
| SUBMITTED: 2020.02.24 | ACCEPTED: 2020.11.17 | PUBLISHED ONLINE: 2020.12.28 |  |
| WEBSITE OF THE JOURNAL: https://journals.umcs.pl/rh | | EDITORIAL COMMITTEE E-mail: reshistorica@umcs.pl |  |

¹ By this term, I understand the area distinguished by Paul Robert Magocsi in: *Historical Atlas of East Central Europe*, Toronto 1995, covering East Germany, Poland, Lithuania, Ukraine, Belarus, the Czech Republic and Slovakia, and the Balkan countries.

present in the works of historians and archaeologists, and the new data brought by the DNA research of the past populations of this area. The former, based on the results of archaeological research pointing to cultural changes, assume a thorough population exchange that supposedly took place in the early Middle Ages, while the latter indicate the continuity of the same biological population peopling the region since over a thousand years BC. The author tries to explain these discrepancies by pointing to the cases of cultural and even ethnic changes within the large population taking place under the influence of small groups of strangers.

Key words: early Middle Ages, Central and Eastern Europe, cultural change, ethnic change, population genetics

Traditionally, ethnic issue play an important role in historiography. The need to record the past of states and national communities was, after all, the key reason for its creation. Works on the history of states and nations have been fundamental in the achievements of the most respected historians, who usually try to place the beginning of their discussions as far back as possible in the past, because the principle still applies that the older history is, the better for those it is about². Therefore, starting their search in the Middle Ages does not satisfy neither researchers, nor history enthusiasts, and they try to delve deeper into the past – looking for ‘their roots’ among pre-Polish, pre-Czech, pre-German (etc.) peoples³. However, this is often not enough, and we try to find the origins of our national communities further in time.

Recently, DNA analysis is used progressively more often for this type of research. The applicable material is acquired from human remains, which sometimes come even from very distant prehistory. The results of these explorations are compared with chemical analyses of bones, the works of archaeologists and (sometimes) historians, as well as with the biological state of modern populations. The results of these investigations

² Examples of this kind of work (of different value, without judging them): S. Weinfurter, *Das Reich im Mittelalter: kleine deutsche Geschichte von 500 bis 1500*, München 2008 (the history of Germany begins here in 500, sic!); C. Brühl, *Deutschland-Frankreich. Die Geburt zweier Völker*, Köln–Wien 1990; B. Zientara, *Świt narodów europejskich: powstawanie świadomości narodowej na obszarze Europy pokarolińskiej*, Warszawa 1985.

³ E.g. G. Labuda, *Plemiona czeskie i polskie w dokumencie biskupstwa praskiego z roku 1086*, in: idem, *Słowiańszczyzna starożytna i wczesnośredniowieczna. Materiały źródłowe do nauki historii dla uczniów, studentów i nauczycieli*, Poznań 2003, pp. 63–64; K.T. Witczak, *O dwóch plemionach prapolskich zasiedlających Ziemię Przemyską i Chełmską*, ‘Acta Archaeologica Carpathica’ 2003, 38, pp. 157–172; D. Třeštík, *Mýty kmene Čechů (7.–10. století). Tři studie ke ‘Starým pověstem českým’*, Praha 2003; see also V. Bierbrauer, *Zur ethnischen Interpretation in der frühgeschichtlichen Archäologie*, in: *Die Suche nach den Ursprüngen. Von der Bedeutung des frühen Mittelalters*, ed. W. Pohl, Wien 2004, pp. 45–84.

often bring forth surprising facts, difficult to interpret for historians, which sometimes call into question the findings of their discipline, previously taken for granted⁴.

It is interesting that, especially in the case of Central and Eastern Europe, these new arguments of researchers from outside of the discipline do not find any response in the published works (and, I suppose, in the thought) of historians, although those arguments are published on an ongoing basis on the Web⁵. Thus, enthusiasts of exploring the past take matters into their own hands and in this way various products of imagination are born, inspired by the Internet and other content⁶, which try to explain the existing differences in the narratives of historians and biologists on their own. Since the conspiracy theories are still doing well, said discrepancies are explained by some alleged plot and scheming of the mighty of this world, aimed at concealing from certain communities the supposed truth about their past⁷. These declamations published on the Internet gain amazing popularity among people who are not familiar with the history or even with the principles of critical thinking⁸.

⁴ See for example: A. Juras et al., *Ancient DNA Reveals Matrilinial Continuity in Present Day Poland over the Last Two Millennia*, 'Plos One' 2014, 9, 10, pp. 1–9; T. Grzybowski et al., *Complex interactions of the Eastern and Western Slavic populations with other European groups as revealed by mitochondrial DNA analysis*, 'Forensic Science International: Genetics' 2007, 1 (2), pp. 141–147.

⁵ There you can find, for example, various materials about genetics as the basis for searching for the origins of the Slavs, see e.g.: M. Mielnik-Sikorska et. al., *The History of Slavs Inferred from Complete Mitochondrial Genome Sequences*, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0054360> [accessed on: 27 I 2020]; one can also determine the origin of their personal ancestors on a commercial basis: <https://www.familytreedna.com>.

⁶ Who knows if the sources of the current wave of mystifications called turbo-Slavism are not situated in the circle of followers of Russian primitivized Eurasianism under the banner of Alexander Dugin and Edward Limonov, who dream that Russian tanks would follow the route of the alleged march of the prehistoric Proto-Indo-Europeans (identified with Early Slavs), see: C. Clover, *Black Wind, White Snow The Rise of Russia's New Nationalism*, Yale 2017; B. Malić, *The Invisible Empire: Introduction to Alexander Dugin's 'Foundations of Geopolitics'*, <http://en.kalitribune.com/the-invisible-empire-introduction-to-alexander-dugins-foundations-of-geopolitics-pt-1/> [accessed on: 07 V 2017].

⁷ In these categories, I perceive the success of such pseudo-scientific books as: J. Bieszk, *Słowiańscy królowie Lechii. Polska Starożytna*, Warszawa 2016; idem, *Starożytne Królestwo Lechii*, Warszawa 2019; however, there are also Russian and German publications of similar value. This issue is discussed in: R. Żuchowicz, *Wielka Lechia. Źródła i przyczyny popularności teorii pseudonaukowej okiem historyka*, Warszawa 2018; see also: M. Gardell, *Gods of the Blood: The Pagan Revival and White Separatism*, Durham 2003.

⁸ See for example: <https://tajnearchiwumwatykanskie.wordpress.com/2016/04/22/poczet-krolow-lechii-kosciol-w-polsce-od-1050-lat-ukrywa-przed-polakami-ze-jestesmy-starozytnym-antycznym-wielkim-imperium/> [accessed on: 31 I 2020]; or in parts even: <https://bialczynski.pl/slowianie-tradycje-kultura-dzieje/genetyka-skad-pochodza-slowianie-1a/genetyczne-odkrycia-2010-nowa-genealogia-slowian-i-innych-ludow-bialego-ladu-eurozyty/> [accessed on: 31 I 2020].

The problem outlined here is serious and complex. It concerns many issues, including contemporary social distrust or even the quality of current historical education. These matters are beyond my research competence. In this essay, I would like to deal only with the consequences for historical reflections that result from the current findings of biological research on ancient populations of Central and Eastern Europe in the context of similar inquiries about the past of our continent's populations. I mean, in particular, to propose a certain explanation of the general mechanism of ethnic and cultural changes that took place in the abovementioned region in the early Middle Ages in connection with the so-called 'departure of the Germanic peoples' and 'arrival of the Slavs'. Still, a significant part of historians and archaeologists understand the so-called Migration Period as the mass abandonment of certain areas by entire populations and their moving to other areas as well as occupying deserted lands by new ethnic groups, arriving from outside. This kind of interpretation is present in a number of scientific and popular publications as well as in current compendia and academic textbooks⁹.

The problem is that such a perspective on the matter is in direct contradiction of the data of ancient DNA. These indicate, as scientists from various reputable research centers claim¹⁰, that the first permanent population of not only Central and Eastern Europe, but essentially the entire continent, was created by the first farmers in the late Neolithic times (6th–3rd millennium BC)¹¹. From the 3rd millennium BCE large groups of shepherds (identified with the Proto-Indo-Europeans) came from the east, partly mixed with the locals, partly pushed them to the west. In the 2nd millennium BCE the continent's population status quo has been defined and continues today¹². Migrations that took place in later times:

⁹ M. Mączyńska, *Światło z popiołu: Wędrowki ludów w Europie w IV i V wieku*, Warszawa 2013; G. Halsall, *Barbarian Migrations and the Roman West*, Cambridge 2008, pp. 376–568. A. Kokowski, *Cień Światowita czyli pięć głosów w sprawie etnogenezy Słowian*, Lublin 2002, see the review: P.M. Barford, *Crisis in the Shadows: Recent Polish Polemic on the Origin of the Slavs*, 'Slavia Antiqua' 2003, 44, pp. 121–155; for a different point of view e.g.: M. Kara, *Najstarsze państwo Piastów – rezultat przełomu czy kontynuacji? Studium archeologiczne*, Poznań 2009.

¹⁰ See e.g. <https://www.eupedia.com/>.

¹¹ A.J. Ammerman, L.L. Cavalli-Sforza, *The Neolithic Transition and the Genetics of Populations in Europe*, Princeton 1984; M.G. Thomas et al., *Europe and Western Asia: Genetics and Population History*, in: *The Encyclopedia of Global Human Migration*, eds. I. Ness et al., Chichester 2013, pp. 1–11.

¹² In this case, the results of the research on the bones found in the valley of the river Doleża (Tollensee) in the German Western Pomerania – the remains of a battle that took place between 1500 and 1200 BC – are very meaningful. DNA of the men killed there, from 3,000 to 5,000 people took part in the fight, corresponds to one of the modern populations of Central and Eastern Europe and southern Scandinavia. A. Curry, *Slaughter at the bridge*:

prehistoric and historic, including the so-called Migration Period, did not significantly affect the biological shape of the population of Europe.

When it comes to the problem of the ethnogenesis of the Slavs, it is also indicated that even the principles of the formation and growth of the population based on empirical knowledge cannot explain the phenomenon of the spread of this people, who in the 5th century AD were to come out from a relatively small area around today's Kiev¹³ (and thus there could not be too many of them) and then to occupy, and more importantly, populate over two or three centuries huge areas of Eastern, Central and Southern Europe. It is difficult to interpret the situation in this way, as historians generally do, taking into account, for example, the procreation limits¹⁴.

At this point, the reader, even slightly familiar with the problem of the origins of the Slavs, will recognize that I want to defend the so-called autochthonism, i.e. the view that modern Poland was an area that the Slavs had always inhabited, and from this area they undertook their journey to all parts of the world. This view, created in the interwar period, was once promoted by the official science of the Polish People's Republic and some other countries of the communist bloc (with the exception of some Russian researchers who wanted to have the cradle of the Slavdom at home), and today it is considered by a large part of Polish archaeologists, especially historians, not only too anachronistic, but even reactionary and 'parochial'¹⁵.

Uncovering a colossal Bronze Age battle, 'Science' 2016, 351, 6280, pp. 1384–1389; Ch. Sell, *Addressing Challenges of Ancient DNA Sequence Data Obtained with Next Generation Methods*, Mainz 2017, pp. 47–62; T. Douglas-Price et al., *Multi-isotope proveniencing of human remains from a Bronze Age battlefield in the Tollense Valley in northeast Germany*, 'Archaeological and Anthropological Sciences' 2019, 11, pp. 33–49; see also: M.E. Allentoft et al., *Population genomics of Bronze Age Eurasia*, 'Nature', 2015, 522 (7555), pp. 167–172; E. Callaway, *Four-thousand-year-old genomes show deep roots of social inequality*, 'Nature' 2019, 574 (7778), pp. 3004–3005.

¹³ This view is sometimes supported by geneticists, K. Rębała et al., *Y-STR variation among Slavs: evidence for the Slavic homeland in the middle Dnieper basin*, 'Journal of Human Genetics' 2007, 52, 5, pp. 406–414; see however: I. Stolarek et al., *Goth migration induced changes in the matrilinear genetic structure of the central-east European population*, 'Scientific Reports' 2019, 9, pp. 1–14; place of origin of the Slavs was also searched for in more distant Euro-Asian areas: Z. Gołąb, *The Origins of the Slavs. A Linguist's View*, Columbus 1992, p. 35 and next.

¹⁴ J. Piontek, *Biologia populacji pradziejowych. Zarys metodyczny*, Poznań 1999; B. Iwanek, S. Segeda, *Antropologia o pochodzeniu Słowian*, Poznań 2008.

¹⁵ The autochthonous theory of the origin of the Slavs from the territory of today's Poland was created archaeologist Józef Kostrzewski before World War II. Today it is promoted by, for example, the linguist Witold Mańczak and the anthropologist Janusz Piontek. A brief study on the views of the autochthonists and their opponents in:

It is hard to deny that in Central and Eastern Europe we find the remains of prehistoric cultures evidently associated with the Slavs only since the 6th century AD, and earlier numerous and diverse traces of cultures associated with the Germanic peoples are found in this area; even earlier, other archaeological cultures already existed in this area as well. However, they are not so easily called with ethnic names. All these older prehistoric cultures can by no means be associated with the Slavs, who lived in Central and Eastern Europe since the 6th century AD, speaking similar languages and maintaining a common identity¹⁶. The state of affairs of this kind entitled a large group of archaeologists and historians to claim that the Slavs came to Central and Eastern Europe from outside, from the eastern parts of the continent, or Asia. These researchers are usually referred to as allochthonists.

Everything indicates, however, that both autochthonist and allochthonist interpretations, although there are some reasons behind them – which will be discussed in a moment – do not reflect the essence of the matter. The issue will become clearer if while reflecting on the problem we include not only the research of archaeologists and biologists who analyze DNA obtained from excavations, but also notice the conclusions of social researchers dealing with ethnicity. Only such a broader context of the issue will reveal that modern archaeogenetic research only seemingly helps the autochthonists. It provides indeed a starting point for completely new interpretations of the problem we are interested in.

The reader who knows little about DNA genetic research¹⁷ and its importance for historical research deserves a brief explanation of the problem, at least a part of it crucial to historians¹⁸. To simplify the issue to the most general matters, it should be noted that among the multitude of various data that is encoded within the human genome (the set of all

A. Buko, *The Archeology of Early Medieval Poland. Discoveries–Hypotheses–Interpretations*, Leiden–Boston 2008, pp. 55–60; see also: J. Piontek, *Archeologiczne rekonstrukcje procesu etnogenezy Słowian a ustalenia antropologii fizycznej*, in: *Praojczyzna Słowian. Zbiór wypowiedzi*, ed. W. Mańczak, Kraków 2001, pp. 39–44.

¹⁶ A. Janeczek, *Świadomość wspólnoty słowiańskiej w pełnym i późnym średniowieczu*, in: *Słowianie – idea i rzeczywistość. Collection of studies*, eds. K. A. Makowski, M. Saczyńska, Poznań 2013, pp. 19–70.

¹⁷ DNA = deoxyribonucleic acid, a multimolecular chemical compound consisting of subunits called nucleotides. It acts as a carrier of genetic information of living organisms. Introduction to the subject: C.R. Calladine et al., *Understanding DNA: the Molecule and How it Works*, Amsterdam 2003.

¹⁸ I would like to express my sincere thanks to Prof. Monika Janczarek from the Department of Genetics and Microbiology, Maria Curie-Skłodowska University, for introducing me to some aspects of an extremely interesting, but very difficult science of genetics.

human genes)¹⁹, for historical studies of ancient populations those portions of the genome are important that allow to determine direct relationships between male and female generations, and male antecedents/descendants of an individual or group of people down to their most ancient ancestors, if, of course, we have the appropriate DNA fragments.

Here, we are particularly interested in genetic profiles, the so-called haplotypes²⁰, which comprise a very small part of every cell and are found either inside or outside of the nucleus. In the maternal lineage, the so-called mtDNA haplotype, otherwise known as mitochondrial, can be used as a tool to track the connections between generations. It is passed on to offspring in female gametes (egg cells) containing the X chromosome, the pair of which determines the female sex. On the other hand, in men, whose reproductive cells are responsible for determining the child's sex, the information about ancestors contained in mtDNA is more difficult to analyze. An inconvenience of this kind, i.e. in studying the history of populations and individual relationships, is in some way eliminated by the haplotype associated with the Y chromosome, which is passed only from father to son and is relatively easy to analyze²¹. Both the Y and mtDNA haplotypes, derived from different organisms, are linked, due to their common origin and similar structure, in the so-called haplogroups.

It is worth noting that this kind of paternity and maternity certificates allow to identify only the lineages of mother's female ancestors, next of our mother's mother etc., and similarly of father's male ancestors, also the secondary ones, but not all in general.

As we have seen, mtDNA haplotypes are somewhat more universal, but for some reasons that will be discussed in a moment, they are more difficult to use in the case of examining ancient populations. It should be mentioned here that the Y haplotype groups and mtDNA transmit very little information compared to other gene groups. It is therefore a common phenomenon that individual populations of a larger scale, although they come from the same male ancestors and belong to identical Y haplogroups, or stem from the same female ancestors and have the same mtDNA haplogroups, externally may be very different from each other; have different anthropological traits, 'racial' ones, as they are often commonly referred to, although it is

¹⁹ The human genome consists of 46 chromosomes (microscopic structures in a cell containing genetic material), 44 of them are autosomes (they are responsible for inheriting the traits of an organism except for sex), 2, X and Y, are the chromosomes of sex inheritance.

²⁰ Haplotype = a group of genes that an organism inherited from one of its parents. It can be determined on the basis of the sequence of nucleotides (DNA molecules).

²¹ An accessible introduction to discussed subject in: T.A. Brown, *Genomes 4*, New York-London 2018.

neither in line with a certain political correctness nor with reality²². External differences arise because in our genome we have a whole mix of genes from our different ancestors, the selection of which determines the traits of our organisms on a random basis, a kind of *bricolage* puzzle, as the eminent French biologist François Jacob once described it²³.

In general, the basic practical activity of the geneticists, apart from the field of their science, is, for example, establishing paternity or determining perpetrators of various crimes. The somewhat bizarre situation is therefore that their authority is referred to by judges who often decide about individual lives, while historians almost completely ignore them. Geneticists make their judgments on the basis of carefully developed and empirically verifiable scientific procedures. Thus, the transfer of their methods, as has been going on for the past three decades or so, to the research on the past of our whole species, particular populations and individuals²⁴ is kept up with the highest possible scientific standards²⁵. Therefore, in contrast to the judgments of researchers-historians, which are very often burdened with a great deal of uncertainty and are subject to broad interpretation, the statements of archaeogeneticists are, by their nature, certain. Only the results can be interpreted.

The value of these studies is based on the relevant DNA databases collected for many decades by laboratories around the world, where large comparative sample material is stored, in part from different times, including prehistoric ones. Those samples provide interesting research material – it must be remembered that parts of the human genome are constantly changing, rearranging and mutating. Mostly it happens regularly, according to certain rules. For many years analyses have allowed discovery of a number of variations of Y haplogroups and mitochondrial DNA haplogroups. Altered gene sequences within these variations were

²² Often nowadays the term ‘anthropological variation’ is used instead of the term ‘race’. The reason, of course, is the embarrassment of the physical anthropologists flirting in the 1930s not only with the Nazis (e.g. H.F.K. Gütner, *Kleine Rassenkunde des deutschen Volkes*, München–Berlin 1939), but with wider circles of fascist politicians: G. Forsell, *Race and Religion. The Construction of Race in Proto-Nazi Christian Association in Interwar Sweden*, Uppsalla 2018, p. 21; M. Gardell, *op. cit.*, p. 284 and next. In this case also other racist crimes, sometimes committed up to the present day, are also significant: G.M. Fredrickson, *Racism. A Short History*, Princeton 2002; L. Back, J. Solomos, *Theories of Race and Racism*, London–New York 2000.

²³ F. Jacob, *Le jeu des possibles. Essai sur la diversité du vivant*, Paris 1981.

²⁴ M. Sommer, «It’s a Living History, Told by the Real Survivors of the Times-DNA». *Anthropological Genetics in the Tradition of Biology as Applied History*, in: *Genetics and the Unsettled Past. The Collision of DNA, Race, and History*, eds. K. Wailoo, A. Nelson, C. Lee, New Brunswick 2012, pp. 225–246.

²⁵ M. Lynch et al., *Truth Machine. The Contentious History of DNA Fingerprinting*, Chicago 2008.

also isolated, which led to developing a comparison scale and creating a kind of change gauge. Therefore, it is possible, after collecting even one well-preserved molecule of old DNA, to determine not only to which population group (with the appropriate haplogroup) belonged the man whose preserved parts of the body are examined, but also to determine quite precisely the time in which he lived.

After this brief and necessarily basic-level genetic introduction, we can provide some details of the ancient DNA researchers' findings that are relevant to historical discussions. Let us start with the present day, because it will be of key importance for the starting point for these that will be developed here. It has been noticed that among the many variations (types and branches derived from them – subtypes) of both mtDNA and Y haplogroups, in case of some variations, but only for male (Y) haplogroups, we observe a highly frequent and territorially concentrated presence of them in certain populations of Europe (and other continents) – up to over 80%²⁶. On the other hand, mtDNA rarely exceeds the threshold of approximately 20% in a particular population group, which generally has a wide range, and is scattered throughout and beyond the continent. The above circumstance makes it more difficult to carry out historical studies of ancient populations using mitochondrial DNA analyses, although such research is also conducted²⁷. It is much easier to draw historical conclusions by studying the Y haplogroups. It seems that the specific situation of male haplogroups outlined above was due to the higher mortality of men, occurring before the procreation period, resulting from constant, numerous wars, as well as due to the patriarchal power subordinating women. Relatively few winners eliminated male competition and through violence were able to pass on their genetic material to large numbers of women. The latter were rather spared after defeating the opponent and in this way they could pass on their mtDNA to their offspring, which explains its diversity, wide range, low percentage of individual mtDNA variations in the population and the lack of centralization. However, this fact makes female haplogroups more difficult material for researching ancient social structures, migration, or power. The Y haplogroups are also more convenient in the case of discussion presented here.

In Europe, one large haplogroup (R1) dominates when it comes to males. In various, very distant areas of our continent, its presence is

²⁶ List of European haplogroups and their distribution: <https://www.eupedia.com/>.

²⁷ T. Grzybowski et al., *Complex*; G. Brandt et al., *Ancient DNA Reveals Key Stages in the Formation of Central European Mitochondrial Genetic Diversity*, 'Science' 2013, 342, 6155, pp. 257–261 + Supplementary Materials.

found in over 80% of males. However, in some Asian areas we will also find similar values of R1 in large groups of people, even in populations of a radically different 'racial' profile than in case of modern Europeans. Also in North African areas, R1 is not uncommon among the evident indigenous inhabitants²⁸. These facts obviously refute the old ideas about human races whose nature would have been determined by their common ancestry and which would once have been strictly separate from each other. It is also worth noting that the transition areas between the regions of particular intensity of certain types of haplogroups are very wide, and the boundaries – if we can talk about them at all – are very blurred.

The R1 haplogroup is divided into two large subgroups, which are very close genetically. R1b is dominant in the west of Europe, whereas R1a occurs more frequently in the east. The border, fluidly defined, is a wide transition zone in the area of western Germany, the central and eastern half of this country are strongly influenced by R1a and the share of this haplogroup resembles the populations of the Slavic countries. In the north, the population of the Scandinavian Peninsula in its southern and western parts also shows similarities in terms of haplogroup R1a to East German and East Central European areas. The population of the north of the peninsula differs significantly from that of the south and west. Likewise, the population of the southern Balkans and the coasts of the Mediterranean Sea, because among this group to a large extent there are different haplogroups than the two mentioned above²⁹.

These examples show well that the beliefs traditionally cultivated in common thought about close biological connection between various modern nations are only an illusion. The Germans and the Scandinavians themselves can be very biologically distant from each other, and the traditional beliefs about the radical difference between 'Nordics' and the Slavs are utterly false. It is similar, however, in the case of associating some groups of southern Slavs with the core of the Slavic region, if by this term we understand the population of Poland, Ukraine, western parts of Russia and other areas of Central and Eastern Europe, where the

²⁸ L.L. Cavalli-Sforza, *The History and Geography of Human Genes*, Princeton 1994, p. 133 and next.

²⁹ In southern Balkans, as on the coasts of the Mediterranean Sea, there is a significant share of, for example, the variation of the haplogroup J, J1 and J2, which is abundant in Asia Minor and the Middle East – these and other information can be checked in the Eupedia project: https://www.eupedia.com/europe/Haplogroup_J1_Y-DNA.shtml [accessed on: 31 I 2020]; see also M. Özdoğan, *Anatolia and the Balkans*, in: *The Global Prehistory of Human Migration*, ed. P. Belwood, Malden–Oxford 2013, pp. 366–379.

R1a haplogroup dominates, while in the south of the Balkans its part is not dominant and the presence of other haplogroups is frequent³⁰.

The matter will become even more intriguing if we return to the aforementioned fact discovered by archaeogeneticists, namely the persistence of genetic similarity between the old, deeply prehistoric state of the population of Europe and its modern profile. Let us emphasize once again that the results of archaeogenetic research indicate that the distribution of population groups in modern Europe is not the result of the so-called Migration Period, which took place at the beginning of the Middle Ages (4th–5th century AD), but first the result of the occupation of certain lands by the first Neolithic farmers (7th–5th millennium BCE), and then the arrival of a large population of the so-called Corded Ware culture and Yamnaya culture (5th–3rd millennium BC), identified unambiguously with Proto-Indo-Europeans³¹. It was noticed that the genetic trait of the eastern groups of this population was a large proportion of men possessing the R1a1a haplogroup (R1a subgroup). Sometimes it is this subgroup that is called Aryan, because its share is high among the modern population associated with the ancient Aryans (North India, Afghanistan, Iran, Kyrgyzstan), even above 60%³². It is important, however, that the percentage of haplogroup R1a1a in Central and Eastern Europe is similar to that in Asia. For example, in large areas of central Poland its share is 60%, and among endemic Sorbs it is even higher, reaching 70%³³. Here we have clear evidence of how much Nazi-influenced German scientists in the 1930s were wrong in describing their nation as ‘Aryan’ and in developing a specific ideology of the ‘master race’³⁴.

³⁰ https://www.eupedia.com/europe/genetic_maps_of_europe.shtml [accessed on: 31 I 2020]; Z.H. Rosser et al., *Y-Chromosomal Diversity in Europe Is Clinal and Influenced Primarily by Geography, Rather than by Language*, ‘American Journal of Human Genetics’ 2000, 67, pp. 1526–1543.

³¹ M.E. Allentoft et al., *op. cit.*, pp. 167–172; M. Currat, *Consequences of population expansions on European genetic diversity*, in: *Population Dynamics in Prehistory and Early History*, eds. E. Kaiser, J. Burger, W. Schier, Berlin–Boston 2012, pp. 3–15; W. Haak et al., *Massive migration from the steppe was a source for Indo-European Languages in Europe*, ‘Nature’ 2015, 522 (7555), pp. 2007–2011.

³² https://www.eupedia.com/europe/Haplogroup_R1a_Y-DNA.shtml [accessed on: 31 I 2020]; see also T. Kivisild et al., *The genetic heritage of the earliest settlers persists both in Indian tribal and caste populations*, ‘American Journal of Human Genetics’ 2003, 72, 2, pp. 313–332; S. Sharma et al., *The Indian origin of paternal haplogroup R1a1 * substantiates the autochthonous origin of Brahmins and the caste system*, ‘Journal of Human Genetics’ 2009, 54, 1, pp. 47–55; M. Daninovi, *Genetics and the Aryan Debate*, ‘Bulletin of the Indian Archaeological Society’ 2005, 36, pp. 146–154.

³³ M. Perić et al., *High-resolution phylogenetic analysis of southeastern Europe traces major episodes of paternal gene flow among Slavic populations*, ‘Molecular Biology and Evolution’ 2005, 22, 10, pp. 1964–1975.

³⁴ R. Cecil, *The Myth of the Master Race: Alfred Rosenberg and Nazi Ideology*, New York 1972; A. Wiercinski, T. Bielicki, *The Racial Analysis of Human Populations in Relation to Their Ethnogenesis*, ‘Current Anthropology’ 1962, 3, 1, pp. 2–46.

However, also today very often the similar serious mistakes when reporting on new discoveries of paleogenetics are made. Unfortunately it happens to professional historians, journalists, sometimes even geneticists. It is primarily about defining the relations of the distant past with modern ethnic terms, or even directly naming the genetic heritage of a current population with ethnic terms – it is therefore written that modern Poles, Germans, or other European nations possess a percentage of Slavic, Germanic, Celtic, Scythian, ‘Viking’ etc. genes³⁵. Setting aside the question of the adequacy of the use of ethnic names in relation to the distant past, even the well-established knowledge that prehistoric communities were not genetically homogeneous proves such statements false³⁶.

Similarly, there are no grounds for various types of media statements, such as those that want to conclude, based on the research on the genome of the first Polish dynasties, the Piasts³⁷, whether the origin of the dynasty was Slavic or other. The supporters of the second option generally look for evidence of the Scandinavian origin of the Piasts³⁸, contrary to the original dynastic tradition preserved in written sources, a completely rudimentary basis for the study of the old viewpoint³⁹. This is probably because the Vikings were and still are fashionable in pop culture⁴⁰.

Recently, the media in Poland was also excited to find a hair, allegedly belonging to Nicolaus Copernicus himself, and some wondered whether

³⁵ E.g. M. Florek-Moskal, *Skąd pochodzą Polacy*, <https://www.wprost.pl/tygodnik/87299/Skad-pochodza-Polacy.html> [accessed on: 31 I 2020]; and in German <https://naryore.eu/norico/45-prozent-der-deutschen-haben-genetisch-gesehen-keltische-wurzeln/> or <http://studgendeutsch.blogspot.com/2007/11/> [accessed on: 31 I 2020].

³⁶ Biology and especially mutations within haplogroups are completely separate phenomena in relation to social phenomena such as nationality, ethnicity, group identity, or even the so-called race. A. Morning, *The Nature of Race: How Scientists Think and Teach about Human Difference*, Berkeley 2011; A. Brah, M.J. Hickham, M. Mac an Ghail, *Thinking Identities: Ethnicity, Racism and Culture, (Introduction)*, Basingstoke 1999, pp. 100–119.

³⁷ Which, of course, does not mean that a very interesting and scientifically important project to study the Piast genome, financed by the National Science Center: *The dynasty and society of the Piast state in the light of integrated historical, archaeological and genomic research*, is not legitimate and necessary.

³⁸ L. Handschuh et al., *W poszukiwaniu Piastów*, ‘Opolskie Studia Administracyjno-Prawne’ 2016, 14, pp. 63–77; <https://www.polsatnews.pl/wiadomosc/2017-04-17/przedstawiciel-piastow-z/> [accessed on: 31 I 2020]; <https://wiadomosci.tvp.pl/46530492/genetyka-wyjasni-pochodzenie-piastow> [accessed on: 31 I 2020].

³⁹ J. Banaszekiewicz, *Podania o «Początku»*, in: *Dynastie Europy*, ed. A. Mączak, Wrocław 1997, pp. 17–45.

⁴⁰ J. Gregor, *Nordicism Revised*, ‘Phylon’ 1960, 22, 4, pp. 351–360; A. Lunde, *The Vikings on Film: Essays on Depictions of the Nordic Middle Ages*, ‘Scandinavian Studies’ 2011, 83, 3, pp. 471–477; <https://www.norsemyth.org/2013/11/the-thor-movies-and-norse-mythology.html> [accessed on: 31 I 2020].

genetic research would be able to resolve the eternal Polish-German dispute over the nationality of the brilliant astronomer – ‘nationality’ understood in the modern way, of course. The media frenzy died down when it turned out that the genetic material attributed to Nicolaus Copernicus did not match the genetic profile of either Germans or Poles, and although it can and could be found in East-Central Europe, it is rare there and much more often it can be as well found among the inhabitants of Asia Minor and the Middle East⁴¹.

The above-mentioned attempts to search for the connections with contemporary nations in the distant past, which are to justify something in the present, something important for people today, namely their own value, the complex of lack of this value, or the right to some lands, and many other issues, are very puzzling. All those issues should not be connected at all with a reflection on the biological affiliation of individuals and larger groups to specific types of haplogroups. The following question clearly illustrates the problem: if a Pole gives a sample of his cells for testing and in the laboratory they find that the Y haplogroup there is identical to the one reportedly possessed by Nicolaus Copernicus (R1b1b2a1)⁴², is he supposed to be particularly proud of it? One can also go further and ask if he is to consider himself an Armenian, a Bahrain or Bhutan resident, because the alleged Copernicus haplogroup occurs several times more often among these nations than among the inhabitants of Central Europe? Questions of this kind are also connected with other, similar ones: for example, are native, born and bred, Norwegians, Englishmen, Turks, or Frenchmen, who have the Y R1a1a haplogroup, most often found in the inhabitants of Poland, in fact ‘denationalised’ Poles, or just crypto-Slavs? And what about the Kyrgyz people or certain groups of the population of India, which show a similarly frequent share of this haplogroup as Poles and some groups of Russians?

The obvious absurdity of the statements above is clearly visible here, but when they appear in contemporary media, on the Internet, as well as in allegedly academic publications, and comment on the past and its connections with the present, this absurdity is usually not noticed, while

⁴¹ *Tajemnica grobu Mikołaja Kopernika. Dialog ekspertów (Kraków 22–23 II 2010)*, ed. M. Kokowski, Kraków 2012, especially pp. 105–155; P.S. Gwozdz, *Y-DNA domniemanych szczątków Kopernika należy do haplogrupy R1b1b2a1/*, pp. 121–155; and T. Grzybowski et al., *Statystyczna i filogenetyczna interpretacja wyników badań mitochondrialnego DNA domniemanych szczątków Mikołaja Kopernika z archikatedry fromborskiej*, pp. 105–120.

⁴² If it is indeed true, that a hair found in a book stolen by the Swedes in the 17th century from Frombork (a great astronomer was the canon of the chapter there) and bones with similar DNA from the collegiate church in Frombork belonged to Copernicus.

specific biological traits of a population are associated with its ethnicity without any reflection. Even aside from the question of racism, those statements are an obvious abuse, ahistorical transfer of contemporary ethnic concepts to the distant past, although it is known for a long time that nations, in the sense we understand them today, were created only in the 19th century⁴³.

There may, however, be some doubts about the argument that I am making. After all, it is known that in the distant times, the knowledge of which is conveyed in writings, there was nevertheless an ethnic identity. There are many testimonies from distant antiquity that there were many different peoples, each of which somehow separated itself from others, nurtured its individuality⁴⁴. How, then, in this situation – if the majority of the European population is to remain to this day in places occupied by their biological ancestors – should one explain the evident ethnic and cultural changes documented by old texts and certified by archaeologists?

We will not resolve the issue here conclusively, as it is too complex. It is also not the purpose of this sketch. The point here is to propose a certain interpretation that could explain the general discrepancy between archaeological data and the results of archaeogenetic research concerning the population of Central and Eastern Europe in the early Middle Ages.

Before we take a closer look at the situation in a region that is extremely poorly described by sources and not best researched by modern science, first, let us look at areas where early medieval populations are relatively well known, i.e. certain areas of Western Europe. Knowledge of the processes that took place there will provide us with comparative material that will be used to construct a certain model of cultural, ethnic and civilizational changes taking place there at that time, which may have a wider application.

Our starting point will be the remarks of Herwig Wolfram, an Austrian historian, one of the most distinguished researchers of the so-called

⁴³ The matter is of course fiercely discussed, see: B. Anderson, *Imagined Communities. Reflexions on the Origin and Spread of Nationalism*, London–New York 1983, but: J.A. Armstrong, *Nations Before Nationalism*, Chapel Hill 1982; A. Gat, A. Yakobson, *Nations. The Long History and Deep Roots of Political Ethnicity and Nationalism*, Cambridge 2013; A. Smith, *The Ethnic Origins of Nations*, Oxford 1986.

⁴⁴ On *Barbarian Identity. Critical Approaches to Ethnicity in the Early Middle Ages*, ed. A. Gillett, in: *Studies in the Early Middle Ages*, vol. 4, Turnhout 2002; *Border, Barriers, And Ethnogenesis Frontiers In Late Antiquity and in the Middle Ages*, ed. F. Curta, in: *Studies in the Early Middle Ages*, vol. 12, Turnhout 2005; F. Curta, *Ethnic identity and archeology*, in: *Encyclopedia of Global Archeology*, ed. C. Smith, New York 2014, pp. 2507–2514; *Eastern Central Europe in the Early Middle Ages. Conflicts, Migrations and Ethnic Processes*, eds. W. Pohl, C. Spinei, Bucuresti 2008.

Migration Period and Barbarian kingdoms. This scholar has noticed more than a decade ago that the German tribes conquering individual regions of the Roman Empire were not as numerous as it was once believed⁴⁵. Thus, there was probably 100,000 to 120,000 Visigoths, who occupied the territories of today's southwestern France (Provence, Aquitaine) and large areas of the Iberian Peninsula. Among their number 20,000 men at the most constituted the armed forces. This incoming tribe, however, managed to conquer a territory of approximately 0.75 million square kilometers with roughly 10 million Roman and Romanized population⁴⁶. Similarly, relatively few (approximately 150,000 people) Ostrogoths took over the Italian prefecture, inhabited by 10 to 12 million Romans⁴⁷. Vandals (about 80,000 people, including approximately 15,000 warriors) captured the Roman province of Africa with a population of about 3 million. Even in Gaul, according to Herwig Wolfram, after the conquests of Clovis and his successors (5th–6th century AD) the Franks constituted about 2% of the population, that is 150,000 (200,000 at the most) people, while there were about 6–7 million Gaul-Romans living there. The situation in Roman Britain was only slightly different. There, the participation of incoming tribes from the Jutland, Angles and Jutes as well as Saxons from the north of present-day Germany, was slightly larger: about 200,000 emigrants compared with approximately 800,000 Romans and Romanized Britons⁴⁸. However, the Germans came to the island in several waves over the course of several years in the 5th century AD and were broken up into a number of often fighting among themselves tribes⁴⁹.

Theoretically, the so-called barbarians in the mentioned provinces of the Roman Empire should not prevail against the Roman population. The indigenous people were much more numerous, they cultivated the traditions of a certain political structure that had bonded them for centuries, and they also lived in a much better developed civilization, which

⁴⁵ H. Wolfram, *Die Germanen*, München 2007, p. 87.

⁴⁶ The trace of the German tribes in the modern genetic material of the inhabitants of the Peninsula is negligible: C. Bycroft, *Patterns of genetic differentiation and the footprints of historical migrations in the Iberian Peninsula*, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6358624/> [accessed on: 31 I 2020].

⁴⁷ In Italy, the incoming tribes basically left no genetic traces of their presence: L.L. Cavalli-Sforza, *op. cit.*, p. 295.

⁴⁸ R. Hedges, *Anglo-Saxon Migration and the Molecular Evidence*, in: *The Oxford Handbook of Anglo-Saxon Archeology*, eds. H. Hamerow, D.A. Hinton, S. Crawford, Oxford 2011, pp. 81–83.

⁴⁹ M. Grimmer, *Invasion, Settlement or Political Conquest: Changing Representations of the Arrival of the Anglo-Saxons in Britain*, 'Journal of the Australian Early Medieval Association' 2007, 3, 1, pp. 169–186; N.J. Higham, M.J. Ryan, *The Anglo-Saxon World*, Yale 2013.

also had better military technology⁵⁰. However, everywhere these more civilized people lost the rivalry with uncouth newcomers, and interestingly, not only primitive militarily and politically, but usually culturally as well⁵¹. The most primitive of the so-called barbarians, Anglo-Saxons, demonstrated the highest ability of cultural domination over the Romanized population⁵². After all, it was they who managed to Germanize Roman Britain, while the more civilized Goths, Vandals and, even to a large extent, the Franks, after subjugating the Romans and making some political and cultural changes, finally succumbed to Romanization⁵³.

However, everywhere in the above-mentioned areas of Western Europe, under the influence of relatively few immigrants from the East, rapid and fundamental civilizational changes took place. Even though there are researchers who relativize the problem and point to the internal collapse of late Rome even before the invasion of the German tribes⁵⁴, it is difficult to deny that old relations were collapsed decisively as a result of the arrival of strangers: culture was primitivized, there was a significant reduction in the economic levels and life standards. However, the long-term effect of the changes was different in different regions; each of them had its own specificity. We will not go into details here, but some general features of the situation everywhere are worth remembering. We will need them to interpret the situation in Central and Eastern Europe. Let us note, then, that the change was made under the pressure of the military success of incoming tribes, which took place despite the existence of enormous disproportions – also confirmed by contemporary archaeological research – between the sparse groups of victors and the indigenous masses⁵⁵. Change always meant a reduction in economic standards in societies, and deterioration and primitivization of living conditions. However, a permanent change in the ethnic profile of the community took place only where the Romans became dependent on the Germans who were the most backward in terms of social development. Here, we risk the thesis that the

⁵⁰ N.J. Higham, *Literary Evidence for Villas, Towns and Hillforts in Fifth-Century Britain*, 'Britannia' 1994, 25, pp. 229–232.

⁵¹ *Britons in Anglo-Saxon England*, ed. N.J. Higham, Woodbridge 2007.

⁵² B. Ward-Perkins, *Why did the Anglo-Saxons not become more British?*, 'The English Historical Review' 2000, 462, pp. 513–533.

⁵³ M. Maiden, J.Ch. Smith, A. Ledgeway, *The Cambridge History of the Romance Languages*, vol. 2, *Contexts*, Cambridge 2011, p. 36 and next.

⁵⁴ A. Goldsworthy, *The Fall of the West: The Slow Death of the Roman Superpower*, Phoenix 2010; G. Bowersock, P. Brown, O. Grabar, *Interpreting Late Antiquity: Essays on the Postclassical World*, Harvard 2001.

⁵⁵ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6436108/>; https://www.eupedia.com/genetics/regional_dna_project_france.shtml [accessed on: 31 I 2020].

key factor in this case was the relative egalitarianism of the Anglo-Saxons (as opposed to the so-called Danubian Germanic peoples, who were led by the aristocracy)⁵⁶. Egalitarian, but cultivating self-esteem, societies are both attractive to strangers in terms of assimilation, and strangers also join them as easily, losing their identity⁵⁷.

Let us now try to consider what the significance of the above observations is for the main subject of this discussion. The transfer of the cultural change pattern, that has taken place in the West and is relatively well recognized there, to the eastern parts of Europe cannot of course be done automatically. Undertaking such a task, one must consider the specificity of the place and other circumstances, but nevertheless a general comparison of the situation in different areas of Europe and pondering over whether there have been any similarities make sense. Even a cursory look at the case proves this. After all, the information provided by archaeogeneticists makes us aware that in both areas most of the population did not participate in the Migration of 5th and 6th Century AD. However, civilization and cultural changes took place both in the west and in the east of Europe. This fact strongly suggests that in the east of the continent, as in the west, the driving force behind the changes were relatively small groups of the immigrant population that were able to dominate the masses of the indigenous people.

In this case, it is secondary for us to indicate the details of the phenomenon. This is an extraordinarily complex matter that requires a series of additional studies, covering several disciplines. One thing is certain: the people imposing changes had to demonstrate military efficiency. Roman sources very often contained references to this kind of qualities of the German tribes. However, it was similar in the case of the Slavs, only that the texts reporting this topic are generally poorly known⁵⁸. Popular culture, which also influences researchers, and to some extent also the academic tradition, create a rather one-sided picture in which mainly Germanic people exist. It seems that there is still a strong stereotype, created in the Middle Ages, which made the Slavs second-class people. Among other reasons it was because since the 6th century AD masses of slaves were exported from Central-Eastern and Eastern Europe to the west

⁵⁶ H. Wolfram, *op. cit.*, p. 64 and next, 91 and next.

⁵⁷ *Das Reich und Polen. Parallelen, Interaktionen und Formen der Akkulturation im hohen und späten Mittelalter*, eds. A. Patschovsky, T. Wunsch, in: *Vorträge und Forschungen*, Bd. 59, Ostfildern 2003.

⁵⁸ M. Wołoszyn, *Theophylaktos Simokates und die Slawen am Ende des westlichen Ozeans – die erste Erwähnung der Ostseeslawen?*, Kraków 2014.

and south of the continent⁵⁹. That is why the name of the Slavs became a synonym for slaves in medieval Latin, which penetrated some Western European languages and, to a certain extent, the consciousness of people who speak these languages. This circumstance – and other ones, not mentioned here⁶⁰ – caused that traits considered very noble, as pugnacity, the will to fight and the ability to defeat the opponent, even if sometimes individually noticed in the Slavs, generally were reserved in Western writings for the Germanic tribes and partially for other Western Europeans. In general, the Slavs were to be a human mass formed by others, by people who were naturally more civilized, genetically better⁶¹.

As a result of a certain inertia and the conservatism of historical knowledge the essence of the phenomenon of the so-called Slavization of Eastern, Southern and Central-Eastern Europe is still not recognized today. After all, this process was the work of extremely militarily skillful, but relatively small groups of people, whose starting point was the area around today's Kiev, whereas by their conquests they seized huge areas of our continent. At the same time, it is worth adding that, compared to similarly acting Germanic tribes, Slavization was much more lasting than parallel Germanisation. In most of the Byzantine (East Roman) Balkans, Slavic languages are still spoken today, while in the former West Roman area only the English use the Germanic language, with a heavy load of broken Latin too. Many reasons contributed to the above-mentioned facts, which indicated a certain cultural strength of some conquerors and the weaknesses of others. The issue is beyond the scope of this study. However, the cultural significance of Slavization in large parts of Europe is worth remembering because our main subject touches on the undervaluation, also in Poland. This undervaluation was related to the lack of relevant research or even reflections by historians on the issue mentioned above, and the habit of using outdated interpretations, which resulted in the ignoring the results of archaeogenetic works. And because life abhors a vacuum, the already mentioned disorganized and, in fact, embarrassing ideas of so-called Turboslavs appeared instead.

This text by no means covers the whole of a very complex issue. Certainly, further research by archaeogeneticists and archaeologists will bring

⁵⁹ A. Rio, *Slavery After Rome, 500–1100*, Oxford 2017, p. 24 and next; J. Henning, *Gefangenensesseln im slawischen Siedlungsraum und der europäische Sklavenhandel im 6. bis 12. Jahrhundert*, 'Germania' 1992, 70, pp. 403–426.

⁶⁰ More on the issue: A. Pleszczyński, *The Birth of Stereotype: Polish Rulers and Their Country in German Writings c. 1000*, Boston–Laiden 2008, p. 9 and next.

⁶¹ L. Wolff, *Inventing Eastern Europe: The Map of Civilization in the Mind of Enlightenment*, Stanford 2000.

interesting new data. Nevertheless, I do not think that they will fundamentally change the theses cited here. For, regardless of the nuances of the matter, one thing is certain: there is no absolute relationship between culture and ethnicity with biology of a given population. And there never was any. The first factor turns out to be variable in time, while the second is constant. The genetically alike people in Central and Eastern Europe first succumbed to the Germanic cultural influences (around the 3rd century BC) – we do not know if to the ethnic ones as well, then since the 5th century AD the same population underwent Slavization, in this case associated with the adoption of Slavic ethnic identity. At the same time, this process, just like the Germanisation in the West, was associated with a cultural change and lowering civilizational level on which the population previously lived.

These circumstances clearly show the inadequacy of the progressivism, i.e. the belief, once stubbornly promoted in the ideological historiography, that societies always change towards the so-called civilization progress. However, in the context of the main subject discussed here, they demonstrate something else, more important to us. Namely, that historiography that promotes the modern understanding of ethnicity to interpret the distant past and, what is worse, considers ethnic categories permanent, is simply ahistorical and anachronistic, or simply false.

Nowadays, it is impossible to analyze history correctly, starting from national positions, and one must not mix patriotism or stereotypical contempt for some societies – including one's own – with science. The object of historical studies, if they are to maintain academic standards, should be humans and communities they form, not nations treated as universal and transcendent beings.

Therefore, one needs to reject not only the mirages of Great Lechia, but also constantly repeated in historical fiction and even in historiography, often in an oblique form or subconsciously expressed, embarrassing tales about the Nordic superman, who always and everywhere organized 'racially' lower Slavic communities. Genetic heritage should not be interpreted in ethnic terms. Humans have always been to some extent a mixture of 'racially' different individuals, and the qualities of their cultures certainly did not result from their biology, but from a number of intertwining cultural and social factors.

It is a great research challenge, which is only slightly touched on by this study, to understand how small groups of incoming tribes, weaker than the local ones in terms of culture and civilization, managed to impose their lifestyle on them, often together with language and identity. It is, after all, well-confirmed scientifically, e.g. in the process of Germanization of Great Britain, but in the case of the Slavization of Central, South and

Eastern Europe we still do not know much. Moreover, the problem of cultural changes did not only concern the early Middle Ages and the region interesting for us, but it is more universal, both in terms of the past and probably also the future.

(translated by LINGUA LAB)

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STRESZCZENIE

Celem autora niniejszego tekstu jest ujawnienie poważnej różnicy, jaka pojawiła się pomiędzy tradycyjnymi interpretacjami dziejów Europy Środkowo-Wschodniej, obecnymi w pracach historyków i archeologów a nowymi danymi przynoszonymi przez badania DNA dawnych populacji tego obszaru. Te pierwsze, opierając się o wyniki prac archeologów, wskazujących na zmiany kulturowe, zakładają gruntowną wymianę populacji, jaka miałaby nastąpić we wczesnym średniowieczu, podczas gdy te drugie wskazują na ciągłość zaludnienia regionu przez taką samą biologicznie populację od ponad tysiąca lat przed naszą erą. Autor stara się wyjaśnić te rozbieżności wskazując na znane z innych obszarów Europy przypadki zmian kultury, a nawet etniczności w obrębie tej samej biologicznie populacji zachodzące pod wpływem niewielkich grup przybyszów.

Słowa kluczowe: wczesne średniowiecze, Europa Środkowo-Wschodnia, zmiana kulturowa, zmiana etniczna, genetyka populacji

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