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Was there No Hungarian Conquest of the Carpathian Basin at the End of the 9th Century a.d.? The Lessons of Genomic Research

The dawn of the 21st century witnessed the birth of the new science of genomics. This event coincided with the sequencing of the human genome in the year 2000. Genomics is also known as “deep ancestry” and has significant implications for the study of our distant past. Hitherto our knowledge of ancient times, even the second half of the first millennium a.d., derived mainly from such fields as archaeology, anthropology, mythology, paleo-linguistics, paleo-musicology as well as the examination of very rare manuscript sources such as chronicles, travel and government reports. In the case of peoples without a tradition of keeping written records, these latter sources invariably originated with foreigners who often had very limited knowledge of the events and conditions they described. To these means of elucidating the distant past genomics offers a new and potent instrument.

The impact of this new science on historiography has already been felt in countries where genomic research was undertaken as soon as this new science, one might say new branch of genetics, became known. A good example is the United Kingdom where several scientists applied genomics to the re-examination of British prehistory. Perhaps the most prominent of them, Stephen Oppenheimer of Oxford University, in a massive study of the pre-history of the British Isles concluded that most of the invaders of these islands (the Celts, the Romans, the Angles, the Jutes, the Saxons, the Danes and the Normans) have left minimal genetic footprints. He also argued that the people who brought the proto-English language to England were not so much the Angles and Saxons of the early Middle Ages as believed hitherto, but migrants who arrived centuries earlier.¹

¹ Stephen Oppenheimer, *The Origins of the British* (London: Robinson, 2007), 477-82.

Scientists in Hungary did not wait long after the debut of genomics to begin applying it to the study of Hungarian pre-history. The most significant of such studies was done by a team headed by Professor István Raskó of the University of Szeged's medical school and director of the Hungarian Academy of Sciences' Biological Research Centre, Institute of Genetics. The project focused on the Hungarian conquest of the Carpathian Basin in the late 9th century a.d. and its genetic legacy.²

The decision to focus on this subject was an important one since there are many unanswered questions relating to this supposedly momentous event in Hungarian history. The conquest (the Hungarian word is *honfoglalás*, which translates literally as “taking of [a] home”) is one of many such developments in Europe during the Dark Ages — and it had an outcome that differs from the others. It could be said that, if it happened as it has been portrayed throughout the centuries, it defies the logic of the history of conquests in the early Medieval period.

In the Hungarian case, according to the received version of this event, the conquest resulted in the establishment by the conquerors of a nation that, for a while at least continued the traditions of the newcomers — including a nomadic lifestyle and wide-ranging military campaigns in search of tribute and booty. More importantly, in this instance the conquerors are known to have imposed their language on the local autochthonous population. In this latter aspect especially, the Hungarian conquest seems to have been highly atypical, one might almost say unique. In all other significant conquests during Europe's Dark Ages different patterns prevailed. Among the conquests that had dissimilar outcomes were those of the Scandinavians — whether called Norsemen, Vikings, Norwegians, Danes, Swedes or Varangians. Scandinavian warriors occupied, and then settled large areas in eastern and northern England — the land known for some time as Danelaw. Other Scandinavians ravaged and then occupied northern France, about the same time as the “Hungarian conquest” happened. Later, in 1066, the descendants of these people, by then known as the Normans, conquered England and installed themselves as the ruling elite there. Other Scandinavians, known as the Varangians, imposed themselves as the rulers of ancient Rus — in Novgorod, then in Kiev, and then elsewhere. Closer to Danubian Europe and somewhat

² The background of this research project is described in the introductory paragraphs of Csanád Bálint, “Az ethnos a kora középkorban (a kutatás lehetőségei és korlátai),” in *Századok*, 140, 2 (2006): 277-348.

earlier, Turkic-speaking Bulgars established their rule over local, mainly Slavic-speaking populations in the Lower Danube Valley. In all of these cases, the conquerors failed to impose their language on a long-term basis. In fact, in a few generations they all learned the language of their subjects. Even the Normans of Normandy (whose ancestors in the mid-10th century still spoke Scandinavian dialects) were unable to impose their recently acquired French language on their English subjects, even though they, in particular the priests that came with them, had a well-developed tradition of literacy.³

Why was the Hungarian conquest supposedly different? One answer could be that in this case we had a large conquering population taking over a sparsely populated area. Many but certainly not all the historians and archaeologists who had examined the story of the Hungarian conquest have said that this indeed had been the case. Would genomic research reinforce or contradict these conclusions? The project undertaken by István Raskó and his team was to throw light on this riddle or possibly even solve it.

The results of the research began to appear in print in 2007. Two papers were in English and appeared in major international journals.⁴ The first study examined and compared the mitochondrial DNA of conquest-era women and present-day Hungarian women. Mitochondrial DNA (mtDNA) is passed on by women to their children, but it is not passed on by men to their offspring. It is, as a result, a means of studying the blood-lines of women. The researchers obtained mtDNA from two groups. One of these was made up of slightly over one hundred women living in present-day Hungary — along with 76 female residents of the Székely counties of Transylvania, Romania.

³ Later, in the early Modern Era and after, conquerors with traditions of literacy, schooling, and in command of a major “world” language, were much more likely to impose their language on autochthonous populations.

⁴ István Raskó, *et al.*, “Comparison of Maternal Lineage and Biogeographic Analyses of Ancient and Modern Hungarian Populations.” *American Journal of Physical Anthropology*, 134 (2007), 354-68. Also, Raskó, *et al.*, “Y-Chromosome Analysis of Ancient Hungarian and Two Modern Hungarian-Speaking Populations from the Carpathian Basin,” *Annals of Human Genetics*, 72, 4 (2008), 519-34. Both are available online. The members of Raskó's team include, in alphabetical order: C. Stephen Doves, E. K. Conant, Bernadett Csányi (corresponding author for the Y-Chromosome study), K. Csete, Aranka Csósz, Ánges Czibula, Tibor Kalmár, Péter Langó, Balázs Gusztáv Mende, Katalin Priskin, Gyöngyvér Tömöry (corresponding author for the mtDNA study) and A. Zsolnai.

(The inhabitants of these counties, it might be added, are overwhelmingly Magyar-speaking Székelys.) DNA was also extracted from the bones of women who were interred in post-conquest era graves. This group was further subdivided into two categories. Some bones came from graves of the elite, presumably wives and daughters of the “conquerors.” These graves were identified by the rich grave goods they contained. The other group represented subject peoples whose bones were found in graves of the common people, as identified by the lack of rich grave-goods.

When the mtDNA of the modern Hungarian (including Székely) women were compared to the two groups of the ancient ones interesting results emerged. It became evident that the variance between the present-day populations’ mtDNA and that of the occupants of graves of the elite was considerable. This suggests that present-day Hungarian (and Székely) women are not descendants of the conquerors. At the same time no significant distance was found to exist between the mtDNA of women in post-conquest era commoners’ graves and the mtDNA of modern Hungarian women. Since most of the occupants of commoners’ graves must have been members of the subject peoples who made up the majority of the Carpathian Basin’s population in the 10th century, these findings clearly indicate a genetic link between the region’s pre-conquest population and its present-day inhabitants. The finding that many present-day women in Hungary and in Transylvania’s Székely counties are related by blood or may even be directly descended from the common people of the Carpathian Basin in the 10th century is significant. It means that immigration into this part of Europe in the last millennium, however substantial it had been at times, did not result in a complete replacement of the region’s genetic stock. The genetic footprints of centuries of immigration are no doubt there in Hungary’s present-day population, but the genetic drift caused by it has not been total.

The other article that Raskó’s team produced resulted from the research that examined the DNA of men. In this project the researchers looked for the incidence of Tat polymorphism, i.e. the marker Tat C allele, in the Y chromosomal DNA of two populations: male occupants of 10th century graves and modern-day Hungarian and Székely men. It should be noted here that Y chromosomes are passed on by men to their sons only and as such are sources of study for male blood-lines. In the case of the ancient DNA, extraction took place from the bones of men resting in “rich” graves identified by grave goods: weapons, horse harness or even the head of a warrior’s horse. These individuals were no doubt the “conquerors” or their sons. In the case of present-day residents, DNA samples were collected from nearly 200 Magyar and Székely men. The results of the investigation were startling. The research

revealed that while in the ancient DNA the Tat polymorphism was common, among the modern samples it was virtually absent. Only one man, a Székely, carried the Tat C allele.⁵

The most important of the findings of Professor Raskó's team is emphasized in both their reports, namely that the size of the population which arrived in the Carpathian Basin at the end of the 9th century was small. In one of the studies the team concluded that, once the invaders established themselves there, they made up only a "small fraction" of the land's total population.⁶ Those who are familiar with the historiography of the Hungarian conquest know that this interpretation is not new or unique. More than a century ago, the internationally-known archaeologist József Hampel (1849-1913) came to the same conclusion, i.e. that the conquering Hungarians were "only a small minority" of the Carpathian Basin's population.⁷

Despite this conclusion about the size of the conquering population, Raskó and his associates never suggested that the conquerors were not Hungarian in language and ethnicity. Instead, they assumed that, because of their superior position as the political and military elite, the conquerors were able to impose their language on a much more numerous local population. But, as it has been pointed out above, this is not how societal evolution worked in the 9th and 10th centuries. The contemporary examples of the Scandinavians in north-eastern England and northern France, the Varangians in ancient Rus, the Bulgars on the Lower Danube, and the Normans in England, speak to this point. In all these cases the conquerors sooner or later assimilated to the more numerous, autochthonous populations. True, at least two of them, the Varangians and the Bulgars, bequeathed to the ethnic groups they subjugated their name: Rus (Russian) in the first instance and Bulgar (Bulgarian) in the second. The conquerors of the Carpathian Basin did the same: the peoples

⁵ According to the article's authors, this finding, i.e. the virtual absence of this C allele in modern Hungarian populations, is consistent with the findings of several other research teams.

⁶ In the study of the female bloodlines (mtDNAs), "Comparison of Maternal Lineage...".

⁷ Hampel cited in Péter Langó, "Archaeological Research on the Conquering Hungarians: A Review," in *Research on the Prehistory of the Hungarians: A Review*, ed. Balázs Gusztáv Mende (Budapest: Institute of Archaeology of the Hungarian Academy of Sciences, 2005), pp. 202f.

they conquered became known by their name: Magyar. They also bequeathed the Hungarian nation their first dynasty of rulers, as well as a large portion of their mythology, including the myth that they, the conquerors, were genetic founders of the Hungarian nation.⁸

It might be asked at this point which among the several theories of the “Hungarian conquest” or Hungarian ethnogenesis the results of this genomic research support? They certainly do not support the most commonly accepted theory, according to which the ancestors of the Hungarians arrived in the Carpathian Basin in 895, assimilated the autochthonous population and thereby established the genetic stock of the future Hungarian nation. The research also fails to endorse the second most commonly accepted theory of the ethnogenesis of the Magyar people, the theory of the Dual Conquest, put forth most forcefully by historian Gyula Laszlo (1910-1996) as well as others, before him and in recent years. This theory suggests that Hungarians arrived in the Carpathian Basin in at least two waves, the second or last one being the influx of 895. The researches of Raskó and his team, however, suggest that the conquerors of 895 were genetically unrelated to Hungarians, whether earlier arrivals or members of today's Hungarian populations.⁹

There is one theory of the “Hungarian conquest” however, that the results of this genomic research support, and support unequivocally. This is actually the theory that there was no Hungarian conquest of the Carpathian Basin at the end of the 9th century and its most outspoken advocate was archaeologist and historian Gábor Vékony (1944-2004). Vékony argued, in the very last book he published,¹⁰ that the conquerors constituted a small

⁸ According to historian Denis Sinor “Hungarians,... have always considered themselves the descendants of the conquerors....” Denis Sinor, “The Outlines of Hungarian Prehistory,” *Journal of World History*, 4 (3): 513-540, accessed in June 2009 at <http://forums.skadi.net/showthread.php?t=105291>.

⁹ This genomic research also does not support, or does not support completely certain less-accepted and less-known theories, such as the one proposed by Adorján Magyar (1887-1978) and re-invented recently by others, that the ancestors of Hungarians have lived in the Carpathian Basin since at least the last Ice Age, but groups of them had migrated to the east, and in 895 one such group returned “home” and helped to lay the foundations of a strong Hungarian state.

¹⁰ Gábor Vékony, *Magyar őstörténet - Magyar honfoglalás* [Hungarian prehistory – Hungarian conquest] (Budapest: Nap Kiadó, 2002). Before his untimely death Vékony taught pre-history at Budapest's Eötvös Loránd University.

invasion force — approximately 5,000 arm-bearing men and their families — and they made up a minute fraction of the Carpathian Basin's total population after they had imposed themselves there. Through the examination of the archaeological, linguistic, and historical evidence, Vékony also concluded that the conquerors were not related to the Hungarian people either ethnically or linguistically: they were Turkic tribes speaking Turkic dialects. The people who spoke proto-Hungarian were already living in the Carpathian Basin, according to Vékony, along with other peoples including Slavs.¹¹ Even their life-styles were different: these autochthonous inhabitants were settled agriculturalists while the conquerors were nomadic warriors. The locals had next to nothing in common with the newcomers, and we now know from Raskó's and his team's researches, even their DNA was different.

The genomic research that had been done in Hungary in this 1st decade of the 21st century was very much a preliminary study. The science is in its formative stages. Every day it almost seems, new discoveries come along that will no doubt soon enable geneticists to make ever more meaningful and precise observations on matters related to ancient history. Furthermore, the research done by Raskó and his team relied on a very limited sample pool. A new research project using technologies not available before — and a much more substantial sample pool — might enable us to construct a different scenario of Hungarian ethnogenesis than suggested by the first genomic inquiries in Hungary, or such a project might further reinforce the conclusions that can be derived from the genomic study described in this essay: there was no Hungarian conquest of the Carpathian Basin at the end of the 9th century.

¹¹ Vékony does not offer a precise date for the arrival of the Hungarians in the Carpathian Basin. He suggests that this happened somewhere between the 6th and 7th centuries. Vékony, p. 219. Vékony's arguments had been disputed even before his book appeared in 2002. See István Riba, "Reading the Runes: Evidence of the Dual Conquest?" *The Hungarian Quarterly*, 41 (no. 157, spring 2000), accessed at <http://forums.skadi.net/showthread.php?t=105291>. The same seems to be happening to my arguments. At the 2009 annual meeting of the Hungarian Studies Association of Canada that was held in late May at Ottawa's Carleton University, I gave a paper suggesting the need for a radical revision of the "Hungarian conquest" story. My idea was greeted with skepticism. I plan to return to this subject in a much bulkier article about Székely origins, slated for a forthcoming special volume of the *Hungarian Studies Review* dealing with Transylvanian history, in which I hope to deflect some expected criticisms.