Politicians, Patriots and Plotters: Unlikely Debates Occasioned by Maximilian Hell’s Venus Transit Expedition of 1769

László Kontler
Central European University, Budapest

Abstract. This paper discusses the cultural and political contexts and reception of the most important by-product of Maximilian Hell’s famous Venus transit expedition of 1768–69, the *Demonstratio. Idioma Ungarorum et Lapponum idem esse* (1770) by Hell’s associate János Sajnovics. Now considered a landmark in Finno-Ugrian linguistics, the *Demonstratio* addressed an academic subject that was at that time almost destined to be caught up in an ideological battlefield defined by the shifting relationship between the Habsburg government, the Society of Jesus, and the Hungarian nobility. The “enlightened absolutist” policies of the former aimed at consolidating the Habsburg monarchy as an empire, at the expense of privileged groups, including religious orders as well as the noble estates. In the situation created by the 1773 suppression of the Jesuit order (a signal of declining patronage from the dynasty), the growing preoccupation on the part of ex-Jesuits like Hell and Sajnovics with “things Hungarian” could have been part of an attempt to re-situate themselves on the Central European map of learning. At the same time, the founding document of this interest, the *Demonstratio*, evoked violent protests from the other target of Habsburg policies, the Hungarian nobility, because its basic assumptions – the kinship of the Hungarian and the Sámi (Lappian) language – potentially undermined the noble ideology of social exclusiveness, established on the alleged “Scythian” ancestry of Hungarians. By exploring the complex motives, intentions, reactions and responses of the chief agents in this story, it is possible to highlight the extra-scientific constraints and facilitators for the practice of knowledge in late eighteenth century Central Europe.

1. Hell’s 1768–69 expedition in context

For obvious reasons, most of the contributions to these proceedings can be firmly located in the history of astronomy, or indeed the study of the pursuit of astronomy in the past and the present. This article is a reminder that more often than not, the practice of field science is pluri-disciplinary, heavily context-dependent and contingent, and as such it tends to be caught up in a complex web of constraints and agendas, many of which are extrinsic to science “proper”. Voyages of exploration and scientific expeditions are just too expensive: few, if any, patrons can afford restricting the recognition they might earn from their sponsorship to achievements in a narrow disciplinary area, and even if they could do so, they tend to prefer throwing the net wider. The 1768–69 Venus transit expedition to Vardø, hallmark by the name of the Viennese Imperial and Royal Astronomer Maximilian Hell, is a case in point. For the purposes of the expedition, Hell temporarily became a servant of two masters: Christian VII of Denmark–Norway, who issued the invitation and secured the finances, and his regular employer Empress Maria Theresa. From the

---

1For the most recent and most comprehensive discussion of the expedition as a whole, see Aspaas (2012).
perspective of the former, besides the astronomical observations, geomagnetic and other measurements carried out during the trip, and a general mapping of the resources of the northern fringes of the realm offered attractive prospects, while the latter seems to have encouraged an already existing interest on the part of Hell and his associate János (Joannes) Sajnovics in the empirical verification of the theory of the kinship between the Sámi (Lappian) language with Hungarian. Below, I shall be preoccupied with this last aspect, and argue that as this theory had ideologically sensitive implications, the reception of the whole achievement of the expedition can only be fully assessed by a consideration of its overall cultural and political context in the contemporary Habsburg Monarchy.

The cross-disciplinary dimension of the expedition of 1768–69 was accurately, if synoptically, indicated by Hell both in the introductory section of the main product of the expedition, the *Observatio transitus Veneris ante discum Solis die 3 junii anno 1769* (Copenhagen, 1770; also printed in the Leipzig-based *Nova Acta Eruditorum* in 1770, and in the annual edited by him, the *Ephemerides astronomicae ad meridianum Vindobonensem* for the year 1771). It was also mentioned in the call for subscriptions of the grand project which never came to be accomplished: a richly illustrated three-volume *Expeditio litteraria ad Polum Arcticum*, which would have consisted of a “historical”, a “physical” and a “mathematical–astronomical” volume. The expedition targeted a largely unexplored geographic area, not reached by the famous predecessors in the region. The 1732 Lapland expedition of Linnaeus was motivated by “the utility of scientific journeys within the fatherland”: sponsored by the Uppsala Royal Society for Science, it was a patriotic venture to explore “natural” resources from minerals through plants and animals to local technologies and ethnography, with an eye to the “economical” and to classifying the finds as national secrets. At the same time, the regions of the far north were subject to a scientific exoticism that in certain respects is reminiscent of the curiosity about distant continents. In 1736–1737, a French geophysical survey headed by Pierre Louis Moreau de Maupertuis and intent on determining the shape of the Earth once and for all had traveled to northern Scandinavia (“Laponie” as they exoticized the Torne Valley where they carried out their triangulations). In a way, the Hell expedition aimed to unite the features of these two enterprises. Although in terms of subject matter unrelated to the issue of the transit of Venus, the main preoccupation of the expedition, Hell assured the readers of the *Observatio* that “nor have we neglected the facts that throw light on or supplement the natural history of the animal and vegetable world, such as mussels, herbs, algae, mosses, and making other observations especially useful in regard of their economic applications” and the “origins, language and different dialects of the Lappian nation living scattered in the North”. Thus, even if “as a result of adverse weather conditions . . . I were to be disappointed in regard of the often mentioned observation, this scientific expedition were still not entirely fruitless for the sciences and the useful arts”. The expedition held out the promise of a wealth of new information capable of breaking new ground in several fields of knowledge, which Hell expressed in the enlightened language of improvement.

---

2 For the cameralist-style preoccupation of “Linnean travel” with an endeavor to explore and establish a frame for rationalistically-governed autarchy, see Koerner (1994, 1996, 1999), Frängsmyr (1985) and Sörlin (1989).

3 See Terrall (2002), Chapter 4.

4 Hell (1770), p 4.
2. Sajnovics’ Demonstratio

Apart from Hell’s theory of Northern Lights and a few weather reports, nothing was published of the “physical volume” of the Expeditio Litteraria. The proposed contents of the tomos historicus fared much better. Although the diary kept throughout the more than two years between their departure from Vienna and arrival back there never got published, a version of the proposed ethnographic, linguistic and historical treatment of the Sámi (i.e. Lappians) appeared soon after their return in the form of Sajnovics’ treatise *Demonstratio. Idioma Ungarorum et Lapponum idem esse* (Tyrnau, 1771 – extended Latin version of the text already published in Latin and Danish in Copenhagen in the previous year). True, among the scientific and learned public of Western Europe it received considerably less attention than even the partial accounts of the astronomical results of the expedition. In Hell’s and Sajnovics’ native land, however, the situation was the exact opposite, and the reasons for this were to be found in the peculiar cultural-political atmosphere of the times in the Kingdom of Hungary and her relations with the Habsburg administrative center.

Sajnovics was initially rather unenthusiastic about the task of studying the possible relation between Hungarian and Sámi, but under the influence of Hell – who was aware of the widespread preoccupation with Nordic cultures in contemporary Europe in general as well as some of the specific literature – and especially the experience of the first encounters with natives along the journey, his interest gradually awoke. The *Demonstratio* is considered a landmark in Finno–Ugrian linguistics, whose methodologically innovative features – especially the fact that beyond vocabulary and tone, he put a great emphasis on grammatical comparison in demonstrating linguistic kinship – eclipse such dilettante aspects of the work as the derivation of the Lappians from northern China, and the further speculation on the kinship of Hungarian and Chinese (prompted by Hell and the recognition, in a Chinese vocabulary, that certain Chinese words when read backwards resemble Hungarian ones). It both fitted into the development of eighteenth-century linguistic studies, and gave them further impetus, which was usually recognized by contemporaries in Europe.5

By itself, the positing of the kinship of Hungarian and Lappian was nothing new; nor, it must be added immediately, was it the achievement of Sajnovics’ work as a piece of academic linguistics that it met a torrent of response, predominantly negative, in Hungary. Ever since the Hamburg scholar Martin Fogel (Fogelius), mainly on the basis of shared etymologies, first raised the idea seriously in *De lingua indole Finica Observationes* (1669), the notion of a Finno–Ugrian community of languages and the special relationship of Finnish, Lappian and Hungarian recurred in the work of scholars from several European countries: Swedes (including Philipp Johann von Strahlenberg, the first to focus on the comparison of the “most ancient” stock of vocabulary: numerals, limbs, simple tools and actions), Germans (such as Leibniz, as well as Johann Eberhard Fischer), and Hungarians. Among the latter, the remarkable Lutheran antiquarian scholar Dávid Czvittinger was the first to embrace the Finno–Ugrian theory in his *Specimen Hungariae Litteratarum* (1711). There were several others to prepare the ground for Sajnovics, including individuals who did so despite their uneasiness with the theory, such as Mátyás (Matej) Bél, who presumed to identify the remnants of the “Hungarian–Scythian” language in Finnish.6

---

5For a concise discussion in English, see Vladár (2008).
6In this sketch I am relying on Domokos (1998).
The idea of a prestigious steppe kinship of the Hungarians with the mighty Huns, which is also apparent in Bél’s mild statement, was the standard narrative of the subject matter ever since the early Middle Ages. It became firmly tied up with the theory of a corporate polity, in which the scions of an (originally) military aristocracy enjoy pre-eminence, in the Gesta Hungarorum of Simon Kézai (1282/1285). Scythianism refers to both a theory of national origins and the privileged status of those defined as members of the corpus politicum after the dissolution of the ancient self-governing community, which ensued because of the contempt of some for the call to arms issued “in the name of God and the people”. It then received reinforcement from legal humanism in the Tripartitum of István Werbőczy (1517), a culmination of the centuries-old process of collecting “the customary law of noble Hungary”, and was still a staple of Hungarian late baroque noble consciousness, also underpinned by the traditional classification of the Hungarian language as one of the “oriental” languages, along with Turkish and Mongolian (and Hebrew, and Chaldean and Arabic, and Armenian, and Persian . . . ). Questioning one pillar of this complex intellectual edifice constituted a challenge to the entire ideological frame and, especially in politically critical times, could expect an appropriate response.

This is more or less what happened in the case of the Demonstratio. In regard of its reception it is meaningful to distinguish between the international and academic on the one hand, and the domestic and lay-literary on the other hand. Already in the Allgemeine nordische Geschichte (1771), relying extensively on Fischer’s books (Sibirische Geschichte, 1768; De Origine Ungrorum, 1770), the famous Göttingen scholar August Ludwig Schlözer recognized Sajnovics’ achievement, and later encouraged Sámuel Gyarmathi’s work, who pursued Finno–Ugrian research beyond Sajnovics in both methodological and empirical terms. In fact, strictly academic circles almost invariably welcomed Sajnovics’ theory in Hungary too. Even the Jesuit scholar, György Pray, the greatest contemporary authority in historical research, felt compelled to modify his earlier views on the subject in his Dissertationes historico-criticæ in annales veteres hunnorum, avarum et hungarorum (1775) – although, like Bél before him, by simply claiming a Hun pedigree for Finno–Ugrian peoples as well.

It must also be added that the only linguist to champion the alternative concept in Sajnovics’ lifetime, György Kalmár, published his relevant work nearly simultaneously with the Demonstratio, so his Prodromus idiomatis Schytico-Mogorico-Chuno-(seu Hunno-) Avarici, sive adparatus criticus ad linguam Hungaricam could not have been a response to Sajnovics (Éder 1999, p. 49). In other words, the issue here was not (yet) that of an academic debate, the more so as contemporary scholars used the terms “linguistic family” or “linguistic kinship”, if

---

7For a brief introduction to this tradition and its ideological significance, see Kontler & Trenčsényi (2007); see Szűcs (1981) for more details.

8Several studies in Rady (2003).

9For Schlözer and his Hungarian connections, see Balázs (1963); Poór (1989); Futaky (2007).

10Kosáry (1980), p. 575. In the abridged English edition, there are short summaries of eighteenth-century historical and linguistic scholarship, as well as the literary and cultural significance of the noble “bodyguards” (Kosáry 1987, pp. 149–154; 160–162; 195–200).

11This somewhat revisionist view of Hungarian scholarship on the subject is summarized, with references to the now extensive literature, in Lörincz (2000). During the subsequent century, however, a veritable “Ugrian–Turkic war” gradually unfolded and culminated in the 1860–1870s, among linguists and ethnographers, in which the notions of linguistic, cultural and genetic affinity and kinship became increasingly confounded.
ever, metaphorically at best, and without any clearcut frontlines between, say, the Scytho–Hungarian and the Finno–Ugrian “schools” (Hegedüs 2006, p. 300).

3. The political and ideological stakes of the *Demonstratio*

There was, however, one important and influential group on the public intellectual scene, which acutely realized the political and ideological stakes of the matter, and reacted accordingly: the men of letters of noble origin who dominated that scene before the 1780s and included, besides the chief Hungarian “Voltaireans” like Lőrinc Orczy and János Fekete, Ábrahám Barcsay, whose poetry gave expression to sensibility as well as anti-court political sentiment, and György Bessenyesi, the emblematic figure of the Hungarian Enlightenment as a whole. Together they gave voice to the sentiments of a sizeable elite group whose cultural and intellectual horizons, thanks to their education as members of Maria Theresa’s famous Hungarian Guards,12 were broadly European, but whose vision of the future restoration of the erstwhile greatness of the Hungarian nation was predicated on galvanizing their own class to a new dynamism through modern letters and knowledge practices. This was a vision of improvement which, in their own view, depended on maintaining a discourse of identity built on a prestigious pedigree and social exclusiveness, both under serious attack from the mid-1760s on by the Viennese court and government, towards which their attitudes were therefore highly ambivalent. In this atmosphere, the implications of Finno–Ugrianism – understood by them as not only linguistic but also ethnic kinship – seemed to them highly disturbing.

Barcsay’s poetry abounds in rebuffs addressed to Sajnovics whose “yoke” was perceived by him a vital threat to ancient liberties, established on the cornerstone of the idea that Hungarians are “the valiant grandsons of Scythians”. Similarly, in his “The Errors of Star-Watcher Sajnovits and Hell Being Refuted”, Orczy casts doubt on the allegation that the progeny of Alexander the Great’s brave opponents should be related to mere Lappians munching on dried fish – but recommends “the astronomer” to return to these “kind relatives” of *his*13: a hint at Sajnovics’ Slavic ethnic background. This tacit reference to Slavic mischief as a possible motive to Sajnovics’ work leads us to the political context. Just a few years earlier, the diet of 1764–1765 ended in bitter estrangement between the Hungarian nobility and the Viennese government, the court having failed to push through a package of administrative and social reforms which drew inspiration from the work of the newly established chairs of cameralist sciences and natural law at the University of Vienna, hallmarked by the names of Karl Anton von Martini and Joseph von Sonnenfels.15 Court propaganda on behalf of the proposed measures received a boost from a treatise by Adam Franz Kollár, *De originibus et usu perpetuo potestatis legislatoriae circa sacra apostolorum regum Ungariae*. Kollár, who was proud of his Slovak commoner origins, called into question many of the political and social privileges of the Hungarian ecclesiastical and secular elites, criticizing Werbőczy in especially sharp terms, and causing great consternation among the clergy and the

---

12 On the Hungarian Guards, with references to the figures mentioned, see Deme (1988). The Hungarian language literature is respectable. However, historians have hitherto largely yielded the field to literary scholars, whose main preoccupation has been the rise of vernacular literature, and are yet fully to discover the subject and approach it with their own questions. The standard monograph is Bíró (1994).

nobility. Characteristically, Kollár’s anti-feudal polemics was readily associated by this constituency with anti-Hungarian sentiment, identified in his commentary on *Hungaria*, a work by the sixteenth-century humanist Miklós Oláh (Nicolaus Olahus), which Kollár edited and published in 1763. These comments, which refer to the statistical minority of Hungarians in the Kingdom of Hungary and predict the gradual demise of the language as well as the nation itself, became European currency through being quoted in Schlözer’s *Allgemeine nordische Geschichte*, which in turn seems to have inspired Herder’s famous “prophecy” to the same effect. The latter’s prediction that the Hungarian nation, amidst the “ocean” of Slavic peoples, will inevitably perish, was underpinned by his theory (available in publication for the first time also in the late 1760s and early 1770s) on the crucial role of language in the formation of human identities. Herder claimed that “all conditions of awareness in [man] are linguistic” – thus, as language acquisition took place in communities, reason and the capacity of thinking, the very distinguishing feature of the human animal, was bound to have as many modes as there were human communities. Members of the Hungarian intellectual elite had good reasons for being attentive to his views, and also for taking them as an alarm bell. These developments also established Schlözer’s notoriety as an “anti-Hungarian”, apparently confirmed by the fact that his social and political views were based on the same foundations as the Viennese reformers – no wonder that the next, “Josephist”, generation of young enlightened Hungarians cultivated his courses at the University of Göttingen. In any case, by championing the Lappian cause, for an influential segment of the contemporary enlightened political public, Sajnovics and his mentor Hell seemed to be the Jesuit hirelings of a hostile court, employed in a plot which also involved willing collaborators from the camps of old and new national enemies, Germans and Slavs.

Finally, in many ways, Bessenyei is a category of his own with his comprehensive programme urging the improvement of public happiness through the cultivation of the arts and sciences, of historical and political knowledge in the vernacular. His engagement with the topic of national origins, and thus (ethno-)linguistic kinship, was conceived in the peculiarly eighteenth-century genre of philosophical history, works which also highlight the fundamental principles of this programme, in all their ambiguity. In many ways, he employed the standard enlightened narrative to give an account of Hungarian history in a European framework as the successive

---

15 *Treatise on the Origin of Language* (1772), in Herder (2002), p. 131, 150; see also *Fragments on Recent German Literature* [1767–1768], in op. cit., p. 49.
16 On the central role of the University of Göttingen as a point of orientation and a source of inspiration for the rank-and-file of Hungarian Josephists, see Balázs (1967), pp. 86–117. Some of the argument is worked in Balázs (1997).
17 A Google search on Hell and Sajnovics demonstrates in a few seconds that this representation is still alive and well among a somewhat less enlightened segment of the political public. – Late eighteenth-century attitudes to Jesuits, both before and after the dissolution of the order, were diverse. On the one hand, in scholarly circles there was a great deal of mutual respect and communication between Jesuits and Protestant scholars, and even personally expressed sympathy by the latter on the occasion of the dissolution. On the other hand, in the public-political domain the old Protestant topoi about the “conspiratorial bent” of the Jesuits remained common currency.
stages of the “mitigation” of rude manners, resulting from religion and learning, but also claimed that military glory and polite letters, rather than being antagonistic, could mutually supplement one another.\textsuperscript{19} This, of course, nicely dovetailed with his overall conviction that \textit{vera nobilitas} could derive from proficiency in letters as well as armsbearing. Assigning an unassailable social pre-eminence to the nobility on account of its historical roles, what he sought was a new justification for these roles, to be found in superior learning, while he still regarded the gulf that separated the nobility from the commoners, especially the peasantry as unbridgeable – and supported this from Werbőczy in a political terminology recalling the staples of Scythianism.\textsuperscript{20} Thus the ideological stakes of the available discourses of origin, to which the position taken by Sajnovics was directly relevant, were as formidable for him as for any of the above authors.

Though Bessenyei’s relevant statement – significantly enough, contained in a work entitled \textit{Magyarországnak törvényes állása} (The Legal Status of Hungary) – derives from the times of his retirement to his estate, some thirty years after Sajnovics’ treatise burst onto the scene, in it he advanced views most probably first developed and discussed with other opponents, back in the 1770s. Bessenyei bluntly claimed that “it is impossible to displace something of such a great consequence, on the basis of so little a circumstance [as language], and set it on a different footing”, and suggested that “instead of words, one should consider moral character and manners” (the standard analytical categories of philosophical history). This lens shows the “Scythian” and the “Lappon” to be separated by a yawning gap: in the subsequent representation, the latter becomes the target of consistent “othering” by Bessenyei. In contrast to the people of Attila, marked by “its thirst for triumph, valour and glory, as well as its sagacity required for domination”, the “Lappon” was deformed in his outward appearance as well as his manners: on top of his “ugliness of form, the Lappon is vile and fearful, it is such a subterranean mole of a Nation, which loathes the fight, and never wages war.”\textsuperscript{21}

4. An interesting paradox

We are dealing here with an interesting paradox. Bessenyei defended a view of national origins which was scientifically obsolete and was under challenge by one that was sound. The former theory, Scythianism, was deployed by him, in the best traditions of Enlightenment social science, with reference to the category of manners and virtues (or the lack of them), while at the same time in the polemic against “Lappianism” coming dangerously close to being conveyed in racial terms. To be sure, this combination was by no means unusual among eighteenth-century scholars:

\textsuperscript{19}The latter principles were developed in Bessenyei’s \textit{A magyar néző} [The Hungarian spectator, 1778], to be supported with a historical argument in \textit{A magyar nemzetnek szokásairal, erkölteirül, uralkodásának modjairul, törvényeirül, és nevezeteseb viselt dolgairul} [The customs, manners, modes of government, laws and important deeds of the Hungarian nation, 1778] and its appendix on “the form of the whole of Europe in the eleventh century” (\textit{Egész Európa' formája a XI\textsuperscript{th} Százban} – excerpted from Voltaire’s \textit{Essai sur les moeurs}, pp. 39–46), intended to demonstrate that in those times Hungarians were not any more barbarous than other European nations.

\textsuperscript{20}Bessenyei (1992). p. 175, 177.

suffice it to refer to the derogatory observations of Cornelius de Pauw to the natives of North America, or – in an academic environment with which late eighteenth-century Hungarians were intimately familiar – the unflattering classification of the “Mongol” race (supposedly giving rise to the peoples of Eastern Asia, North America and Africa) by the Göttingen historian Christoph Meiners. However, language, although recognized as an important racial marker – and a more inherent one than manners – did no more seriously enter into their considerations than in those of Bessenyei. This sort of “enlightened racism” was tailor-made to the Hungarian writer’s agenda, a programme of elevating the cultural level of the country, in the conviction that while martial valour is capable of being translated into virtue in letters, dumb and smelly fishermen would never attain to this. Kinship with the latter was therefore repudiated in violent terms of othering, together with the phenomenon of language as representing any analytical value, albeit – to amplify our paradox – its cultivation, as a tool of improvement, was deemed by Bessenyei indispensable for the achievement of his ends. However much he claimed, famously, that “as long as her own language remains uncultivated, no Nation in this World will become learned in foreign tongues,” he retained his scepticism about language as the constitutive element of community. Hungarian enlightened patriots like him continued to insist on the role of “virtue” in cementing the community, only they urged that virtue in arms ought to be replaced by “virtue in letters”, i.e., promoting improvement. The scientifically sound Finno–Ugrian theory on the other hand gave a boost to ethno-linguistic definitions of nationhood, which started to emerge in the context of efforts by the same enlighteners who dismissed that theory but still fostered the cultivation of the mother tongue with a view to the requirements of socio-cultural progress. Conversely, Hungarian ethno-nationalism, which received an initial impetus from the discovery of Finno–Ugrian theory, has yet continued – to this day – to take immense satisfaction in the Scythian myth.

While Hell and Sajnovics were astronomers by employment, they possessed a broad-ranging erudition not only in the physical and mathematical sciences, but also in each of the diverse fields which they set out to explore during the expedition. The latter was therefore conceived by them – on the testimony of Hell’s views expressed in the preface to the Observatio, but also Sajnovics’ journal – as a unitary scientific enterprise. Yet this unity crumbled in the reception. While in Copenhagen and Trondheim Sajnovics was rewarded with academy membership for the findings of the Demonstratio, which also stimulated the interest of Schlözer at Göttingen and caused a great deal of agitation in Hungary, elsewhere it seems to have been taken little notice of. Conversely, while Hell’s Observatio was quite extensively reported and reviewed in international venues of scientific communication, in Hungary – no doubt, in a large measure because of the virtual absence of such venues – appreciation for the team’s achievements in astronomy remained sporadic, and in the existing fora of learned sociability references to their being “star-watchers” were ironic, intended to question their competence in the fields of language and ethnography. The reasons for this discrepancy may be partially found in the failure of Hell’s grandiose – and perhaps not entirely realistic – project of serial publication. It may also have to do with the rather different character and level of technicality involved

22 For the classic exploration on de Pauw’s thesis on the inferiority of native Americans and the debate provoked by it, see Gerbi (1973, Chapter 3); for developments upon Gerbi’s perspective, Cañizares Esguerra (2001, Chapter 1); Sebastiani (2008, esp. Chapters 3–4).


in astronomical versus linguistic-ethnographic discourse and the concomitant divergence of the respective audiences. There is much further research to be done on each of these aspects, and many more. For the time being, one needs to stress once again the complexity, even inconsistency of contexts – aims and intentions, collaborations, simultaneities, conflicts – in whose hub the expedition can be located. It was these contexts, many of them definitely outside the domain of "pure science", that decisively influenced the selection strategies which local agents applied vis-à-vis the results of a scientific venture which its chief protagonists regarded as one and indivisible.

References

Aspaas, P. P. 2012, Maximilianus Hell (1720–1792) and the eighteenth-century transits of Venus. A study of jesuit science in Nordic and Central European contexts, A dissertation for the degree of Philosophiae Doctor, University of Tromsø. http://hdl.handle.net/10037/4178

Balázs, E. H. 1963, “A Magyar jozefinisták külföldi kapcsolataihoz” [About the international connections of Hungarian Josephinists], Századok, 97, 1187–1203

Balázs, E. H. 1967, Berzeviczy Gergely, a reformpolitikus (1763–1795) [Gergely Berzeviczy, the political reformer] (Budapest: Akadémiai Kiadó), 86–117


Bíró, F. 1994, A felvilágosodás korának magyar irodalma [Hungarian literature in the Age of Enlightenment], Budapest: Balassi Kiadó


Domokos, P. 1998, Szkitától Lappóniáig. A nyelvrokság és az ösztördénet kérdéskörének visszhangja [From Scythia to Lapponia. Echoes on the problem of linguistic kinship and ancient history], Budapest: Universitas


Éder, Z. 1999, “Újabb szempontok a Demonstratio hazai fogadtatásának kérdéséhez” [New perspectives on the domestic reception of the Demonstratio], in idem., Túl a Dunatájón. Fejezetek a magyar művelődéstörténet európai kapcsolatai köréből [Beyond
the Danube region. Chapters from the European relations of Hungarian cultural history], Budapest: Mundus


Hegedüs, B. 2006, “Kalmár György a magyar nyelv származásáról” [György Kalmár on the origin of the Hungarian language], in István Csörsz Rumen, Béla Hegedüs and Gábor Tüsksés (eds.), *Historia litteraria a XVIII. században* [Historia litteraria in the eighteenth century], Budapest: Universitas Kiadó

Hell, M. 1770, *Observatio transitus Veneris ante discum Solis die 3 junii anno 1769*. . . , Copenhagen: Gerhard Giese Salicath


Rady, M. (ed.), 2003, Custom and Law in Central Europe, Cambridge: Centre for European Legal Studies


The country made an estimated $7 billion from the agreement for allowing Russian gas to transit through the Soviet-built network of overground pipes. However, a number of Ukrainian politicians have claimed that the new Nord Stream 2 pipeline poses a threat to the future of that arrangement, with President Volodymyr Zelensky warning that Moscow could shut off the flow and use the nearly completed Baltic Sea link instead to deliver gas directly to Germany. "Nord Stream 2 will disconnect Ukraine from gas supplies, which means 'disconnecting' us from at least $3 billion a year," he said. Zelensky has claimed this will profoundly impact Kiev's budget, and the country "will have nothing to pay for the Ukrainian Army." 1761 & 1769 Transits of Venus. 

Venus in her chariot passes between the sun and earth; from Johann Doppelmayer's Atlas Coelestis, 1742. 

In 1742, two decades before the next transit would be visible, Johann Doppelmayer's Atlas Coelestis touted the upcoming 1761 transit and illustrated Venus' predicted path across the sun. Point Venus (on right side of panorama) and Matavai Bay, Tahiti, from which Captain James Cook observed the 1769 transit of Venus; image courtesy of Eric Schreur, Kalamazoo Valley Museum. (492 KB).


Politicians, Patriots and Plotters: Unlikely Debates Occasioned by Maximilian Hellâ€™s Venus Transit Expedition of 1769 . LaÅ’szlo Kontler. 21 33 39. Å Second, several Venus transit expeditions in this region were central in the global enterprise of measuring the scale of the solar system in the eighteenth century. The site of the conference was the Nordnorsk Vitensenter (Science Centre of Northern Norway), which is located at the campus of the University of TromsÅ,. After the conference, participants were invited to either stay in TromsÅ, until the midnight of 5â€“6 June, or take part in a Venus transit voyage in Finnmark, during which the historical sites VardÅ,, Hammerfest, and the North Cape were to be visited.