Rector, respected colleagues and participants,

I would like to entertain you for a few minutes on the historical dimension of certain big issues which were generated in the Danube basin and which have profoundly marked its human and cultural background, not to mention its economic structure. My point is that sustainability constraints have substantially moulded these dynamics through the centuries.

Well then, after the arrival of the Magyar tribes in the Pannonian plain at the end of the C9th, the next event – even more laden with long-lasting consequences for the Danube basin – is the Ottoman conquest of Central Hungary by the mid-C16th. Before then the Kingdom of Hungary had been a great European power, wealthy and densely populated, with a Renaissance court, three universities, a royal library in which Greek and Latin manuscripts were gathered, and a printing works opened just a few years after that of Gutenberg. Hungary had been suffering the military pressure of the Ottomans from the south for about 75 years, when in 1526 its king was defeated and killed in battle and the Ottomans established themselves in Hungarian territory to the north of the Sava and the Danube. Some historians attribute the defeat to a structural fact, namely the enfeeblement of the monarchy brought about by
the enserfment of the peasantry and the feudal fragmentation of political power (Szelenyi, 371-2). Nevertheless, what intrigues and puzzles the historians even more is what happened after the Battle of Mohács: that is, the fact that the Ottomans hesitated, and the conquest of Central Hungary was postponed for some fifteen years (Kann, 52). Sultan Süleyman engaged in inconclusive military actions: he captured and plundered Buda, unsuccessfully besieged Vienna, tried to turn Hungary into a buffer vassal state, before deciding to occupy Buda permanently and make it the capital of a province under direct Ottoman rule. Temesvár would follow after a few years.

The so-called “Mohács debate” among the historians, very elegantly summarized by Pál Fodor in 1991, has two salient issues. The first concerns the question: why did Süleyman either want or need to conquer Hungary? The answers (Sugar, 65) cover a vast range of possible reasons: to plunder; to acquire land to distribute as a military fief; to keep the army occupied; to enlarge the dar-ul islam; even to realise a farfetched notion of preemptive defence against a growing Habsburg threat. The other issue of the debate concerns the reasons for the hesitation, which turn out to be all based on preoccupation with sustainability: that is, the military costs of the buffer vassal state, the insufficient demographic resources to replicate the model of the Turkish settlement in the Balkans (Sugar, 16-17, 70), the range of the military action radius in relation to the condition of the communication roads and the problems of provisioning, and finally the admission of Süleyman himself: “Hungary was very far from the Muslim Empire and thus it would have been hard to govern it” (Fodor 1991, 274). In the end Süleyman resolved to conquer and annex the central lands of Hungary. The action radius constraint could in theory be overcome by shifting the gathering point for Ottoman campaigns from Adrianopolis to Belgrade (Fodor 1991, 301-302); but this could not easily be done as long as the Ottomans were in a state of latent or actual war on their eastern frontier with Persia.

Thus about halfway through the C16th Hungary became, and remained for the next century and a half, a permanent battlefield between the Ottomans and the Habsburgs (Ágoston 2010, 118), who in the meantime had acquired the crown of the Kingdom. The frontier between the two empires was not a line but a broad belt of territory, dotted with major fortresses and minor fortifications. The opposing sides maintained garrisons amounting to 20-30,000 soldiers each (David and Fodor, 2000, XVII; Ágoston 2010, 119), and these were engaged in constant skirmishing mainly aimed at carrying out raids, taxing the enemy territory, and wresting scant resources from the enemy (Pálfy 2001, 114; Pálfy 2008, 187). Very soon the two large Ottoman provinces of Buda and Temesvár, as also those smaller ones subsequently formed towards the west, turned out
not to be economically self-sufficient. Far from conveying revenue to Istanbul, they had to be supported by subsidies: up to 70% of their exorbitant military expenditure was covered by remittances from the centre, by the transferring of revenue sources from the Balkans or Wallachia, and by the fiscal aggregation of districts to the south of the Sava to the Ottoman frontier provinces (David 1999, 119; Ágoston 2000, 197, 211, 224; Fodor 2001, 432-3; Hegyi 2008, 77-84; Ágoston 2010, 120-121). In no way better was the situation of Habsburg Hungary. With a truncated territory and a shrunken contributory capacity, Hungary could barely sustain 30% of the anti-Ottoman defence system; the remaining 70% was covered by the Habsburg hereditary lands, by Bohemia, and by the Holy Roman Empire (Ágoston 1998, 135; Pálffy 2000, 43; Pálffy 2001, 116). In a sense, the whole of Central Europe and South-East Europe were confronting each other in the middle Danube basin. And when the friction war exploded into the so-called “long war” at the turn of the C16th into the C17th, the financial stress sustained left the two powers so exhausted that for more than half a century there were no further military campaigns on their common frontier (Hegyi 2000, 170).

### The costs of the Hungarian frontier

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<th>For the Habsburgs</th>
<th>For the Ottomans</th>
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<td>30% from the truncated Kingdom</td>
<td>30% from the Hungarian vilayets</td>
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<td>70% from the Hereditary Lands,</td>
<td>70% from the Treasury, Walachia, the Balkans</td>
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<td>Bohemia, the Holy Roman Empire</td>
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But suffering still more than the two imperial treasuries was the territory of Hungary. An eighth of its population disappeared while the rest of Europe increased by 50% (Haselsteiner, 142). The cities also disappeared, making way for large villages or “prairie towns” (Sugar, 88-91; Szelenyi, 381). Tillable soil deteriorated as a result of floods, in their turn caused by lack of control over the rivers. Entire districts became deserted and unproductive (Macartney, 46). Agriculture reverted to minimum subsistence functions, while animal husbandry became the principal economic activity (Hollander 1960, 82). The soldiers and the civilians were assailed by a variety of diseases connected with stagnant
marshy waters, among which was a typhoid fever which the foreigners called *morbus Hungaricus* (Sugar, 108; Pálffy 2001, 118).

Despite the high costs of the defensive system, the Habsburgs were in a position to adopt certain aspects of the military revolution then underway in Europe: fortification techniques, hand firearms (Kelenik, 156), a more efficient fiscal system; for the Ottomans, on the other hand, there began to arise problems of supply and gunpowder transportation and shortage (Ágoston 1998, 139), and of fiscal erosion by province administrators. For the third time, towards the end of the C17th, the Ottomans targeted Vienna, seeking to resolve in a single blow the confrontation that had lasted for a century and a half. But the military campaign had to be organised from afar, since the theatre of war was barren and provisionless (Murphey, 101). And so the *action-radius* constraints made themselves felt (Perjés, 1-52), transforming the Ottoman advance into a gigantic, ponderous operation of civil engineering in order to cross the rivers and marshes, subject to unforeseen weather changes, and compressed into the 6-month span representing the “dry season” (Murphey, 20-25; Wheatcroft, Chapter 4, “Taking the Road to War”). The conquest of Vienna failed, and the Austrians counter-attacked. In its turn the Habsburg army overstretched its action radius by taking the war deep into the Balkans. In the end the military and political balance was stabilized on the line of the Sava and the Danube, which would remain, with minor adjustments, the border between the two empires for a hundred and fifty years. Having won the war, the Habsburgs also wanted to win the peace and imposed upon the Ottomans a commercial treaty (Passarowitz, 1718) by which they thought to invade the internal Ottoman market; ironically, Austria was invaded by Greek-Ottoman merchants and its commercial balance remained in the red for half a century.

The demographic and economic recovery of Hungary, after it had ceased to be a permanent battlefield, is an interesting chapter of history involving sustainability issues. The colonisation of southern Hungary was above all the work of the Habsburg government, particularly in those lands that were not restored to the Hungarian nobles, descendants of the ancient owners, but were instead included in the property of the *Hofkammer* (Wessely, 70; Bérenger, 44). Recruiting agents were sent to Germany, and westwards as far as French Lorraine (Wessely, 88-89; Bérenger, 134). The aspiring colonists, for the most part German, poured into southern Hungary and there, lacking everything needful, they died like flies during the first winters. The second wave of colonisation involved Wallachians, Serbs, Slovaks and Bulgarians, in addition to Germans, and was successful because state support helped them to settle in. The ethnographic structure of southern Hungary was thereby radically modified (Bérenger, 80; Macartney, 87-88). This can not have constituted a problem at that
time, in an imperial context, but it was destined to become a political prob-
lem in the following century, with the spread of the ideology and practices of
the nation state. In the meantime the new settlers, free and semi-free peas-
ants, reclaimed swamplands and put the land to cultivation with grain, tobac-
co, maize and potatoes (Macartney, 47; Haselsteiner, 152). But this return of
southern Hungary to market-oriented agricultural production was doomed to
turn into a curse for the peasants, who in the course of two generations suf-
f ered the pressure of the landowners and so slid into a condition of serfdom
(Király, 275-6).

The driving force of such a process was the growing demand for grain in
Europe. When the price of grain was sufficiently high in Italy as to offset the
expenses of transport, the Hungarian grain was able to reach the Upper Adri-
atic by going down the Danube, going up the Sava again, and then the Kupa
river as far as Karlovac, there to continue on wagons by land as far as the
port of Fiume/Rijeka. The problem of Hungarian exportation was that the entire
river convoy moved against the current, drawn from tow-paths along the river
banks by horses, and more often by human beings such as wage-earners, cor-
vée-bound peasants, and even by those condemned to hard labour (East, 340;
Bérenger, 164). Of these last, about 1,200 hauled barges in the time of Joseph
II, and only one third of them came out alive (Dogo, 302-304).

Speaking more generally, the trouble with the Danube was that it flowed in
the wrong direction, at least for trade with Central Europe. During the century
and a half in which the Ottomans were masters of the river from Komárom to
the Black Sea, the Danube’s use was almost exclusively military. The river was
crowded with oared barges for the transport upstream of small contingents
of troops, victuals and ammunition. Besides the rowing boats, the riverside
districts had to provide oarsmen and haulers: so the navigation of the Danube
brought more servitude than benefit to the peoples along its course (Gradeva,
163-8). After the Habsburg conquest of the middle Danube, there was not much
that could be transported downstream, apart from those European diplomats
that might prefer the river to the land route in order to reach Istanbul (East, 339;
Gradeva, 168).

In the C19th the Austro-Turkish rivalry was a faded memory of the past, but
the possible integrated commercial use of the middle and lower course of the
Danube was obstructed: 1. by the gorges at the Iron Gates, which demanded
the transhipment of travellers and goods; and 2. by the problem of transport
upstream. The first problem began to be tackled in the early Thirties with the
regulation of the gorges and later with the digging of by-passing canals (East,
341); the second problem was overcome, at the same time, by steam naviga-
tion (East, 340; Hollander 1961, 160). But the big development was that the grain
of Wallachia was no longer under the Ottoman monopoly, and at least in theory could reach the European markets via the Black Sea and the Mediterranean (Ardeleanu, 44-45).

The new obstacle was the Danube delta, with its channels subject to silting up, which again called for the transhipment of cargo. It was precisely in order to bypass the delta, with the aim of making huge profits, that certain British speculators and engineers constructed two railway lines, the very first in the Ottoman Empire, between the Danube and the ports of the Black Sea. Both undertakings turned out to be unprofitable (Jensen and Rosegger, 111-124), but their inadvertent effect was to spur on the work of their rival, the European Danube Commission in charge of the upkeep of the delta channels. Open sea ships entered the Danube, and this marked the beginning of globalization for its basin.

We can measure the distance that separates us from these different moments in the historical development in the Danube basin if we consider that the Bibliotheca Corvina, sacked by Süleyman five centuries ago, is today being restored in digital form; that the remains of the Turkish and Islamic cultural heritage in Hungary today are the object of preservation and study, and are included in tourist tours; that the multinational society of southern Hungary could have been a liability a century ago, but is certainly an asset for a dynamic university like that of Novi Sad today; and finally, that a great part of the Danube Delta is a World Heritage Site and a biosphere reserve under UNESCO protection.


