"Provincial" Universities and Scientific Networks in the Habsburg Monarchy
Introductory Remarks

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The papers in this issue were originally presented at a symposium held as part of the sixth International Conference of the European Society for the History of Science in Lisbon in September 2014. The conference location was, in a way, quite appropriate; for in Portugal, too, and not only in East Central Europe, issues of "center" and "periphery" have long been topics of discussion and debate, both in the political and the cultural spheres. For many years, scholarship on scientific and scholarly networks tended simply to accept attributions of "central" or "peripheral" status from the political sphere, that is, simply to follow political and economic power relations more or less uncritically.

More recently, awareness has grown that both terms in this duality require justification, differentiation and perhaps even modification. To cite a well known example: as the case of seventeenth-century London shows, political and economic centers could become centers of science and scholarship, inter alia through the work of the Royal Society, long before any universities were located there. To reverse the perspective: certain universities with high reputations, such as Oxford, Cambridge, the Sorbonne or later the University of Berlin, have consistently been regarded as academic "centers", whether or not they were located in the capital cities of their respective states. However, certain apparently "provincial" locations could suddenly became "centers" when a charismatic teacher or researcher moved there; the case of physician Hermann Booerhave in Leiden is one of many such examples. Perhaps more important for the present discussion is that places regarded as "provincial" when seen from imperial "centers" such as Paris or Vienna can and have become themselves "centers" when viewed from a more localized perspective.

The papers in this issue addresss multiple aspects of this complex topic, focusing specifically on academic and scientific activities outside Vienna within the education and science systems of the Habsburg Monarchy from 1800 to 1918. In the following remarks I discuss each contribution briefly in more or less chronological order.

Milada Sekyrková modestly subtitles her contribution "Some events at the Prague University in the first half of the 19th century". In her paper she addresses the long held claim that at the university in Prague, as elsewhere in the Habsburg monarchy, the first half of the nineteenth century was a period of absolute state control, in which universities lacked freedom of scientific investigation or any free expression of opinion in teaching. As she shows, theology was the academically weakest faculty in this period, though professors there and in the Faculty of Law did produce contributions to Czech history. The Faculty of Medicine was the only one engaged in scientific research in the modern sense. The Faculty of Arts (Philosophical Faculty) appears at first to have changed the least during this period, remaining merely a preparatory for studies at the other three faculties. The well-studied affair around philosopher Bernhard Bolzano's dismissal in 1819 for advocating liberal views in his sermons and writings, and the vehement protest of the faculty senate against this act indicated the potential for disturbing new ideas. After this event and the rigorous suppression of student protests following the Paris revolution of 1830, the situation appears on the surface to have become as quiet and unoriginal as traditional historiography has suggested. The fact that lectures had to be submitted in advance to authorities in Vienna for approval indicates nearly complete dependence on the political "center"; surviving records of academic staff meetings indicate that teaching appointments remained highly politicized. First indications of change to come included the establishment of the habilitation as a teaching qualification, first in medicine (1842) and later in law (1847). That discontent had been building below the surface became abundantly clear when students and faculty demanded academic as well as political freedoms in March 1848.

In her paper, **Felicitas Seebacher** moves, so to speak, from the "periphery" to the "center," focusing on the role of Bohemian medical students and physicians in advocating and spreading liberal ideals in science and politics at the University of Vienna even before the Revolution of 1848. As she argues, medical students of liberal background, such as Karl Rokitansky and Josef Škoda, who first had to complete a philosophical preparatory course before beginning medical studies, were impressed by Bolzano's lectures and tried to carry on his ideas. Disappointed with the low level of most of the lectures at the Medical Faculty, many of them left Prague for Vienna in search of greater academic freedom. For those who sought social mobility, study and an academic career at the Medical Faculty of the University of Vienna was a desirable goal in any case. Due to poor prospects in Bohemia or Moravia, these students and young physicians developed an increasingly strong oppositional attitude against the authoritarian government headed by Prince Metternich. The more political engagement was banned in

the "pre-March" period, the more fiercely physicians engaged in campaigns for reforms in medicine. Seebacher claims that the Revolution of 1848 in Vienna was prepared in the dissecting rooms of the Medical Faculty, where political discussions could take place without state control. Rokitansky and Skoda, who in the meantime had become professors in Vienna, showed their support for the Revolution and their own egalitarian politics by enlisting in the "Academic Legion" as common soldiers, rather than accepting officers' commissions.

As Seebacher also writes, after the Revolution's defeat Škoda, Rokitansky and others continued their efforts to establish science-based medical curricula within the context of reformed university structures. Vienna thus took full advantage of the intellectual capital from Prague. However, the durability of this Prague-Vienna linkage came into question in the 1870s, as newly appointed German professors introduced "German" models of research and training.

In his paper, **Attila Szilárd Tar** presents a brief overview of study-tours by students and teachers from the Technical University of Budapest in Europe from 1899 to 1914. The Technical University of Budapest was a young institution at the end of the 19th century, having been founded in 1871, though it had some forerunners from the 1840s. As Tar suggests, Hungarian technical schools tried to copy the German model, but to do this they needed information about this type of higher education. He outlines several modes of information-collection and academic exchange: inquiries to German technical colleges and universities in letters; arranging excursions to partner institutions; and honorary doctoral degree awards, as well as memberships granted to Hungarian professors in German scientific academies or societies.

Focusing mainly on study tours of students and teachers to German institutions in order to gain knowledge and practical experience, Tar shows that the Hungarian Ministry for Education and Religion granted stipends to support these tours, but insisted on a detailed, formalized procedure for applying for these stipends, required interim and final reports of the results, and also expected that participants would return and put their new knowledge to use in Hungary. In addition to education institutions, students and younger faculty members also visited factories, public institutions and non-university research institutes. The documents in the archives list 17 people who were sent abroad from the Technical University of Budapest during this period; in addition one teacher was sent three times within 15 years. The main destination of these tours was Germany, but sometimes German locations were included as part of a wider Central-European journey. Further research is needed to determine exactly what technical or scientific knowledge these Hungarians brought back with them, and how this knowledge may have been transformed in new contexts.

Ana Cergol Paradiž and **Željko Oset** address the ambivalent situation of students and university teachers of Slovenian descent, caught as they were between the demands of academic careers and the expectations of the Slovenian national camp in the period from the March Revolution to the collapse of the Habsburg monarchy. This case is similar in some respects to that of other East-Central European lands; for Slovenian scholars and scientists, too, had to decide or compromise among the claims of emerging national identity and those of academic research careers.[1] However, in other respects the situation of Slovenians was quite different, because their home territory lacked institutional infrastructure for science and scholarship. Though a Slovenian Literary Society was founded as early as 1864, a Slovenian university was not realized until 1919. Slovene-speaking students in this period therefore studied mostly at Austrian universities; by far the most studied in Vienna and Graz, some also in Prague and at other universities.

The authors offer an overview of the number of Slovenian students at individual Austrian universities from the second half of the 19th century until the First World War, and follow this with illuminating biographical examples of the situations of students and scientists of Slovenian descent in this period. As they show, Slovene-speaking students and scholars often functioned as important carriers of cultural transfer from more developed urban centres, in particular Vienna, to an under-developed homeland that was not completely ethnically homogeneous. But their role was not always supported or understood, because nationally oriented opinion-makers saw in them possible propagandists for opposing ideological ideas, and occasionally criticized them for their lukewarm attitude towards the national question. In the case of Vienna physicist Jožef Stefan, criticism of his popular scientific writings led him to cease writing in Slovenian, and later to his disappearance from Slovenian historical memory. After 1919, Slovenian scientists and scholars, such as chemist Maks Samec, established themselves successfully at the University of Ljubljana and maintained international reputations; but others, such as mathematician Josip Plemelj and zoologist Boris Zarnik, achieved this at the cost of leaving science behind and emphasizing teaching and organizational work.

[1] For an examination of such ambivalences in the Czech case, see Soňa ŠTRBÁŇOVÁ. Patriotism, Nationalism and Internationalism in Czech science. Chemists in the Czech revivial. In Mitchel G. ASH – Jan SURMAN (eds.). *The Nationalization of Scientific Knowledge in the Habsburg Empire (1848–1918)*. Basingstoke, Palgrave Macmillan, 2012, pp. 138–156.

Marek Ďurčanský discusses relations between the universities of Prague and Cracow from 1882 to 1918, considering both formal and informal contacts. This is a case not of center-periphery relations, but rather of relations among two regional "centers". When the Prague University was divided into German and Czech institutions in 1882, the Jagiellonian University in Cracow (together with the other Galician university in Lwow) became a potential ally of and inspiration for professors at the newly created Czech Charles-Ferdinand University. The organizers of the only Czech national university sought quickly to establish the institution, ensure its material background and re-create its identity. Both Galician universities, where the teaching language was Polish since the 1860's, had already faced similar tasks and problems. Moreover, the Jagiellonian University had the tradition of being the oldest Polish university, and there was a long history of contacts between Prague and Cracow since the mediaeval beginnings.

These aspects were emphasized in formal contacts between both universities. The most significant example was the visible Czech participation in the celebrations of the 500th anniversary of the second foundation of the Jagiellonian University in 1900. Czech professors who took part in the celebrations, such as slavicist Jan Gebauer and historian Jaroslav Goll, had real scientific and social contacts with their colleagues in Cracow, which influenced the makeup of the relevant university departments. The paper documents such working, partly non-official contacts among historians, philologists, and also anthropologists. As they show, some of these contacts began as scientific and ended as political ones.

Finally, **Soňa Štrbáňová** presents yet another, original perspective on the "center--periphery" issue by addressing ambitions to establish an institutionalized network of Slavic scientists at the turn of the 20th century. As she shows, the Czech scientific community had gradually established a linguistically Czech institutional and communication base, including Czech-speaking universities, scientific and learned societies and journals, and had in the process become a self-assured minority within the Habsburg Monarchy during the last two decades of the 19th century. Building on this foundation, and supported by economically and politically strong strata of the Czech population, Czech academics, especially chemists and physicians, then attempted to establish their own autonomous representation on the international scene, making serious efforts to strengthen the position of Czech science and medicine not only within the Austro-Hungarian Monarchy, but also outside its territory. One instrument of this effort consisted in bringing together Slavic scientists with a vision of establishing a Slavic scientific community around a new centre, Prague.

The programme of Slavic scientific cooperation, which took shape especially during the Prague congresses of Czech naturalists and physicians from 1880 to1914,

included establishing Slavic scientific journals, creating common Slavic scientific nomenclature, publishing terminological dictionaries and Slavic bibliographies, organizing regular Slavic congresses, founding Slavic scientific societies, and exchanging Slavic students. However, this extensive programme of Slavic scientific integration never materialized, in part because of persistent language problems and the absence of a Slavic lingua franca, and also in part due to the indifference or active opposition of Russian (and in one case, also German) scientists and officials. Nonetheless, Štrbáňová establishes that these efforts can be understood as a historical attempt to integrate the supposed "periphery" and to create a new centre, in this case of "Slavic science". She also suggests that this effort can also be considered a special, albeit unsuccessful example of the nationalization of scientific knowledge.[2]

Taken together, these papers suggest among other things, (1) that Vienna, though clearly important, was not the only "center" of orientation for scientists, scholars and technical academics in East Central Europe in the last years of the Habsburg monarchy; in Hungary and elsewhere, links to colleagues and institutions in other nations were utilized as counterweights to dependency on Vienna. In addition, the papers show (2) that scientific and cultural interactions among "centers" in the Slavic provinces took on increasing significance over time; and (3) that while efforts existed to utilize such interactions in order to create a pan-slavic (cultural) "nation," Russian opposition to such efforts and the forces of monolinguistic nationalism in the provinces themselves proved stronger.

In the case of Slovenia after 1919, successful engagement of scientists and scholars trained in Vienna, Germany and elsewhere in the development of new local institutional and cultural-linguistic infrastructures for science and scholarship appears to have come at times, though not always, at a high cost in scientific productivity and quality. Whether such trade-offs took place elsewhere as well – that is, whether the successful efforts of formerly "peripheral" regions to become nation states and thus "centers" in their own right in the other successor states and provinces of the Habsburg Empire after World War I came at a similar cost – is still an open, and potentially controversial question.

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[2] Mitchel G. ASH – Jan SURMAN (eds.). *The Nationalization of Scientific Knowledge in the Habsburg Empire (1848–1918)*. Basingstoke, Palgrave Macmillan, 2012.