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HISTORICAL APPROACHES TO TECHNICAL CREATIVITY AND INNOVATION

THE HISTORY OF INNOVATION AND TECHNICAL CREATIVITY AS A SOCIAL PROCESS

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One of the central ideas that stimulated the development of historical science and its philosophy in the 19th century was the concept of the continuous progress of humankind. Progress was assessed not only in terms of improving material conditions of life, but also as an increasing ability of human beings to perceive and understand the world through reason across all areas of society.

If we consider the views of major thinkers from the formative period of innovation and rationality, we find strikingly convergent ideas. For instance, Nicolas de Condorcet (1743–1794) regarded rationality as the foundation of modern civilization and a key to overcoming prejudice, inequality, and oppression. The liberal historian James Mill (1773–1836) linked the level of advancement of civilizations to their degree of rationality. Similarly, Auguste Comte (1798–1857) asserted that rationality represented the maturity of civilization – the ability to control one's environment through reason, as well as through science and technology. Scientific thinking based on observation, technical skill, and empirical methods was seen as a positive driver of development. Charles-Louis Montesquieu (1689–1755) argued that civilizations become more advanced as their legal systems and institutions align with rational principles, such as the separation of powers, equality, and liberty. In doing so, he was among the first to link rationality to effective governance. For the philosopher Georg Wilhelm Friedrich Hegel (1770–1831), progress resided in the evolution of the human spirit, which moves toward increasingly rational forms of social and political organization.

These prominent thinkers were key representatives of the European intellectual tradition that paved the way for placing innovation, scientific and

technical knowledge, and rationality at the center of inquiries into social progress and development. However, their ideas were not entirely new. The emphasis on rational thought as a specifically human faculty had already been acknowledged by Aristotle, further developed by Renaissance scholars and artists, and fully embraced by Enlightenment thinkers of the 18th century, who laid the foundations for new scientific and technical disciplines and contributed significantly to the rise of industrialization.

In recent decades, these concepts have increasingly become the focus of historical research. Economic history builds upon *business history* in the broadest sense, while historians of science and technology concentrate on the evolution of specific disciplines and scientific institutions within their historical context. At the same time, social historians investigate the societal impacts of these developments, examining how innovation and rationality have shaped and been shaped by the social fabric of different eras.

For this reason, technical creativity and innovation have become frequent topics of historical inquiry. Today, they are commonly associated with the development of new technologies, digital tools, and start-up environments. In contemporary discourse, innovation is often portrayed as a spontaneous, purely expert-driven, and technologically determined process. However, a historical perspective reveals that genuine innovation unfolds within a specific temporal, geopolitical, economic, and cultural context, embedded in a particular social order. This more nuanced understanding of innovation is precisely what is illuminated by the two contributions published in this thematic issue of *Historický časopis*.

Each of the articles captures a distinct dimension of innovation as it occurred in Central Europe during the 19th and especially the 20th century. Despite their thematic diversity, two studies share a common ambition: to embed technical and organizational transformations within the broader context of evolving societies. Whether examining innovations in the rationalization efforts of interwar technical elites in the field of scientific management, or the adaptation of everyday public services to technological progress, these contributions make clear that innovation is not an isolated or apolitical phenomenon. Rather, it reflects broader historical dynamics – including the structure of power, institutional capacities, value systems, and cultural perceptions of science and progress.

By integrating institutional history, social history, and the history of science and technology, the articles demonstrate how deeply embedded innovation processes are in the lived realities of their time. They challenge the simplified narrative of technological determinism and instead propose a historically grounded view, in which innovation emerges from the interplay of expertise, state policy, international relations, and societal needs.

The first article, by Jiří Sedláček and Marcela Efmertová, offers a remarkable analysis of the relationship between technocratic thinking and the transformations of political power in Czechoslovakia from the 1920s to the period of the Communist dictatorship. The life and work of Professor Emanuel Šlechta serve here as a paradigmatic example of the complex interplay between technological innovation, scientific management, and political authority.

Šlechta's influence was not limited to the academic or governmental spheres; it also had a crucial impact on the practice of industrial enterprise. As an adviser to major Czechoslovak companies, he focused on reorganizing production, introducing standardized work procedures, and optimizing logistics. His ability to transfer abstract principles of scientific management into concrete corporate processes was exceptional and contributed to highly efficient organizational operations within manufacturing enterprises. In this way, Šlechta significantly shaped a modern work culture grounded in performance measurability, systemic thinking, and responsible leadership.

An equally important aspect of his work was his engagement in the international networks of the rationalization movement. His active participation in the International Committee for Scientific Management and his presentations at congresses in Paris, London, and Geneva demonstrate that Šlechta successfully integrated Czechoslovak experience into a global context. His conviction that modernization and technological progress were inseparable from international cooperation became one of the key features of his professional identity. At a time of rising nationalist tendencies, he represented a voice advocating openness, mutual learning, and the sharing of best practices.

After 1948, however, Šlechta's professional orientation came into increasing tension with the demands of the communist regime. His emphasis on empiricism, economic rationality, and efficiency clashed with ideologically driven planning that suppressed expert arguments in favor of political directives. Despite the difficulties, Šlechta tried to promote modern forms of management in the new environment, but he soon recognized the limits of technocratic thinking in a system that absolutized political control. The pressure he faced – from the marginalization of his expertise to the loss of public influence – ultimately contributed to his tragic decision. His final years thus reflect a critical turning point at which an expert finds himself in an environment that systematically suppresses autonomy and innovation.

Šlechta's career was both remarkable and emblematic. As a promoter of Taylorism, Fordism, and Fayolism, and as an expert in the organization and management of labor, he drew on firsthand experience gained in the United States, which he later applied in various industrial contexts in Czechoslovakia. A teacher, entrepreneur, rationalization expert, and politician, Šlechta embodied

the ideals of interwar Czechoslovak modernization – prioritizing functionality, efficiency, and rationality. His story, however, also powerfully demonstrates how innovation and technical thinking can be distorted or even suppressed under totalitarian regimes.

The authors emphasize the tension between expertise and power: Šlechta's technical competence was perceived as a threat by an increasingly authoritarian state. Yet his legacy also highlights the crucial role of technical intelligentsia and scientific communication in advancing democratic modernization. Šlechta's journey – from modest beginnings as a student, to a liberal-minded university professor committed to rationalizing labor and administration, to a key figure at international rationalization congresses (1924–1939), and finally to a minister in several postwar governments – culminated in a tragic downfall. Unable to reconcile himself with the ideological rigidity of the Communist regime he had once helped to establish, he took his own life in March 1960.

This narrative serves as a powerful example of how technical creativity struggles to thrive in societies that suppress professional autonomy and inhibit open dialogue between science, technology, and political power. Šlechta is portrayed as a symbol of the conflict between expert knowledge and ideological control – a conflict that remains relevant today, as modern societies seek a balance between efficiency, authority, and intellectual freedom.

Šlechta represents the transition from the optimistic technical visions of interwar modernization to their eventual collapse in a society that had lost trust in professional competence. The article underscores that innovation cannot flourish without an appropriate institutional framework and respect for expertise. In this case, innovation failed not for technical reasons, but due to political and ideological repression. The study thus serves as a warning for the present: when technical voices are marginalized by populism or authoritarianism, the prospects for meaningful innovation are significantly endangered.

The second study, by Ivan Jakubec and Jan Štemberk, offers a seemingly unexpected yet compelling contribution to the theme of innovation: the historical development of gastronomy – specifically, railway station restaurants – as an integral part of transport infrastructure services. The study examines how these establishments were historically linked to the evolution of mobility, public space, and consumer experience in modern society.

Through a detailed analysis of operational models, institutional management, and cultural patterns, the authors demonstrate the essential role that station restaurants played in shaping the modern travel experience. In this case, technical innovation is not represented by the invention of a new machine but by changes in logistics, customer service, the standardization of offerings, and the broader operational culture. These transformations illuminate the ways in

which even service infrastructures respond to technological progress and shifting organizational strategies.

A particularly important insight emerges from the contrast between the entrepreneurial model of station catering in the 19th century and the rigidly centralized gastronomic system of the 1970s and 1980s. In the former, private initiative fostered service quality, competition, and innovation, whereas in the latter, excessive state control and the absence of managerial flexibility led to stagnation and decline. The study thus highlights a key historical lesson: innovation depends not only on technological tools, but also on institutional and organizational contexts that either enable or restrict creativity and responsiveness.

By following the long-term evolution of station-based gastronomy, autors contribute to a broader understanding of how infrastructure services – often perceived as mundane or secondary – can serve as crucial arenas for social innovation, modernization, and public interaction. In doing so, they bridge the gap between economic history, the history of everyday life, and the material culture of mobility. The station restaurant becomes a lens through which to observe how societies manage the interplay of efficiency, service, and modernization in the public realm.

Ultimately, the study argues that innovation in public services is deeply contingent upon how institutions organize labor, define quality standards, and interact with both political authority and consumer expectations. The decline of service quality under late socialism is thus not simply a matter of economic inefficiency, but the outcome of institutional rigidity that stifled initiative and responsiveness.

A unifying theme across two contributions is the conviction that innovation cannot be reduced to mere technological advancement. Rather, it emerges from long-term interactions between individuals and institutions, situated within specific geopolitical, economic, and cultural contexts, and closely tied to professional specialization and everyday life. Innovation is a cultural and social construct – and as such, it requires historical investigation. The ambition of these studies is to demonstrate that linking the history of science and technology with the social sciences is not an academic curiosity, but a necessary foundation for critically reflecting on the processes that shape contemporary society. We cannot meaningfully speak of sustainability, efficiency, or social justice without understanding where these concepts originated and how they have evolved over time. This is arguably the greatest contribution of the thematic issue as a whole. Each article offers valuable insights into the fact that creativity and innovation are not solely the domain of exceptional individuals, but rather emerge from deep institutional and socio-political linkages. This thematic block provides

a rich mapping of the transitions between democratic, authoritarian, and socialist models of society – and the respective impacts of these systems on innovation. Interwar Czechoslovakia is portrayed as a space of technocratic enthusiasm and modernization (as illustrated by the case of Emanuel Šlechta), while the post-1948 period reflects the distortion of these visions under the pressures of centralization (seen in the railway catering system), ideological enforcement, and bureaucratic rigidity (two studies attest to the loss of flexibility and autonomy).

Innovation was under bipolar world conditions. While the first article primarily focus on elite actor and a high-ranking technocrat, the second article convincingly demonstrates that creativity and innovation also manifest in everyday life. Collectively, the studies challenge the notion of innovation as a form of "technological automatism." Instead, they demonstrate that the emergence, diffusion, and acceptance of innovation are shaped by historical and cultural circumstances.

Innovation, as portrayed here, is not solely driven by "great scientists" or "large corporations." It is enacted by a diverse array of actors: professors, administrators, entrepreneurs, and even railway restaurateurs. In the historical context, creativity arises from social interaction and the dynamic between individuals and institutions. These articles dispel the myth that innovation simply occurs "naturally" when there are no obstacles. On the contrary, they show that innovation often emerged in spite of institutional barriers – or flourished only when actively supported by the state, universities, or business communities. Understanding these historical processes is just as crucial today, at a time when public discourse often calls for an "innovation society," yet lacks a grounded understanding of how innovation has historically functioned – and under what conditions it can thrive.

The significance of this thematic block for *Historický časopis* lies not only in expanding its already wide scope to include the history of science, technology, economy, education, and infrastructure, but also in its ability to present history as a tool for reflecting on the present. Whether we are addressing today's challenges – digital transformation, AI, the globalization of education, or the crisis of public services – it is impossible to fully understand these phenomena without recognizing their historical roots.

The two studies published in this issue remind us that even technical solutions have their own evolution, their own histories – and that understanding these histories is essential for fostering conscious, socially embedded forms of innovation. We believe that this thematic block will serve as an inspiration not only for historians of science, technology, and economics, but also for social historians, political scientists, educators, and experts in public administration. Connecting historical narratives with present-day questions of innovation may

serve as a powerful impetus for transforming the nature of scholarly inquiry itself – and enhancing its societal relevance.

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