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TECHNOLOGICAL INNOVATIONS UNDER REAL SOCIALISM:  
FROM SOCIOTECHNICAL NETWORKS TO "SECOND NETWORKS"

The paper looks at the economic development of classical socialism and its potential for innovation by juxtaposing three different theoretical frameworks:

- 1) Classical Joseph Schumeter's ideas about economic development in non-market economies;
- 2) The resent understanding of functioning socialist economy as performing pendulum-like movement from total dominance of administrative (hierarchical) coordination (i.e. taking of the power from money and goods as autonomous mediators of economic life) to the rise of 'second networks' (weakening the power of hierarchies and restoring the power of goods and money);
- 3) The STS understanding of innovations as "science and technology based" and considered as specific socio-technical (or techno-economic) networks;

The paper outline the classical J.Schumpeter's model of economic development in non-market economy, pointing out two of main faults in it: *1) that it takes for granted the sources of innovation (invention, discovery), which ignore major aspects of the relation between the process of discovery and invention - the problem that has become especially acute since the early 20<sup>th</sup> century with the rise of first "science-based" industries; 2) that it considers "communist leaders"(nomenclature) as homogeneous group, while in fact they are split into different camps not only vertically, but also horizontally. Since the division lines and functions of the different groups vary during the different stages of evolution of socialism, so did the leaders' entrepreneurial behavior - the speed and direction of economic development depends in a crucial manner from the internal straggle and constellation of forces between different camps of the nomenclature.*

The critical analysis of the three theoretical frameworks make possible the outline of the specific innovation regime in socialist economies as an dynamic interplay between a) process of expansion of universal/world-wide socio-technical networks of industrial production (and which makes former socialist economies compatible in principle with capitalist ones) and b) indigenous mechanism of straggles and negotiations between different "second networks" hidden behind the all-encompassing administrative coordination (hierarchies). This interplay possess its internal dynamics, which at the 'surface' of socialist economic development appears as changes in the capacity of socialist economy to introduce indigenous technological innovations and to absorb those made elsewhere (marked by Kornai as "two phase" in socialist technological development).