PÁL GERMUSKA

IN A STATE OF TECHNOLOGICAL SUBJECTION

SOVIET ADVISERS IN THE HUNGARIAN MILITARY INDUSTRY IN THE 1950S

In March 1953, the Secretariat of the Central Committee of the Hungarian Workers' Party (*Magyar Dolgozók Pártja Központi Vezetőség* – MDP KV) assessed the work of Soviet advisers in Hungary as follows:

> 'The Soviet advisers working in the economic ministries field provided significant help in the utilization of the Soviet Union's abundant experience and in the implementation of modern technology. Soviet advisers are by now working in almost all areas of the people's economy, providing great support with their recommendations for the fulfilment of our plans and the building of socialism. The help of the Soviet advisers contributed in great measure to a deepening love for the Soviet Union, and an appreciation and application of Soviet technology and science by our economic leaders and technological intellectuals. The recommendations of the Soviet advisers extended to the solution of the most important problems facing the people's economy.'[1]

Following World War II, Soviet military, political and economic advisers played a particularly significant role in Central Eastern Europe in the communist takeover of power and the consolidation of the socialist system.[2] One aspect of Sovietization occurring in the late 1940s and the first half of the 50s, which has as yet been awarded little attention, is the forced trans-

[1] Az MDP KV Titkárságának határozata a gazdasági minisztériumok területén dolgozó szovjet tanácsadók munkájának hasznosításáról. 1953. március 18 [MDP KV Secretariat: Resolution on the Utilization of the Work of Soviet Advisers Working in the Economic Ministries Field, 18 March 1953], Magyar Országos Levéltár (Hungarian National Archive, MOL) M-KS 276. f. 54. cs. 235. ő. e., p. 126. Here and henceforth all quoted archival sources have been translated by the author.

[2] Zoltan Barany has compared the roles Soviet advisers played in 1920s Mongolia and in Central Eastern Europe after 1945: ZOLTAN BARANY, Soviet Takeovers. The Role of Advisers in Mongolia in the 1920s and in Poland and Hungary after World War II, in: East European Quarterly 28/4 (1994), p. 409-433.

fer of Soviet technology.[3] The institutionalization of the socialist system and the planned economy was accompanied by the compulsory acceptance of the Soviet technology and production model, which in the countries of the region clearly signified a step back for several branches of industry. On the one hand, this was due to the fact that the Soviet Union in numerous cases (re)exported American and western technology, imported in the early 1930s, to the new socialist countries – albeit incorporating further developments to some extent. On the other hand, from the outset they had no intention of passing on the latest developments and most modern technology to the satellite countries, particularly in the military industry.[4]

Perhaps the most thorough analysis of Soviet technology export/technology transfer has been carried out by Baichung Zhang, Jiuchun Zhang and Fang Yao – with regard to China, which received aid to the value of several billion rubles from the Soviet Union for the building of socialism.[5] The following three areas were examined in their study with respect to Soviet-Chinese cooperation and technology transfer:

- The transfer of industrial technology, including aiding the construction of large industrial projects, technical assistance, complete equipment transfer, transfer of designs and technical data, and developing plant and product design capacities.
- The development of Chinese capacity in science and technology through various forms of cooperation (the establishment of a science and technology cooperation commission etc.).
- A huge educational and training project: reform in technical education, helping China construct technical colleges, recruiting a large number of Chinese students to study in the U.S.S.R. and sending Soviet technical experts to China.

[3] Mention must be made of the Soviet 'technology transfer' in the opposite direction: After World War II, hundreds of scholars, engineers and technicians were forced to work for the Soviet industry, and many of them were deported to the Soviet Union as well. JOHANNES BÄHR, Oberspreewerk 1945–52, in: Zeitschrift für Unternehmensgeschichte 39/3 (1994), p. 145-164; CHRISTOPH MICK, Forschen für Stalin. Deutsche Fachleute in der sowjetischen Rüstungsindustrie 1945–1958, München 2000.

[4] For example, the gunpowder and explosives manufacturing documentation passed on to Czechoslovakia, Poland and Hungary in 1951–53 was based on procedures used in the Soviet Union between 1941 and 45. IRINA V. BYSTROVA, Sovetskii voenno-promyshlennyi kompleks. Problemy stanovleniia i razvitiia, 1930–1980–e gody, Moskva 2006, p. 329.

[5] BAICHUNG ZHANG/ JIUCHUN ZHANG/ FANG YAO, Technology Transfer from the Soviet Union to the People's Republic of China 1949–1966, in: Comparative Technology Transfer and Society 4/2 (2006), p. 105-171.

According to the data of Zhang et al., more than ten thousand Soviet economic, cultural and educational experts spent time in China between 1949 and 1966. Their activities were certainly far reaching:

> 'Soviet visitors ranged from technical consultants and engineers to technical workers. They came from all types of Soviet enterprises, including design and research institutions. After 1953 […] various experts worked on every site targeted for Soviet assistance, installing equipment, conducting workshops and training classes, as well as supporting related technical, design, and scientific research institutions. These people were the manpower that enabled Soviet technology to take root, grow, and bear fruit in China. Many Soviet experts also worked with the Chinese Academy of Sciences, the scientific research institutes of industrial ministries and commissions, and institutes of national defense.'[6]

In her monograph on the Soviet military industry, Irina V. Bystrova has also stressed the importance of the advisers in the consolidation of weapons manufacture in the people's democracies. In the satellite countries, Soviet officers, engineers and technicians directed and aided the reconstruction of old factories, the selection of sites, and the design and construction of new military industry plants. The Soviet experts provided practical help in the launching of weapons manufacture, trained the officers carrying out the military takeover and quality control, and took part in the testing of specimen weapons.[7]

The following study attempts to present the process of Sovietization and the means of technology transfer by examining the activities of Soviet advisers and experts in Hungary in the 1950s. Although the adoption of Soviet technology was extensive in all sectors of heavy industry, my choice has fallen on the military industry, as Sovietization was the most radical and far-reaching in this sector. All of the satellite countries had, after all, discontinued their earlier manufacture of weapons, military vehicles and equipment, with the exception of a few products, and completely switched over to production based on Soviet licences. This study begins with a brief panorama of Central Eastern Europe in order to introduce the general features of the advisory system. It then presents the main stages of the arrival of military and civilian advisers and experts in Hungary, as well as the primary conditions of their operation. The following section goes into details and analyses the activities of the advisers using the examples of specific military industry companies. Finally, the experience of the presence and activities of the advisers in Hungary is summarized.

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[6] Ibid., p. 142.

[7] BYSTROVA, Sovetskii voenno-promyshlennyi kompleks, p. 320-321.

1. The Soviet Advisory System in Central Eastern Europe and Hungary

A precise picture of the consolidation of the Soviet advisory system in Central Eastern Europe can be obtained from a study by Albina F. Noskova, in which the process is divided into three stages based on Russian archival sources. The first advisers appeared together with the advancing Red Army, or following the conclusion of armed conflict at the turn of 1944–45. In the initial period, the advisers stayed for a relatively short period of time in the host countries, their duties comprising consultation in connection with problems in individual areas (border guard, police, interior special forces, economic issues). In Bulgaria, Romania and Hungary, they carried out their duties within the sphere of the Soviet division of the Allied Control Commission.[8]

The second period began in 1949: From the summer of this year onward, consolidation of the *permanent* advisory system accelerated, and the leadership of the army and security forces was 'reinforced' with an increasing number of Soviet officers and generals in the countries of the region. In autumn 1949, a special department was set up in the Soviet Ministry of State Security (MGB) for the purpose of 'offering help to the state security organs of the people's democracies', which coordinated the work of the advisers and systematized the information they provided. Then in 1950–51, advisers appeared in droves in the armies of the satellite nations. 'Their duties not only involved purely professional matters such as building up and administering the army, armaments and military training, but also included controlling the political mood, particularly among the ranks of higher command,' Noskova emphasizes.[9]

In the third period (1951–52), a multilevel advisory structure was established in the economic field. Chief advisers were assigned to work alongside important ministries in the governments of the countries in question. Leading and simple advisers worked in various departments (sections) of the ministries, on major construction projects and in significant factories. They also directed the work of further Soviet experts arriving in connection with scientific-technical aid agreements. The mechanism for sending civilian advisers had not changed since the second half of the 1940s: A country would officially approach Stalin or the Soviet government with a request, and a decision to dispatch a delegation would be made at the highest level.

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[8] Albina F. Noskova, Szovjet tanácsadók a kelet-európai országokban. A rendszer megalapozása 1945-1953 [Soviet Advisers in the Countries of Eastern Europe. The Establishment of the System 1945-1953], in: Múltunk 44/3 (1999), p. 203-219, p. 204-208.

[9] Ibid., p. 213-214, quote on p. 214 (author's translation).

Beginning in May 1952, the sphere of duties of the advisers was regulated by a special governmental resolution – the resolution by the Executive Council of the Soviet Union 'on the betterment of the management of Soviet advisers and experts delegated to offices and factories in the people's democracies', as well as associated detailed directives. On the basis of the resolution, the office of economic counsellor was created in the Soviet embassies. This counsellor exercised political supervision over the civilian advisers' duties, although in professional matters they were under the authority of the Soviet institution which sent them.[10]

The resolution referred to above and other directives *in theory* only provided the advisers with a consultative role: They could not make decisions in the place of local leaders, they could not force their opinions on the other party, they could not give unrequested advice, they could not take part in the implementation of specific tasks etc. In reality, the advisers naturally had a deciding voice in numerous matters, as proven by the lines committed to paper in November 1956 by Ernő Gerő, deputy chief secretary of the Hungarian Workers' Party and deputy prime minister of Hungary:

> 'The Stalin Iron Works [of Hungary] were built on the basis of Soviet consultation; even the site was selected on Soviet recommendation. The plans for the iron works and the majority of the fittings were produced in the Soviet Union; the question as to why we were building it was never raised on the Soviet side. […] We built all the military industry plants specifically based on Soviet requests and recommendations. Not one was built on our own initiative.'[11]

Based on Soviet sources, Noskova also clearly states that in the late 1940s and the first half of the 50s, not a single significant social-economic decision was made in the Soviet satellite states without the influence and approval of the Soviet advisers. She also points to an internal reason for calling in the advisers: The local communist party elites suffered from a lack of politically reliable cadres who also possessed the appropriate exper-

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[10] Ibid., p. 216-217.

[11] MAGDOLNA BARÁTH, Gerő Ernő értékelése az 1956. októberi eseményekről [Estimation of Ernő Gerő on the Events of October 1956], in: Múltunk 44/1 (1999) p. 138-169, p. 164-165 (author's translation). The first intention was to build the iron works in Mohács close to the Yugoslav border, but following the outbreak of the Soviet-Yugoslav conflict, construction of the investment and the associated socialist town was begun approximately one hundred kilometers further north in Dunapentele (now: Dunaújváros). On the socialist towns in more detail, see PÁL GERMUSKA, Indusztria bűvöletében. Fejlesztéspolitika és a szocialista városok [Under the Spell of Industria. Development Policy and the Socialist Cities], Budapest 2004; PÁL GERMUSKA, Between Theory and Practice. Planning Socialist Cities in Hungary, in: Urban Machinery. Inside Modern European Cities, 1850-2000, ed. by TOM MISA/ MIKAEL HÅRD, Cambridge, MA 2008, p. 233-255.

tise, and they had experience neither in planned economy nor in the organization and execution of large investments. In addition, based on (Soviet) propaganda, they had an exaggerated impression of the capabilities of Soviet experts.[12]

In the case of Hungary, the placement of the advisers can likewise be clearly divided into three phases. In February 1945, when Budapest was just newly occupied, Soviet liaison staff can already be found in the freshly established political investigation division of the police. Later on, the Soviet military command clearly collaborated in setting up the Political Department of the Hungarian State Police. According to the recollections of onetime state security officers, the Soviet Ministry of State Security was permanently represented in Hungary from 1947 onwards.[13]

In negotiations conducted on various matters in Moscow following the signing of the Hungarian-Soviet Treaty of Friendship, Cooperation and Mutual Assistance on 18 February 1948, Deputy Prime Minister Mátyás Rákosi came to an agreement with leaders of the Soviet general staff that they would send eight advisers to Hungary to aid with the development of the army. The first group of eight military advisers then arrived at the Ministry of Defence (*Honvédelmi Minisztérium* – HM) in Budapest on 1 October 1948 under the command of Major General J. M. Prokofiev.[14] On 4 November 1948, the Secretariat of the MDP KV assented to a request by the HM for thirty to forty training officers from the Soviet Union – 'in addition to the present specialists'.[15] Then, on 17 November, the MDP State Security Committee approved the HM proposal to request further Soviet military advisers (twenty-eight field officers and three senior officers).[16] Following these decisions, a total of forty-six further military

[12] NOSKOVA, Szovjet tanácsadók, p. 216-219.

[13] For details, see MAGDOLNA BARÁTH, Soviet Counsellors at the Hungarian State Security Organs, in: NKVD/KGB Activities and its Cooperation with other Secret Services in Central and Eastern Europe 1945-1989. Anthology of the international conference, ed. by ALEXANDRA GRÚŇOVÁ, Bratislava 2008, p. 87-99. At the conference (14-16 November 2007, Bratislava) and in the edited volume, panel II was devoted to the role of Soviet advisers.

[14] IMRE OKVÁTH, Bástya a béke frontján. Magyar haderő és katonapolitika 1945-1956 [Bastion at the Frontlines of Peace. The Hungarian Army and Military Policy 1945-1956], Budapest 1998, p. 150-151.

[15] MOL M-KS 276. f. 54. cs. 16. ő. e., p. 5.

[16] MOL M-KS 276. f. 84. cs. 12. ő. e. It is evident from the proposal that the request was lodged from the outset in agreement with the chief Soviet adviser. The following comment in the recommendation is illuminating: 'It was the opinion of the Chief Soviet Adviser that the demands made in the request are totally sufficient in consideration of present numbers. A larger number of advisers could not be put to appropriate use.' Quote on p. 12.

advisers arrived in 1949, although no intergovernmental agreement was made to provide for their legal status, their sphere of authority or the services due to them.[17] Later on, their numbers further increased: The register of military advisers, established in 1956, listed eighty-two Soviet officers serving on the general staff, with the troops and in the academies of the Hungarian People's Army.[18] The military industry advisers arrived in the second phase, at the same time as the first civilian experts (see details below).

Civilian advisers were called in en masse in the summer of 1951: On 20 June, the Secretariat of the MDP KV made a decision to invite thirty-four Soviet economic, financial, health, educational and cultural experts, who it intended to employ for one year in sixteen ministries and central offices (planning office, statistical office etc.). Besides mining engineers and oil industry experts, geologists and statisticians, invitations for a ballet master, gymnast, schoolmaster and primary school teachers were also included in the request.[19] The Secretariat of the MDP KV considered several of the advisers already working in the country as worthy of receiving honours in the second half of 1951: metallurgy experts for the acceleration of the reconstruction of the Diósgyőr and Ózd foundries,[20] a textile industry engineer for demonstration of Soviet manufacturing standards[21] as well as an expert in cotton growing for domestication of the plant in Hungary.[22]

It appears, however, that whilst the political and military advisers achieved their objectives almost completely, Soviet experts arriving in the third phase faced significantly more difficulties in the economic field. The March 1953 resolution of the MDP KV Secretariat, quoted in the introduction, severely condemned the hosting ministries and companies: 'In more than one place the obscurantism, or even antagonistic attitude of the experts has obstructed, and continues to obstruct the work of the advisers and the utilization of their guidance.'[23]

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[17] OKVÁTH, Bástya a béke frontján, p. 163.

[18] TAMÁS NAGY, Fordulattól – forradalomig. A Magyar Dolgozók Pártja katonapolitikája 1948-1956, Ph.D.-doktori disszertáció [From the Turn to the Revolution. The Military Policy of the Hungarian Workers' Party 1948-1956, Ph.D. thesis], Budapest 2003, p. 69.

[19] MOL M-KS 276. f. 54. cs. 149. ő. e., p. 2-3, 21-23.

[20] MOL M-KS 276. f. 54. cs. 156. ő. e., p. 5, 51-54.

[21] MOL M-KS 276. f. 54. cs. 158. ő. e., p. 7, 75-76.

[22] MOL M-KS 276. f. 54. cs. 171. ő. e., p. 7, 65.

[23] Az MDP KV Titkárságának határozata a gazdasági minisztériumok területén dolgozó szovjet tanácsadók munkájának hasznosításáról. 1953. március 18 [MDP KV Secretariat: Resolution on the Utilization of the Work of Soviet Advisers Working in the Economic Mi-

It also emerges from the document, however, that the Secretariat of International Economic Relations working alongside the Executive Council did in fact request reports from time to time, but no governmental organ was coordinating the work of the advisers. Even the party centre did not monitor the working conditions of the advisers or the utilization of their recommendations. Advisers worked in various ministries without any detailed work scheme, and it also transpired that the implementation of their proposals was not prescribed by edict of the responsible ministry (for instance, the Ministry of Housing and Public Construction [*Építésügyi Minisztérium*]). Due to all this, the MDP KV Secretariat laid down in its resolution that a deputy minister was to be appointed in every ministry to liaise with the advisers, a detailed work scheme was to be contrived everywhere specifying the precise tasks of the advisers and young, politically reliable experts were to be assigned alongside the advisers to ensure acceptance of the Soviet methods.[24]

Between 1953 and 1956, further advisers were only invited in a few special areas, for instance to the Operative Technical Department of the Ministry of the Interior (*Belügyminisztérium*) in August of 1954.[25] The MDP Political Committee also attempted to moderate further requests for advisers, or rather passed them on to the Executive Council.[26] For the most part, the government under Imre Nagy, appointed prime minister in July 1953, merely approved the extension of the mandate for the advisers already in the country and gave permission for a new invitation perhaps on one occasion.[27] For want of appropriate sources, it cannot be known

nistries Field, 18 March 1953], MOL M-KS 276. f. 54. cs. 235. ő. e., p. 126-129, quote on p. 126.

[24] Ibid., p. 127-129.

[25] Az MDP KV Titkársága 1954. augusztus 16-i ülésének jegyzőkönyve [MDP KV Secretariat, minutes of 16 August 1954], MOL M-KS 276. f. 330. ő. e., p. 6 and 80.

[26] Az MDP Politikai Bizottsága 1954. április 7-i ülésének jegyzőkönyve [MDP Political Committee, minutes of 7 April 1954], MOL M-KS 276. f. 53. cs. 169. ő. e., p. 5 and 81-82.

[27] See: Extension of residence period for individual Soviet advisers. 540615/26/1954. Numbered executive council resolution (Minisztertanács számú határozat – Mt. sz. hat.), 15 June 1954, MOL, XIX-A-83-a 53021 microfilm. Extension of residence period for the Soviet adviser working at the State Surveying and Cartographic Office, 540713/25/1954. Mt. sz. hat., 13 June 1954; Extension of residence period for the Soviet adviser working in the Ministry for Collecting Surplus Produce and Livestock, 540713/26/1954, Mt. sz. hat., 13 July 1954, MOL, XIX-A-83-a 53022 microfilm. Extension of contract for N. M. Richkov, Soviet adviser working alongside the Chief Prosecutor's Office and the Ministry of Justice, 541016/3/1954, Mt. sz. hat., 18 October 1954, MOL, XIX-A-83-a, 117. d. as well as: Invitation for committee of Soviet experts in electrical energy, 18 September 1953, 509/nk/2/1953, MOL, XIX-A-83-a 52989 microfilm.

whether Nagy attempted in this way to demonstrate independence or whether entertaining the legion of Soviet experts was simply deemed too expensive. No comprehensive evaluation of the work and aid of the advisers, similar to that of March 1953, was ever carried out again. Following the series of cutbacks to the Hungarian People's Army carried out continuously and in significant measure (numbering tens of thousands) from 1953 onwards, Minister of Defence Colonel General István Bata proposed a reduction in the numbers of military advisers. In a letter written to the Soviet minister of defence Marshall Georgii K. Zhukov on 22 September 1956, he proposed reducing the current number of eighty-two to fifty-four.[28] Due to the outbreak of revolution on 23 October 1956, however, this was realized in a different form: In the final days of October, simultaneously with the withdrawal of the Soviet troops from Budapest, the advisers and their families were also 'rescued'.[29]

Following the second Soviet military intervention on 4 November 1956, Soviet party and state leaders took over control of Hungary for several weeks. Following the consolidation of the Hungarian government led by János Kádár, the new communist party – the Hungarian Socialist Workers' Party (*Magyar Szocialista Munkáspárt* – MSZMP) and the apparatus of repression, Moscow cut back the most visible institutions of Soviet influence and control in the course of 1957. After this, advisers only remained in the state security organs and in the highest levels of the army.[30] It emerges from a draft letter of October 1958 presented to the MSZMP Political Committee that the Presidium of the Communist Party of the Soviet Union recommended to the Hungarian party leadership that the advisory system be discontinued. According to the draft reply, there were around forty advisers in Hungary at that time: eight permanent advisers with the Hungarian People's Army, twenty-three advisers with the Ministry of the Interior and nine uranium industry experts. Of these, the mandates of twenty-four advisers and four experts were due to expire at the end of 1958. The Political Committee decided on 7 October 1958 that the Hungarian side would request a gradual liquidation of the advisory system, but at the same time they deemed it necessary for four advisers to remain at the HM and four at the Ministry of the Interior, as well as five experts with the

[28] NAGY, Fordulattól – forradalomig, p. 88.

[29] On the withdrawal of troops in more detail, see MIKLÓS HORVÁTH, 1956 hadikrónikája [The Military Chronicle of 1956], Budapest 2003, p. 249-251.

[30] JÁNOS M. RAINER, A Szovjetunió [The Soviet Union], in: Evolúció és revolúció. Magyarország és a nemzetközi politika 1956-ban [Evolution and Revolution. Hungary and International Affairs in 1956], ed. by CSABA BÉKÉS, Budapest 2007, p. 31-54, p. 53-54.

uranium industry.[31] As yet, no higher-level governmental or party document from later years has been discovered to shed light on the numbers and composition of the Soviet advisory-liaison staff working in Hungary in small numbers, but for a prolonged period.

Similar reductions and cutbacks to the advisory system were made in the other countries of Central Eastern Europe in the mid and late 1950s. Following the death of Stalin, in a way similar to earlier times, the Soviet leadership issued direct commands for the initiation of reforms and for restricted de-Stalinization. At the same time, Nikita S. Khrushchev increasingly communicated his wishes and expectations to the leaders of the satellite states in the form of 'comradely critique and advice'.[32] With the establishment of the Warsaw Treaty and the reorganization of the Council for Mutual Economic Assistance (COMECON), however, certain coordination forums came into being where, although Moscow had the deciding voice in multilateral negotiations, the partner countries could at least express their opinions.[33]

The principles stressed at the Twentieth Congress of the Communist Party of the Soviet Union in February 1956 also resulted in mitigation of direct Soviet control and greater independence for local communist parties. Furthermore, by the mid 1950s a new vocational intelligentsia faithful to the system had been educated in the socialist countries of Central Eastern Europe, which made sustenance of the advisory system unnecessary. Having gained experience from the consequences of the Hungarian Revolution of October 1956, Moscow gradually withdrew its civilian advisers, and only left delegates in the region in state security and military positions of key importance. The high-ranking military liaison staff, however, remained in the command structure of the allied socialist armies until the 1980s, practically until the withdrawal of the Soviet troops, in order to ensure continuous Soviet control.

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[31] MOL M-KS 288. f. 5. cs. 97-98. ő. e., p. 12 and p. 170-171.

[32] JÁNOS M. RAINER, Magyarország és a Szovjetunió kapcsolatainak történetéhez (1953–1956) [Contribution to the History of Hungarian-Soviet Relations (1953–1956)], in: A magyar-orosz kapcsolatok tizenkét évszázada. Az ELTE Ruszisztikai Központ 2005. május 26-i ünnepi konferenciájának előadásai [The Twelve Centuries of Hungarian–Russian Connections. The Proceedings of the Festive Conference of the Tsentr Rusistiki of the ELTE, 26 May 2005], ed. by GYULA SZVÁK, Budapest 2005, p. 73-80.

[33] For further detail, see CSABA BÉKÉS, Magyarország és a nemzetközi politika az ötvenes évek közepén [Hungary and International Politics in the mid 1950s], in: Evolúció és revolúció, p. 9-27.

2. Soviet Advisers in Hungarian Military Industry Companies

The modest-sized Hungarian military industry consisting of a few state-owned industrial companies, two to three large private firms and numerous small private enterprises suffered serious damage from the events of the war in 1944-45. Between 1945 and 1948, there was almost no war production at all in Hungary. Following the communist takeover of power and nationalizations, a survey of military industry capacities and an assessment of the requirements of the newly forming army was begun in the second half of 1948. At the negotiations in Moscow in February 1948 mentioned above, representatives of the Hungarian government and the Soviet general staff also discussed armament requirements in connection with the development of the Hungarian army. A theoretical agreement was reached on various matters, including the delivery of weapons manufacturing patents to Hungary by the Soviet Union. The Hungarian side could not pass the licences on to any third party, and could not manufacture war supplies surpassing the permitted quantity. For the initiation of equipping and arming the Hungarian army, however, there was a definite need for Soviet imports: The first Soviet-Hungarian weapons supply contract was signed on 2 July 1948, to the value of around 9.5 million USD.[34]

Negotiations on the creation of conditions for development of the Hungarian army were carried out in Moscow between 30 January and 9 February 1949. Based on the discussions, Foreign Minister László Rajk appealed in several letters to Soviet Minister of the Armed Forces Marshall Nikolai A. Bulganin. On the one hand Rajk requested the delivery of licences, technical drawings and manufacturing instructions necessary for the production of war supplies, and on the other the assignment of designers and advisers familiar with manufacture. The Hungarian side requested licence documentation for four kinds of infantry- and thirteen types of artillery ammunition, four kinds of hand weapons, three types of guns, gunpowder and explosives, as well as optical instruments from the Soviet side. Rajk concluded one of his letters in this way:

> '[I]n such case that the government of the Soviet Union is unable to provide planning advisers and production advisers at the rate we have requested, we would ask that at least one adviser familiar with infantry weapons manufacture and one skilled in artillery weapons be made available to us if possible.'[35]

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[34] Okváth, Bástya a béke frontján, p. 150, p. 191-192. Hungary received the weapons and war supplies on a ten-year loan at two per cent annual interest.

[35] Rajk László külügyminiszter levele Bulganyin marsallhoz. 1949. február 12 [Letters from Foreign Minister László Rajk to Marshall Bulganin, 12 February 1949], MOL, XIX-J-1-j Soviet Union TÜK, 8. d.

Deliveries of Soviet weapons commenced in the course of 1949, but the provision of documentation needed for manufacture in Hungary and the arrival of Soviet military industry experts were increasingly delayed. In order to launch the production of Soviet small arms and artillery weapons as soon as possible, the Hungarian army and the Military Technology Institute provided the industry with specimens.

For instance, in January 1949 Diósgyőr ordnance works (DIMÁVAG Engine Works, from autumn 1949 onwards Heavy Machine Tool Works), one of the oldest war production factories in Hungary, obtained single specimens from the HM of the two Soviet gun types to be manufactured. Between February and June, drawings of all the component parts were produced for the 76.2 mm anti-tank gun and the 122 mm field howitzer. Concurrently with this, preparations for manufacture as well as the setting up and tooling of the machinery was begun. Measurements and drawings of the 37 mm anti-aircraft gun, also to be put into production, took from May until September. The Soviet licence documentation for the guns (construction drawings and complete technical descriptions for manufacturing) only arrived in November/December 1949. Due to a lack of translators and the unfamiliar drawing and numbering system, however, the company could only use the approximately fifteen cubic metres of documentation for refining the earlier drawings. The company began manufacturing the anti-tank gun and the howitzer in March of 1950, and then production was stopped when the Soviet adviser arrived in May. The Soviet technical instructions were used from that point on.[36]

During this same year, the Székesfehérvár Sporting Cartridge Factory, founded in 1936, obtained Soviet specimens of artillery fuses (cartouche caps) from the HM to be put into production. Based on the specimens and in line with the Hungarian standards then in force, the factory engineers and technicians produced structural drawings, materials tests and finally the complete technical documentation for manufacture and assembly. The necessary tools and the gauges needed for monitoring (e.g. callipers) were likewise developed by the factory's designing department. The Hungarian documentation based on the specimens was already completed when the

[36] Zoltán Farkas, A magyar hadiipar kialakulásának, tevékenységének történeti feldolgozása a Diósgyőri Gépgyárnál [The Historical Treatment of the Evolvement and the Activities of the Hungarian Defence Industry at the Diósgyőr Engine Works], Kézirat, Hadtörténelmi Levéltár, Magyar Néphadsereg (HL MN) Különgyűjtemény [War History Archives, Special Collection of Hungarian People's Army], Manuscript, Budapest 1984, p. 4-6. The company history of Diósgyőr, as well as those documents quoted below, were written in 1984/85 at the request of the then Ministry of Industry. These studies were written and compiled by the company managers, manuscripts were produced in two to three copies, and until 1996 were classified as top secret.

Soviet advisers arrived and announced that everything had to be produced again in accordance with the *Soviet standards* laid down in the licence documentation. The manufacturing specifications and the acceptance instructions were therefore modified based on the newly arrived Soviet documentation in 1950–51. The Soviet machine tools, finishing tools and other equipment stipulated in the original manufacturing documentation was, however, not available. The components were therefore produced with the existing machinery, with more efficient technology, but assemblage and quality control occurred throughout in accordance with the original stipulations.[37]

The Törökbálint Mechanics Works, established in 1936 for the manufacture and assembly of artillery ammunition and fuses, found itself in a situation similar to the one in the Székesfehérvár plant. They began repairing the war damage in 1949, but the documentation for the Soviet ammunition to be assembled was not available. The necessary drafts were sketched in the Military Technology Institute on the basis of specimen ammunitions. Then the Ministry of Heavy Industry (*Nehézipari Minisztérium*) designated companies to cooperate in supplying the Mechanics Works. The factory began to work out the manufacturing technology and to purchase and prepare the tools and machinery. They had got through sixty to eighty per cent of the preparatory procedures when the original Soviet manufacturing documentation arrived for the eleven types of artillery ammunition. On collating the documents it became clear that numerous modifications were necessary. In 1951, before machine production was begun, the Soviet advisers arrived. These were experienced ammunition industry specialists who provided significant help in elucidating inefficient translations and performing adaptations.[38]

Besides those already mentioned, few data are accessible on the invitation and arrival in Hungary of the military industry advisers. According to a proposal from June 1950, to be found in Mátyás Rákosi's chief secretarial archives, a total of twenty-six Soviet experts was requested in three phases by the Hungarian army command: In the first phase until 20 July 1950, two specialists in guns manufacture, five in artillery ammunition manufacture and three engineer-technicians for infantry weapons manufacture arrived.

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[37] JÁNOSNÉ KÁROLY, A speciális híradástechnika kialakulásának történeti leírása. A hadiipari gyártás alakulása a Videotonnál [Historical Record of the Evolvement of the Special Telecommunication Activities. The Evolution of the Military Production at VIDEOTON], Kézirat, HL MN Különgyűjtemény, Manuscript, Budapest 1985, p. 3-5.

[38] KÁROLY VÖLGYI, Visszaemlékezés. A Mechanikai Művek története [Reminiscences. The History of the Mechanics Works], Kézirat, HL MN Különgyűjtemény, Manuscript, Budapest 1984, p. 3-5.

In the second phase until 1 August 1950, they were augmented by a further engineer-technician for guns manufacture, five for artillery ammunition manufacture, one for explosives manufacture, two for optics and instrument manufacture, as well as one for infantry ammunition manufacture. The third phase until 10 August 1950 witnessed the arrival of two more experts for artillery ammunition manufacture, one for explosives manufacture, two for mine-throwers as well as one extra person for infantry ammunition manufacture.[39] According to indirect sources, contracts signed on 30 November 1950 and 4 June 1951 between the Soviet Union and the government of the Hungarian People's Republic provided for the conditions of the hosting and employment of the Soviet advisers active in the military industry. As the original contracts are missing, only this much can be known: For the period of their stay in Hungary, the HM guaranteed the advisers official premises (an office), suitable flats, trained translators, means of transport (private cars) and health care.[40] This was in any case general practice with respect to accommodating the advisers.

Based on the sources cited, it can be assumed that the advisers arrived between the summer of 1950 and the summer of 1951. According to reports from autumn 1951, a total of thirty-three Soviet military industry advisers were working in the Ministry of Metallurgy and Machine-building Industry (*Kohó- és Gépipari Minisztérium* – KGM) and its companies: five in the Diósgyőr Heavy Machine Tool Works, one in the Budaörs Pressed and Forged Goods Works, in Székesfehérvár, three in the Sporting Cartridge Factory and seven at the Motor Overhaul Company, one at the Salgótarján Iron Foundry and Engine Works, also in Budapest, one at the Hungarian Steelwork Factory, two at the Car and Tractor Parts Works, two at the Seventeenth Vehicle Repair Company, four at the Gamma Works, two at the Mining Detonator Factory, one in the Lamp Works, two at Danuvia, one at the KGM D/1 Department and one in the KGM Telecommunications Department.[41]

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[39] A magyar hadiipar részére szükséges és kérelmezett szovjet tanácsadók ütemterve. 1950. június 22 [Schedule of the Soviet advisers necessary to and requested by the Hungarian military industry, 22 June 1950], MOL, MK-S 276. f. 65. cs. 195. ő. e., p. 14.

[40] Feljegyzés Bíró Ferenc elvtársnak a Magyarországon tartózkodó, hadiiparban tevékenykedő tanácsadó elvtársak helyzetéről. 1952. április 29 [Memo to comrade Ferenc Bíró on the situation of the adviser-comrades living in Hungary and active in the military industry. 29 April 1952], MOL, XIX-F-6-cc 13. d.

[41] KGM felügyelete alá tartozó vállalatoknál tartózkodó szovjet tanácsadó bajtársak névsora. 1951. szeptember 17 [List of the Soviet adviser-comrades working in companies under the supervision of KGM, 17 September 1951], MOL, XIX-F-6-cc 8. d., A KGM D/1 Nehézfémipari Főosztály feljegyzése. 1951. október 9 [KGM D/1 Heavy Metal Industry Department: memo, 9 October 1951], MOL, XIX-F-6-cc 8. d.

Although there exists a comprehensive list with the names of all the advisors, there is no accessible information about their military-social backgrounds or careers. These people were featured in the contemporary reports as well-trained and experienced officers or artificer officers – with the superiority of the *homo Sovieticus*.

Whilst in the old war plants the advisers mainly supervised the conversion to Soviet standards, in the newly founded military industry factories they arrived in time to assist in the planning stage. The General Machinery Design Office (*Általános Géptervező Iroda* – ÁGTI), founded in the spring of 1950 as an independent military industry design institute, produced the plans for eight new factories (one of which was eventually not built) and processed the documentation for the reconstruction of at least six plants before 1953. The plans for all the new factories were produced by adaptation of Soviet documentation. In order to speed up the work, the Soviet side provided ÁGTI with the following documents and designs: construction drawings of the products to be manufactured, the manufacturing technology descriptions of the products, the acceptance instructions (quality and military) for the products, important, relevant GOST standards,[42] in several cases, the technological installation designs for the factory, workshop layout plans, the production machinery and equipment ledger, and a registry of the workforce needed for each profession.

Soviet advisers for the individual types of weapons and in the various industrial branches participated in the selection and designation of the locations for individual factories. In this context, the technology detailed in the licence documentation provided had to be strictly adhered to; it could only be modified with the permission of the advisers.[43]

Despite the standard designs provided, the plants designed with Soviet assistance were not free of difficulties. Construction work on a new infantry ammunition factory known as Mátravidék Metal Works was underway in Sirok beginning in September of 1950; pilot manufacture of normal gun bullets was carried out from the first quarter of 1952 onwards. Following the arrival of the Soviet technologists in the summer and autumn of 1952, however, the plant manufacturing armour-piercing bullets had to be reconstructed, as the advisers ordered the reworking of the whole technology and

[42] GOST is the acronym for *gosudarstvennyi standart*, i. e. state standard.

[43] KÁROLY GROHE, Az Általános Géptervező Iroda története [The History of the General Machinery Design Office], Kézirat, HL MN Különgyűjtemény, Manuscript, Budapest 1985, p. 2-3, 7-10.

rearrangement of the production lines.[44] The position of the advisers active in the military industry was reviewed by the general staff of the People's Army in May 1952. In several factories the advisers had objected to their accommodations and working conditions: In some cases they just considered the flat provided for them to be cramped or crowded (Miskolc-Diósgyőr), and in several firms they could not be provided with a typewriter with a Cyrillic keyboard or there were too few official vehicles available.[45] At the same time, a letter written by Gerő to Rákosi in May 1952 also sheds light on other circumstances. Increasing and expanding demands from the army necessitated the establishment of further war production plants, the construction of which the party leadership could only imagine with Soviet help. In the same letter, Gerő comments in connection with the organization of repairs for jet planes:

> 'We are asking for a lot. Unfortunately, however, the way things are we are unable to make a move in certain areas without the help of the Soviet Union. For example, it is not just that none of our industrial experts have ever manufactured a jet-propelled plane, they have never even seen one in the flesh. In such a case, how can they be required to design the general overhaul and parts manufacturing plant to be built, when they have no idea of this technology? So we are compelled to request help from the Soviet Union for this. Besides this, if here at home they manage more or less to figure out how to construct the plant and what sort of machinery to purchase or manufacture, this will undoubtedly all be worse, more expensive and slower than if we received the designs and the advice we need from the Soviet Union.'[46]

At the beginning of December 1952, eleven military industry plants in north-eastern Hungary were visited under the leadership of Four-star General Mihály Farkas, minister of defence, with K. F. Vasil'chenko, deputy of the chief adviser to the HM, and Leonid P. Murashkin, adviser

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[44] Az észak-magyarországi hadiipari vállalatok rövid jellemzése. 1952. november 28 [Brief characterization of the military industry companies of northern Hungary. 28 November 1952], HL MN 1952/T 50. d. 3. cs.

[45] Feljegyzés Bíró Ferenc elvtársnak a Magyarországon tartózkodó, hadiiparban tevékenykedő tanácsadó elvtársak helyzetéről. 1952. április 29 [Memo to comrade Ferenc Bíró on the situation of the adviser-comrades living in Hungary and active in the military industry. 29 April 1952], MOL, XIX-F-6-cc 13. d.

[46] MOL, MK-S 276. f. 65. cs. 195. ő. e., p. 7. Gerő was clearly exaggerating here. But it is certainly a fact that only turboprop planes were manufactured earlier in Hungary. In cooperation with Nazi Germany, based on a bilateral agreement signed on 6 June 1941, turboprop Messerschmitt (Me) planes of the types 109F and Me 209 were among those manufactured between 1942 and 44 at the Duna Aeroplane Works Ltd. For details, see LÓRÁND DOMBRÁDY, A magyar hadigazdaság a második világháború idején [The Hungarian Military Economy in the Era of World War II], Budapest 2003, p. 327-394. Jet-propelled planes were not manufactured in Hungary, neither during World War II nor afterwards.

to the Ministry of Medium Machine-building (*Középgépipari Minisztérium*)[47] in attendance. According to the report produced on the inspection trip, the plants were definitely running their production based on Soviet licences. '[H]owever, they had not switched over sufficiently or studied and introduced the Soviet technology'. 'This circumstance contributed in great measure [to the fact] that in many factories the percentage of rejects is high and the quality is inadequate,' the minister of defence concluded in signing the report.[48] Of the recommendations formulated in the wake of the visit, the conversion of the incompleted gunpowder works in Sajóbábony was also given serious consideration because the manufacture of the artillery gunpowder was not in accordance with the Soviet stipulations. This gunpowder could also be used for ammunition, but it generated a higher temperature, thus causing greater wear to the gun barrels.

In the field of communications and telecommunications, which was one of the most developed branches of Hungarian industry before 1945, what unfolded was more like a kind of rivalry between the Hungarian development engineers and the Soviet specialists. In December of 1949, the Telecommunications Research Institute (*Távközlési Kutatóintézet* – TÁKI) was founded by the amalgamation of several company research laboratories in order to concentrate military electronics and telecommunications research and development as well as radar locator research. In October 1950, two Soviet engineers studied the Hungarian artillery fire locator (spotting station) development programme and recommended that TÁKI request Soviet specialists for the further development of the matter. Research in connection with an anti-aircraft locator also began in 1951. Independent research was significantly checked, however, when TÁKI was given the task of adapting the documentation for two Soviet locators in 1952: that for the 'Most' anti-aircraft locator (Hungarian code-name: 'Duna') and the 'Luch' artillery locator ('Dráva'). In order to aid conversion of the materials, two Soviet advisers were also sent, and they also supervised the launching of manufacture of the two types of radar in the newly founded Precision Mechanics Company. There had previously been no Hungarian standards

[47] An independent ministry from January 1952 onwards, the Ministry of Medium Machine-building supervised the military industry companies. In July 1953, the military industry was formally integrated into the Ministry of Metallurgy and Machine-building Industry, but remained separate from civilian companies under the name of division 'B' (KGM/B) until 1961.

[48] Jelentés egyes hadiipari üzemek megtekintéséről. 1952. december 9 [Report on visits to various military industry plants. 9 December 1952], MOL, XIX-A-2-ee 93. d. In the end, the manufacture of the so-called solvent artillery gunpowder in accordance with the Soviet standards was not introduced in Sajóbábony. The necessary quantities were supplied from imports instead.

in the manufacture of telecommunications components, so the adaptation of GOST represented a step forward in standardization and also enforced the modernization of the components/parts production industry. This is because the Soviet stipulations necessitated the introduction of new techniques (galvanization, lacquering etc.) and the use of new raw materials (lacquer, non-ferrous and cold-rolled metal sheets etc.) in the manufacture of components.[49]

In almost all of the newly founded military industry plants, production could only be launched with great difficulty and accompanied by a significant quantity of reject products. Besides the serious lack of engineers and skilled workers as well as suitable machinery, the main reason for this was difficulties resulting from the adoption of the GOST standards. It was only at the beginning of 1953, however, that the Ministry of Medium Machine-building set up a central materials testing laboratory, chiefly for the purpose of providing raw materials in line with the Soviet regulations. From this, the Technological Institute of Medium Machine-building (*Középgépipari Technológiai Intézet*) was created in November 1953, whose priority duty was the translation of the Soviet documentation and the adaptation of the GOST standards. (The institute was then merged with ÁGTI in June of 1956.)[50] According to a report of July 1955 by the deputy minister of KGM in charge of the military industry, production of diverse steel alloys in line with GOST was still causing difficulties for metallurgy. There were also fundamental problems with the adaptation of the manufacturing technology instructions, which usually arrived late. The Soviet documentation applied rather to large-scale industry, mass-production or continuous manufacture, whereas in Hungary there was only need and opportunity for manufacture of series at a lesser order of magnitude. The Hungarian HM, on the other hand, ignoring these divergent features, attempted to adhere to an adoption of the Soviet technology without modifications. The deputy minister considered that the industrial companies should work out the technical instructions for the licenced products, paying maximum attention to the Soviet documentation, and these would be finally approved by technical experts of the HM.[51]

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[49] AURÉL KOMPORDAY, A híradástechnikai hadiipari tevékenység fejlődésének története 1980-ig [The History of the Development of the Military Telecommunication Activities until 1980], Kézirat, HL MN Különgyűjtemény, Manuscript, Budapest 1985, p. 18, 121, 125-128.

[50] GROHE, Az Általános Géptervező, p. 17-19.

[51] Feljegyzés Csergő János miniszter elvtárs részére: Az 1949-1955. évi hadiipari gyártásnál elkövetett hibák és hiányosságok, különös tekintettel a HM és az ipar együttműködésére. 1955. július 4 [Memo to Comrade Minister János Csergő: mistakes and deficien-

Due to the extraordinary efforts and continuous Soviet control, Hungarian military industry production increased by a factor of sixteen between 1950 and 1953. However, the governmental programme under Nagy attempted to create resources to raise the standard of living for the population by curtailing the heavy industry developments and the military expenditures. The drastic reduction of orders from the army necessitated a switchover of the military industry to civil production: While the proportion of civilian products amounted to fifteen per cent in 1953, it had grown to sixty-five per cent within military industry production by 1955. We have no knowledge as to whether the Soviet advisers played any kind of role in the implementation of the conversion programme; the majority of them were probably recalled.

In the spring of 1955, however, the situation changed once again: Not only did Rákosi take back power from Nagy, but with the establishment of the Warsaw Treaty, Moscow urged the modernization of the armies in the member countries with increasing emphasis. For the launching of the large-scale rearmament programme, the manufacture of around seventy-five new types of weapons and war supplies (Goriunov machine-guns, 152 mm howitzers, copper cartridge-cases, anti-aircraft ammunition etc.) had to be organized in the Hungarian military industry factories, based on licences, with new technologies. Due to the continuing cut-backs to the Hungarian army and the uncertainties surrounding the products to be manufactured, however, it only became more or less clear what the industry needed to prepare for by the summer of 1956. Final production and development plans, however, were not contrived even then.[52]

At the same time, the Soviet technical advisory system was significantly altered. A modification of the Soviet attitude can be discerned in the minutes of a discussion in May 1956 between Soviet and Hungarian electronics industry experts. The parties agreed on a *mutual* exchange of scientific and technical literature and industrial branch standards, a *mutual* notification of new research and development results as well as a *mutual* interchange of patents and inventions. Furthermore, in the case of military licence products planned to be manufactured in Hungary, the Soviet side consented to Hungarian experts studying their manufacture in the Soviet Union and

cies in military industry manufacturing in the years 1949–1955, with particular regard to cooperation between the HM and the industry, 4 July 1955], MOL, XIX-F-6-a 118. d.

[52] For details, see PÁL GERMUSKA, The First Conversion Project of the Cold War. The Hungarian Defence Industry in 1953–1955, in: Exiting War. Post Conflict Military Operations. 6th International Conference of the Military History Working Group, Bratislava 3-7 April 2006, ed. by MILOSLAV ČAPLOVIČ/ MÁRIA STANOVÁ/ ANDRÉ RAKOTO, Bratislava 2007, p. 281-289.

coordinating the order in which the necessary documentation should be compiled and sent.[53] Probably as a consequence of these negotiations, in a letter from August 1956 addressed to the Soviet government Prime Minister András Hegedüs no longer requested advisers for the manufacture of new military industry products, but requested approval for a trip abroad by eighty-two Hungarian industrial and military experts. On study trips of three weeks to one month, the experts would have liked to study the production process and technology in the Soviet Union for the appliances and weapons not yet manufactured in Hungary.[54]

The October Revolution naturally balked the concrete travel and production plans, but military industry relations were now clearly based on mutual cooperation and bilateral communication. Thus, for instance, in the case of the S-60 57 mm anti-aircraft gun, several consultations and exchanges of experience preceded the launching of manufacture. The Diósgyőr Heavy Machine Tool Works received the complete manufacturing documentation in September 1957, and experts from the works were able to familiarize themselves with the production of the special steels and machining of the skelp as well as the process of the military product-acceptance on a four-week study trip to the Soviet Union.[55] Subsequently, industry-branch and direct inter-company relations became decisive; the Soviet experts always offered advice in Hungary in connection with putting specific individual products into production. A new framework for discussions was established starting in October 1956 by the Standing Committee on Defence Industry Cooperation of COMECON, which operated as a forum for multilateral coordination and cooperation.[56] The relations also became increasingly regulated in legal terms. For instance, a special protocol provided for the classroom training facilities of the 'Neva-M' anti-aircraft rocket complex to be put into operation in Hungary in April of 1978. The agreement included the means, timing and schedule for the provision of Soviet technical aid,

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[53] Jegyzőkönyv a szovjet és magyar szakértőknek a gyengeáramú ipar területén a kölcsönös műszaki segítségnyújtásról és a munkák koordinálásáról megtartott értekezletéről. 1956. május 4 [Minutes of the meeting on the coordination of the mutual technical assistance and work of the Soviet and Hungarian experts in the electronics industry field, 4 May 1956], MOL, XIX-F-6-a 118. d.

[54] MOL, XIX-A-2-p 3. d.

[55] FARKAS, A magyar hadiipar kialakulásának, p. 12-14.

[56] On the Standing Committee on Defence Industry Cooperation, see PÁL GERMUSKA, From Commands to Coordination. Defense Industry Cooperation within the Member-States of the Warsaw Pact, 1956–1965, in: Multinational Operations, Alliances, and International Military Cooperation. Past and Future. Proceedings of the Fifth Workshop of the Partnership for Peace Consortium's Military History Working Group, Vienna, Austria 4-8 April 2005, ed. by ROBERT S. RUSH/ WILLIAM W. EPLEY, Washington, D.C. 2006, p. 101-108.

the delivery of the necessary tuition documentation for the Hungarian experts to be trained, the means of bearing costs etc.[57]

3. Conclusion

The objectives of the gigantic colonization manoeuvre mobilizing hundreds of Soviet advisers and experts changed significantly between 1944 and 1956. At the beginning, the primary goal was the stabilization of the Soviet occupation and the pacification of the occupied countries. At this time, the task of the advisers was temporary, and concentrated on partial territories. By 1947, it had become clear that the Soviet presence in Central Eastern Europe would be permanent, and that the occupied countries would have to adopt the Soviet model of socialism. The advisers therefore made every effort to help the local Communist forces to a position of autocracy. Following the takeover of power, the advisers appeared in the state security apparatus and the army in ever increasing numbers in order to begin the reorganization of the organs of coercion modelled on the Soviet pattern.

From 1949 onwards, the goal of the advisory system was to reproduce the Soviet social and economic model as closely as possible. The advisers came with a threefold mission:

- to faithfully interpret the Soviet pattern;
- to influence middle- and upper-level decision making in such a way that Soviet interests predominate whatever happens, and to ensure that the pattern be followed;
- to constantly supervise the adoption of the Soviet model.

In essence, these intentions corresponded to the expectations and conceptions of the local Communist leaders, who put more trust in the advisers than in their own apparatus and intelligentsia.

Then, as Sovietization advanced from year to year, and new cadres were thoroughly educated, there was less and less need for such a direct means of control. In addition, Moscow's attitude was also modified between 1953 and 1956: Within certain limits, the Soviet leadership tolerated the individual routes taken by some of the socialist countries. The majority of civilian advisers thus became essentially superfluous, and they returned home on

[57] Jegyzőkönyv a Szovjetunió Kormánya és a Magyar Népköztársaság Kormánya között speciális objektum létrehozásában a Magyar Népköztársaságnak nyújtandó műszaki segítségnyújtásról. 1978. április 21 [Minutes between the government of the Soviet Union and the government of the Hungarian People's Republic on the technical assistance to be provided to the Hungarian People's Republic for the establishment of a special institution, 21 April 1978], MOL, XIX-G-3-c 54. d.

expiry of their mandates. Military cooperation was, eventually, placed on a new basis with the establishment of the Warsaw Treaty, but in the cases of the army and state security, Moscow did not wish to relinquish the possibility for direct intervention. Following 1956, the greatest change that occurred in this area was that the senior Soviet officers assigned to the HM and the general staff were known as liaison officers rather than advisers.

The reorganization of the military industries in the Central Eastern European countries and their development at an accelerated rate unfolded from 1948 to 1949 under the direction of the Soviet military and later the industrial advisers. The development set two main targets: 1. autarky: Individual countries should be self-supporting in as many weapons and implements of war as possible; 2. standardization: All the armies in the block should be equipped with identical armaments based on Soviet standards and licences. For reasons of secrecy and protection of information, however, and in order to disparage the satellite armies and to keep them in a subordinate position, the Soviet Union passed on second-rate technology for the most part. The chief task of the military industry advisers was the direction and control of the switchover to Soviet standards; no deviation from the original licence stipulations was allowed, regardless of their technological levels. The switchover in connection with raw materials production, components manufacture, tooling and monitoring involved serious conflicts, extra work and tremendous excess costs. The application and observance of the GOST standards, generally stricter than the earlier ones, was mastered by the industry at the cost of huge efforts made over a period of years. (It is however true that, once it had become routine, the greater technological discipline also represented an advantage in civilian production.)

The mission and sphere of duties of the advisers was basically influenced by Soviet military doctrine and a rethinking of the function of the military industry in 1954-55. It emerged from an examination of the investments implemented to date in the war industries of the region that the developments realized had been of uneven standard, and that superfluous concurrent capacities had been constructed. A report of September 1954 by the Soviet State Planning Committee (GOSPLAN) pointed out among other things that as a result of the uncoordinated provision of licences, for the most part out of date armaments of mixed composition were being manufactured in the military industry plants of the satellite countries.[58] But with

[58] BYSTROVA, Sovetskii voenno-promyshlennyi kompleks, p. 328-329. For the eighty-five millimetre anti-aircraft gun, for example, Hungary and Poland manufactured the 1939 model, and Czechoslovakia the 1944 model, with Czechoslovakia introducing the manufacture of the new version of the gun.

an industrial background of this sort, it was impossible to begin modernizing the Warsaw Treaty armies. It became clear that the structure enforced on the allies with the help of the advisory system was not efficient. Instead, division of labour, mutual cooperation and multilateral coordination was necessary, and the Standing Committee on Defence Industry Cooperation of COMECON was created to provide a framework for this. Within this milieu, the permanent industrial professional advisory system also became meaningless. Conferences of several days and direct, on-the-spot mutual professional consultation lasting a few weeks became general practice after 1956. All this signified a covert admission from the Soviet side: that the provision of technology did not work using the 'copy-paste' method, but that adaptation was an unavoidable part of the process.

From the Hungarian point of view, not many positive returns can be mentioned in connection with the advisory system. The Soviets imposed on Hungary an overstretched development of the army and the military industry by peremptory order and for political reasons, along with a foreign technological culture and standards system. The Soviet advisers working in the country were key figures in the transfer of technology, carrying out complex political and professional tasks. From planning to construction and to the launching of manufacture, they supervised the utilization of the documentation and technology provided as well as adherence to the licence stipulations and standards. For the most part, it was not due to the 'incompetence' of the Hungarian engineers and technicians that they were unable to meet the advisers' expectations – it was much more the unfavourable circumstances (lack of machinery and materials, untrained workforce etc.), political mistrust and the change of technology which caused the production setbacks. The introduction of the GOST standards upset the entire metallurgy industry for years. In the ammunition industry as well as weapons and machinery manufacture, loads of tools, machinery and gauges had to be exchanged or modified. It was only in telecommunications and component manufacture that there was a positive effect, as there had been no Hungarian standards in force. The costs involved in the change of standards in the 1950s were only partially cleared in the 1970s and 80s when division of labour was introduced within the framework of COMECON: For instance, the above-mentioned Sporting Cartridge Factory (now under the name of VIDEOTON) provided numerous Warsaw Treaty member countries with military radios.

In sum, the Soviet advisory system of the 1950s in essence aimed at the total control of the subordinated nations and economies; technology transfer was only a secondary target. At first glance, the system worked acceptably well, at second it was a dictatorial act which later initiated a process of mutual alignment and adaptation.