

CONCLUSION

In the 1930s, together with the motorisation of military transport and the development of armoured weapons (the change of tactics of its use as independent units operating on the front and not as a weapon of infantry support), there was a decrease in the importance of rail transport in operational transport.

The development of aviation, in turn, led an Italian strategist General Giulio Douhet, at the end of the 1920s, to formulate a doctrine of a total air war, because the increasing range and impact power of aviation meant that this type of weapon began to threaten in no small extent the enemy's facilities, including the railway infrastructure, which was vulnerable to damage. Also the development of artillery and increasing the range and effectiveness of artillery fire (introduction of modern rangefinders and fire control systems for army equipment) deepened these tendencies. The railway infrastructure was also vulnerable to attacks from partisan and sabotage troops. As a result of the existing threats, the protection of railway lines in the deep hinterland entailed considerable forces that could not be used at the front.

In the 1930s, military theorists pointed to the shortcomings of rail transport: limited manoeuvrability, attachment to the track and high vulnerability to air strikes and artillery fire. In 1934 General Władysław Sikorski in his visionary work "The Future War" characterised these tendencies in the following way: "Air attacks are extremely dangerous for rail transport. Train routes are well known and outlined in the field, their major stations, viaducts, and bridges will in the future be sensitive to bombs and missiles even at night. The railway network has a lot of such locations. Their destruction may seriously paralyse rail traffic, causing long-lasting transport delays, and with today's growth in aviation, making it partly impossible."⁸⁹⁷

As a consequence of the revolutionary changes in the battlefield during the Second World War, rail transport lost its priority and became a means of delivering operational transports and supplies to the rear of the operations. However, it continued to play a leading role in the delivery of reinforcements and supplies for the fighting troops. In difficult terrain conditions of the Russian off-roads of the Eastern Front, it continued to play a significant role in operational transport as well.

897 Sikorski (1984), 250.

The adaptation of the transport system in the People's Republic of Poland to the transport tasks in the case of war, in the Western and Seaside Operational Direction, which has been carried out since the beginning of the 1950s, served precisely these purposes. The new Soviet doctrine of the operational rear together with the development of the theory of nuclear war assumed the adaptation of the transport network to function in the conditions of a new type of conflict.⁸⁹⁸

It was assumed that all means of transport would be used at the same time and that there would be a rapid shift from one mean of transport to another. However, already in the sixties and seventies, when strategic aviation became the dominant element of the modern battlefield, rocket artillery and air-landing units, rail transport in the back of operations lost its dominant importance. The attachment to the traditional use of land troops (crushing attacks of armoured and mechanised forces) in the conditions of a total conflict with the use of nuclear weapons was a sign of an anachronism of the Warsaw Pact strategists. The use of folding railway bridges assembled from SEK-500 overpass and the NZM-56 bridge elements, which were planned in the case of war, also had the main disadvantage of masking the crossing, apart from many advantages. Each folding bridge was a clear, immovable and uncovered target, and the concentration of engineering and transport equipment during its construction exposed the intentions to build a temporary crossing.⁸⁹⁹ Also, the organisation of Temporary Transshipment Areas did not ensure the confidentiality of their location in the event of the use of aerial reconnaissance and modern means of electronic intelligence.

The operational assumptions concerning the use of rail transport, which were adopted in spite of the defects and deficiencies identified, were consistently implemented until 1990. It is impossible to assess the actions taken in a completely unambiguous way. On the one hand, investments carried out in 1945–1990 on the Polish railway network related to its adaptation to wartime tasks were one of the significant factors of technological underdevelopment and limited rational management in Polish State Railways. However, the consolidation and expansion of the railway network through the construction of connections and detours of junctions and sensitive railway sections have become

898 At that time all the significant armies were working to preserve the vitality of transport and telecommunications systems in a nuclear war. It should be emphasized that the prototype of Internet was a military ICT network, the aim of which was to maintain efficiency in the conditions of a nuclear war (destruction of the central computers, automatic operation in the network of other active computers).

899 Białobrzeski (1978), 9.

a factor increasing the efficiency of railway transport use, facilitating the organisation of railway traffic. Some of the Permanent Transshipment Areas (built with considerable effort and resources only for military purposes during the war) at the meeting points of the Russian and Polish railway networks (apart from the closed and inactive ones) are currently used to a large extent for the transshipment of goods in trade with Belarus and Russia, and they are of great economic importance. Finally, it is impossible not to notice the significant contribution made by the military rail and road units, which, since the 1950s, have invested in the construction of railway lines and engineering structures and carried out continuous replacement of the railway surface and infrastructure repairs. Also, military folding bridge structures have been widely used in peacetime for many years, as bypassing and temporary bridges. In this way, actions taken for strictly military purposes have found their application in the time of peace, mechanisms of this kind best explain in the words of the English thinker and politician Edmund Burke: [...] “Nor will short experience introduce us to this practical science, because the real effects of social enterprises are not always direct; something that at first glance seems harmful may bear excellent fruit in the future, and the initially unsuccessful results may contribute to this perfection. There are also reverse situations: very credible projects, which are promising at first glance, often have disgraceful and regrettable consequences.”

The changes which resulted in a decline in the importance of classical types of military transport had a much broader dimension, due to the extremely rapid pace of technological development.

The introduction of tactical thermonuclear weapons for the US army, NATO and the Warsaw Pact, as well as the intensive development of long-range missile weapons and strategic aviation, has led to a situation in which any use of such weapons would be the cause of extermination of both sides of the conflict. It should be stressed that the total nature of a nuclear war did not provide for the possibility for both sides to retreat the fighting troops. Also, the first-line tactical units attacking at high speed would be exposed to high levels of radiation. This necessitated an increase in the rate of attack in order to exploit the combat capability of first-line units before the development of the radiation disease.

The main factor that led to a situation where weapons of this type could not achieve superiority over the opponent and success was the intensive development of military satellites, radiolocation systems, electronic intelligence and modern cryptography in the 1960s. New means of reconnaissance meant that every regrouping of troops or even opening of a rocket silos or raising the rocket to the launcher was “seen” by the enemy – this way the element of surprise was eliminated.

Soon it turned out that the assumed operational goals could not be achieved with weapons of mass destruction. Thus one of Clausewitz's main theses that war is a continuation of the politics conducted by means of war has become obsolete in Europe at that time. Nearly one hundred years after the creation of the work *Przyszła wojna* [*Future war*], the central premise of Jan Gottlieb Bloch's doctrine of the impossibility of the outbreak of a common war due to its destructive nature is still valid. At that time Bloch argued that the extremely rapid technological development of armaments and the destructive nature of a total war would make both sides of the conflict hostage to modern military technologies, which cannot be used without risking the total annihilation of the army and the citizens of their own countries.

In other words, the assessments – premature, as it turned out at the time – have now been confirmed with the introduction of thermonuclear weapons. Since then, the ownership of the thermonuclear arsenal could only be seen in terms of psychological war, and its possible use, in consequence, could lead to the extinction of life on Earth. Since then, the confrontation of opposing camps has become a field of influence all over the world, where armed conflicts for indirect confrontation and testing of new types of weapons have been fuelled. The technological change has shifted conflicts more into economic. The arms race lost by Russia and the Warsaw Pact was the cause of the economic crisis, which de facto became one of the leading reasons of the fall of communism.