

ANDRZEJ GRUSZECKI
THE NEED FOR THE PROTECTION
AND PRESERVATION OF FORTIFICATIONS

Modern fortifications, popularly called bastion fortifications, constitute an important area in the history of architecture, which is suffering from dangerous neglect. Fortifications of this type first appeared in Italy at the turn of the 15th and 16th centuries, and developed into splendid geometric stars which on an unheard scale surrounded the cities of Europe and spread to other continents. These fortifications, first created by the genius of the Italian Renaissance, then developed by the Dutch and subsequently by the French, reigned supreme for four hundred years, up to the 20th century.

Medieval fortifications have not been neglected, as have bastioned fortifications, including those to the Gothic.

Where the Italian-type bastioned fortification remains close to residential building and is connected with architecture, as in the "palazzo in fortezza", it meets with general approval. But the more it becomes separate from architecture, the less interest it arouses. Early 17th century fortifications, with a separate fortified ring (often earthen) encircling the palace, have lost their appeal as historic relics, and also the interest of historians.

From that time on, for a period of about 300 years, it has been something of a blank spot in our history. This state of affairs has had a disastrous effect on these historic relics, which have been left unstudied and unprotected, liable to damage and destruction by anyone who happened to need the bricks or soil from the ramparts.

This lack of interest in bastioned fortifications cannot be explained by their lack of historical value. On the contrary, they offer highly valuable material for many forms of historical research work. Miles of these fortifications surrounded the major towns, castles, fortresses, military camps and bridges of Europe. Contemporary atlases and engravings show how universally these fortifications appeared and what an important part of the landscape they constituted. The history of wars makes the importance of fortresses — or entire chains of fortresses — quite obvious. The taking and defence of fortresses were among the decisive factors in many campaigns. The constant appeals of prominent thinkers of those times for the equipping and building of fortresses also prove their importance.

The function of defence had a considerable influence on architectural form, not only when the defense factor was really necessary, but also as a decorative style.

An art historian who does not take the defensive factor in Renaissance architecture into consideration is bound to give an incomplete picture of it.

The problem of defence was among the basic factors in urban planning. It affected the choice of site for building the new town, its shape and design. This can be seen particularly in Renaissance towns, where the regular, star-shaped design of bastioned fortification resulted in a symmetrical, regular urban plan. Urban fortifications had the advantage of providing safety for the inhabitants, but also the disadvantage of constricting the developing town.

There was certainly no lack of interest in the subject among architects of bygone days, when fortress builders were well-paid and sought-after. Those were the times when a military engineer "was accounted as worth one third of the entire army". During the Renaissance an interesting type of architect-builder appeared, often possessing a wide range of abilities, ranging from building magnificent churches to severe military architecture. The Italian Andrea del Aqua and the Dutchman Tylman of Gameren, who worked in 17th century Poland, are good examples of this type of architect. The problems of solving the divergences between offense and defence, which arose in the 15th century as a result of the fast development of artillery, fascinated the most brilliant minds of the time. Leonardo da Vinci designed fortifications, and Albrecht Dürer in his plans for raised cannon batteries was 300 years ahead of this time. A large number of treatises and publications from that period are still in existence and the wealth of invention shown by the work of the builders has rarely been equalled.

European fortification developed over a period of several hundred years as a result of the constant search for better protection against artillery fire. Actually, mid-19th century artillery differed to only a small degree from that of the 16th century. The cannon-balls were round and were loaded from the front of a straight-bore barrel. The accuracy, range and effectiveness of this kind of cannon was of course negligible, and so fortresses could still be built of the same materials and on the same principles as before. It was not until the second half of the 19th century that a tremendous development in artillery took place, with the introduction of breech-loading cannons, rifled barrels and explosive shells. As a result of this, many attempts were made to adapt fortifications so that they would withstand the increasingly effective artillery fire. The defense-line was extended by building rings of forts around the castle and introducing concrete and steel covers. Fortifications were sunk lower and lower in the ground. But all these attempts could not save them, and today in times of atomic weapons they are of course completely obsolete. Bastioned fortifications, like mediaeval castles, have become historic relics, but since this process has taken place within one generation most people are quite unaware of the historic value of fortifications, and consequently these relics are in need of protection. All the more so since there is now a very natural tendency to look down on forms which have recently become out-of-date. This had happened to the Gothic, Renaissance and Baroque styles, and now it is the turn of the Neo-gothic.

One of the reasons for the lack of interest taken in bastioned fortifications is the fact that there are not enough trained historians of fortification. If professional fortifiers still existed today and if some of them were interested in history they could deal with the history of fortification. But since the need for that profession long ago ceased to exist, experts on fortification must be recruited from two professions close to it: architecture and military science. But in spite

of its interest of historians of technology and town planning, fortification does not lie in the line of interests of the art historian nor of the military historian. As a result of this state of affairs there are only very few people dealing with fortification.

Another reason for the architects' and historians' lack of interest is the fact that during their studies they are given an insufficient knowledge of bastioned fortification, or none at all. However, students of architectural departments in Poland are now being more and more thoroughly trained in this matter.

Even before the war in Poland, research was being done in this field, and these fortifications were being given increasing protection. In the winter of 1965 there was a conference on the research and preservation of modern fortifications in Poland from the 16th century up to the German fortifications of the last war. At the moment talks are being held the well-disposed army authorities with regard to the study and preservation of fortifications used by the army. In other countries the study of fortifications is more neglected. Countries where bastioned fortification had originally developed, like Italy, Holland and France have only a very few individual experts studying fortifications. In Paris, at the Galerie des Plans-Reliefs of the Hôtel des Invalides, a unique collection of bastioned fortification models is allowed to deteriorate for lack of funds. These extremely intricate models, some of which measure about 30 square metres, date back to the times of Louis XIV.

Similar measures as in Poland would seem to be called for in other countries. Specialists in modern fortifications ought to organize themselves within the framework of an international society which would provide them with the necessary base for a campaign on these lines.

ANDRZEJ GRUSZECKI
NECESSITÉ DE PROTÉGER
ET CONSERVER LES FORTIFICATIONS.
RÉSUMÉ.

Les fortifications modernes, appelées communément fortifications bastionnées, apparurent d'abord en Italie aux alentours des XV^{ème} et XVI^{ème} siècles et se développèrent en de splendides étoiles géométriques qui, sur une grande échelle, entourèrent alors les villes d'Europe et se répandirent sur les autres continents. Ces fortifications eurent la suprématie pendant 400 ans, jusqu'au XX^{ème} siècle, et jouèrent un rôle très important dans le développement de l'architecture et du plan urbain. Malgré l'incontestable valeur de ces bastions, le nombre de spécialistes en ce domaine n'atteint pas la douzaine. L'insuffisance des recherches et de divulgation sont la cause du faible intérêt porté à leur préservation.

Le magnifiques édifices sont en train de s'écrouler et de nombreux autres, démantelés, ont disparu sans laisser de traces. Et cela s'observe particulièrement de nos jours par suite de l'industrialisation rapide et de l'agrandissement des villes, et plus spécialement pour les fortifications construites au XIX^{ème} siècle.

Dans ces conditions, le besoin urgent de protéger ces ouvrages historiques, tout comme les fortifications gothiques furent protégées au XIX^{ème} siècle, se fait sentir.

Déjà avant la guerre, en Pologne, des recherches avaient été faites en ce domaine et les fortifications avaient été mieux protégées.

L'hiver prochain, une conférence aura lieu sur l'étude et la préservation des fortifications modernes en Pologne, du XVI^{ème} siècle aux fortifications allemandes de la dernière guerre, et des conversations auront lieu à ce moment-là avec les autorités militaires, qui sont bien disposées, en ce qui concerne la préservation des fortifications utilisées par l'armée.

De semblables mesures pourraient, semble-t-il, être demandées à d'autres pays. Les spécialistes en fortifications devraient jeter entre eux les bases d'une société internationale qui ouvrirait une campagne en faveur de ces édifices. Et le moment serait propice pour trouver le moyen de protéger les fortifications modernes.