

Military Technology

The armored knight mounted on his horse is the most prevalent image of medieval warfare. Until about the eighth century, infantry dominated among armies in medieval Europe. Afterwards, beginning during the time of Charlemagne, armies began relying more and more on cavalry. Several developments contributed to the rise of the central role of the mounted knight in warfare. The stirrup, introduced in the eighth century from the Mediterranean, gave knights more maneuverability on their horses. New harnesses, which distributed the weight among pressure points along a horse's shoulders instead of its neck, and horseshoes in the tenth century, further improved the fighting ability of the knight. Increased body protection followed. Knights, coming from the nobility, provided their own armor. This usually included mail shirts, helmets, shields, and lances, but there was no standardization. The Normans introduced leg protection, and breastplates appeared at the end of the fourteenth century. With increased body protection, the shields that knights carried became smaller. Helmets also evolved. New helmets with nose plates obscured the identity of a knight. As a result, knights began embossing elaborate coats of arms on their armor so that they could recognize who their allies were on the battlefield.

All of the armor necessary to protect the mounted knight and his horse, which he also provided himself, was expensive. It was also heavy. The more armor a knight wore, the greater immobility if thrown from his horse. The latter became ever more apparent with two technological advances in weaponry. In the thirteenth century, the crossbow appeared. Firing metal bolts, it would penetrate a knight's armor. The major limitation was that the crossbow had to be loaded for a single shot, which was short range and not very accurate. If it struck a knight, however, he would fall and his heavy armor would many times prevent him from remounting his horse. A little later in the thirteenth century, the longbow appeared. Favored and mastered by the English, the longbow had a longer range and fired more than once rapidly. While the increased range made it less effective than the crossbow in penetrating armor, the rapid fire of the longbow created chaos on the battlefield, scattering troops.

The technologies in weaponry had at least two serious long-term effects on the noble knight. The first was a heavier reliance on infantry, which could reassemble more quickly when the longbow created chaos. The second was the increased use of mercenary soldiers, or soldiers for hire. Those who could afford the armor, horse, and the best training became highly valuable commodities for monarchs and princes. Vassals owed on average forty days of military service per year. Better trained and equipped mercenary soldiers, whose sole profession and responsibility was to fight and who often brought their own troops with them, were seen as more reliable. They stayed for the duration of a battle. Due to their status, knights from the nobility still commanded by and large on the battlefield, but the for-hire soldier became a staple of longer-waged wars by the mid-thirteenth century.