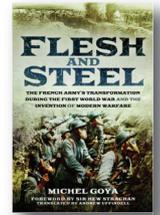


BOOK REVIEW:

Flesh and steel during the Great War: the transformation of the French army and the invention of modern warfare

by Michel Goya

Pen & Sword Military: Barnsley, South Yorkshire; 2018; 323 pp.; ISBN 9781473886964;
RRP \$65.99 (hardback); Ursula Davidson Library call number: 570.11 GOYA 2018.



Flesh and Steel describes the transformation of the French army from a 19th century force in 1914 to arguably 'the most modern in the world' by 1918. This transformation involved a high-tempo process of bottom-up tactical and technological innovation in response to battlefield experience and enemy innovation, coupled with adaptive doctrine refinement and teaching from the top down. The book challenges the assertion of British historian, John Terraine, that the British army won the final offensive of the 'Hundred Days' single-handedly.

Flesh and Steel was originally published as *La chair et l'acier: l'invention de la guerre moderne, 1914-1918* ('Flesh and steel: the invention of modern warfare, 1914-1918') by Éditions Tallandier, Paris, in 2004. Tallandier reissued it in 2014 as *L'invention de la guerre moderne: du pantalon rouge au char d'assaut, 1871-1918* ('The invention of modern warfare: from red trousers to tanks, 1871-1918'). This first English edition was translated from the French by Andrew Uffindell, a leading British military historian and accomplished translator of French works.

The author, Dr Michel Goya, served in the French army from 1983 to 2009 and reached the rank of colonel. At the Institut de Recherche Stratégique de L'École Militaire, he led the study of new forms of war and the development of French military doctrine in the wars following '9/11'. He has published on the war in Iraq and experience of front-line combat, as well as critiques of France's strategy in the national press. He undertook the research for this book while reading for his PhD in history.

The book contains a very useful foreword by eminent military historian Sir Hew Strachan, which places the book in its context and compares it with similar works. It also has three helpful appendices; extensive notes and references; and an index.

Flesh and Steel begins by discussing the development of various schools of military thought in France from the Franco-Prussian War of 1870 to 1914, thereby setting the context for what is to follow. Goya then describes the flaws in the learning process at the outbreak of the war. A series of chapters follow that look at the fate of the various arms (infantry, heavy artillery, cavalry *etc.*) in the early stages of the war, how weaknesses were revealed in the weapons systems available, the tactics employed, and the command and control arrangements. We then learn how the 'pressure of the front' led to tactical innovation and micro-transformation at the front, before filtering back to General Headquarters. This led to the issue of new army-wide doctrine which was assimilated into the army through training.

Concurrently, new technologies were being developed and emerged rapidly onto the battlefield, the most notable of which being aircraft and tanks. It took time to evolve, evaluate and adopt tactics which optimised their utilisation.

For me, the most interesting chapter was the final one which describes how 'the Grand Army of 1918' emerged so rapidly from the failure of the Second Battle of the Aisne and General Lavelle's grand offensive of April-May 1917, followed by 'mutinies' in the French army in June. Further grand offensives were put on hold while morale was rebuilt under the leadership of General Pétain through a series very successful limited offensives, such as the Battle of Malmaison in October which cost the Germans 50,000 men to French losses of 12,000.

Next, to absorb the expected German offensive, a new system of defence-in-depth was implemented, coupled with a re-organisation of logistics behind the front to enable rapid re-deployments, especially of artillery. During the German 1918 spring offensive, despite initial tactical reversals, it was strategically successful.

Finally, the offensive weapon was forged, based on manoeuvre, mastery of the 'deep battle', 'shock troops' and combined arms – the co-ordinated use of 'new' infantry, machine-guns, tanks and aircraft supported by overwhelming artillery. This honed weapon proved very effective in the final 100 days offensive which opened on 8 August 1918 with the Battle of Montdidier – the 'model battle'.

The rapid learning, adaptation and transition which the French army undertook in the period 1914-18 is a process that most armies face when they enter a new war and some armies handle it better than others as the 2017 Army History Conference case studies reveal – one case study citing the 2004 French edition of this book¹.

Flesh and Steel may not appeal to the general reader. It is really for aficionados of military strategy, grand tactics and tactics; and for students of rapid learning and adaptation during war. It should be essential reading for army officers and its omission from the *2019 Australian Army Reading List*² is an oversight which the Army Research Centre should rectify in the next list.

David Leece

¹Elizabeth Greenhalgh (2018). The French Army on the Western Front. pp. 75 – 93 in Peter Dennis (editor), *2017 Chief of Army History Conference: the skill of adaptability: the learning curve in combat* (Big Sky Publishing: Newport, NSW).

²Duncan Foster (2018). *Australian Army reading list, 2019* (Australian Army Research Centre: Canberra).