



**Paul Strong & Sanders Marble *Artillery in the Great War*, Pen & Sword, 2011. 272pp, £19.99**

Nick Evans submitted his review when I had virtually finished mine so you can now read reviews by both a Gunner and an Infanteer on this important book. It is available at an even lower price on Amazon. **Ed**

“...the artillery's direct influence on the planning and conduct of operations has rarely been examined... in this book, we aim to start filling that gap.”

So say Paul Strong and Sanders Marble in their introduction and it is a mighty task that they have set themselves. Artillery is not a glamorous subject and if studies of guns and ammunition might attract geeks then a study of artillery operations runs the risk of being an insomnia cure for readers other than specialists. So congratulations to them and their publisher for firing the first rounds.

As the authors say, despite the importance of the subject, the literature is not particularly extensive. They pay tribute immediately to Jonathan Bailey's magisterial *Field Artillery*<sup>1</sup> and Bruce Gudmundsson's superb *On Artillery*<sup>2</sup> which speaks so eloquently (and almost alone in English) on the French and German arms. In the 1970's we had the works of Ian Hogg<sup>3</sup> which covered artillery weapons with a verve and style suitable for readers of *Eagle* and *Look & Learn* though they were no less scholarly in content for all that.

The 1980's brought the works of Shelford Bidwell covering the doctrine of the Royal Artillery<sup>4</sup> but, immensely stimulating though they were concerning the nature of the Great War at the time, they were not and did not set out to be comparative studies of artillery and neither did Sir Martin Farndale's *History of the Royal Regiment*<sup>5</sup>. Given the decisive nature of artillery to the conduct of operations a comparative study can be immensely revealing – as Gudmundsson demonstrates in *On Artillery*.

Paul Strong and Sanders Marble start off straight away by looking at Le Cateau. It is the traditional starting point for looking at the Royal Artillery in the Great War but here they use it to illustrate the debate about whether to deploy one's guns in the direct fire role for greater effectiveness at the expense of vulnerability or to conceal them and fire from cover. 5<sup>th</sup> Division chose the former approach losing 27 guns (over one-third of its strength) and 200 men whilst 3<sup>rd</sup> Division lost only 4 expendable sniping guns and three men.

The early battles in the east revealed another lesson. The Russian artillery was traditionally well-equipped but for operational reasons its logistics in central Poland were overstretched.

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<sup>1</sup> Jonathan Bailey *Field Artillery & Firepower*, Naval Institute Press 2004

<sup>2</sup> Bruce Gudmundsson *On Artillery* Praeger 1993

<sup>3</sup> Ian Hogg *The Guns 1914-1918* Pan Ballantine 1971

<sup>4</sup> Shelford Bidwell *Gunners at War* Arrow 1978, Bidwell & Graham, *Firepower British Army Weapons & Theories of War 1904-1945*, London 1982.

<sup>5</sup> Sir Martin Farndale *History of the Royal Regiment of Artillery, Western Front 1914-18*, Royal Artillery Institution 1986.



Their guns at Tannenberg were hampered by ammunition shortages due to the distance from the railheads. After all, the shell is the weapon; the tube only the means of delivery.

They then look at the artilleries of the competing nations – Germany, France, Britain, Russia, Austria and Turkey. Amongst all the hoary debates about Butchers and Bunglers, the learning curve (or process) and even Easterners and Westerners it is often still not appreciated just how significant a factor in the context of planning and conducting operations was the capability of artillery. The number and quality of German weapons and the training of her artillery arm gave her an advantage during the first two to three years of the war that could only be countered with a lot of casualties and, occasionally, a great deal of luck. And if the British and French had difficulties dealing with them the problem for the Austrians, Russians and Italians was far worse with largely illiterate populations and a much lower proportion of officers who took their profession seriously. The authors demonstrate that greater firepower gave German forces a huge advantage especially against second rate opponents but one suspects that training, staffwork and logistics were just as important.

Having quickly realised that direct fire was no longer feasible all the participants at first directed their efforts at knocking out the enemy trenches and machine guns. This view did not last long. Very quickly it was appreciated that the main component of the defence was not so much the enemy's barbed wire and machine guns but his batteries. The British came to understand this during Neuve Chapelle and Petain was simultaneously demanding better training for his gunners and the latest calibration techniques (the measuring of the barrel wear of every gun) for the same reasons. The authors' analysis of Loos clearly reveals that the planners had lots of good ideas and did their best with the resources at their disposal but although there were more guns and shells than ever before there were still nothing like enough. They also consider questions such as the need to balance high rates of fire offering greater effectiveness at the target against the greater wear on guns (and gunners) and thus the unplanned requirements for repair facilities

It was not just Britain that needed to expand its artillery arm enormously. In any event expansion was not just a question of churning out lots of guns and shells (in itself the equivalent of converting the economy from metal bashing to high precision manufacturing) but gunnery itself was a highly technical skill. Training gunners took a long time and training batteries, regiments and commanders in new techniques took even longer. At the same time commanders and soldiers everywhere had to learn the hard way. The authors show repeated examples of the moral benefits of spectacular bombardments – until it is discovered that the defences underneath them are virtually unscathed.

France's artillery doctrine pre-1914 had been muddled and relied almost entirely on the 75, a weapon which had virtually no indirect fire capability. It was immensely fortunate that orders for new weapons, especially howitzers, had been placed in 1913 and started to come on stream two years later. Given the political necessity to attack in 1915, all this directly affected the massive casualty rates of 1915 and France's ability to continue the war two years later.

In the Dardanelles campaign both sides had artillery support that was entirely inadequate in terms of numbers and calibres of weapons and quantities of ammunition. But whilst the more professionally trained allied artilleries were better able to identify solutions that still not solve the question of materiel. The Turks were in a worse position because of the length of their line



of communication disrupted as it was by submarines as well as the poor quality of the ammunition that it did deliver.

The Italian front offered different challenges again. Neither side was particularly well-equipped, led or trained but a profusion of good mountain top observation positions was faced by defences tunnelled into solid rock which were proof against the heaviest shells. British officers posted there in late 1917, nearly three years into the war were appalled at the non-existent liaison between infantry and artillery and limited quantities of both weapons and shells, vast though these appeared to their Italian allies.

In short, the artillery war between 1914 and 1918 was highly dynamic. Each combatant started the war with an arm that was very different in terms of doctrine, training and weaponry – though low ammunition stocks were common to all. Whilst each therefore found different solutions by 1918 their artillery arms tended to share certain characteristics, however. France, Britain, the USA and Germany could deliver predicted hurricane bombardments of great weight within a few days or even hours of planning and operations were based around them. Their less well educated and resourced colleagues in Austria, Russia and Italy do not appear to have reached this level of technical competence during the war - and I admit I would have liked to see a little more on the comparative capabilities by, say, late 1917 as the authors offer for 1914.

As the Germans were mostly on the defensive they tended to seek tactical solutions and decentralise their weapons only having to change course prior to the 1918 offensives. Then it would seem that the efforts of their individual junior commanders were less effective than the huge, centralised and institutional changes implemented by Britain and France. Augmented by the total application of their nations' industrial and scientific resources, by 1918 they were overwhelming the Germans both with weaponry and the scientific application of it. .

The Brusilov offensive revealed that the Russian artillery was by no means as hidebound as some painted it at the time but it seems true that lessons of the Great War were better learnt by the new Revolutionary Government than by that of the Tsar.

The authors achieve their objective of illustrating the changes undertaken by artillery during the war and the different problems faced by each participant. These combatants did not always find it easy to identify the solutions – or even the problems themselves – and from 1919 appeared mostly to be content not only to forget them but also how they kept changing. It is to be hoped that this relatively small book will at least show historians and enthusiasts the extent of the artillery task in 1914 even if, like its historical counterparts, it cannot bring instant success.

**Andy Grainger**

**Paul Strong & Sanders Marble *Artillery in the Great War*, Pen & Sword, 2011. 272pp, £19.99**

*C'est avec l'artillerie qu'on fait la guerre.*

'There's too much \*\*\*\*\* artillery in this war.'<sup>6</sup> This graphic, apparently authentic but actually fictional remark shows why this book is important. Artillery shaped 1914-18. This book describes the part played by the arm on both sides. It is a heroic endeavour, not only due to artillery's omnipresence, but also because of limitations of space: the text is only just over 200 pages long. This is a weakness, given the task's scale, admittedly one which the authors are not responsible for.

They have chosen a chronological structure, perhaps for reasons of space, but it can cause problems as for example in Chapter 4 on 1917 where they have to revert to 1916. This approach also perhaps makes them cover peripheral events which have little bearing on the subject of the book. The reviewer doubts whether there is anything salient from Serbia apart from the fact that it lacked artillery. Whether there is quite enough material on the non-British artilleries is questionable; your reviewer would have been interested to learn more about French and German Counter Bombardment (CB) techniques.<sup>7</sup>

The book doesn't probe the effects of technology deeply enough; it is key to understanding artillery and its part in 1914-18. Realising that conventional artillery firing Indirect has a very low individual Single Shot Kill Probability (SSKP) even today and that the weapons of 1914-18, due to poor fuzes and metallurgy, proved excellent at moving earth, less effective at killing, explains much.<sup>8</sup> Your reviewer argues that between July 1916 and November 1917 artillery's aim was shifting from destruction towards neutralisation. To destroy defences days of fire were needed with massive collateral damage, handicapping mobility and logistics, not to mention losing surprise. One corps in two days in 1917 nearly equalled the total British artillery ammunition expenditure in 1899-1902.<sup>9</sup> Hence the massive crater fields, the extreme mobility problems on the battlefield, the extraordinary logistic efforts, requiring construction of massive infrastructure. Switching towards neutralisation by disrupting C<sup>3</sup>, by engaging HQs and telephone exchanges reduced these problems. By 1918 Durchbruchmuller's hurricane bombardments with fire well before troops advanced were dated, the British having the capability to achieve more by opening fire at Z-Hour.<sup>10</sup>

The authors seem sometimes to confuse guns and howitzers. Too often historians use the former to describe all artillery pieces. There are deep technical, hence tactical differences

<sup>6</sup> Pte Jakes in F Manning *The Middle Parts of Fortune*, suitably bowdlerised! A more scholarly estimate is in *Statistics of the Military Effort of the British Empire during the Great War* (1922), p 405 for the 7578 pieces, 2519 mortars and 15.8 million shells in France in November 1918. Ibid p 421 shows 187 million shells sent there between 1916 and 1918.

<sup>7</sup>

A Horne *The Price of Glory Verdun 1916* (1978), p243 praises French CB. Your reviewer believes that CB was key with greater production, in giving Allied artillery predominance by 1918.

<sup>8</sup> Your reviewer observed the effect of an armoured division's artillery firing on a platoon position for 5 minutes. Only one trench had been hit and though most above surface targets were struck, few had more than one hole; admittedly they were substantial. He concluded that with conventional ground burst shells fuzed far more effectively and which splintered much better than those of 1945, let alone 1918, even medium artillery was best at neutralising not destroying defences.

<sup>9</sup> Lt Gen McNaughton *The Development of Artillery in the Great War* (nd), p 18.

<sup>10</sup> Comparing the British fire plan at Cambrai and the German in March 1918 is revealing, Capt W Miles *Military Operations France and Belgium (MOFB) 1917III* (1948), pp 25-6 and Appendices 6a, b and c and Brig Gen JE Edmonds *MOFB 1918I* (1935), pp 159-160, 162. But the Germans had few tanks so more preparation was needed and they were falling behind the Allies in artillery, Maj Gen JBA Bailey *Field Artillery* (Annapolis 2004), p 241, so fire had to be opened earlier. This review uses his nickname: 'Breakthrough Muller!'

meriting explanation. Similarly, in your reviewer's opinion, they wrongly describe 'calibration' as an offshoot of sound ranging.<sup>11</sup> Despite the limits of space the book needs a technical glossary. Similarly the critical switch from Direct to Indirect Fire and its tactical implications merit explanation.<sup>12</sup>

Even so, this is an important book and there's much to interest; the authors give key insights into a critical feature of the war, one too often ignored by historians. Another major strength is that they examine both Allies and Central Powers, so enabling readers to see artillery in context. But in the space available this means losing depth of fire. To use a gunner metaphor they have engaged a Victor Target, but need to add 100 before ordering fire for effect.<sup>13</sup> A few more shells would have helped too.

### **Nick Evans**

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<sup>11</sup> Nick Evans *From Drill to Doctrine* (KCL 2009), Glossary. Strong and Marble *Artillery* p 149. Calibration ie measuring an individual piece's muzzle velocity was developed by coast defence gunners pre-1914, Brig RGS Bidwell *Gunners at War* (1970), p 32. Your reviewer feels that the reason in 1914-18 was to increase the accuracy of Predicted and, in the case of Observed Fire, to reduce the need for ranging, ie the adjustment of shells onto the target, prejudicing surprise. Using calibration, met data and survey raised SSKP and surprise and saved shells. But sound ranging helped in calibrating pieces, Miles *MOFB 1917III* p 323.

<sup>12</sup> The authors cite Bidwell *Gunners* and Bailey *Artillery* in their bibliography. Though they cover many technicalities, directing readers to say Col MP Manson *Guns, Rockets & Mortars* (1997) would give greater insight.

<sup>13</sup> This in the RA's old terminology was a target for a corps' artillery. In World War 2 they could be engaged within 30 minutes suggesting the firepower generated by the RA, Bidwell *Gunners* p 200. This mission, effectively an army target, involved 668 pieces; the response time was 33 minutes. It is noteworthy that the Germans fell behind the Allies in artillery in the Second World War and that Russian Front veterans fighting in Normandy were staggered by the weight and efficiency of Allied artillery fire.