Terry Copp, ed., *Montgomery's Scientists: Operational Research in Northwest Europe* – *The Work of No.2 Operational Research Section with 21 Army Group, June 1944 to July 1945.* (Waterloo, Ontario: Laurier Centre for Military Strategic & Disarmament Studies, Wilfrid Laurier University, 2000). Pp. 478, photos and maps b&w, hardcover.

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Those skilled at the art of war are also dependent upon the science of war. Montgomery and his 21st Army Group were no exception. Although early Second World War operational research had focused solely on various aspects of radar gunnery, the scope of Army Operational Research work was later expanded to assess equipment and to advise command on infantry and armoured tactics. Formed in July 1943, No.2 Operational Research Section served with 21 Army Group and established a firm basis for OR in Northwest Europe.

Professor Terry Copp of Wilfrid Laurier University provides a solid context for the work of No.2 ORS and introduces the reader to the key players – men like Brigadier Basil Schonland and Canadian physiologist Omond Solandt (later chairman of the Defence Research Board from 1947-56). By the end of the war, OR had proven successful and influenced many aspects of 21 Army Group planning. "A new discipline had been created," Copp concludes, "and henceforth no modern military force would try to function without the aid of a large operation research team." (26)

Montgomery's Scientists contains the full text of the report of No.2 ORS, reproduced from a clean copy held by the Library of the United States Military History Institute at Carlisle Barracks, Pennsylvania. The LCMSDS has done a great service by publishing this valuable, primary resource and thus rendering it more accessible to researchers. The range and depth of material provided is impressive. Part I, which composes nearly half of the entire volume, deals with heavy bombing of enemy forward positions and interdiction, the utility of fighter and fighter-bomber attacks on ground forces (including psychological warfare), and miscellaneous air support matters. Reports in Part II assess artillery: the accuracy of predicted fire, counter battery, its effects on morale, and its role in the assault on the beaches. Part III analyzes Allied and German tank casualties from June-September 1944, and assesses factors governing the speed of the armoured advance after the Rhine crossings. Part IV contains reports on infantry officer casualties, countermortar activities, the effectiveness of Allied anti-tank guns and weapons, and an assessment of the assault crossing of the Rhine. The reader learns that the Allies were not amateurs floundering against a superior foe, nor were they uncritically complacent in their successes; they continuously sought more effective and efficient means to execute operations and decrease casualties.

The Operational Research reports take the reader from the D-Day landings through to the Rhineland campaign. Scholars of individual operations (from Bluecoat, Charnwood, and Clipper, to Plunder, Varsity, and Veritable) will find ample material to help appreciate and assess operational and tactical effectiveness – as well as shortcomings. The book is

filled with a wealth of detailed tables, charts and graphs filled with substantiating evidence. Thankfully, the editor has provided a comprehensive, three-page glossary to help negotiate the predictable minefield of acronyms and abbreviations, as well as a detailed index. Many of the original maps have been handsomely redrawn, and the overall presentation is crisp and clear.

This is certainly not the classic military history narrative filled with gripping accounts of valour and individual horrors. Instead, it is a technical resource that should facilitate more grounded, critical study of air, army, and (to a lesser extent) sea operations in the Northwest European theatre. The editor prefaces the book with the statement that more volumes documenting the contribution of operational research in WWII are forthcoming. If this volume is any indication, these should be eagerly anticipated by serious scholars of the Allied campaign in Northwest Europe.

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