

# A Re-examination of the Nineteenth Century French Influence on American Mathematics Education through Textbook Author Charles Davies

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The French influence on American mathematics education in the nineteenth century by way of the United States Military Academy at West Point is well documented. When Sylvanus Thayer took over as superintendent of West Point, he initiated a number of reforms that reoriented the school towards the model of the École Polytechnique, including by requiring hours of French language classes each day so that the cadets could read French mathematics textbooks. Also under Thayer's superintendency, Charles Davis served as Assistant Professor and then Professor of Mathematics at the school. In Davies' long career at the school, he taught at least 780 cadets, many of whom taught mathematics themselves and West Point and at other colleges around the United States after graduation. Davies also spread his influence by publishing French-influenced textbooks, including translations of French works, which were so popular that they dominated the American market in the nineteenth century.

Some authors have emphasized the wide spread of French curriculum and methods throughout the United States by way of Davis' textbooks and the improvement American mathematics education generally (Grabiner 1977; Simons 1931). Other authors have expressed a more skeptical view of the extent or depth of French influence in these years (Parshall & Rowe 1991; Preveraud 2014; Cajori 1890). This study takes a closer look specifically at Charles Davies as a conduit of French influence. It examines Davies' 1835 translation of Bourdon's *Algebra* to see what Davies chose to include from the original and what was left out. While Davies' translation of Bourdon was important because of its great influence on schools throughout the United States throughout the 19th century, it was also imperfect as a vehicle of French mathematical knowledge because it "watered down" the material in an important way -- by largely avoiding the concept of a "function." It is undisputed that American mathematics education lagged behind the French long after and in spite of Davies' influence, and examining the details of his translation helps to explain that disconnect.

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