At the end of the 19th century, applications played a significant role in the teaching of undergraduate students of mathematics in the United States. This is clear from scholarly work by Florian Cajori, an early president of MAA. But by the middle of the 20th century, applications of mathematics were rare in the undergraduate curriculum. Today, once again, applications are common. This paper will describe the key milestones marking this return of applications in the second half of the 20th century. In addition we will describe what we consider to be the main reasons why applications regained popularity. Some of these reasons are of an intellectual nature, but some concern the impact of social factors on mathematics education. (Received September 01, 2009)