Today most cities emphasize the construction of separate bicycle lanes as a sure path toward sustainable urban mobility. Historical evidence shows a singular focus on building bicycle lanes without embedding them into a broader bicycle culture and politics is far too narrow. Bicycle lanes were never neutral, but contested from the start. Based on comparative research of cycling history covering nine European cities in four countries, the article shows the crucial role representations of bicycles play in policymakers’ and experts’ planning for the future. In debating the regulation of urban traffic flows, urban-planning professionals projected separate lanes to control rather than to facilitate working-class, mass-scale bicycling. Significantly, cycling organizations opposed the lanes, while experts like traffic engineers and urban planners framed automobility as the inevitable modern future. Only by the 1970s did bicycle lanes enter the debate as safe and sustainable solutions when grass-roots cyclists’ activists campaigned for them. The up and downs of bicycle lanes show the importance of encouraging everyday utility cycling by involving diverse social groups.