A central problem in object identification in general and face identification in particular is to build stable representations from entities that vary, both rigidly and non-rigidly, over time, under different viewing conditions and with altering appearances (Bruce, 1994). This talk discusses possible cognitive mechanisms to overcome these problems, particularly how effective new facial information can be integrated into prevailing face representations. Five experiments demonstrate that these mechanism are highly flexible even when highly familiar faces were used. Furthermore, the data indicate that facial representations are presumably stored in an exemplar-based way. This enables the cognitive apparatus to flexibly integrate new appearances of a face. However, with such a technique, the recognition of similar looking people also seems also to be very fallible.