In most situations we are accustomed to, e.g., Bergman and Hardy spaces in the disk, the reproducing kernels do not vanish. Neither they do if we consider the later spaces with fairly general weights, for example comprised from moduluses of analytic functions. Yet in the "cut-off spaces" formed by polynomials of degree less or equal to $n$ this is not necessarily true. We shall discuss what is known and the numerous compelling open problems that remain.