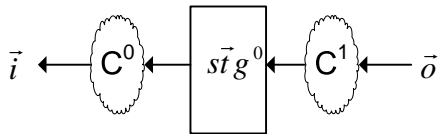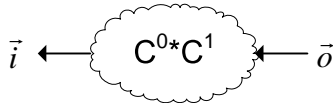a) An encoder with one pipeline stages

b) A decoder without pipeline

c) A proper decoder with pipeline