Abstract
Recent successes in visual recognition and game playing have led to media spec-
ulations of AI being just around the corner. It is worth taking stock of where we
actually stand, and the ways in which AI today falls spectacularly short of human
capabilities. In addition to big computation and data, we have been helped by
"big annotation" and "big simulation", but these will not be able to carry us all the
way in other components of AI. Child development suggests a wide variety of
learning mechanisms, which we can try to model and exploit. We have some
promising examples of a "constructivist" agenda at the interface of vision and
robotics, that I will point out.