

## 1998 Paper 7 Question 7

### Neural Computing

In Computer Science, a fundamental distinction has classically been erected between computing and communications. The former creates, requires, or manipulates data, and the latter moves it around. But in living neural systems, this distinction is less easy to establish; a given neurone performs both functions by generating nerve impulses, and it is not clear where to draw the distinction between processing and communication. The problem is even more obvious in artificial neural networks, where the entire essence of computing is modelled solely as changes in connectivity. Flesh out and discuss this issue. Would you argue that some of the limitations of efforts in artificial intelligence have been the result of such a spurious dichotomy?

[20 marks]