

Category: Uncategorized

Connecting to the Past

Authors:

Bruce MacDonald

Abstract:

Recently there has been renewed interest in neural-like processing systems, evidenced for example in the two volumes *Parallel Distributed*

Processing edited by Rumelhart and McClelland, and discussed as parallel distributed systems, connectionist models, neural nets, value passing systems and

multiple context systems. Dissatisfaction with symbolic manipulation paradigms for artificial intelligence seems partly responsible for this attention, encouraged by the

promise of massively parallel systems implemented in hardware. This paper relates simple neural-like systems based on multiple context to some

other well-known formalisms-namely production systems, k-length sequence prediction, finite-state machines and Turing machines-and presents earlier sequence prediction results in a

new light.