

reason for Lady-Macbeth's inability to persuade Macbeth to want to be king. Update the semantic network to reflect the new situation. [7 marks].

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wfc

----- Artificial Intelligence (Part II) 2000

#### Answer Guide

Semantic networks for this are illustrated in Winston and in Kodrakoff.

The chain of reasoning is: M-^SMacduff kills MacbethM-^T caused by M-^SMacduff is angry because Macbeth murdered Duncan and because Macduff is loyal to DuncanM-^T caused by M-^SMacbeth murders Duncan using a knife because Macbeth wants to be king and because Macbeth is evil.M-^T caused by M-^SLady-Macbeth persuades Macbeth to want to be king.M-^T Caused by M-^SMacbeth is weak because Macbeth married Lady-Macbeth and because Lady-Macbeth is greedy and ambitiousM-^T.

Suppose M-^SMacbeth does not like Lady Macbeth, and does not listen to herM-^T. This removes the M-^SpersuadesM-^T condition in the chain of reasoning. It is then not possible to prove whether Macbeth wants to be king or murders Duncan, or that Macduff kills Macbeth. It is still possible that Lady Macbeth could kill herself, as no reason supported by the above chain is present.