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<p>Tiivistelmä-Referat-Abstract</p> <p>In this master's thesis some solutions to the backward induction paradox as well as some ways to regain the paradox are examined. Backward induction is a method to solve finite, extensive games of perfect information. The main idea is, roughly, that the players choose the best outcome at each nonterminal node of the game, starting from the last node and proceeding backward until the initial node is reached. The backward induction argument states that a rational player who shares the common knowledge of (or belief in) rationality, in a certain kind of games, chooses to end the game at each of his nonterminal nodes.</p> <p>Lately, the viability of backward induction argument has been questioned. The problem is that acting according to backward induction argument may lead to an undesirable outcome. This is known as the backward induction paradox.</p> <p>The solution proposals to the paradox assert that the assumption of common knowledge of (or belief in) rationality is the cause of the problems of the backward induction argument. However, these solutions can be shown to be fallacious and the backward induction paradox can be regained in several ways.</p> <p>The conclusion of this thesis is that, although the paradox remains unsolved, the studies on the backward induction paradox have been constructive; the argumentation has revealed a number of interesting properties concerning important assumptions behind the backward induction argument. Especially, the assumptions concerning players' rationality, common knowledge of rationality and counterfactual reasoning have turned out to be crucial in the backward induction argument.</p>			
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