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The Truel

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Abstract. A truel, or three-person expansion of a duel, has been a popular model of attrition in a struggle for survival throughout the history of game theory. The outcome is often very sensitive to the rules under which it is played—for example, who can shoot whom, when, and how many rounds of play there are—as well as the marksmanship of the players. While slight changes in the rules can produce dramatically different results, there are some general and quite robust findings that seem relevant to understanding real-world conflicts today.

JEL Classification: C73. *Keywords:* Truel; games of timing; backward induction; Prisoners' dilemma.

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