"A New Chess Variant: Crazy Random Chess; Combination of crazyhouse and Chess 960"

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Abstract

Our purpose was to introduce a Crazy Random Chess variant. We combine random chess with crazyhouse chess rules.

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Ethical Approval and Consent to participate

Ethical statement is not required since our study does not include human or animal participants.

Availability of supporting data

None

Competing interests

There is no competing interest to declare.

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Authors’ contributions

K.U. wrote the manuscript.

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Review article

Abstract

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Background
Chess is a popular game, and its rules have provided a complex environment. It leads players to enjoy complex problem-solving tasks. However, standard chess has led to memorizing specific chess patterns and openings. Therefore, many different chess variants have been created to make the game attractive again, such as crazyhouse, chess960, three check, king of the hill, antichess, atomic, bughouse, and horde. Creating novel chess variants may attract many people to play chess. For example, several tournaments have been held to select the best chess960 players (world chess960 championship tournaments and online Lichess tournaments). Crazyhouse chess is one of the most popular chess variants similar to bughouse chess. In this variant, players can reuse the chess pieces they captured from their opponents. However, there is a risk that players can memorize crazyhouse chess patterns and openings that maximize chess success. Therefore, combining random chess (chess960) with crazyhouse chess can help to improve the variant.

Goal of Manuscript:
Our purpose was to introduce a Crazy Random Chess variant. We combine random chess with crazyhouse chess rules.

Conclusion
A novel chess variant Crazy Random Chess, allows players to engage in complex problem-solving tasks.

Key Words: Chess, artificial intelligence, chess variants, crazy random chess, chess960, crazyhouse, bughouse.

Introduction
Chess is a game that has been studied by many researchers (Cardellicchio, 2014). Chess involves high-level cognition and complex problem-solving (Atherton, Zhuang, Bart, Hu, & He, 2003). Therefore, it may improve attention skills (Uludag, 2019). In addition, chess has been a testbed for artificial intelligence research. Many chess engines have analyzed human decision-making using advanced chess engines such as Stockfish and Komodo.

Previous literature examined the history of chess and its variants based on complexity (Cincotti, Iida, & Yoshimura, 2007).

A different study aimed to learn piece importance for three chess. The importance of pieces are different from those of standard chess (Droste & Färnkrantz, 2008). Various chess variants have been created to make the game attractive again, such as crazyhouse, chess960, three check, king of the hill, antichess, atomic, and horde. In crazyhouse chess variant, players can reuse the chess pieces they captured from their opponents. Similarly, in another chess variation, players play progressively longer series of moves rather than just making one move per turn (Janko & Guid, 2015). However, the literature is scarce on chess variations. Therefore, future studies should investigate chess variations in terms of complexity and decision-making.

Conclusion:
In summary, combining chess960 and crazyhouse chess can improve the game’s complexity. Thus, it may attract many people to play chess.

Limitations:
We did not calculate search-space complexity and draw rate related to Crazy Random Chess.

Suggestions for Further Studies:
Further applications should be created to allow chess players to play Crazy Random Chess. Random chess variations can also be used with other chess variations (e.g., king of the hill, horde, antichess, and three check). As mentioned in the previous study (Uludag, 2022), brain imaging methods can be used to understand the decision-making process associated with playing chess.
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