Card-rule variations in the game of *Risk*

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Introduction

Risk is a turn-based strategic board game, produced by Parker Brothers (now a division of Hasbro). Under the standard rules, three to six players attempt to control all 42 territories, grouped into six continents, on a political map of the world. (Alternate rules exist for two players.)   The game was originally released in 1957 and since that time the official rules, game markers, and territory designations have undergone changes. Rule variations have also been created, some of which have been incorporated into the official rules.

Official Rules Summary

Game setup begins with each player choosing a different colored set of game markers ("armies"), depending on the number of players. Then a player is randomly selected (e.g. through a role of dice) to choose to occupy one of the 42 territories on the board.   Players take turns placing one army on an unoccupied territory until all territories are occupied. A player is then randomly selected to have the first turn.

Besides the map-board depicting the world map and the markers representing armies, the game includes a set of 44 *Risk* playing cards, and 5 dice (3 red dice for the attacking player and 2 white dice for the defending player).

On 42 of the *Risk* cards is an image of one of the 42 territories on the map, as well as a military symbol (canon, infantry, or cavalry). The remaining 2 *Risk* cards are wild cards depicting no territory, but with all 3 military symbols. Players earn a card at the end of their turn if they have successfully captured at least one enemy territory that turn. At the start of any turn, a player may elect to turn in a matching set of cards in exchange for a specified number of armies. A matching set consists of either: 3 infantry, 3 cavalry, 3 canon, or one of each. Since a wild card has all three symbols, it can be counted as any of the 3 symbols for the purpose of making a matching set of cards.

The number of armies for a matching set of cards is:

- First set turned in during game: 4
- Second set: 6
- Third set: 8
- Fourth set: 10
- Fifth set: 12
- Sixth set: 15
- For each set thereafter the set of cards is worth 5 more than the previous set turned in.

Each player-turn consists of three phases: Initiation, Attacking, and Wrap-up.

Initiation

At the start of each player turn, the player draws a number of new armies based upon a formula of:

A= # of territories held / 3, rounding down to nearest integer, but in no case less than a minimum of 3 new armies

B = A number of bonus armies for each continent held in its entirety, depending on the continent as follows:

- Australia – 2
- South America – 2
- Africa - 3
- North America – 5
- Europe – 5
- Asia - 7

C = If a player has a matching set of *Risk* cards and chooses to turn them in, then they receive a number of armies based upon how many sets of *Risk* cards have been turned in so far during the game. They must turn in a set if they have 5 or more cards. Cards turned in are turned in for later re-use in the came after all 44 cards have been used once.

The player receives a number of armies equal to A+B+C and may place those armies on any territory or territories they hold at the start of the turn.

When turning in a matching set of *Risk* cards, some rule variants give the player one additional army for any card they turn in if they hold the territory depicted on the card. Depending on the rule variant, there may be a requirement for any army gained in this manner to be placed on that specific territory, or alternatively it may go into the pool of armies they may distribute to any territory they own.

Attacking

After the player has positioned his or her new armies on the board, they may (but are not obligated) to attack one or more adjacent territories. The outcome of the battle will be determined by one or more rolls of the dice. The following rules govern attacks:

1. In the event the attack is successful, the attacker must leave at least one army behind in the attacking territory, whilst moving to the newly gained territory at least as many armies as the attacker rolled dice.
2. Because of the above rule, the attacking territory must contain at least 2 armies In order to launch an attack (i.e. if the attacker has 2 armies on the territory they can hold one army on the territory and attack with one die representing the second army. If they have 3 armies on the territory they can hold one army on the territory and attack with two dice representing the second and third armies, etc.).

3. The attacker may not use more than 3 dice, even if they have more than 4 armies on the attacking territory.
4. The defender may elect to roll 1 or 2 dice, unless they only have 1 army on the defending territory.
5. An attacker may attack with fewer armies than they entitled to use on the attack, but more dice (up to the maximum of 3) provide better odds of success. Likewise, a defender may choose to roll only one die even if they have two or more armies on the territory, but doing so lessens their chance of success.
6. In each roll of the dice, each player is risking a number of armies equal to the number of dice they are throwing.
7. After the dice are thrown, the attacker's highest die is matched against the defender's highest die. The player with the higher die wins (defender wins a tie). Likewise, the attacker's second-highest die is matched against the defender's second-highest die. The player with the higher die wins (defender wins a tie). Any extra dice are disregarded and do not affect the results.
8. If the defender still has armies on the territory after the dice roll, the attacker may choose to attack the same territory again, attack elsewhere, or stop attacking.
9. If the attack results in the elimination of all defending armies then the attacker must move into the defeated territory at least as many armies as they rolled dice.
10. If the attack captures the defender's last territory then the defending player is eliminated from the game. The attacking player receives the defender's *Risk* cards. If the attacking player now holds 5 cards or more, they must trade in matching sets for armies until they hold fewer than 5 cards.
11. After moving into the new territory, the attacking player may optionally attack a new territory.

Wrap-up

When a player has finished attacking, if they have won at least one territory then they draw a single *Risk* card from the top of the deck.

Optionally, they may move any number of armies from a territory they occupy into another territory they occupy.

Play then passes to the next player.

Rule Ambiguities

A few ambiguities exist in the rules. For instance the rules state that if an attacking player eliminates a defender and as a result reaches five or more *Risk* cards, that they must turn in matching sets of cards to get below 5. However, the rules do not state if the attacker is permitted to turn in cards if they eliminate the defender and hold only 3 or 4 cards as a result. Likewise, if the attacker eliminates the defender and as a result holds 6 cards that include 2 matching sets of 3, the rules do not specifically state if they are allowed to turn in both pairs or not. The rules only specifically state that the attacker *must* turn in sets until they are below 5 cards. Some players agree to a clarification on this prior to play.

Existing Rules Variations

A number of rules variations have been developed over time, some of which are listed in the *Risk* rules as official variants. These include:

- Instead of having players take turns selecting territories at the start of the game, territories can be randomly assigned by dealing out the deck of 42 territory cards, with each player occupying the territories corresponding to the cards they were dealt.
- Reducing the rate at which *Risk* card sets increase in value so that they only increase by one army each set.
- Allowing for the reinforcing move (at the end of a player's territory) to span any number of contiguous territories rather than being from one territory to a single adjacent territory.

New Rules Variations Tested

I created two Rules variants that experimented with alternate rules pertaining to the *Risk* cards. In one variant, *Risk* cards are eliminated in their entirety. In the other variant the cards are used as normal except there is a different pattern to their escalation in value.

Before considering the new rule variants, an explanation of how the standard rules tend to affect game-play may be helpful. The reader is advices to remember that different players bring their own strategies, and the explanations given here are general observations of trends seen and not a guarantee they will be evident in any single game. Also, while the author has played hundreds of games of *Risk* by the standard rules, the author has only played a handful of games using the two rules-variants shown here. Small sample size may therefore have affected the observations.

Default rules and their effect

In the standard game, they player may receive a benefit to holding their matching *Risk* cards. For example, on Turn X, Player 1 may hold 3 cards that constitute a matching set. At that point in the game, a matching set of cards may be worth 20 armies. The player may turn in that matching set and receive the 20 armies. However, since they hold fewer than 5 cards they are not obligated to turn them in. They may choose to wait and hope that another player turns in cards on their turn. That would mean that other player would draw the 20 armies and Player 1 could then draw 25 armies when their turn comes around again. In fact, it is possible that more than one opposing player may draw armies on Turn X, so that if Player 1 waits until Turn X+1 their cards may be worth 30 or more armies. Knowing how many cards your opponents helps you determine the likelihood of this, but since you do not know their cards you do not know for certain if they have a match unless they hold 5 cards (a match is certain) or <3 cards (a match is impossible).

This escalation of card value tends to result in a card hoarding behavior. Players want to receive as many armies for their cards as they possibly can, so they choose to hold their cards and hope that they increase in value.

Waiting to turn in cards carries risk, however. If Player 1 chooses to pass on turning in cards and opponent(s) elect to turn them in, those opposing armies may be used to attack Player 1 which may put Player 1 in a weaker position by the time their turn comes around again.

The escalating value of *Risk* cards tends to cause big see-saws of power in the later phases of the game, because the number of armies being acquired may be very large compared to the strength of existing placements on the board.

Equitable *Risk* Cards

This rule variant allows *Risk* card sets to escalate in value, but on a per-player basis. I.e. Player 1 will receive 4 armies for Player 1's first set of cards, regardless of whether other players have turned in cards or not. Player 1 will receive 6 armies for Player 1's second set of cards, regardless of whether other players have turned in cards or not, etc. Likewise for Player 2, 3, etc.

In this variant of the game, there is no benefit[1] to holding onto cards. Therefore, players tend to turn in the cards as soon as possible. This results in more armies on the board; these armies may be used for offense or defense, or a combination of the two. When players use the armies as quickly as possible for aggressive attacks, games tend to be somewhat shorter than the standard game. If players use the armies to solidify defense however, it can actually lead to longer games. More experimentation is necessary to determine if one trend predominates over the other.

No *Risk* Cards

This rule variant eliminates *Risk* cards entirely. Reinforcement armies are still awarded for A (the number of territories) and B (continents) as described in the standard rules.

This game variant results in fewer armies on the board, which lessens the capability for sweeping attacks. Continents become the dominant way to earn armies, so their capture and maintenance is even more important than the standard game.

The build-up of armies is slower and more predictable. Games tend to take longer as emphasis is places on entrenching oneself into continental strongholds and fortifying those strongholds.

The roll of dice in the game means chance is still a big factor, but the elimination of the luck-of-the-draw in *Risk* cards eliminates a second element of chance, meaning the game is arguably more reliable on strategy and less reliant on risk than in the standard rules.

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[1] A small exception to this statement occurs if the Player has a card depicting a territory they do not possess, but which they may soon posses. If the rules being used are such that a bonus army is awarded to the player for holding a territory they turn in, then that player is forgoing one army by turning in that card without holding the territory. However, since the benefit is only one army, and since the chances of gaining and holding that territory until turning in the card are uncertain, the author considers this benefit to be negligible.