

Chance & Skill

TRADEOFF MECHANICS

A tradeoff puts players in a situation where they must choose between things. In order to keep their money, they can't have the armor they have their eye on. Designers use a variety of mechanics to put players in this situation.

Auctions

In an auction, players bid some resource (usually money) in order to earn an item. The winner of the auction pays his bid and takes the item.

There are many kinds of auctions.

- In an “open auction,” players call out bids at any time, each one being higher than the last, until everyone is silent. (This is the form most people are familiar with—it ends with “going once, going twice, sold!”)
- A “sequential auction” involves players each making a bid in turn order, one at a time. There are many variants on this kind of auction: it may only go around once, or it may continue indefinitely, players may or may not be allowed to pass without bidding, and passing (if allowed) may or may not prevent the player from bidding again in a later round (if there is one). Sequential auctions often occur in card games where players bid on the number of tricks they will take. The highest bidder is left to prove his prowess.
- A “silent auction” or “closed auction” involves players each making their own bid, simultaneously and in secret, and revealing their bids at once.
- In a “fixed-price auction,” an item is offered at a named price, and the first player to accept the named price buys it. (You can see this on eBay with the “buy it now!” options on some items.)
- A “Dutch auction” offers the item at an initial high price but the price falls slowly over time; the first player to accept the current price wins the auction.
- In a “reverse auction” the item up for bid is a disadvantage or negative event, and players bid to avoid getting stuck with it.

Designers can vary auction mechanics. Instead of auctioning a single item, items can be auctioned in lots (groups). Multiple auctions can be performed at once, with players allocating their resources between them. Players can all lose their bids, instead of just the auction winner. Or the player with the second-highest bid wins a lesser item (or gets hit with a penalty, making high bids dangerous). Instead of the resources being removed from play, the winner can pay his bid to some or all of the losers.

Games that use action mechanics include *Pitch*, *Bridge*, *Modern Art*, and *Monopoly* (though few actually play using those mechanics in the latter).

Purchases

Instead of players competing in an auction, they have the ability to purchase items, abilities, or actions at fixed prices. The choices come from which stuff to purchase, given that players will be limited in the currency used to make purchases, and when to purchase, particularly if the resource is limited and players may be unable to purchase it later in the game.

Limited-Use Special Abilities

Special abilities give players the ability to break the standard rules of the game in specific ways. This mechanic was originally popularized with the board game *Cosmic Encounter*.

If players can gain some advantage but only once per game (or twice, or what have you), the choice of *when* to use the ability becomes a compelling decision. A player knows what advantage he will get by using the ability right now, but it is unknown whether a *better* use will make itself available later.

Dynamic Limited-Use Special Abilities

By varying the strength of special abilities based on space, time, location, or some other factor, the strategic nature of the decision is amplified. For instance, the longer you hold the item (or the longer you hold the button down), the more powerful it may become. Using it now or saving it until later presents the player with an interesting decision. In *Risk*, players face this decision when they try to decide when they should use the cards in the game. Players get an immediate bonus when they use their cards, but they also increase the bonus when their opponents subsequently use *their* cards. Weighing the immediate benefit against larger future rewards isn't always an obvious decision.

Explicit Choices

Sometimes, a game gives a choice to a player, making clear the effects of both choices. Perhaps the player draws a card that says "Choose one: gain 10 gold, or heal 5 life points." The player must then weigh the relative values of those choices.

Limited Actions

In games where players have one avatar, all of their actions are taken through that avatar. Where players have multiple avatars, choosing which one takes which action becomes a difficult decision (assuming that the player cannot give orders to every avatar simultaneously). This is more common in board games (think of games where players have multiple pawns on a board and can choose which to move, like *Backgammon*), but can be done in video games as well. (An example would be *The Lost Vikings*, where the player has three characters but can only control one at a time, leaving the other two vulnerable.)

Trading and Negotiation

Whenever multiple players are working together toward mutual goals, a whole host of social choices come into play. There's the mix of cooperation versus competition. Alliances can be forged and broken. Promises of future considerations in exchange for help at present can be made. (Based on the rules of the game, these can either be formally binding, non-binding, or else with a penalty when the contract is broken.) There are even the metagame considerations of the social relationships of the players outside of the game itself; one plays the board game *Diplomacy* differently with close friends than with total strangers.

STRATEGIC EVALUATION

How do game designers assess the success of the strategy and tactics they hoped to create? By interviewing players or watching them play, a designer can gather a lot of information. Remember that not every player likes a game of *Chess*, *Go*, or *Risk*. The level of strategy in your game should be commensurate with the audience's desire for the same. Here are some questions you might ask.

Do players care when other players are taking their turn?

If a game has a high degree of strategy, players are reluctant to leave the table, let alone the room. To illustrate, consider how likely you would be to leave your friends alone with a game of *Monopoly* versus a game of *Risk*.

A strategic game requires players to care about the outcomes of each player's move, because those moves will, in turn, affect their move. They are constantly reassessing the play state as each player takes his or her turn.

Are players making long-term plans?

Strategic games invite the player to form strategies that can be carried out over multiple turns. If players are stifled by the existing mechanics of the game or allowed too much latitude, they may be unable to see how their strategy could be sustained or achieved over multiple turns. When playing a game, ask the players what they plan to do or how they think they will win the game. These answers usually reveal a strategy or lack thereof.

Are there multiple strategies for multiple games?

At the beginning of any given game, the player should have an idea of how he will approach the play of the game. The more rich the strategic opportunities are, the more diverse the answers will be. In *Risk*, for instance, a player may have literally dozens of different strategies to play against different players or to compensate for different starting states.

PLAYTESTING FOR LUCK/SKILL BALANCE

How do game designers know if their game has too much luck or not enough? This is something that becomes apparent when observing playtesters who are part of the target audience. Some common warning signals:

- **The players are bored.** This can signal that there is too much luck in the game, or that the frequency of interesting decisions is too low. To fix this, convert some random elements to player decisions, or else shorten the length of the game.
- **The players are bored on all *but* their turn.** Find a way for players to engage with other players through gameplay. If your players don't care when other players are taking their turn, odds are your game isn't as immersive as it could be. Alternatively, make player turns short enough that no one has to wait long for her turn.
- **The players never become engaged, or seem confused about what to do.** This can mean that the game is too complicated, or that there are too many decisions, or there is too much information for the players to process. Consider removing some decisions, either by automating them or making them random, and perhaps reducing the complexity of the rules in general.
- **One player beats all of the other players by a wide margin.** If your players have varying levels of skill, this suggests a game that has too many skill elements. Add some randomness to the game. Another possibility is to add a negative feedback loop, some mechanics that make it easier for players who are behind to catch up (see Chapter 2, "Game Design Atoms," for more information on feedback loops).

EXCHANGING LUCK AND SKILL

There are many specific ways to alter the mix between chance and skill in a game, but they all ultimately come down to adding or removing random elements and adding or removing player decisions that affect the state of the game.

Adding randomness (die rolls, shuffled cards, and so on) increases the amount of luck in the game. Random elements can either be removed by automating them ("All players move forward one space on their turn" instead of "Players move forward 1d6 spaces") or replacing them with a player decision ("Players choose to move from one to three spaces forward on their turn").

Decisions can be added by replacing automatic rules. For example, in the printed rules of *Monopoly*, the player always rolls the dice and moves forward that many spaces on the board. If this were replaced by a decision (say, "You may choose to pay \$50 before rolling, and if you do then you roll *three* dice and choose any two for your roll"), then the game gains an actual player decision.