



Game Design: Chains, Loops, and Player Motivation

The concept of **Chains** in game design is a way to understand how specific sequences of actions create emotional meaning and forward momentum for the player, contrasting with the traditional idea of repetitive **Game Loops**.

Game design theory uses both loops and chains as metaphors to help designers understand how players react to a game and how to create the art of gaming.

Chains vs. Loops

While game loops are a helpful tool, they primarily highlight that games are repetitive. The most fundamental loop is the **reward and investment loop**: you complete an action (kill a guy), receive a reward (coins), invest the reward (buy a better sword), and then repeat the action.

Chains offer deeper insight because they focus on how actions link together to map onto the player's emotion and motivation. Instead of doing the same thing over and over, chains involve a specific set of actions leading toward a destination.

The Three Types of Chains

Game chains create a sense of investment because the player knows (or eventually discovers) that a current action is a step toward a much larger goal. The sources describe three main types of chains:

1. **Action Chains (Emotional Investment)** This is the most straightforward type of chain: a fixed series of actions that must be performed in a specific order.
 - **Concept:** Executing a combo in a fighting game is a prime example.
 - **Emotional Arc:** The chain creates a rising sense of emotional investment. If you successfully complete the first few actions, the stakes for the next action are raised. Failing early might be disappointing, but failing later in

the sequence (on the fourth or fifth move) feels like an **"epic fail"** because you were so close to completion.

2. Value Chains (Clear Chains) These chains connect the activity of collecting or gathering to a meaningful destination, which gives the collection meaning.

These are often called "clear chains" because the player knows exactly what they are working toward.

- **Meaning from Destination:** Simply picking up sticks is not inherently fun. The activity becomes enjoyable and meaningful because of what the player plans to do with those items, such as using them to build something beautiful or useful that fulfills the core fantasy of the game.
- **Richer Decisions:** When a player knows they are working toward a goal—for example, rebuilding a settlement in a game like *Fallout 4*—it dramatically changes their motivation for looting. If a player is trying to build a lighting fixture for a bar, they must look specifically for items containing **copper wiring**. This forward goal changes the decision space, making the action of collecting resources more meaningful and interesting than just collecting every item to sell for the best cost-to-weight ratio.

3. Secret Chains (Discovery and Depth) These chains are sequences of hidden actions or discoveries that the player doesn't realize are connected until they start putting the pieces together.

- **Hidden Goals:** In games like *Spelunky* or *Castlevania Symphony of the Night*, a player might complete what they think is the game, only to realize that following a specific chain of secrets leads to a better or "proper" ending.
- **Stumbling Across the Solution:** This design works well in systemic games, especially roguelikes, where players repeatedly run through the same environment. Doing many runs vastly increases the chance that a player will **stumble across the solution** to one of these hidden chains.
- **The "Aha!" Moment:** The feeling of realization—walking past an object dozens of times before recognizing its significance and connecting the pieces—is highly satisfying. The player feels smart because they have finally realized they were accidentally triggering part of a larger chain. This

concept adds significant depth to a game, even one with relatively simple mechanics (like jumping and punching).

In essence, if a game loop is like running on a treadmill (repetition), a game chain is like climbing a staircase: each step is a separate action that moves you closer to a defined and satisfying destination.