

Yah-Steal!

By Carlos Pineda

Design Log:

1/29/2008:

1. Got homework form class.
2. Since I haven't played any dice games, I did some research on popular dice games and their rules.
3. Rolled some dice around, tried to come up with ideas.
4. Thought about what kind of game I wanted to make, and decided that:
 - a. I wanted a four player game. There's something about sitting in a square table that seems appealing to me.
 - b. I wanted players to be able to affect each other. Seems that most dice games don't really have this, and I knew that having players be able to affect each other would encourage communication between players (Metric: people cursing = good!)
 - c. I wanted a game that used only six sided dice. I didn't want to get too fancy since I had little experience with dice games.
5. Stopped to work on game design paper.

1/31/2008:

1. Rolled dice some more. Got several ideas:
 - a. Could I make a game using the popcorn tumbler? Rolling dice inside a popcorn tumbler sounds like popping popcorn.
 - b. Maybe a game where people had to 'read' dice, like how soothsayers read bones.
2. Went to dice store, bought some dice (8 dice, 2 of each color). Also bought some dice games to play – Cosmic Wimpout and Greed.
3. Watched Lost.
4. Sent e-mail to dice group asking if they wanted to play dice games.

2/1/2008:

1. At Bandology meeting – got first “bright light” idea – make a game where people had to “buy” and “steal” items using dice combinations.
2. Played Yahtzee and Cosmic Wimpout with dice group.
 - a. Decided to use dice combinations from Yahtzee as a base.
3. Thought about dice game more:
 - a. Decided to have a game where players “bought” cards using dice combinations. But the cards could also be “stolen.”
 - b. Thought: why would people want to buy cards from the center if they can steal them from another player?

- i. Cards should have a different, possibly higher “steal cost”
 - 1. Opens new possibilities for card design: could have cards that have a high “buy cost” but a low “steal cost” and have a special ability attached to it.
 - 2. Could have cards that have a low “buy cost” and a low “steal cost,” high point value, but have negative side effects like, “all other players get an extra chance to re-roll.”
- c. Conducted probability study for game (see Appendix A)
- d. Started table for initial card designs (see Appendix B)

2/3/2008:

- 1. Started work on initial card designs.
 - a. Realized that game was becoming more of a card game than a dice game.
 - b. Decided to hold off on complicating the game.
- 2. Decided on an easier rule set, without card abilities (see Appendix C: Iteration 1)
 - a. Based game on Yahtzee!
 - i. Thought about problems with Yahtzee that I wanted to address:
 - 1. Not a lot of interaction between players – I wanted a game where players can affect each other’s gameplay.
 - 2. No clear idea of who is winning at any given point in the game.
 - 3. Counting score at the end of the game was slow and painful.
 - b. Came up with design pitch: “It’s Yahtzee, with stealing!”
 - i. Playtested the game with the bandology crew: Lisa, Joe, Andy, Edmundo.

Appendix A: Probability Analysis

Possible Combination	Probability
3 of a Kind	15%
4 of a Kind	1.9%
Full House	3.8%
Straight	9.2%
5 of a kind	.07%
Specific 5 of a Kind	.01%
Roll adds up to 18	10%
2 pairs	23%
At least 1 pair	46%
Specific pair	7.6%
Specific trio	2.5%
At least 1 of a specific number	66%

Appendix B: Initial Card Designs

These were never used, but I figured I'd post them anyway. This was back when I had the idea for more specialized cards.

Value	Cost	Steal Cost	Pt Value	Special Ability
3	Hi	Hi	Hi	-
1	Low	Low	Low	-
3	Hi	Low	Mid	-
5	Low	Hi	Low	Mid
2	Mid	Low	Hi	Negx2
4	Low	Mid	Low	-
4	Hi	Low	Low	Hi
2	Mid	Mid	Mid	-
4	Mid	Low	Mid	Low
	Mid	Low	Hi	Neg

Appendix C: Initial Rule Set

Goal:

The goal of the game is to acquire the highest number of points before all the Value Cards have been taken. Points are acquired by either earning Value Cards or stealing them from someone else.

Materials:

5 dice
12 Value Cards
Post it sticky notes (prototype only)
Pen

Setup:

12 Value Cards are laid out in a circle on the table. Each card is marked with the required roll to earn them, as well as their corresponding point values. The cost and point value of each card are as follows:

1. Aces	1 pt
2. Twos	1 pt
3. Threes	1 pt
4. Fours	1 pt
5. Fives	1 pt
6. Sixes	1 pt
7. Three of a Kind	5 pts
8. Four of a Kind	5 pts
9. Full House	10 pts
10. Small Straight	10 pts
11. Large Straight	15 pts
12. Five of a Kind	15 pts

Gameplay:

Players take turns rolling the dice and earning or stealing Value Cards.

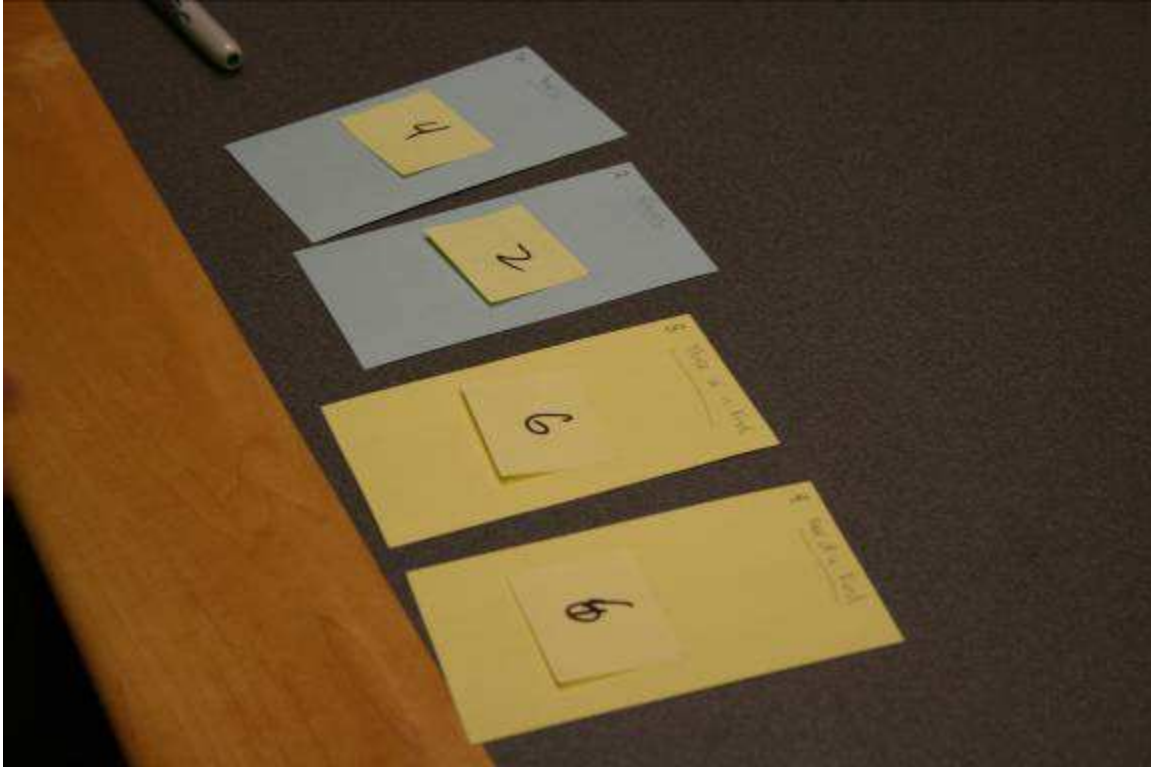
During a player's turn:

1. A player determines the value of his roll by rolling the five dice.
 - a. The player has up to two chances to re-roll any number of dice to achieve his desired dice combination.
2. At the end of his third roll (which is also his second re-roll), the player must select a Value Card that he is eligible to take from the center or steal from another player, by matching the required roll marked on the Value Card. Players need not wait for their third roll to select an eligible Value Card.
 - a. If the player cannot find a Value Card eligible to be taken or stolen, he must return one of his Value Cards to the center.

3. The player is awarded the Value Card, and play continues with the next player to the left.

Taking Value Cards:

1. A Value Card is eligible to be taken if the combination on the dice matches the required roll marked on the Value Card. More specifically the required rolls are:
 - a. Aces at least one 1
 - b. Twos at least one 2
 - c. Threes at least one 3
 - d. Fours at least one 4
 - e. Fives at least one 5
 - f. Sixes at least one 6
 - g. Three of a Kind at least three of the same number
 - h. Four of a Kind at least four of the same number
 - i. Full House Three of a Kind + two of the same number
 - j. Small Straight Four dice showing consecutive numbers
 - k. Large Straight Five dice showing consecutive numbers
 - l. Five of a Kind All five dice showing the same number
2. If the player has taken a **BLUE** or **YELLOW** value card, he marks the card with a "score." This "score" will be used later on to determine whether or not the card will be eligible to be stolen. The "score" is determined as follows:
 - a. **BLUE Value Cards** – Count the number of dice that match the value marked on the card.
 - i. For example, if I roll **1, 3, 3, 2, 6** and I decide to take the **Threes Card**, the "score" on that card will be **2** because there are two threes.
 - b. **YELLOW Value Cards** – List the value of the dice that form the combination that matches the required roll.
 - i. For example, if I roll **1, 3, 3, 3, 6** and I decide to take the **Three of a Kind Card**, the "score" on that card will be **3** because I used threes to form my three of a kind.



Stealing Value Cards:

1. A Value Card is eligible to be stolen from another player if the combination on the dice matches the required roll marked on the Value Card **and the score formed by the dice is greater than or equal to the score marked on the card.**
 - a. **PURPLE** and **RED** cards always have a “score” of 0, so as long as someone rolls a combination that matches the required roll on those cards, he/she may steal that card.
 - b. For example, if a player is holding the **Threes** card with a “score” of 3, a player who rolls **1, 3, 3, 3, 5** may be eligible to steal that card.
 - c. Another example, if a player is holding the **Three of a Kind** card with a score of **4**, a player who rolls **1, 3, 3, 3, 5** may not be eligible to steal that card. However, if another player rolls **1, 5, 6, 6, 6**, he may steal that card and mark it with a new score of **6**.
2. Once a value card is stolen, it is marked with a new score, according to the dice roll. (See #2 on Taking Value Cards)

Ending the game:

1. Once all the cards have been picked up from the center, the **End Game** phase begins.
2. During the **End Game** phase, each player has one last chance to take a turn, with the intent of stealing a Value Card from another player.
3. During this phase, a player **does not** return a card to the center in the case that his dice roll is not eligible to steal any card.

4. Once all players have taken their last turn, all the points are tallied up and the player with the most points wins the game.

Appendix D: Playtest Notes

Playtest 1: 02/03/08 18:30

Participants:

Andy Jih
Joe Grubb
Lisa Brown

Notes:

1. Right off the bat, players seemed to be very involved in the game.
 - a. Rules are easy to understand.
 - b. Player interaction worked well.
 - c. "Fuck!" – swearing is good, means people are invested.
 - d. Game length: ~20 mins
2. Game lasted for around 16 minutes.
3. "Is the game fun?"
 - e. "Yes!"
4. "Did you feel bored at any point in the game?"
 - f. "No."
5. "Is it more or less fun than Yahtzee?"
 - g. Lisa: "It's a different kind of fun, because Yahtzee is more laid back, and people tend to converse more, and this is a lot more intense, so people are more engaged"
 - h. Joe: "It's a lot more obvious who the leader is."
6. "How did you feel when someone stole your card?"
 - i. Lisa: "Pissed off!"
 - j. Joe: "It didn't matter too much in the beginning, since there were a bunch of other cards to take anyway."
 - k. Andy: "It seems the blue cards didn't have a lot of value, since they were only one point."
 - l. Joe: "The Full House card moved around so much that I didn't really care for it after a while."
7. "Did you feel the game was fair?"
 - m. Andy: "The point values might have been skewed, since the 5 of a Kind and the Large Straight had such high point values."
8. "Other comments?"
 - n. Joe: "The Small Straight and Full House moved around so much, that it might be better to have a way to lock down the cards."
 - o. Joe: "It might be a good idea to have some way that I can defend my cards against steals too, since I always feel helpless when other people try to steal my cards."
 - p. Joe: "You might also want to try having some sort of bonus for sets, like in Monopoly. It might change the way people strategize in the game."

- q. Lisa: "I really had this sense of despair when I had to put a card back in the middle."
 - r. Andy: "Yeah, that didn't happen enough. I think there should be more times when people have to put stuff in the middle."
 - s. Andy: "Also, what happens when no one rolls a five of a kind? There are Yahtzee games when five of a kind doesn't get rolled at all."
9. I explained my original idea for the game, about having cards with specific abilities and stuff and asked them what they thought of that. Lisa said that there's something elegant about the simplicity of the game I had.
- a. I have to agree with this, because one of the things that I was struggling with in my first idea was how to make sure that players were familiar with all the cards on the board.

Analysis:

The game seems to have good potential. It needs some balancing, but the interactions themselves, particularly stealing, seem to be very rewarding. In addition, the problems with Yahtzee that I tried to address (no player interaction, leader not obvious, counting score is a pain) seem to have been resolved. I don't think I should pursue my original idea of giving the cards special abilities; that just leads to people having to memorize cards and I may run into the problem of overcomplicating my game.

According to the feedback given, a couple of things need to be addressed:

1. Full House and Small Straight moved around so much that they lost value.
 - a. I really liked Joe's suggestion of having a defense mechanic. But I'll need time to think about what that would be.
2. Game balancing
 - a. Blue cards don't seem to have a lot of value
 - b. Point values might be skewed
3. Feeling of helplessness when people steal your cards (not sure if this should be addressed, it might be a good thing)
4. 5 of a kind may never be rolled



Revisions:

1. Changed point values for cards:

a. Aces	2 pt
b. Twos	2 pt
c. Threes	2 pt
d. Fours	2 pt
e. Fives	2 pt
f. Sixes	2 pt
g. Three of a Kind	8 pts
h. Four of a Kind	8 pts
i. Full House	10 pts
j. Small Straight	10 pts
k. Large Straight	12 pts
l. Five of a Kind	15 pts
2. **New Rule** – **BLUE** cards now have multipliers associated with them:
"Scoring Blue Cards: a **BLUE** card's point value is multiplied by the number of **BLUE** cards a player has."
Example: I have three **BLUE** cards: Ones, Fours, and Fives. The point value for each **BLUE** card would be:
 $3 \text{ [number of BLUE cards]} \times 2 \text{ [point value of each BLUE card]} = 6$
3. **Changed rule for End Game:** The game goes into the End Game phase when all cards aside from the **RED** cards have been taken from the center.

Playtest 2: 02/03/2008

Round 1 (19:30):

Edmundo Ruiz
Andy Jih
Joe Grubb
Carlos Pineda

Notes:

1. Game seems to be a lot more balanced: end game scores were much closer together.
2. **BLUE** cards now play a more important role – they can be extremely powerful if you collect enough of them.
3. Edmundo: “you should have a cup or something, because you have so many dice! Kinda like Yahtzee!” – BAD! Not sure if I want my game to be “like Yahtzee.”
4. Full house still moved around a lot – still felt like it lost value.
5. Not enough tension in the game. I want a lot more screaming.
6. Game length: ~15 mins.



Round 2 (21:30):

Alyson Szymanski
Jake Rheinfrank
Nicole Epps
Karin Ray

Notes:

1. A little hard to tell how well people reacted to the game, since the Superbowl was on and people were distracted.
2. Alyson: "Looks like Yahtzee or Poker"
3. Alyson: "Why not make full house stealable by only higher full houses?"
4. Jake: "I want more stealing"
5. Jake: "Maybe have more dice?"
6. Alyson: "I want the game to be longer."
7. Alyson: "Maybe have bonus points for getting something in less than 3 rolls?"

Analysis:

The game is definitely getting better. So I just have to keep pushing forward. I have yet to design a mechanic for defending dice, but I definitely want to try that sometime. So far, here are the problems with my game:

1. Game needs to be longer
2. Needs to have more opportunity for stealing
3. I don't know if I like the idea of my game being associated with Yahtzee... I mean I did base it on Yahtzee, but I don't want it to be obvious. I should probably add some theming to my game.
4. Still needs a defense mechanic
5. I need to stop using post-its and buy some tokens, for better score keeping.

Revisions:

On the defense mechanic: There are a few things that I want to try. I'm not sure what I will go with in the end, but here are a couple of ideas:

1. Can steal cards only if amount rolled is greater than the "score" on the card.
2. Players may move some tokens ("score" on the card) from one card to another.
3. Players can increase the "score" on their card if they roll a higher combination.

To increase the game length, I also have a few ideas that I want to try:

1. During the end game, one entire round without stealing must complete in order for the game to end.
2. During the end game, if a player isn't able to steal anything, he must return a card to the center.
3. Increase the number of **BLUE** cards: there are now two of each blue card, but a player must collect consecutive blue cards in order to achieve a multiplier.

Playtest 3: 02/04/2008 20:00

During this playtest, I tested Defense Revision #1 and Game Length Revision #2 from Playtest #2. During this iteration, I was able to borrow Katelyn Mueller's tokens to keep track of "scores" on the cards.

Participants:

Jake Rheinfrank
Katelyn Mueller
Oscar Ramirez
Carlos Pineda

Notes:

1. People still liked the game, but it dragged out during the end because people kept having to return cards to the center.
2. There wasn't as much stealing as there was in other games, but players didn't really notice it (except for Jake, who had played an older version).
3. The tokens made the game feel a lot better. There's definitely something cool about moving tiny rocks on top of your cards.

Analysis/Revisions:

1. Neither of the ideas worked. Will try other ideas next time.

Playtest 4: 02/05/2008 12:00

During this playtest, I tested Defense Revision #2 and Game Length Revision #1 from Playtest #2. I did not have access to tokens for this iteration, so I used paperclips instead.

Participants:

Sean Kelly
Trent Burg
Nayoung Kim
Carlos Pineda

Notes:

1. No one seemed to use the mechanic of moving tokens (paperclips) across cards, with the exception of Sean Kelly, who seems to be a pretty hardcore gamer (as I noticed his dice game was based on D&D).
 - a. That rule change may have been a little too hardcore, and I think my game is better suited for more casual audiences like families.
2. The end game once again dragged out too much, because there was so much stealing going on in the end game. I had to stop the game because people were getting bored.
3. Paperclips get stuck to each other when people pick them up from a pile.

Analysis/Revisions:

1. Try other ideas next time.

Playtest 5: 02/05/2008 13:00

During this playtest, I tested Defense Revision #3 and Game Length Revision #3 from Playtest #2. I used paperclips as tokens again.

Participants:

Charles Palmer
Laura Lantz
Lauren Etta

Notes:

1. People tended to increase the strength of their cards whenever possible, which made for less stealing. I'm not sure I like this. I actually liked it when cards moved around the table a lot.
2. Game went on longer, but the additional BLUE cards also led to less stealing amongst players, since there were so many cards that people could take.
3. I noticed that the 3 of a Kind and 4 of a Kind card had the same score! I can't believe I only noticed now!
 - a. On a side note, it's a little weird how nobody noticed. In addition, people would still attempt to increase their three of a kind to a four of a kind, even if the cards had the same point value.
4. I have to start thinking about how to explain the rules of my game in an elegant manner. There seems to be too much "...oh and there's this rule too!" whenever I try to explain my game.



Analysis:

1. None of my ideas seemed to work very well. Maybe I'm going about this the wrong way. How could I get people to defend their cards without taking away stealing?
2. Maybe I don't really need a "strategic" defense mechanic: maybe I just need an illusion... something to make people **feel** like they're defending their cards...
3. Should the game really be longer? 15 minutes seemed just right to me. Did people really want the game to be longer? Maybe the game just needs more tension, which makes the game **feel** longer...
4. I am starting to have too many card colors: blue, yellow, green, purple, red. What's the difference between a purple and green card? Just the score? I wonder if it would really matter if I had different point values for cards of the same color.

Revisions:

1. This idea for a defense mechanic came a few days later:
 - a. **New Rule:** If a player rolls the same "score" as the card he wants to steal, the defending player gets a chance to defend his card.
 - i. **Defending cards:** the defending player rolls one die while the stealing player rolls four. If any of the stealing player's dice match the defending player's die, the steal is successful. If a steal fails, the stealing player does not need to return a card to the center.
2. I also forgot to address the issue of the full house moving around so much. So I want to try making it a yellow card – it will be scored using the numbers on the three of a kind.
3. I need to increase the point value of the four of a kind. It only seems right because it's harder to get. New point values are as follows:

a. Ones	2 pt
b. Twos	2 pt
c. Threes	2 pt
d. Fours	2 pt
e. Fives	2 pt
f. Sixes	2 pt
g. Three of a Kind	6 pts
h. Four of a Kind	8 pts
i. Full House	10 pts
j. Small Straight	10 pts
k. Large Straight	12 pts
l. Five of a Kind	15 pts

Playtest 6: 02/08/2008 22:30

Participants:

Bryan Cash

Andy Jih
Lisa Brown
Joe Grubb

Notes:

1. Defense mechanic seemed to work well.
2. Bryan: "I definitely like the defense mechanic, but I feel like there should be some sort of decision made by the defending player. There's just so much build up leading to the confrontation, and then all of a sudden it falls flat because it just comes down to a die roll."
3. The Full House didn't move as much, and I didn't like that. I would much prefer that it moved around a lot, instead of once or twice. Besides, the addition of the steal mechanic lessens the Full House's movement.
4. I need to get new playtesters: Andy, Joe and Lisa have played this game so much that I am beginning to feel that their opinions are biased.

Analysis:

1. I think I hit a pretty good defense mechanic. It's weighted towards the stealing player but the defender gets a small glimmer of hope. Bryan does have a point about giving more decisions to the defending player, though. The problem is, I like the simplicity of the defense mechanic, and adding an extra decision there might complicate the game further.
2. The Full House needs to be changed back to a purple card.

Revisions:

1. Need to think of a way to give the defender some sort of decision making.
 - a. **Rule Change:** Instead of having the defender roll the dice, I just have him decide what number he wants the stealer to match. That way, the game is still weighted towards the attacker, and the defender still has to "decide" what the attacker has to match.
2. The Full House needs to be changed back to a purple card.

Playtest 7: 02/10/2008 20:30

Participants:

Katelyn Mueller
Oscar Ramirez
Jake Rheinfrank
Carlos Pineda

Notes:

1. New defense mechanic worked really well.
2. There was lots of tension when defenders had to decide what number to have the stealer match.
3. Katelyn: "I really like the new defense mechanic!"
4. Oscar: "I think your game is already done."

Analysis/Revisions:

1. Looks like the game is in good shape. No more complaints about game length or more stealing. People laughing. Lots of “OOOooooohHhh!!”s in the game. Awesome.
2. Now it’s time to add some theming.
 - a. I thought of this idea right before the playtest session, so I didn’t have time to implement it: **Heist!** Players take the role of thieves trying to steal the world’s greatest treasures, all located in one vault.
 - i. Cards will represent different kinds of jewels.
 - ii. The blue cards can be the crown jewels, which are worth more if they are together.
 - iii. Instead of giving cards a “score” to beat, players will be able to add “locks” to their jewels – but beware: Diamonds (purple and red cards) cannot be locked away.
 - iv. The five of a kind can be the Hope Diamond – it’s not technically the most expensive diamond in the world, but I think it’s the most famous. I don’t mind that the game isn’t realistic – in fact I like the game being a little cheeky.
 - b. I did some research on famous jewels and I came up with this:
 - i. 1 - The Ampulla and the Spoon
 - ii. 2 - Jeweled Sword of Offering
 - iii. 3 - Sovereign’s Orb
 - iv. 4 - Sceptre with the Dove
 - v. 5 - Sceptre with the Cross
 - vi. 6 - Imperial State Crown
 - vii. Three of a Kind - Delong Star Ruby
 - viii. Four of a Kind - Star of India
 - ix. Full House - Heart of Eternity Diamond
 - x. Small Straight - Regent Diamond
 - xi. Large Straight - Great Star of Africa
 - xii. 5 of a Kind - Hope Diamond

Playtest 8: 02/11/2008 19:30

This playtest was really just to check if people understood the symbols on the cards that I made, and to see if they felt a better connection with their cards.

Participants:

Abhishek Nath
Vimal Sathish
Lisa Brown
Carlos Pineda



Notes:

1. Most people didn't really pay attention to the theming. T_T
2. People understood the dice symbols on the cards.
3. I didn't have to explain the rules as much, since the information regarding locks and point multipliers were all written on the cards.
4. Cards had typos so I have to redo them.
5. Game unbalanced! – at the end of the game, Abishek had The Star of India, The Sovereign's Orb, and the Hope Diamond, which gave him a score of 25. But I had The Regent Diamond, The Great Star of Africa, The Sceptre with the Cross and the Imperial State Crown, which gave me a score of 30. Part of me felt that Abi should have won that game because he was holding the Hope Diamond (or at least, our scores should have been closer). It's not that big a deal, but I think I should try to balance it a bit more.
6. I ran out of counters ("locks") in the middle of the game. I need to buy more.



Playtest 9: 02/12/2008 RIGHT BEFORE GAME DESIGN

Got a new game board! That should make the game a lot prettier. Also trying out the new number tweaks (I held on to the old cards, just in case the old numbers were better).

I couldn't get anyone to play, so I just moved the cards around and tried different card combinations, to see if any card/card combination was too powerful.

Participants:

Carlos Pineda

Notes:

1. New numbers seemed to work a lot better, though it's too soon to tell. I would have wanted to playtest the game a little more, just to make sure to get the numbers right, but I'm out of time. This will have to do for now.
2. The board is pretty! I am proud of it. 😊
3. More typos!! 😞
4. The game needs a name... I call it... HEIST!

HEIST!

By Carlos Pineda

Overview

Welcome to HEIST! In this game, players take the role of master thieves trying to steal the world's greatest treasures, all located in a super security vault. Roll the dice, and crack the codes! But beware - there is no honor among thieves, so be careful to guard your loot too!

Game is for 2-4 players.

Contents

This game includes:

- › 5 white dice
- › 25 Lock Counters (skulls – if this were in production, I would like them to be little padlocks... also, I wish I was able to buy more counters, but phantom ran out)
- › 12 Jewel Cards
- › 1 Game Board

Setup

1. Arrange the Jewel Cards in their designated spots on the board, face up.
2. Place the Lock Counters in the center of the board.

Objective

The object of the game is to be the player with the most valuable collection of jewels at the end of the game. Players steal jewels by rolling dice combinations that match those displayed on the Jewel Cards. Players may either steal jewels from the vault or from other players.

Gameplay

1. Players take turns rolling dice and stealing Jewel Cards.
2. During a player's turn:
3. A player determines the value of his roll by rolling the five dice.
 - a. The player has up to two chances to re-roll any number of dice to achieve his desired dice combination.
4. At the end of his third roll (which is also his second re-roll), the player must select a Jewel Card that he is eligible to **steal**, either from the vault or from another player. Players need not wait for their third roll to steal a Jewel Card.
 - a. If the player cannot find a Jewel Card to steal, he must return one of his own Jewel Cards to the vault.

5. The player adds the Jewel Card to his collection, and play continues with the next player to the left.

Stealing from the Vault

1. A Jewel Card may be stolen from the vault if a player matches the combination displayed on the Jewel Card. More specifically:

a. The Ampulla and Spoon	at least one 1
b. The Jeweled Sword of Offering	at least one 2
c. The Sovereign's Orb	at least one 3
d. Sceptre with the Dove	at least one 4
e. Sceptre with the Cross	at least one 5
f. Imperial State Crown	at least one 6
g. Delong Star Ruby	at least three of the same number
h. The Star of India	at least four of the same number
i. Heart of Eternity	Three of a Kind + Pair
j. The Regent Diamond	Sequence of four dice
k. Great Star of Africa	Sequence of five dice
l. The Hope Diamond	All five dice showing the same number
3. Once a player has stolen a Jewel Card, it is added to his collection.

Applying Locks

1. Certain Jewel Cards allow the player to apply locks to it. The number of locks a player may add is equal to the **value of his roll**. The **value of a player's roll** is determined as follows:
 - a. **Crown Jewels** – Count the number of dice that match the value displayed on the Jewel Card.
 - i. For example, if I roll **1, 3, 3, 2, 6** and I decide to take **The Sovereign's Orb**, The **value of my roll is 2** so I may add two locks to that Jewel Card.
 - b. **Rare Gemstones** – List the value of the dice that form the combination that matches the required roll.
 - i. For example, if I roll **1, 3, 3, 3, 6** and I decide to take the **Delong Star Ruby**, I may add **3** lock to that card because I used the number 3 to form my three of a kind.
2. Diamonds cannot have any locks applied to them, and as such, the **value of a player's roll** when stealing a diamond is always 0.

Stealing from another player

1. A Jewel Card may be stolen from the vault if a player matches the combination displayed on the Jewel Card **AND** if the **value of the player's roll** is greater than the number of locks on Jewel Card being stolen.
 - a. After the player has stolen the Jewel Card, he may apply additional locks, such that the total locks on the Jewel Card is equal to the **value of his roll**.

2. If the **value of the player's roll** is **equal** to the number of locks on the Jewel Card, the player may attempt to **Challenge** the current owner.
3. Since a roll that steals a diamond always has a value of 0, and diamonds always have 0 locks on them, players attempting to steal diamonds from other players must always attempt a **Challenge**.

Challenge

1. A challenge occurs when a player wants to steal a Jewel Card with the same amount of locks as the value of his roll.
2. During a **Challenge**, the defending player:
 - a. Picks a code number from one to six
 - b. Declares that number by taking one of the five dice, and placing it in front of him, making sure that the number is face up on the die.
3. After the defending player has declared his code number, the challenger must roll the rest of the four dice.
 - a. If any one of the four dice matches the defending player's code number, the challenge is successful and the challenger adds the Jewel Card to his collection.
 - b. If the **Challenge** is not successful, the player does not need to return a Jewel Card to the vault.

Crown Jewels

1. **Crown Jewels** are special in that they are worth more if a player has more of them in his collection.
2. On its own, a member of the **Crown Jewels** is worth only \$2 Million, but for each additional **Crown Jewel** a player has stolen, the value of each **Crown Jewel** is worth \$2 Million more.
 - a. For example, **The Sovereign's Orb** alone is worth \$2M.
 - b. If I held **The Sovereign's Orb** and **The Jeweled Sword of Offering**, they would be worth \$4M each (\$2M + \$2M), making their total value \$8M.
 - c. If I held **The Sovereign's Orb**, **The Jeweled Sword of Offering**, and **The Imperial Crown of State**, they would each be worth \$6M (\$2M + [\$2M x2]), making their total value \$18M.

Ending the game:

1. Once all the Jewel Cards, with the exception of the Hope Diamond, have been stolen from the vault, the **End Phase** begins. The Hope Diamond need not be stolen for the game to go into the **End Phase**.
2. During the **End Phase**, each player has one last chance to take a turn, with the intent of stealing a Jewel Card from another player.
3. During this phase, a player **does not need to** return a Jewel Card to the center in the case that he cannot steal another card.
4. Once all players have taken their last turn, all player assess the value of their collections, and **the player with the most valuable collection wins!**

Appendix E: Estimated Value of HEIST!

In determining how much a retail copy of HEIST (assuming it is in better production value, with the Jewel Cards and board properly cut and printed, and the Lock Counters actually custom-made), would be, I took a look at how much other dice games were.

1. Yahtzee!	\$7.99
2. Yahtzee! Deluxe Ed	\$16.99
3. LCR	\$6.95
4. Pass the Pigs	\$11.49
5. Shut the Box 12	\$12.95
6. Cosmic Wimpout	\$5.48

Considering my game has more materials than Yahtzee, but isn't as fancy as Yahtzee! Deluxe, I would say a good price for it would be somewhere between **\$9.99 and \$12.99**. I think a good price would be **\$10.99**, just so it's a bit cheaper than Pass the Pigs.