GAT 110: Game History

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Game Families

What Are Game Families

What Are Game Families?

- In R.C.Bell's *Board and Table Games from Many Civilizations*, you were introduced to the idea of game families.
- Game families are:
  - Groups of games with similar design properties.
- This isn't just the shape of the board – it is also the structural mechanics of the game.

Structural Mechanics

- Structural mechanics are the way in which the game is played.
- It's the basic type of gameplay for that family of games.
  - For example, the race game family is all about moving around the board.
  - There is usually a randomizer involved.
  - And the pieces are eventually removed from the board.

Families as Markers of Change

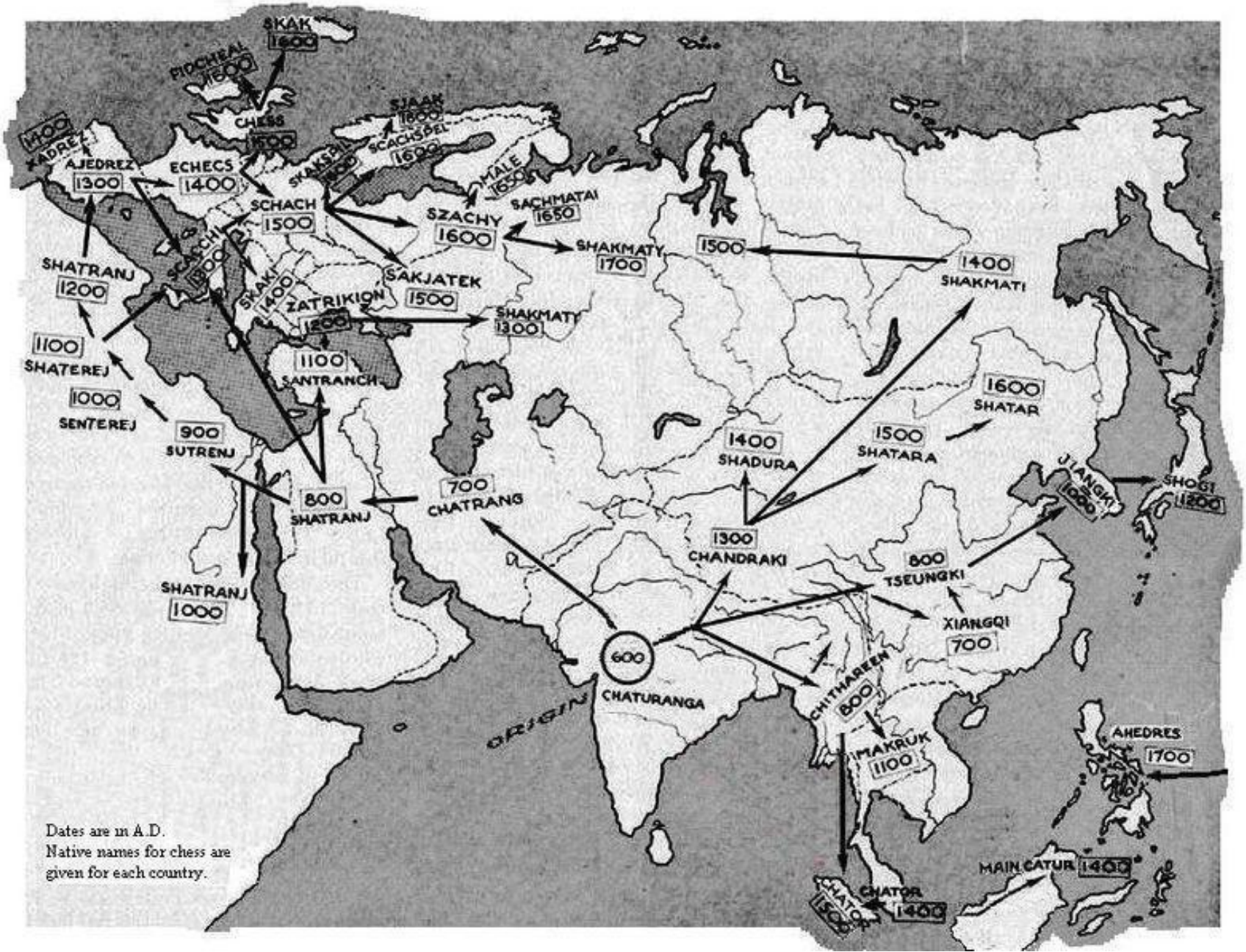
- By tracing the time in which a game appears in the historical record…

Families as Markers of Change

- By tracing the time in which a game appears in the historical record…
- And by tracing the changes in the games structural mechanics…

Families as Markers of Change

- By tracing the time in which a game appears in the historical record…
- And by tracing the changes in the games structural mechanics…
- You can learn a lot about how certain cultural and technological elements move between cultures.


SKAK
1600
FIDCHEAL
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SHAKMATY
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SCHACH
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AJEDREZ
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ECHECS
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XADREZ
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ZATRIKION
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1100
SHATEREJ
1100
SANTRANCH
1000
SENTEREJ
900
SUTRENJ
1600
SHATAR
1500
SHATARA
1400
SHADURA
800
SHATRANJ
700
CHATRANG
1300
CHANDRAKI
800
TSEUNGKI
XIANGQI
700
600
CHATURANGA
ORIGIN
CHITHAREEN
800
MAKRUK
1100
SHATRANJ
1000
JIANGKI
1000
SHOGI
1200
AHEDRES
1700
MAIN CATUR
1400
CHATOR
1400
Dates are in A.D.
Native names for chess are
given for each country.

Games as Birds

- Specifically, Darwin's finches!
- With the fall of the Roman Empire, we have a lot of tiny sub-kingdoms that arose, conquered each other, etc.
- We can track how long it takes for these kingdoms to arise based on what games go where.
- We can also track what populations move from place to place.
- And even who is on top in these migrations.

Families of Games for GAT 110

Older Families

- Race Games
- War Games
- Dice Games
- Domino Games
- Positional Games
- Mancala Games
- Dexterity Games

Newer Families

- Card Games
- Miniatures Games
- Roleplaying Games
- Trading Card Games
- Word Games

Digital games replicate many of these same families.

Family Sub-Groups

Within each family is a further sub-grouping by game type. For example:

- Race Games
  - Cross and Circle
  - Spiral
  - Square Board
  - Peg Scoring
  - Backgammon Group

Family Sub-Types

- War Games
  - Alquerque Group
  - Chess Group
  - Latrunculorum Group
  - Running Fight Group
- Position Games
  - Morris Games
  - Three in a Row Games
  - Replacement Games
  - Territorial Possession Games
  - Patience Games

Families Define the Game

- If you know the family, you can extrapolate the structural mechanics.
- You can also extrapolate what factors have changed the game over time.
- This in turn gives you the effects of culture and historical events on game design.

Analyzing Games

Pattern for analysis that will be used for this class

Mnemonic: COME and GO RULES DYNAMIC FLOW

Game Nomenclature

- Games have 4 components to defining the basic nature of the game:
  - COMPONENTS → "CO"
  - MECHANICS → "ME"
  - GOALS → "GO"
  - RULES → "RULES"

Goals

- This is the point of playing the game – what is the goal you are trying to achieve?
  - Point Accumulation
  - Elimination
  - Race
  - State/Position Achievement
  - Story/Experience
- The goal gives you the vision for why you are playing:
  - "This game is about…"
  - "This game teaches…"
  - "This game simulates…"
- A game has a CORE GOAL and may have SUPPORTING GOALS.

Components

- These are the materials that you use to play the game (or the computer proxies for you).
  - Dice
  - Cards
  - Tokens
  - Topology (Boards and Maps)
- The central component is the CORE COMPONENT.
- Other components are SUPPORTING COMPONENTS.

Mechanics

- A mechanic is a tactical play methodology defined by the game design. Every game has at least one mechanic.
  - The central mechanic is the CORE MECHANIC.
  - Other mechanics are SUPPORTING MECHANICS.
  - A Core Mechanic usually reflects the game's Goal and gives you the specific method of reaching that Goal.

Game Mechanics

- Racing
  - Chasing/Evading
- Set Collection
  - Trading
  - Drafting
- Communications (Story/Acting/Singing)
- Area Control/Influence
- Memory
- Pattern Recognition/Matching
- Route Planning/Optimization
- Wagering
- Action Point Allowance
- Auction/Bidding/Voting
  - Trick Taking
- Bluffing/Prediction
- Words
- Resource Management
- Variable Player Powers
- Asymmetric Abilities
- Trivia
- Attrition
- Spatial Reasoning
- Building

Rules

- The rules define how the GOALS, COMPONENTS, and MECHANICS work together to play the game.

Dynamics & Flow

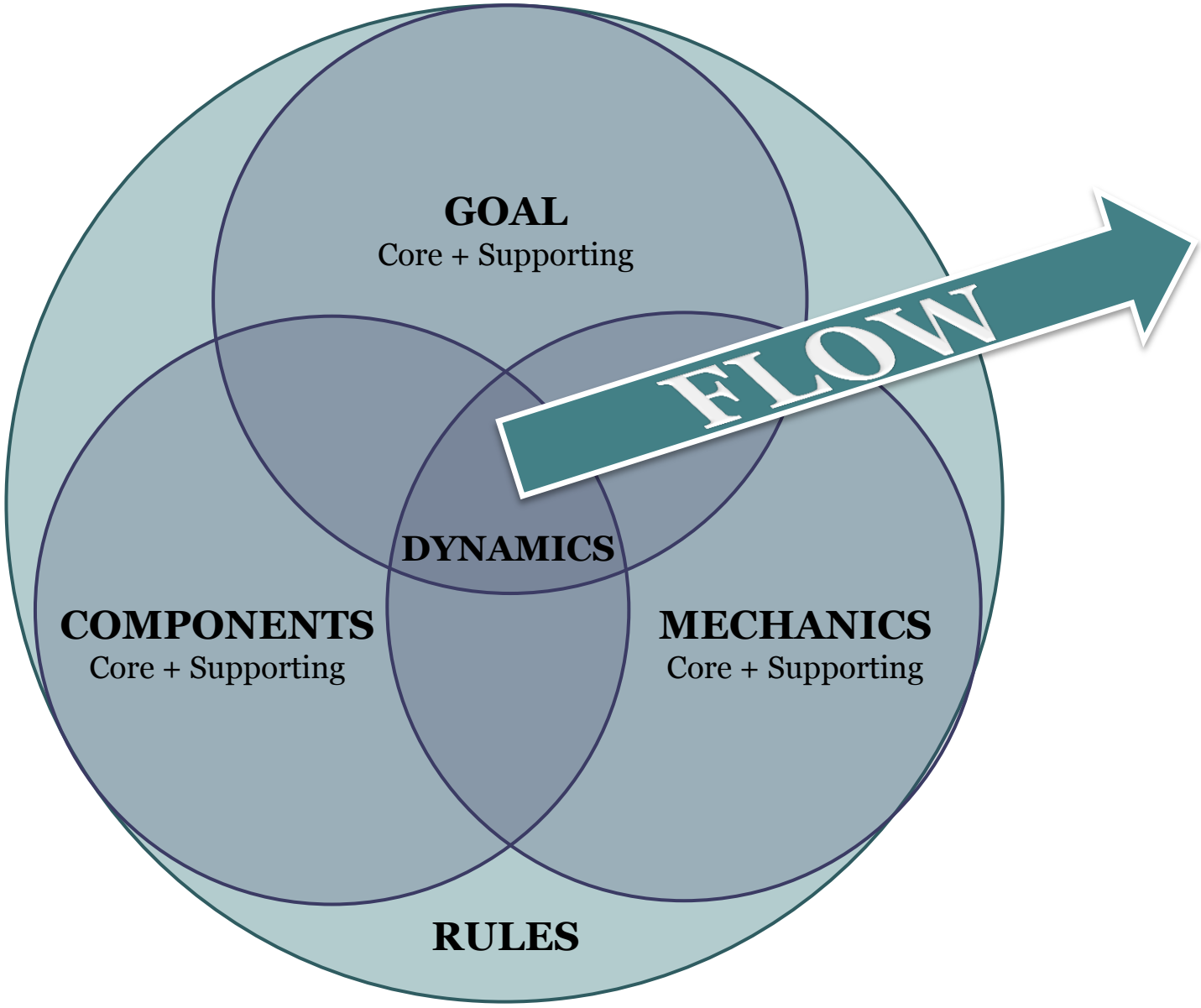
- The interaction of the goals, components, and mechanics create game play DYNAMICS (sometimes called “play patterns”).
- Dynamics are the experience of the game.
- Great dynamics lead to the psychological state of FLOW.
  - “Flow is the mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity.” - Wikipedia

What is Flow?

The following six factors are identified as accompanying an experience of flow:

- Intense and focused concentration on the present moment
- Merging of action and awareness
- Loss of reflective self-consciousness
- Sense of personal control over the situation or activity
- Distortion of temporal experience, one's subjective experience of time is altered
- Experience of the activity as intrinsically rewarding, also referred to as autotelic experience

Those aspects can appear independently of each other, but only in combination they constitute a so-called *flow experience*.


GOAL
Core + Supporting
FLOW
DYNAMICS
COMPONENTS
Core + Supporting
MECHANICS
Core + Supporting
RULES

Tools of the Trade

Writing, Research & Structure

Designer's Tools

A designer has five key tools at their disposal

- Research
- Analysis
- Domain Knowledge
- Writing
- Presentation
- (Rarely: Flashes of Brilliance)

Research

- There is no substitute for good research.
- Research can be performed on any of the following:
  - Competitive Landscape (Products)
  - Historical Background (Theme)
  - Audience (Customers)
  - Intellectual Property (IP Conformance)
  - Resources (Tech/Tools/Processes)
- When starting a new product, you may need to research all of these factors.

Why Research is Important

Analysis

- Analysis of similar products will give you a good idea of those products':
  - GOALS
  - COMPONENTS
  - MECHANICS
  - RULES
- Analysis also leads to an understanding of the mathematics that are driving a game system which, in turn, makes it easier to alter.
- There are insights you can learn from both good and bad games about what kinds of things will work and what kinds won't work for your desired game type.

Domain Knowledge

- Research * Analysis = Domain Knowledge
- Having an encyclopedic domain knowledge will allow you to abbreviate a lot of research and analysis on projects in the future.

- Domain Knowledge leads to:
  - Greater Productivity
  - Agility in Pressure Situations
  - Flexibility in Job Types
  - More Hirable
  - Easier to Promote
  - More Money, Fame, and Power

Writing

- Ultimately, almost everything you design will need to be written down and communicated to:
  - Asocial, bitter recluses (programmers)
  - Dreamy, uncooperative non-conformists (artists)
  - Cynical, grumpy nitpickers (testers)
  - Optimistic, greedy dreamers (producers)
  - Hopelessly clueless bean-counters (management)
- It is imperative that you become clear, succinct, and practical in your writing if you want to be clear to all of these people.
- Consequences of not writing well:
  - You won't get what you want.

Presentation

- Once you write it down, you need to be able to present the vision to all of those people at once and rally everyone to the cause you are promoting: building YOUR game.
- We are not doing presentations in this class, but you will do them over and over again throughout your time at DigiPen and the rest of your career.
- If you have a fear of public speaking (75% of Americans do) – get over it.
  - Public speaking is no harder than speaking to any one other person – just **tell them what you know**.
  - Note that domain knowledge is key to "knowing" and the confidence that comes with it. It also gives you the confidence to not be afraid to be wrong.

Why Papers?

Or: Why Are You Torturing Me?

Why Write Papers?

- Builds our communication skills.
- Exercises our research muscles.
- Begins developing critical analysis skills.
- Gives us practice in following a structure.
- Develops argument and persuasion.
- It's darn good practice!

Communications

Written

- We write a lot of documents
  - GDDs
  - Level design docs
  - Spreadsheets

Verbal

- We do a lot of talking!
  - Brainstorming
  - Team problem solving

Visual

- Diagrams
- Mock ups
- Illustrations

Structure

- Helps keep information organized and easy to access.
  - Indexes
  - Spreadsheets
  - Flowcharts
  - Naming conventions
- Presents a logical flow from one section, thought, or element, to another.
  - Builds on the reader's knowledge
  - Ties elements together
- Most companies have a specific format for their in-house documentation.
  - You'll need to conform to it

Papers for GAT 110

Nature of Assignments

- Play three games:
  - Historical Analog Game
  - Modern Analog Game
  - Modern Digital Game
- Pick one of the analog games and make a significant modification to it that does not alter the base nature of the game. Modifying the digital game is **not** allowed without prior permission.
- Test this modification with classmates, friends, and/or family. You must do at least one testing session, but three to five would be better.

Paper Structure (1/2)

- **Game Analysis:** An analysis of how the goals, components, mechanics, and rules of each of the three games are similar and exemplify the game family.
- **Dynamics Analysis:** An analysis of the dynamics of playing each of the three games was similar and each was different.
- **Modification:** A detailed description of the modification you have made to ONE of the three games AND what positive effects you intend the modification to have.

Paper Structure (2/2)

- **Testing Report:** A detailed account of how the testing went, including what went right, what went wrong, what happened that you expected, what happened that you did not expect, and the overall reaction of your testers. Note that it does not matter if your modification turns out to be terrible—what matters is the quality of your analysis of why.

- **Further Modifications:** A description of what further modifications and/or adjustments to your original modification you would now make based on the results of your testing and why.

Grading Rubric

How Papers Are Graded

Basic Requirements

BASIC REQUIREMENTS Max: +0	
Paper is turned in late (-10% per day)	
Not in Word/Open Office format (-10% per day)	
Section name text is incorrect (-2% each)	
Section names are not bolded	-2%
Section names font size is not larger than main text	-2%
Additional sections other than the required ones	-5%
Pages are not neatly formatted	-2%
Page margins are smaller than one inch	-2%
Fonts used are not consistent throughout	-2%
Font is smaller 10 points or larger than 14 points	-2%

Basic Requirements (Continued)

Font used is obscure or difficult to read	-2%
No cover page	-10%
Cover page is missing your first or last name	-5%
Cover page is missing the class name & semester	-2%
Cover page is missing the instructor name	-2%
Headers/footers are missing	-10%
Headers/footers are missing the DigiPen copyright	-2%
Headers/footers are missing the page number	-2%
Headers/footers are missing your name	-2%
Headers/footers are missing the class name	-2%

Writing Quality

WRITING QUALITY Max: +2	
Sentence or paragraph structure is very poor	-5%
Lots of obvious grammar problems	-5%
Spelling errors spell-check would catch (-2% each)	
Other spelling errors (-1% each)	
Style is very casual or conversational	-2%
Paper has no major errors and is decently written	+0%
Paper is very well written with few errors	+2%

Game Analysis

GAME ANALYSIS (750 words) Range: -18 to +6	
Word count under 250	-10%
Word count under 500 or over 1000	-5%
Game not really analyzed (-2% per game)	
Games not really compared	-2%
Goals, components, and mechanics adequately analyzed and compared	+0%
Mechanics analysis is solid & detailed (+1%/game)	
Mathematical analysis is solid or exceptional	+2%
Overall analysis is exceptional or insightful	+1%

Dynamics Analysis

EXPERIENCE ANALYSIS (500 words) Range: -18 to +4	
Word count under 250	-10%
Word count under 350 or over 750	-5%
Dynamics not really analyzed (-2%/game)	
Dynamics not really compared	-2%
Dynamics adequately analyzed and compared	+0%
Dynamics analysis is solid and detailed (+1%/game)	
Overall analysis is exceptional/insightful	+1%

Game Play Modification

MODIFICATION (350 words) Range: -22 to +2	
Word count under 100	-10%
Word count under 250 or over 500	-5%
Modification is trivial or not understandable	-5%
Modification is a direct copy of another game	-5%
Intended modification effects are not described	-2%
Modification and effects adequately described	+0%
Modification is very interesting or original	+2%

Testing Report

TESTING REPORT (750 words) Range: -20 to +9	
Word count under 250	-10%
Word count under 500 or over 1000	-5%
Report does not have an overview of how it went	-2%
Report does not say what went right	-2%
Report does not say what went wrong	-2%
Report does not talk about expected results	-2%
Report does not talk about unexpected results	-2%
Report covers all the above areas adequately	+0%
Report on mechanical effects is solid and detailed	+2%
Report includes analysis of changes to dynamics	+2%
Report includes a table of player results per test	+1%
Report shows that lots of testing was done	+2%
Report shows there were lots of *different* testers	+2%

Further Modification

FURTHER MODIFICATION (350 words) Range: -17 to +2	
Word count under 100	-10%
Word count under 250 or over 500	-5%
Further changes are trivial or not understandable	-5%
Reasoning behind further changes not explained	-2%
Further changes adequately described	+0%
Further changes are very interesting or original	+2%

Assignments

Weekly Deliverables

Reading Assignment: Week 1

- GAT 110 Paper Guidelines
- "Board and Table Games From Many Civilizations"
  - Book 1: Introduction, Book 1 & 2: Chapters 1 & 5
- "The Book of Games"
  - Dice Games, Pachisi, Backgammon, Goose, Nardshir, Senat

Writing Assignment: Week 1

- Week 1 Design Journal – DUE WEDNESDAY
- Paper 1 Assigned

Next Lecture

- Origins of Dice
- Dice Forms
- Probability
- Example Dice Games