

INITIUM

Gameplay and Game Mechanics Design

A Key to Quality in Digital Games



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Goal

- **Focus on gameplay and game mechanics, showing how they determine quality in digital games (i.e. fun for the player), and how fun is bound to learning processes involved in the playing experience**



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Contents

- **The quest for the fun factor**
- **Gameplay: where does the fun come from?**
- **Game mechanics, fun, motivation and learning processes**
- **Architecting gameplay**
- **A final conclusion**



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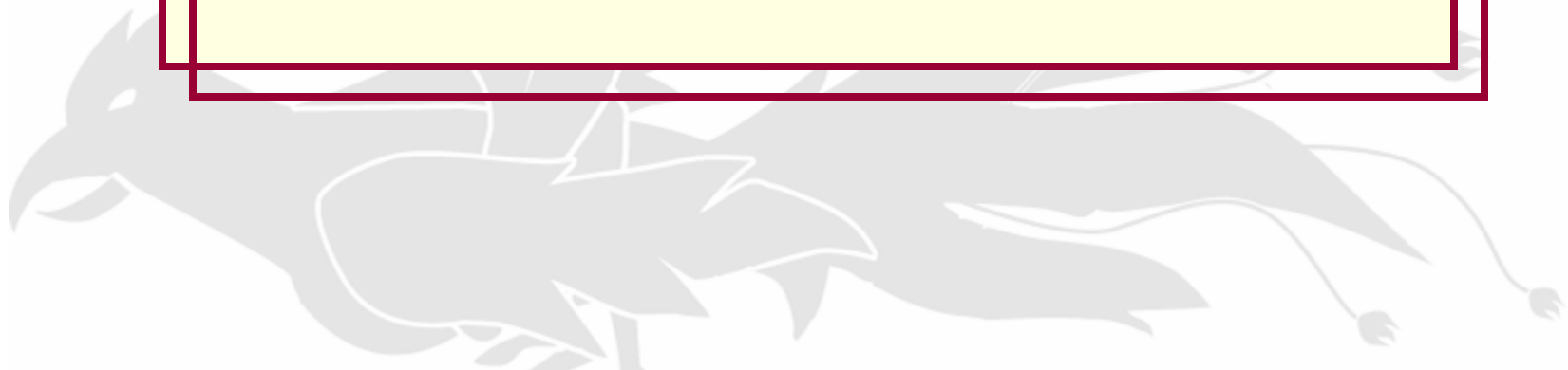
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The quest for the fun factor

What do designers want in a game?



The quest for the fun factor

What do designers want in a game?

- Designers want to entertain players
- The real crucial question is: **what makes a game fun to play, according to players?**



The quest for the fun factor

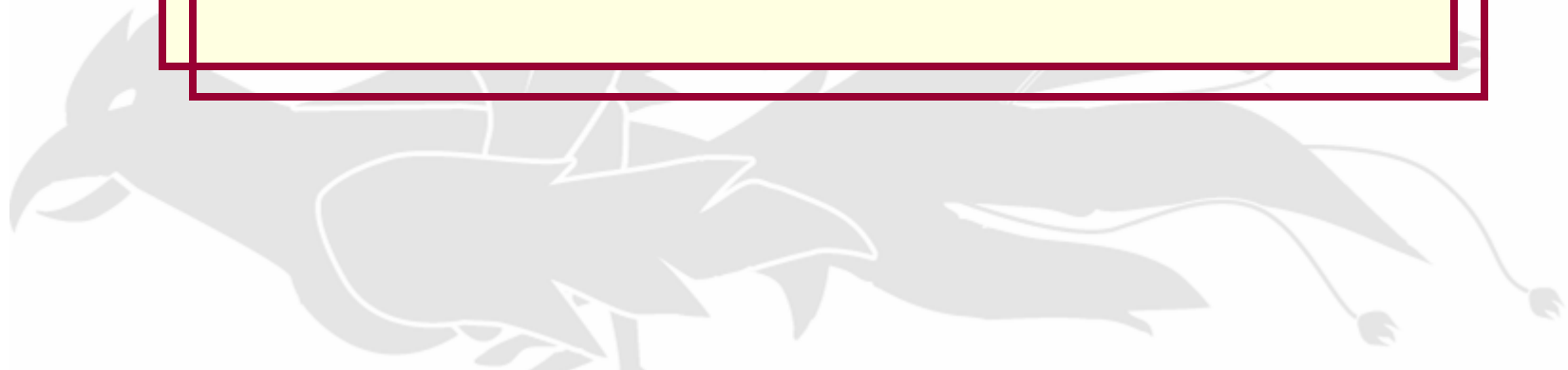
Conclusion #1

- The goal of game designers is to entertain players. Hence the real important thing is what **players** want, and how they have fun.



The quest for the fun factor

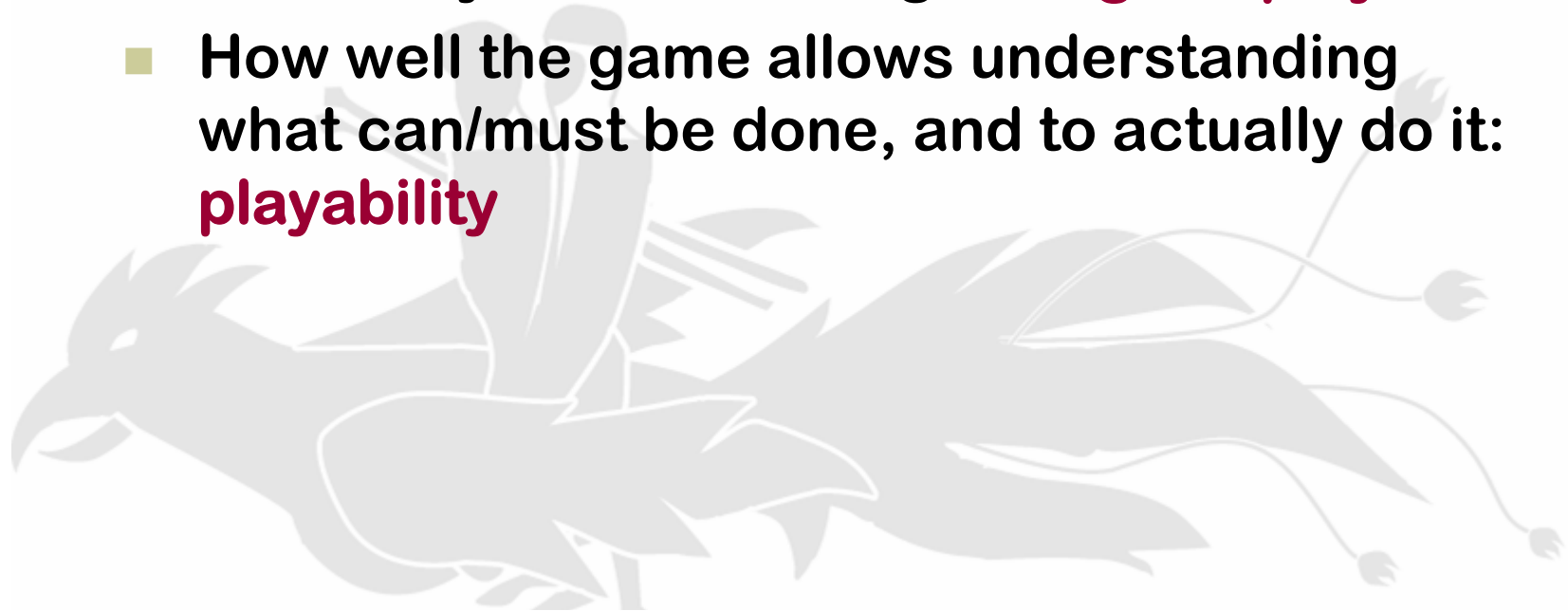
Key determinants of the fun factor



The quest for the fun factor

Key determinants of the fun factor

- What do players take into account, when judging a game?
 - What the game is about: **setting** and **storyline**
 - Game **goals**
 - What they can do in the game: **gameplay**
 - How well the game allows understanding what can/must be done, and to actually do it: **playability**



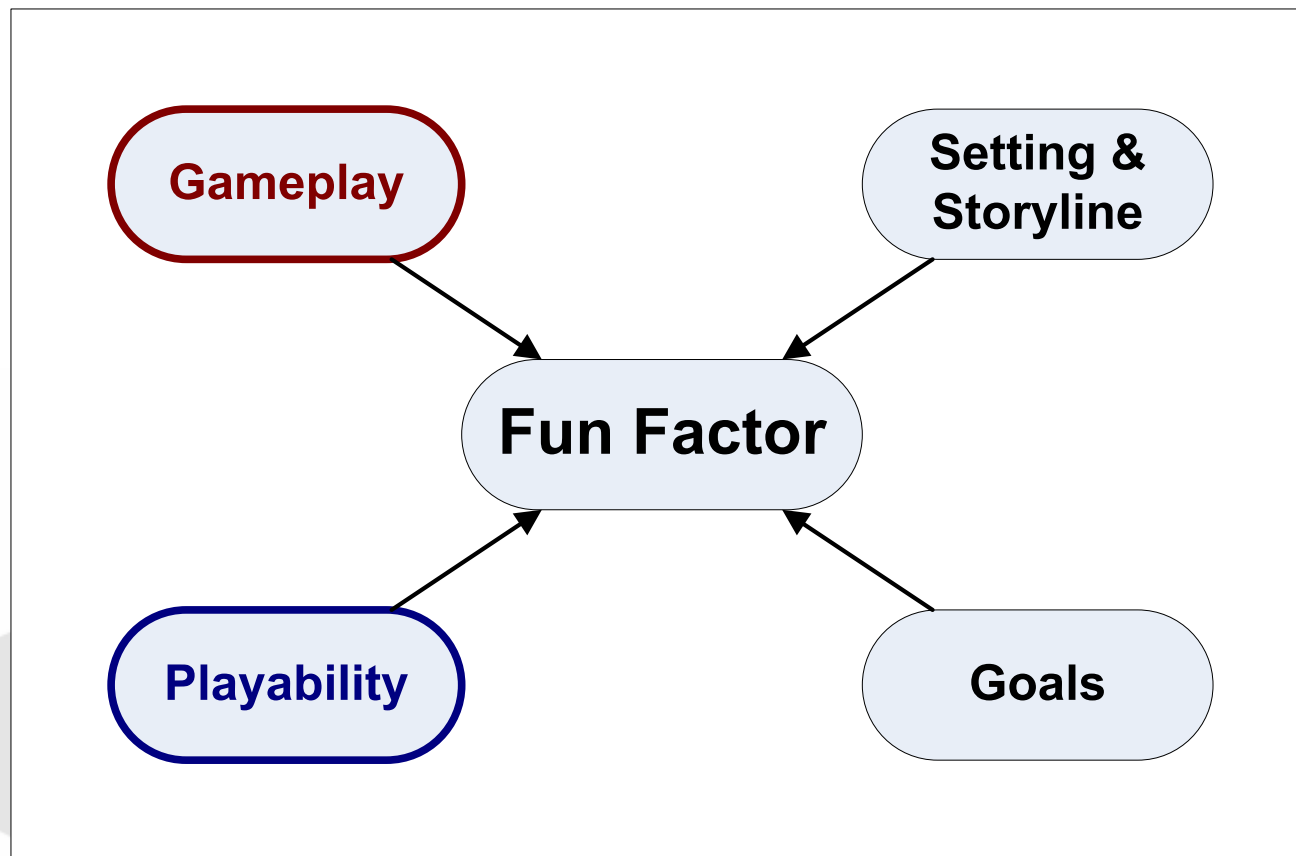
The quest for the fun factor

The game design cornerstones



The quest for the fun factor

The game design cornerstones



The quest for the fun factor

Conclusion #2

- **Gameplay, playability, game goals and setting & storyline are the key determinants of quality in videogames, with gameplay being the true spinal tap of the fun factor.**



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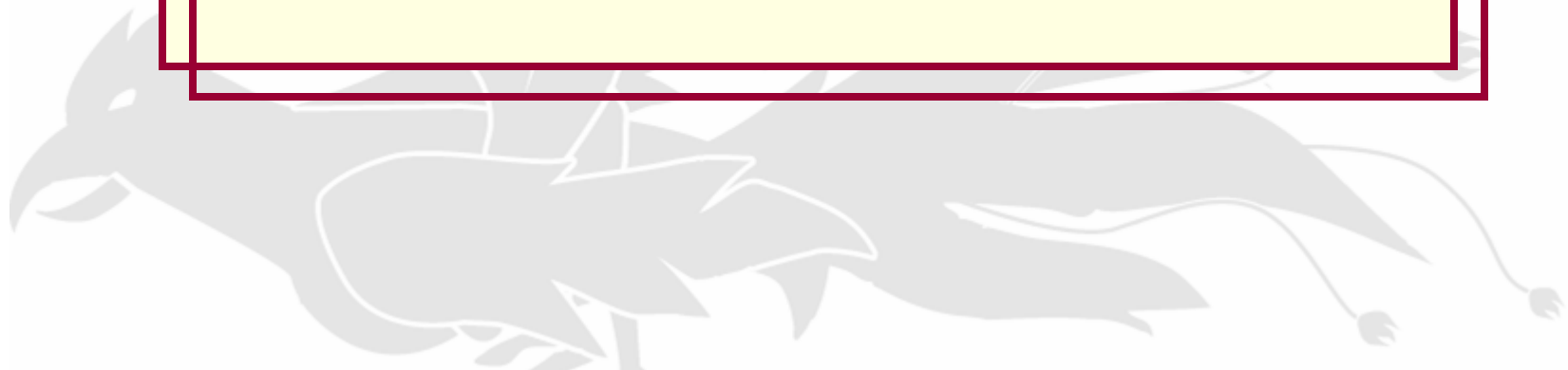
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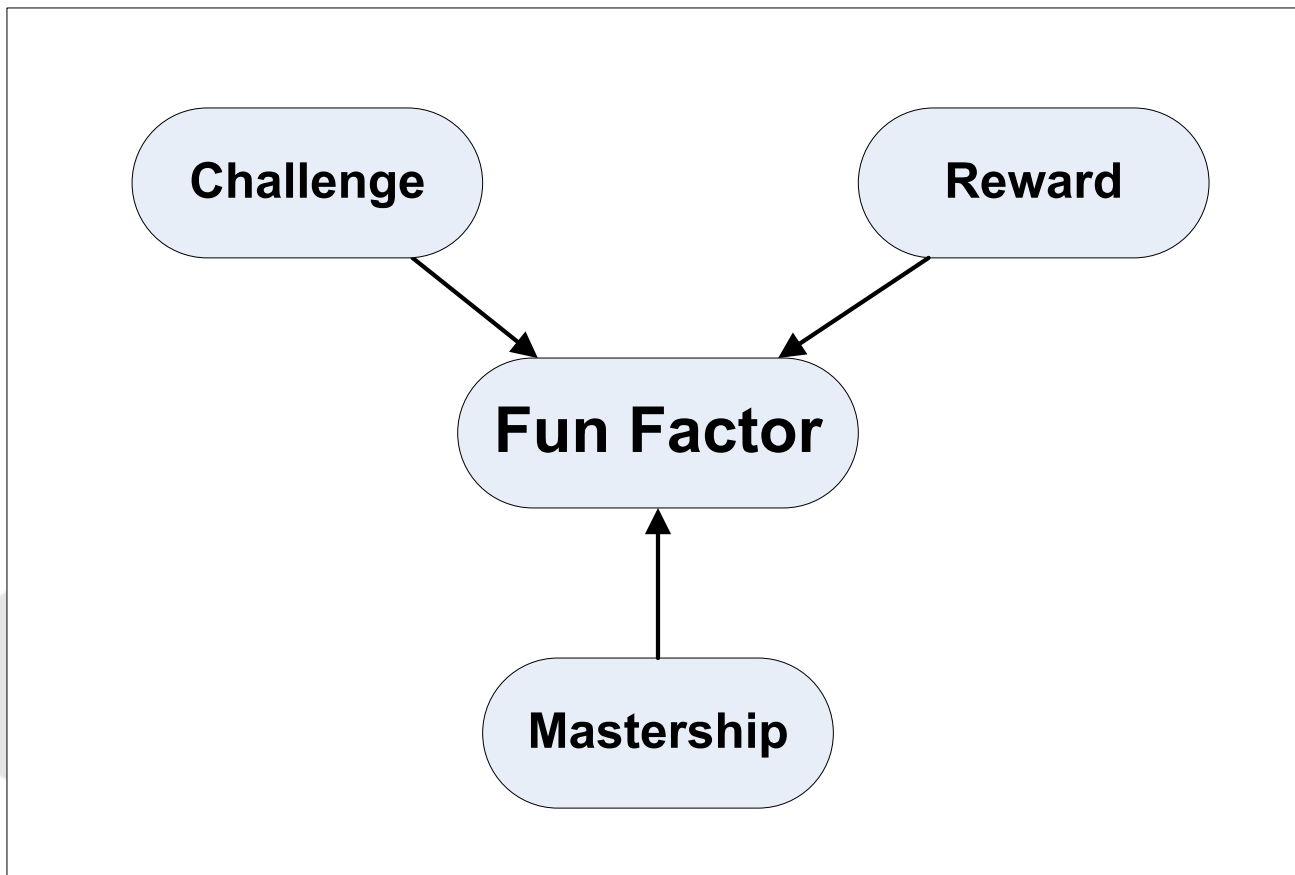
Gameplay & fun factor

Quality in gameplay activities



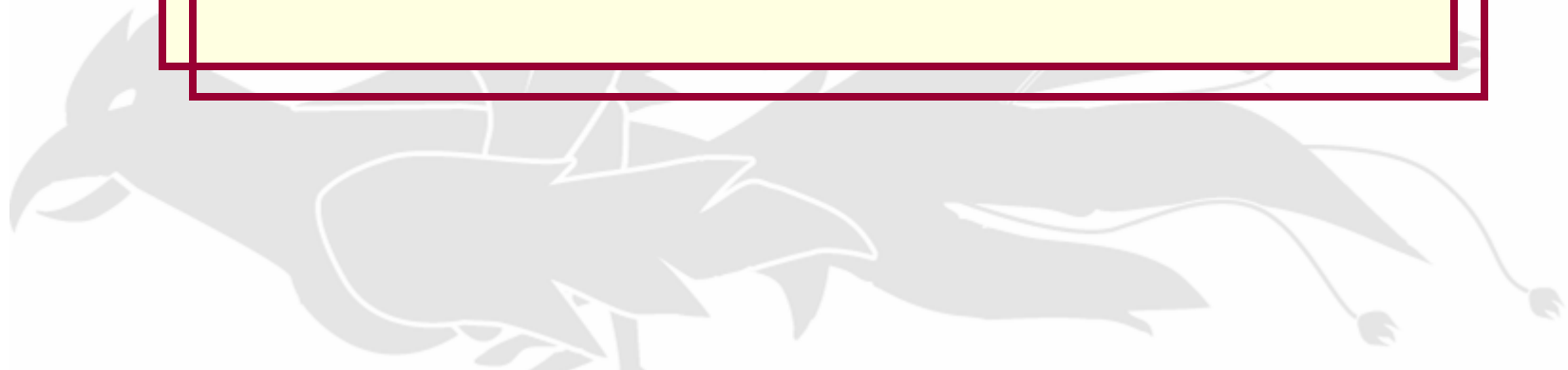
Gameplay & fun factor

Quality in gameplay activities



Gameplay & fun factor

Toys: the tools for playing



Gameplay & fun factor

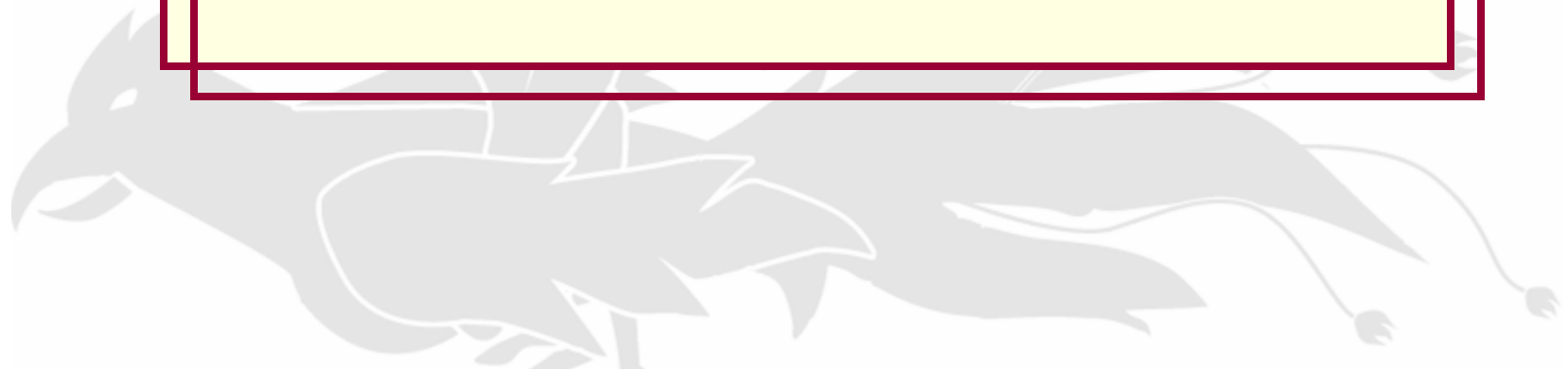
Toys: the tools for playing

- To achieve anything at all, players need to interact with concrete or abstract object: **toys!**
 - Input devices
 - **Game mechanics**



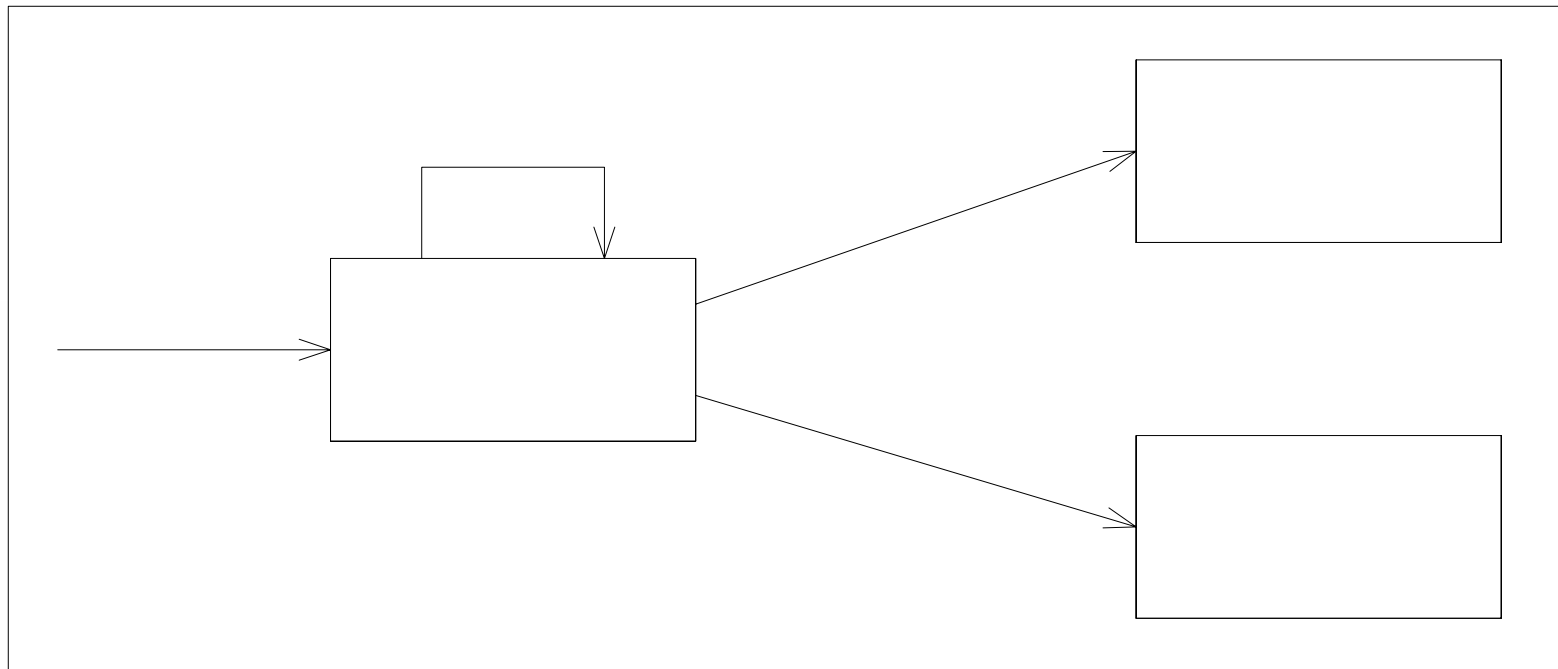
Gameplay & fun factor

Game mechanics: building
blocks for gameplay



Gameplay & fun factor

Game mechanics: building blocks for gameplay



2:

Status Change

Gameplay & fun factor

Conclusion #3

- **Game mechanics are true building blocks to create gameplay, and are the most important tool that a game designer can use in his/her “quest for the fun factor”**



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Game mechanics, fun, motivation and learning

Game mechanics: where does
the fun come from?



Gameplay & fun factor
Game mechanics: where does the fun
come from?

- **Challenge, reward and development of mastery** are keys to motivate players



Gameplay & fun factor

Game mechanics: where does the fun come from?

- **Focusing on mechanics, challenge and consequent reward come from a process of learning how the mechanics works and using it to achieve game goals:**
 - Learning how the mechanics works and can be used (i.e. the rules of the mechanics)
 - Using them in ordinary situations, as gameplay tools
 - Using them in extra-ordinary situations, under the influence of modifying external factors

Gameplay & fun factor

Game mechanics: where does the fun come from?

- **Learning the rules of the mechanics**
 - **Challenge intrinsic** to the mechanics itself: explore it and understand how it works and can be used to achieve game goals
 - **Learning required**: how the mechanics works



Gameplay & fun factor

Game mechanics: where does the fun come from?

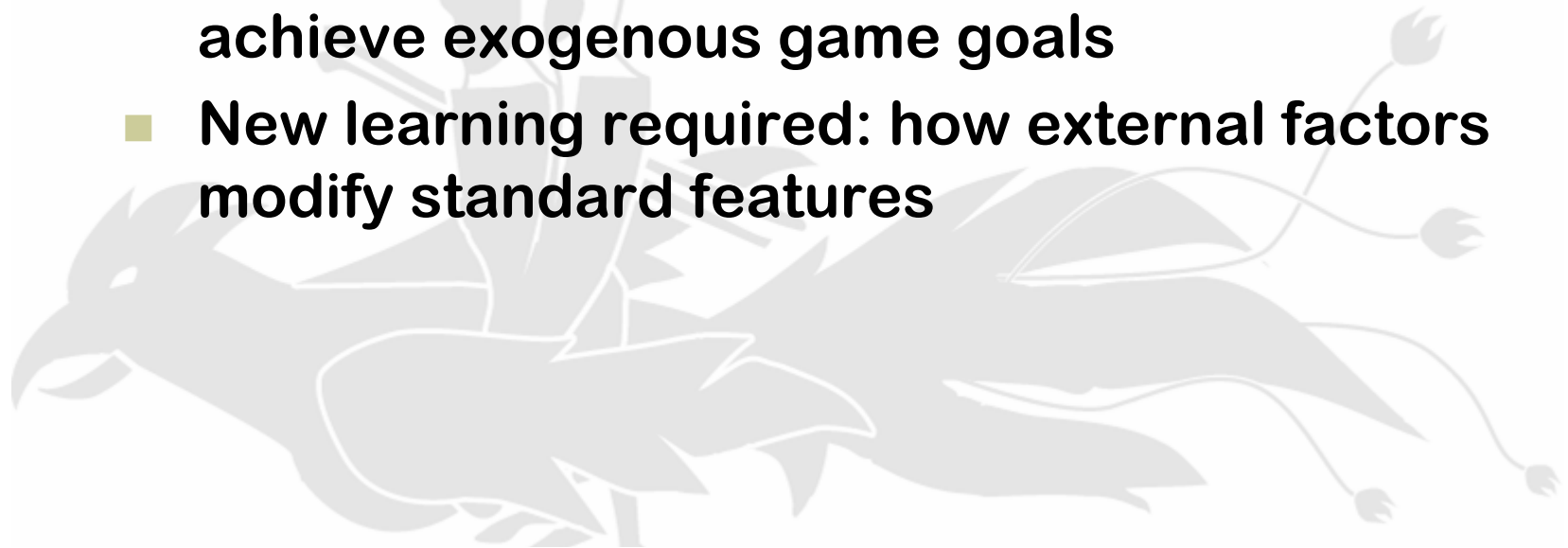
- **Using the mechanics in ordinary situations**
 - **Extrinsic challenge:** based on contextual conditions, decide what standard features to use, in order to achieve exogenous game goals
 - **No new learning required**



Gameplay & fun factor

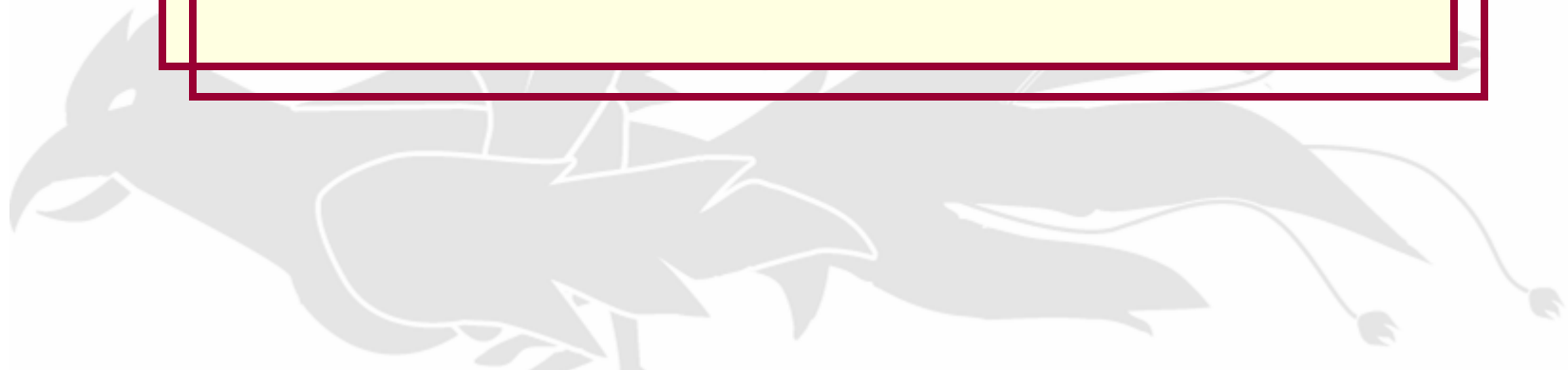
Game mechanics: where does the fun come from?

- Using the mechanics in extra-ordinary situations, under the influence of external modifying factors
 - **Extrinsic challenge**: based on contextual conditions, decide what “modified” features to use, and how to use them, in order to achieve exogenous game goals
 - New learning required: how external factors modify standard features



Game mechanics, fun, motivation and learning

Fun factor and game
mechanics: the dangers



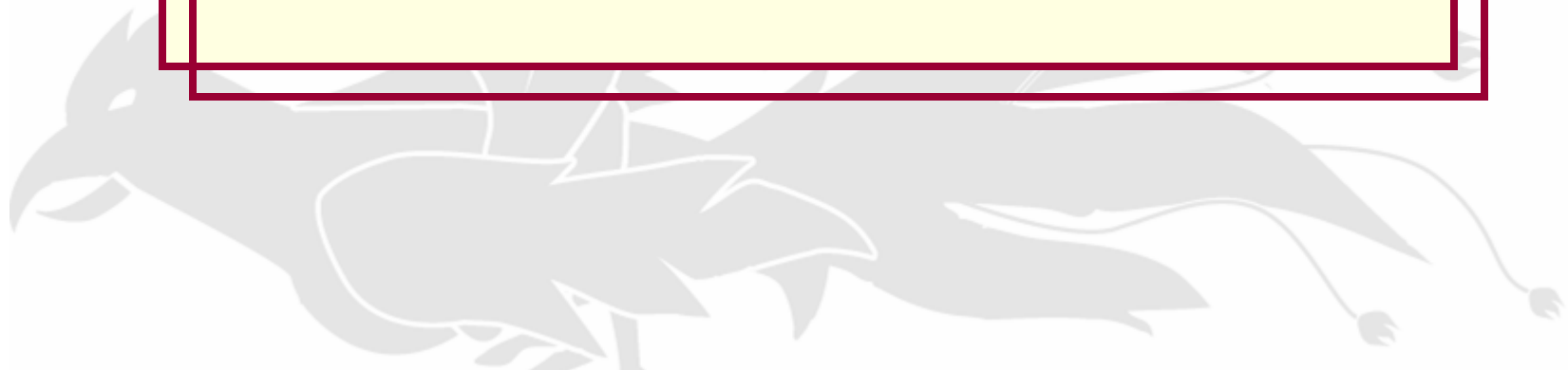
Gameplay & fun factor

Fun factor and game mechanics: the dangers

- **Game mechanics and fun factor don't go along unconditionally**
 - **Burnout:** learning has been completed, and a particular action no longer yields meaningful achievements
 - Motivation in using the mechanics decays, and the mechanics become boring to play with
 - **Challenge flooding:** new learning is required too often by new challenges
 - The player cannot enjoy what he/she has learned, and is prevented from developing mastery

Game mechanics, fun, motivation and learning

Fun factor and game
mechanics: avoiding the
dangers



Gameplay & fun factor

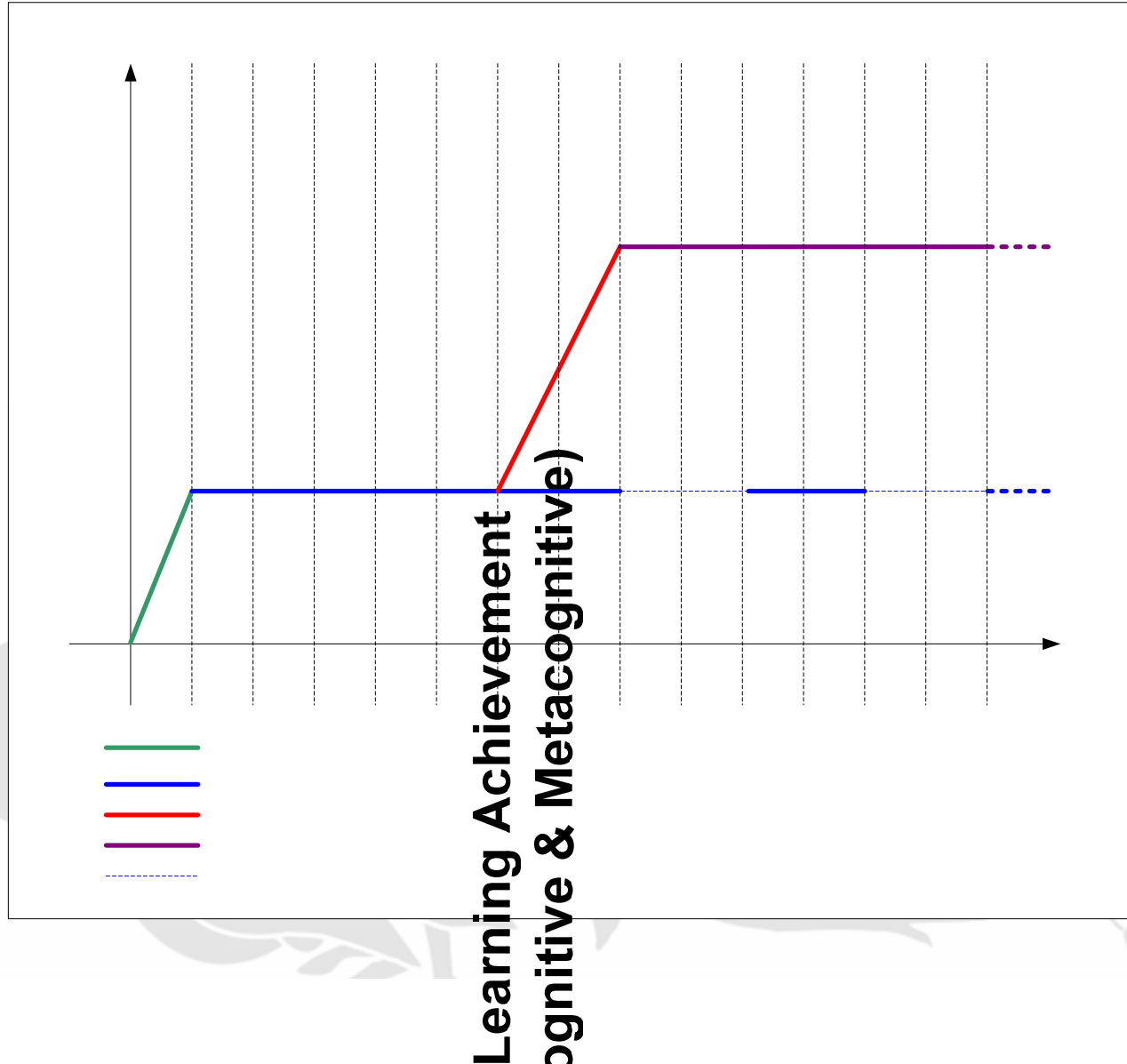
Fun factor and game mechanics: avoiding the dangers

- **Balance the effort and time required by learning processes, the time spent on using what has been learned and the payoffs (achievements) of the usage of the mechanics**



Gameplay & fun factor

Fun factor and game mechanics: avoiding the dangers



Gameplay & fun factor

Conclusion #4

- Although game mechanics are a primary source of entertainment, they don't go along with fun factor unconditionally
 - The effort and time required by learning processes, the time spent on using what has been learned and the payoffs (achievements) of the usage of the mechanics should be balanced to avoid **burnout** and **challenge flooding** dangers

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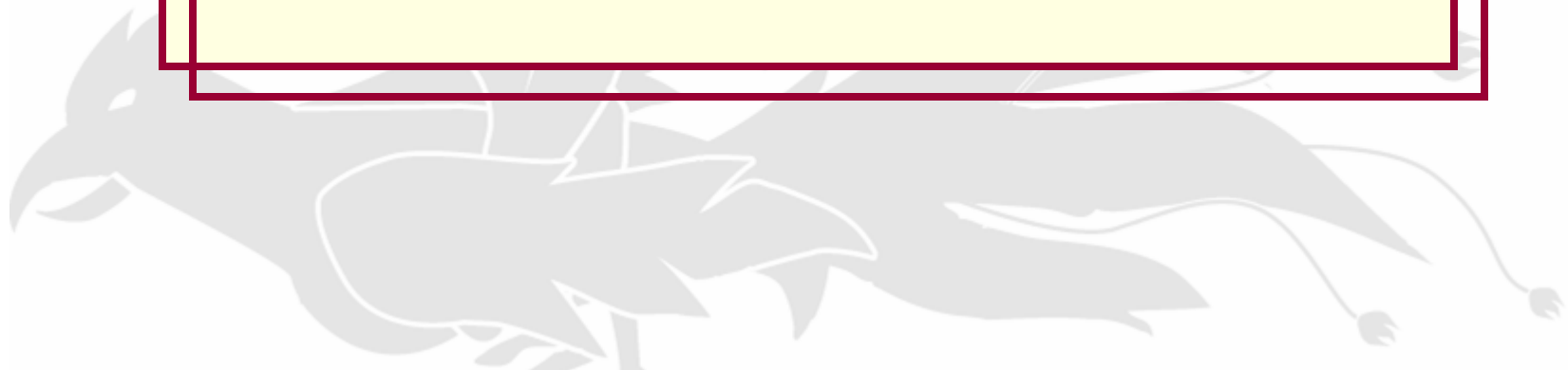
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Architecting gameplay

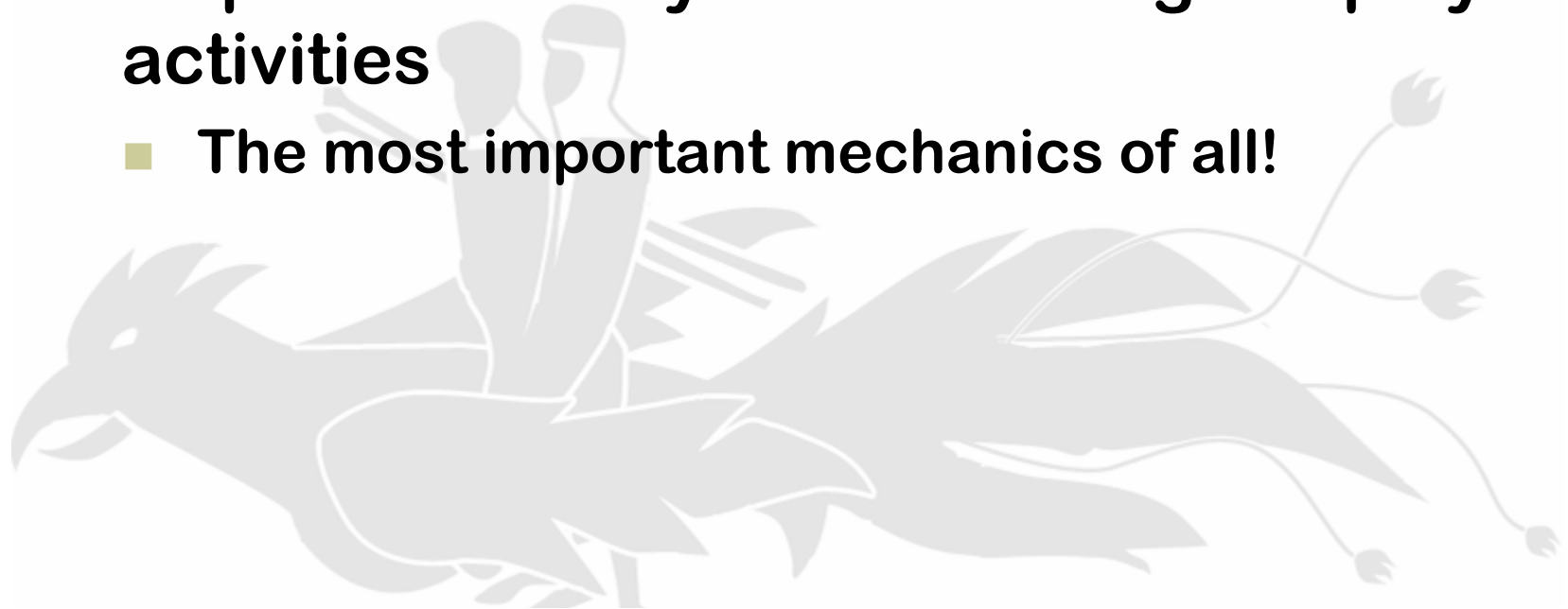
Core gameplay and core mechanics



Architecting gameplay

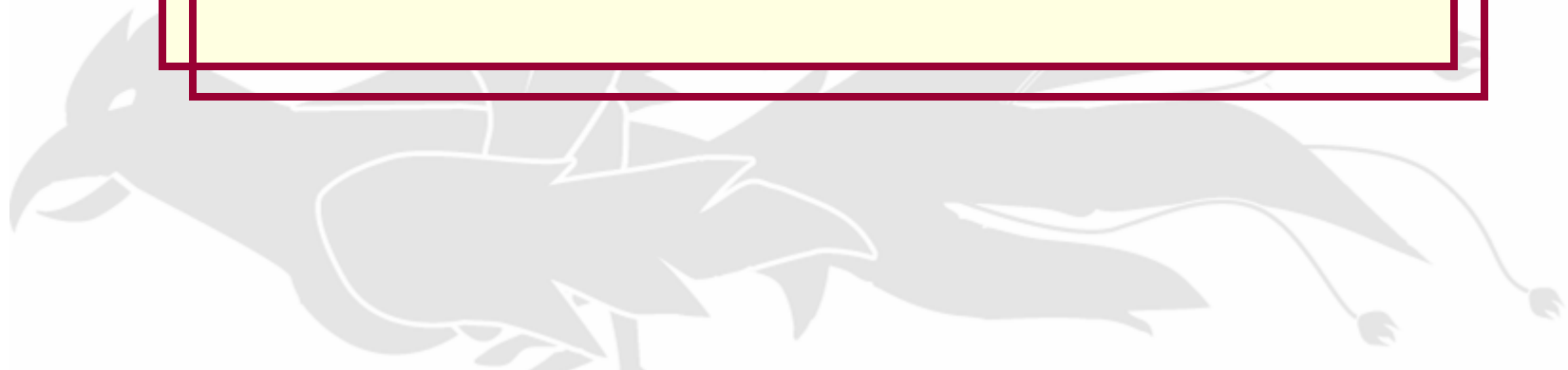
Core gameplay and core mechanics

- **Core gameplay:** set of activities undertaken more frequently, and indispensable to win the game
- **Core mechanics:** game mechanics required to carry out the core gameplay activities
 - The most important mechanics of all!



Architecting gameplay

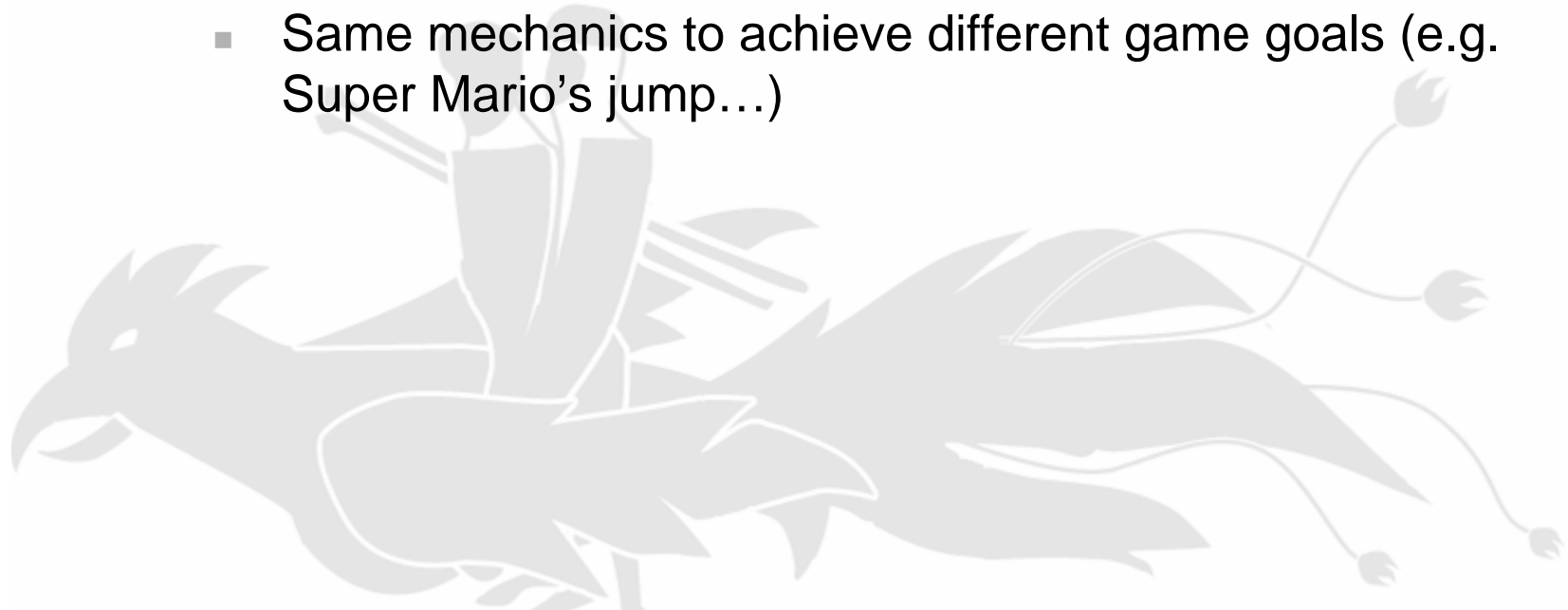
Core meta-gameplay and core mechanics



Architecting gameplay

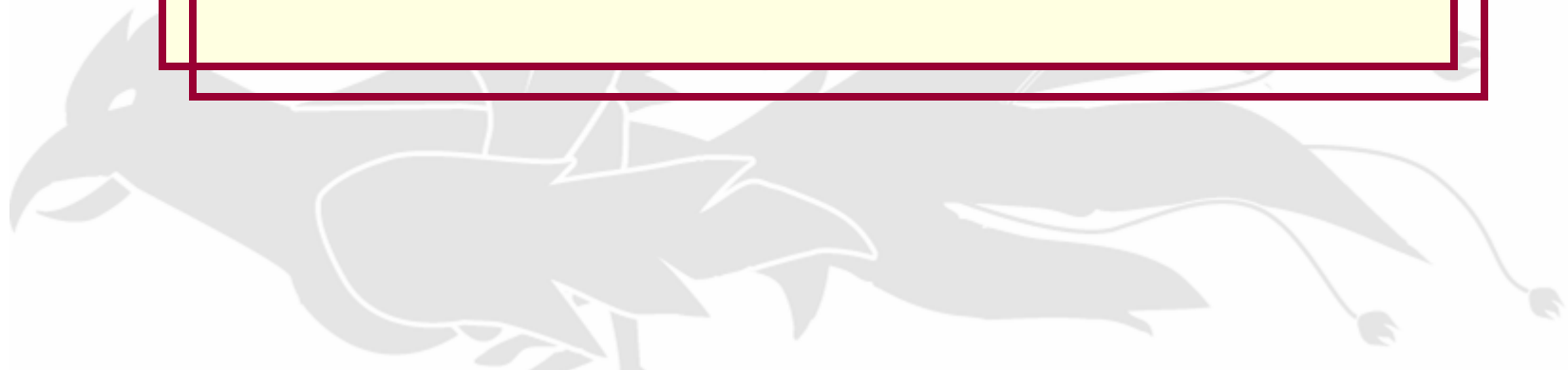
Core meta-gameplay and core mechanics

- **Core gameplay can be used to build core meta-gameplay**
 - **Core activities, but with new semantics**
 - **A powerful means to enrich the gameplay without requiring new mechanics**
 - Same mechanics to achieve different game goals (e.g. Super Mario's jump...)



Architecting gameplay

Satellite game mechanics



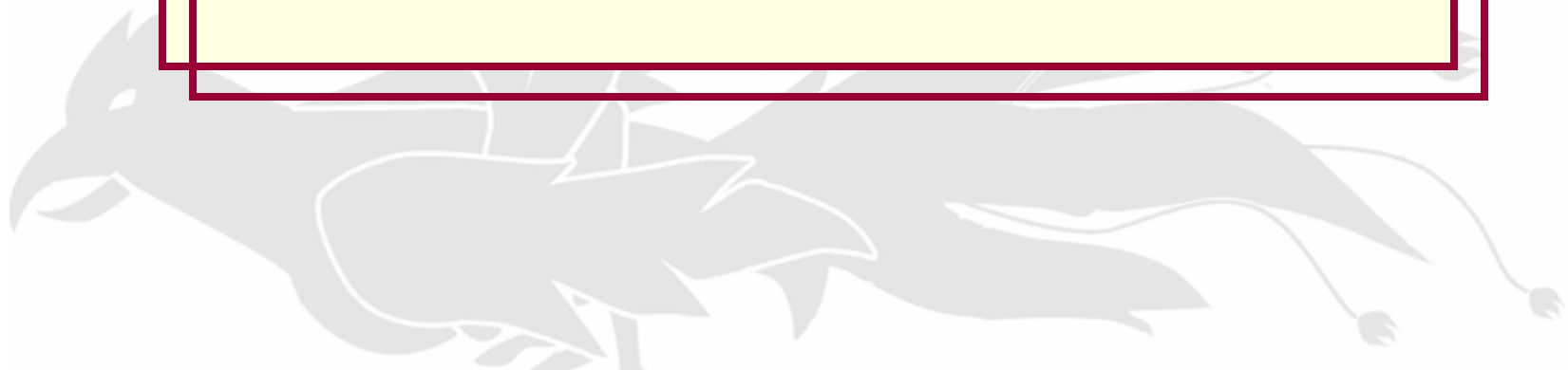
Architecting gameplay

Satellite game mechanics

- Aimed at enhancing existing core mechanics
 - Add new features: **add-on (complementary) mechanics**
 - Modify existing features: **power-up**
- Aimed at offering alternatives to existing mechanics
 - **Alternate mechanics**
- Aimed at hindering player's progress
 - **Opposition mechanics**
- **Importance of polyvalence!**

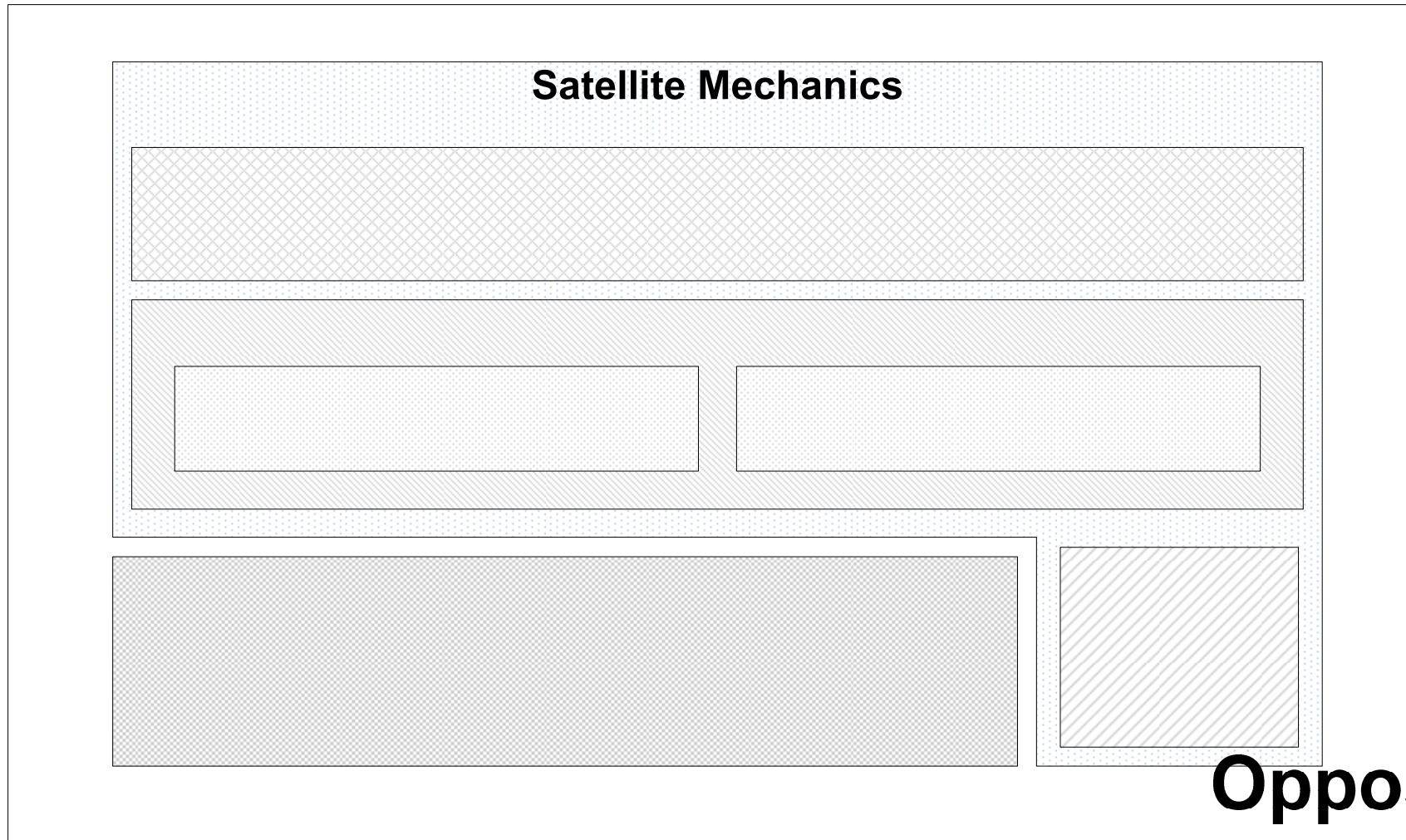
Architecting gameplay

An architectural model for
game mechanics



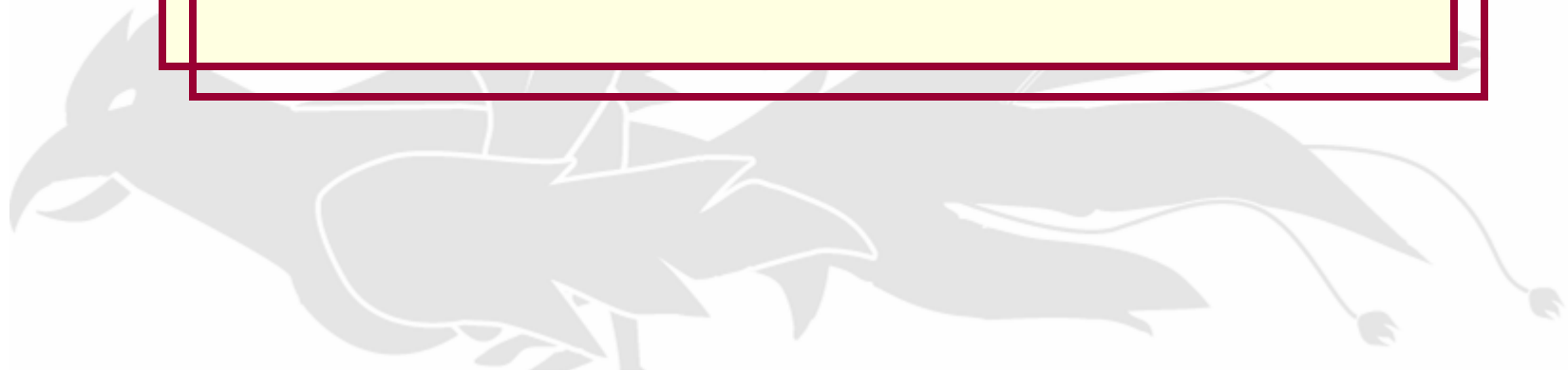
Architecting gameplay

An architectural model for game mechanics



Architecting gameplay

Peripheral gameplay



Architecting gameplay

Peripheral gameplay

- **Activities requiring completely new mechanics**
 - **Temporary substitute of core gameplay**



Architecting gameplay

Conclusion #5

- **Good gameplay can and should be based on core gameplay activities, relying heavily on core mechanics**



Architecting gameplay

Conclusion #6

- **Guidelines for architecting gameplay**
 - 1) Build the gameplay mostly based on core gameplay and core meta-gameplay activities
 - 2) Minimize the learning time required to master core mechanics' features
 - 3) Minimize the number of core mechanics, and the amount of features for each one of them
 - 4) Core mechanics should be relevant throughout most of the game, and that there should be no functional redundancies amongst them
 - 5) Exploit polyvalence in game mechanics design
 - 6) Exploit satellite mechanics in order to sustain and enhance players' motivation in using core mechanics.
 - 7) Suspend temporarily the use of specific mechanics in order to renew players' interest in them
 - 8) Minimize the use of peripheral gameplay

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A final conclusion

- **Gameplay is the most important pillar of good game design. A handful of good core mechanics and some carefully designed satellite mechanics allow building simple but yet entailing gameplay, providing the doses of challenge, reward and sense of mastery that players seek in the game experience.**

