

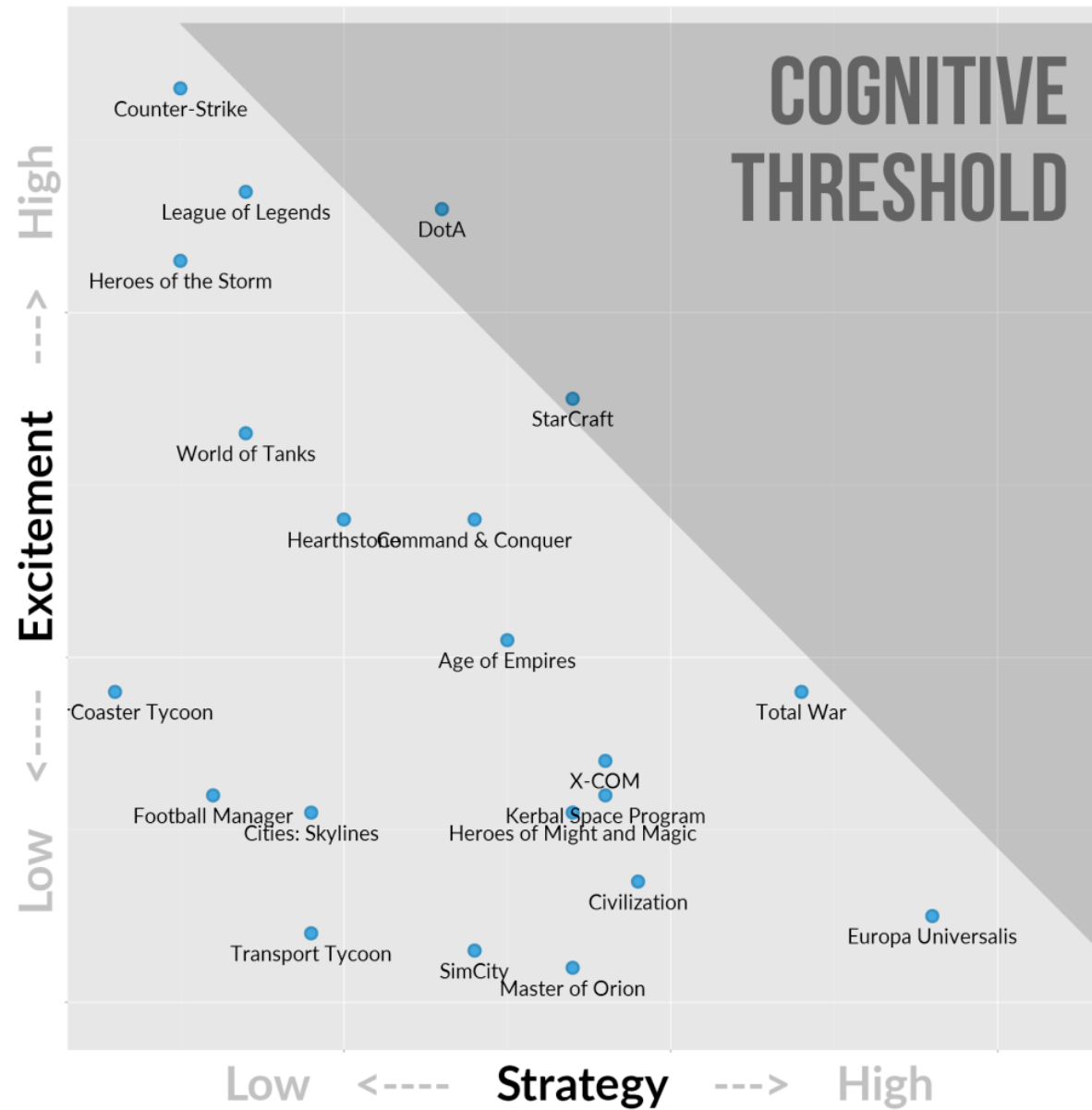
G54GAM Games

Structuring Games

Progression

Where are we?

- Formal elements
 - Core game mechanic
 - Game play
 - **How** we play
- Dramatic elements
 - Challenges
 - **Why** it is interesting to play
- What keeps us playing?



<http://quanticfoundry.com/2016/01/20/game-genre-map-the-cognitive-threshold-in-strategy-games/>

Level Design

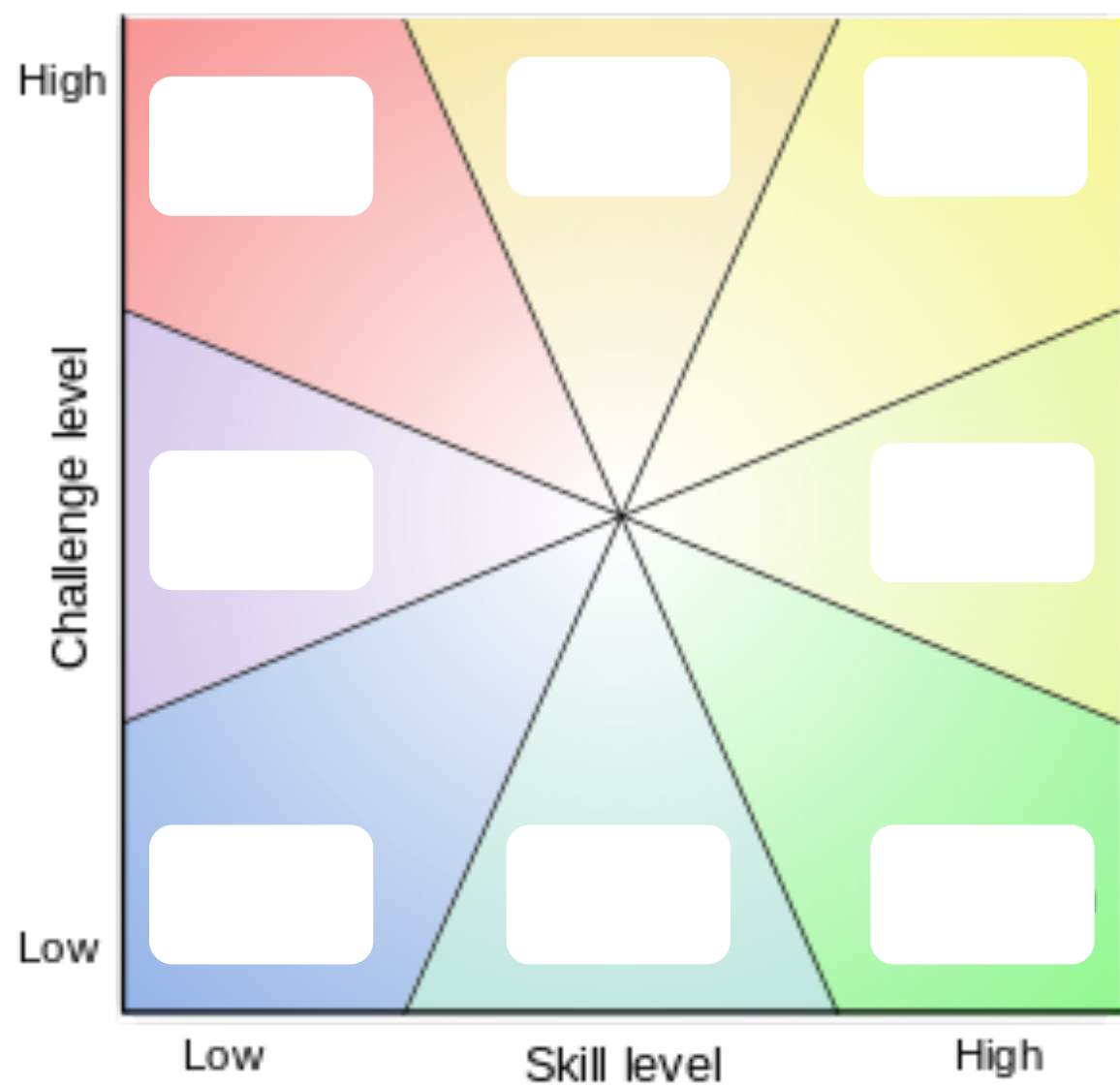
- The space in which the game takes place
 - Creating the space
- Initial conditions
 - Number of opponents, amount and location of resources
- The set of challenges the player will face
 - Often a linear sequence of levels, linear or non-linear sequence within a level
- The termination conditions
 - Winning or losing
 - Some levels can only be “lost”
- Interplay between gameplay and story
- Aesthetics and mood

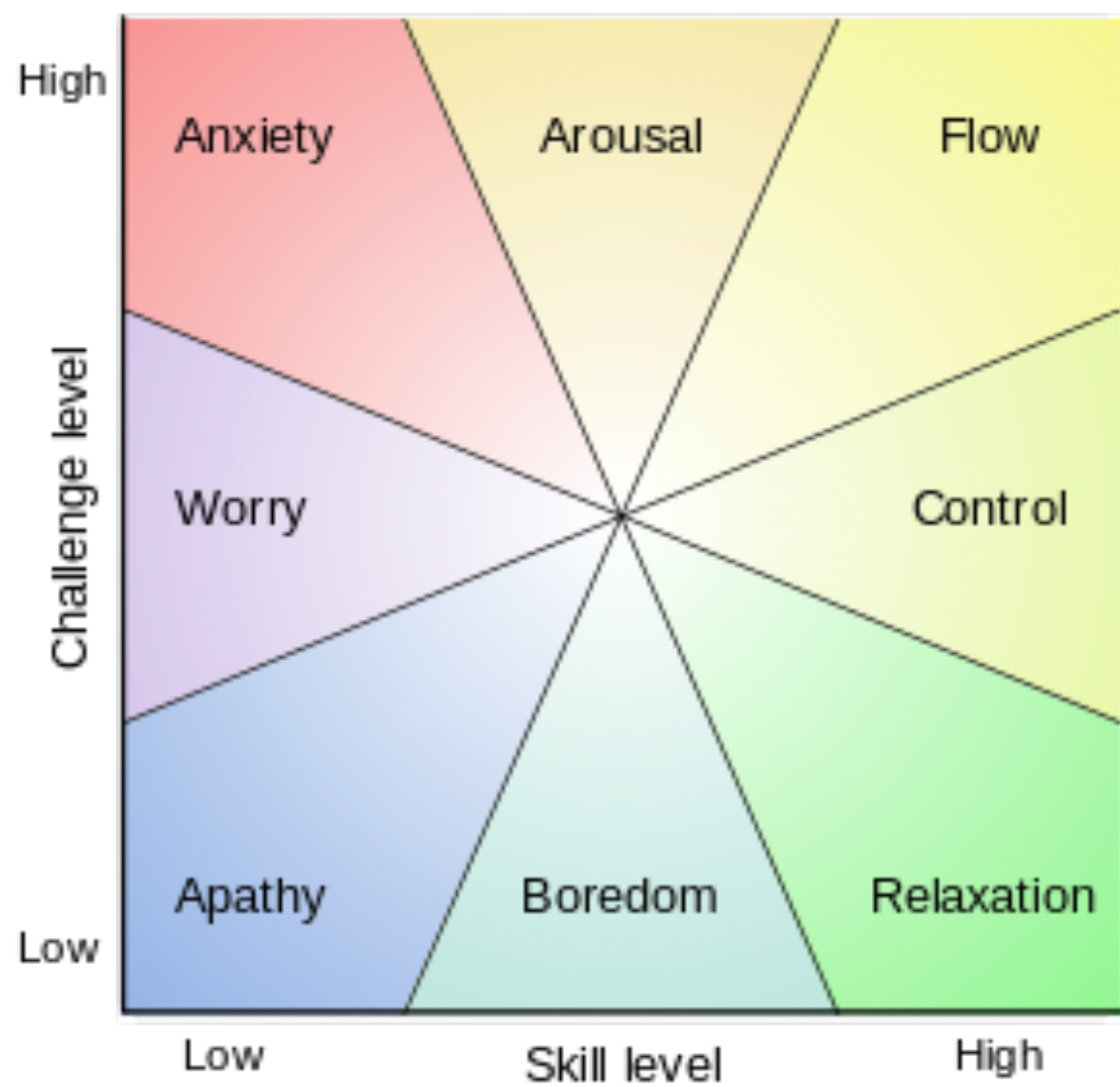
Progression and Longevity

- Challenges can be...
 - Concurrent
 - Contiguous
 - Nested
- Good game design is about **generating a series** of interesting challenges
 - Player has inefficient means to achieve their objectives
 - Players become more skilled over time, more adept at using means
 - A “good” game is one where success of the player is largely determined by the skill of the player
- How should we balance rules and challenges in general for appropriate progression?
 - What are the parameters of the challenges
- How can we ensure or assess engagement?
 - How can we **evaluate** if our game is “correct”?

“Flow” (Csíkszentmihályi)

- The Psychology of Optimal Experience
- Elements of enjoyment
 - A challenging, rule bound activity that requires skills
 - A task that has clear goals, offers immediate feedback
 - An ability to concentrate on the task at hand
 - A perceived sense of control over actions, lack of a sense of worry about losing control
 - Merging of action and awareness, a state of deep and effortless involvement
 - A loss of self-consciousness or preoccupation with self
 - The transformation of time





“Immersion” (Ermi & Mäyrä)

- The degree of involvement or engagement
 - Challenge-based immersion
 - Cognitive and motor requirements
 - Sensory immersion
 - Perceptual impact of multi-sensory properties
 - Imaginative immersion
 - Imaginary game world

Levels of Immersion (Brown & Cairns)

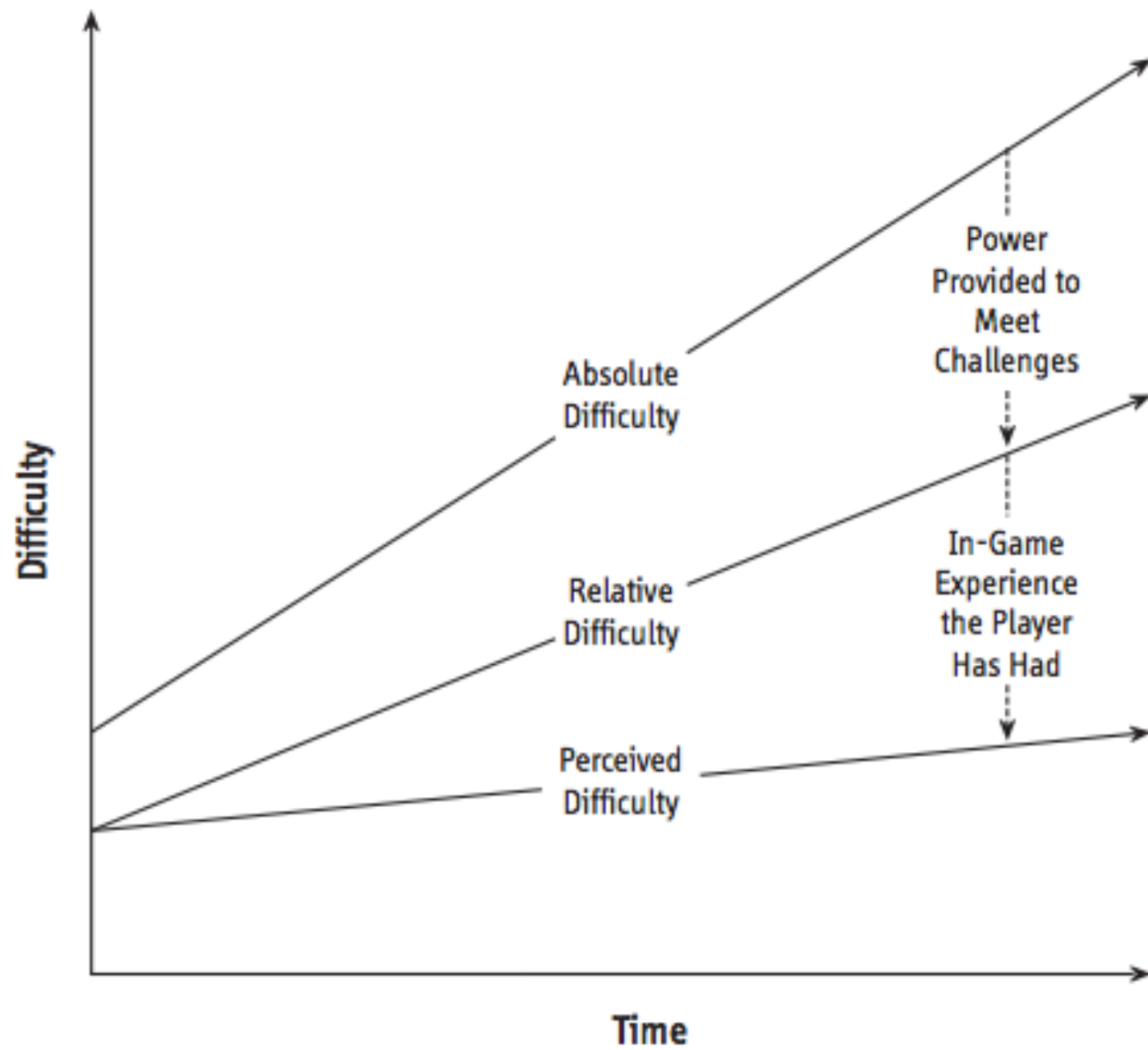
- Engagement
 - Willing to invest time, effort, attention
 - Does the player like this genre of game?
 - Expected effort = expected reward
 - Losing track of time = a feeling of guilt
- Engrossment
 - “Game construction” directly affects player’s emotions
 - High level of emotional investment
 - Less aware of surroundings
 - Distraction free environments
- Total immersion
 - C.f. “Presence”
 - Stop thinking about the fact that a game is being played
 - The game is all that matters
 - Empathy with game characters
- Brown, E. and Cairns, P. A grounded investigation of game immersion

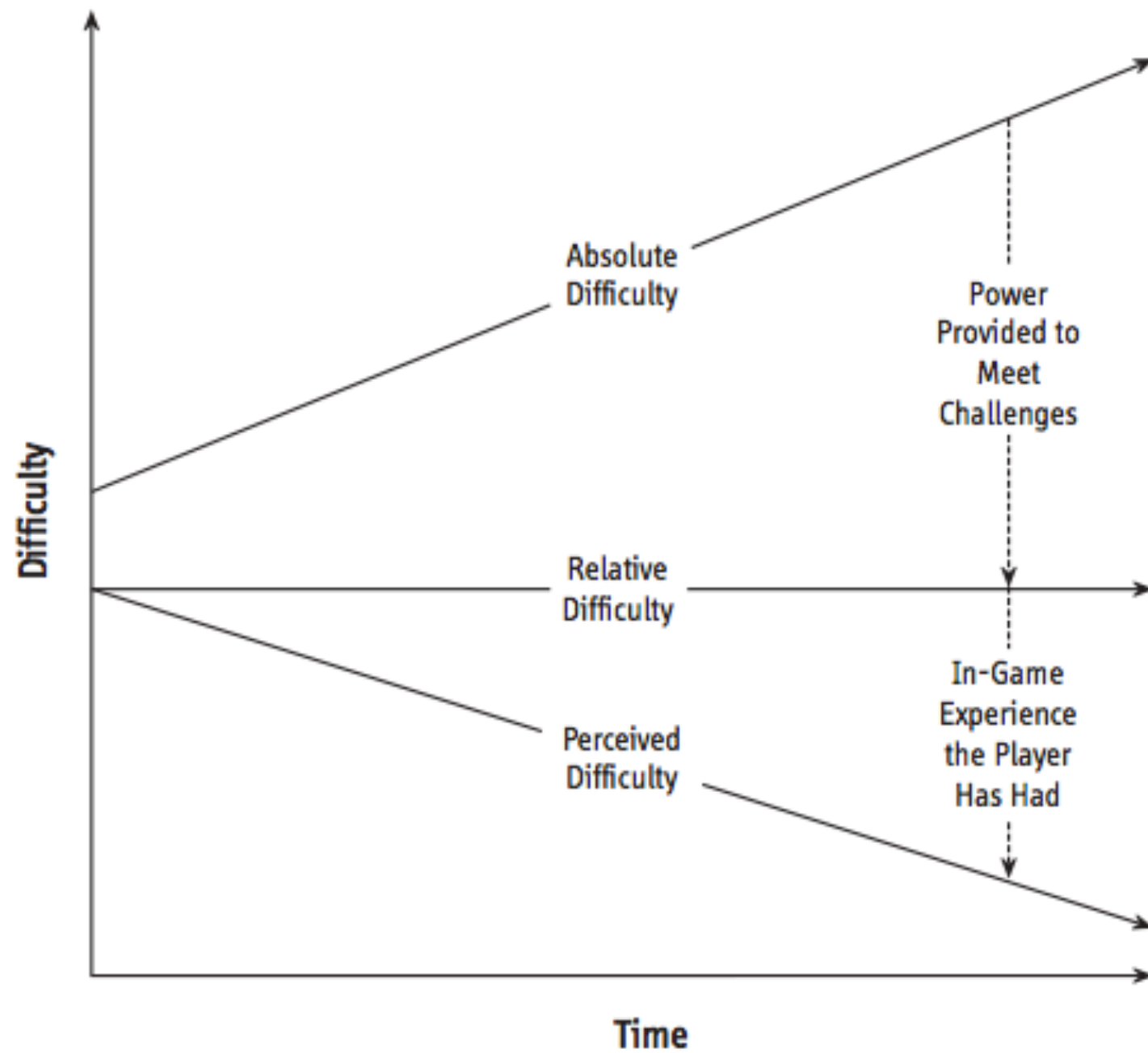
Measuring Game Experience (Ijsselstein)

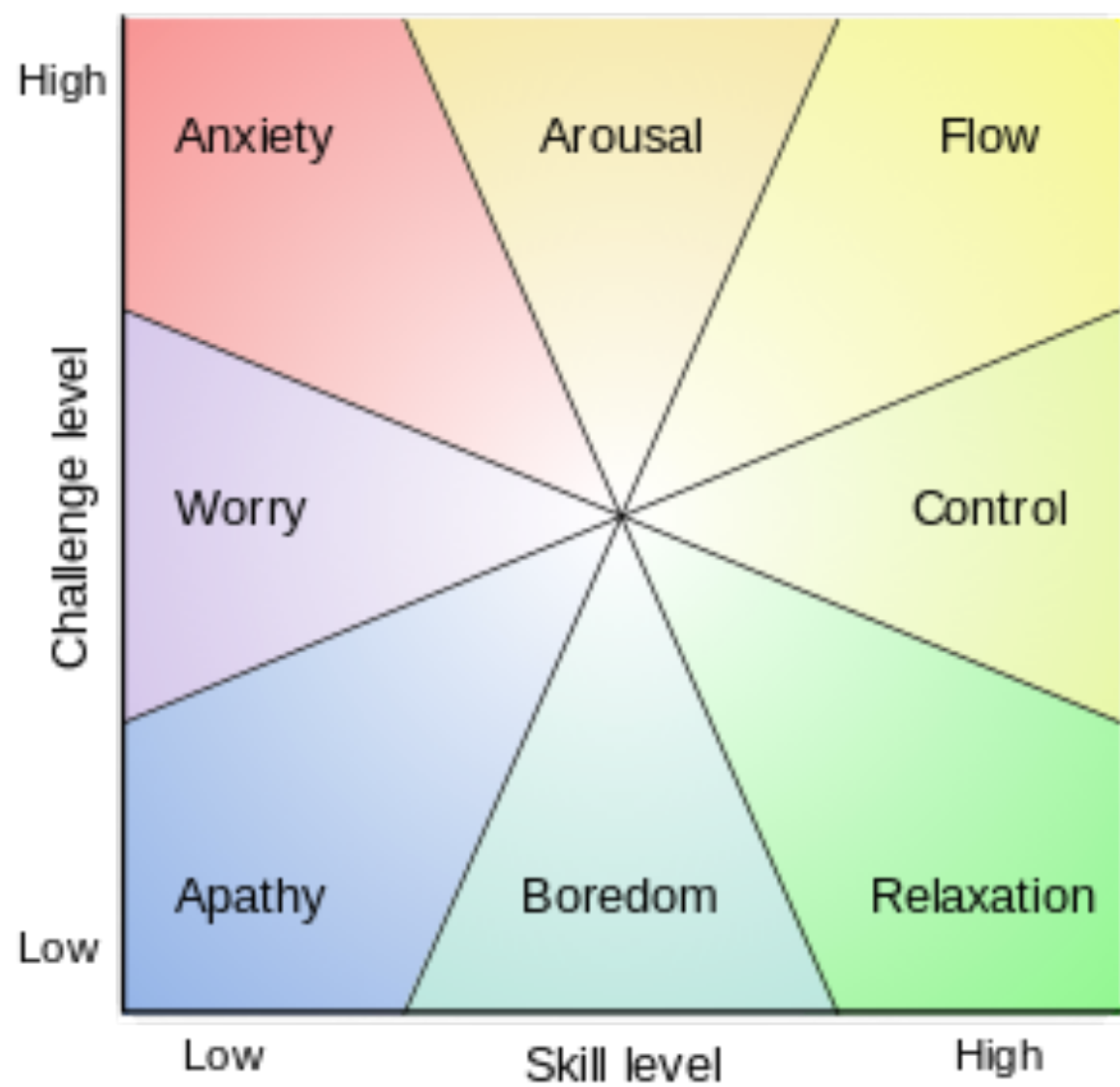
- Game Experience Questionnaire
- Ijsselstein, W.A.; de Kort, Y.A.W.; Poels, K.
- Seven factors of experience
 - Sensory and imaginative immersion
 - It was impressive, I was interested in the story
 - Tension
 - I felt frustrated, I felt pressured, I felt tense
 - Competence
 - I felt strong, I was good at it, I felt skillful
 - Flow
 - I lost track of time, I forgot everything around me
 - Negative affect
 - I felt bored, distracted, it gave me a bad mood
 - Positive affect
 - I felt good, I enjoyed it
 - Challenge
 - I thought it was hard, I felt that I was learning

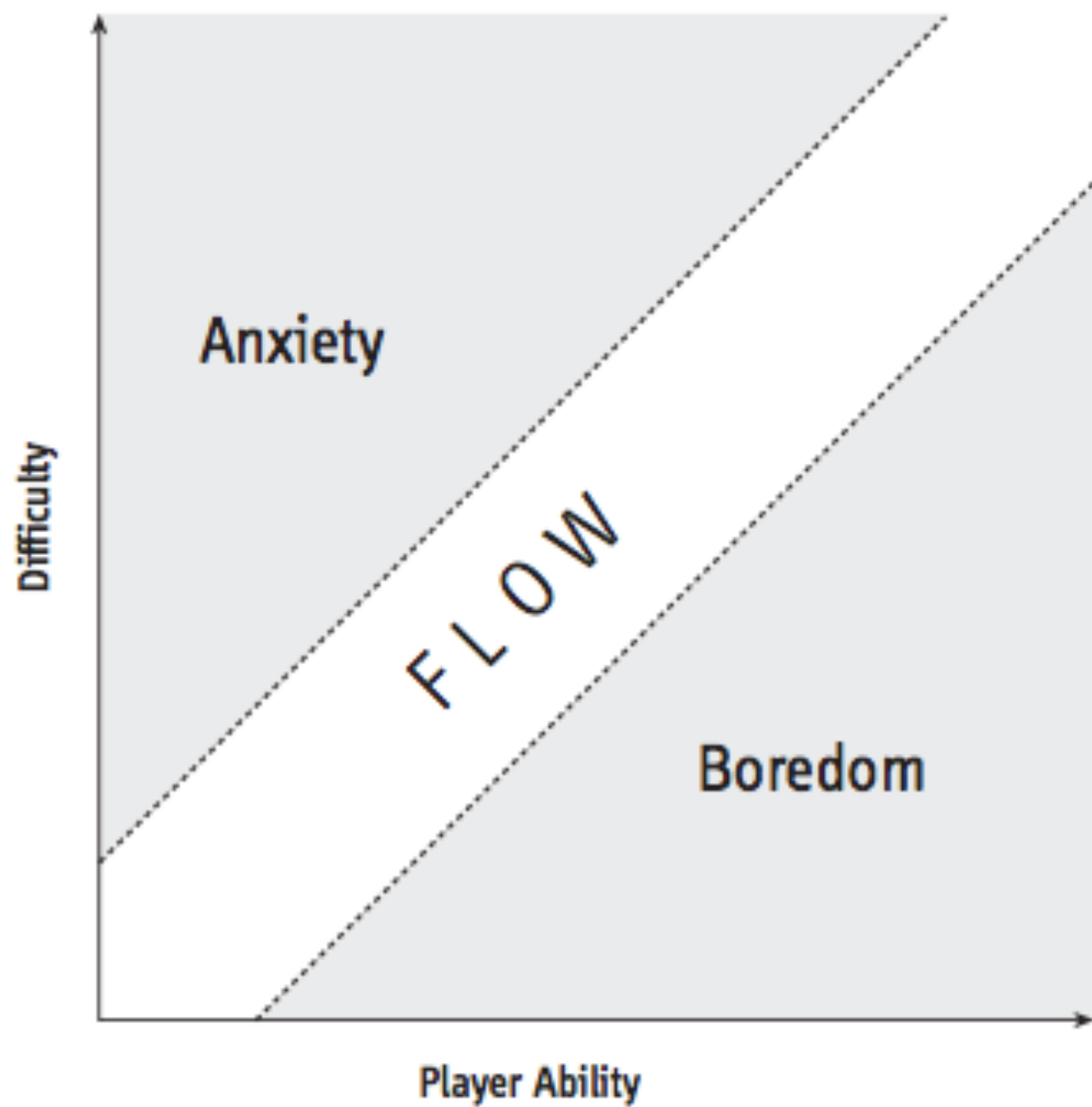
“Difficulty”

- Actually *how* challenging is it?
 - A trivial enemy: stands still, could not harm the player, could be killed with one hit
 - A non-trivial enemy: moves around, hits the player, requires multiple hits
 - **Absolute** difficulty
 - The intrinsic skill required and the stress of the challenge compared to the trivial case
- What is the *power provided*?
 - How much damage can the player do with a single hit
 - **Relative** difficulty
 - The difficulty relative to the player’s power to meet the challenge
- How does the player’s intrinsic skill change over time?
 - How much time has the player spent meeting similar challenges
 - **Perceived** difficulty = **absolute** difficulty – (power provided + in-game experience)









Reading

- The Concept of Flow. Csíkszentmihályi (2009)
 - <http://eweaver.myweb.usf.edu/2002-Flow.pdf>
- Fundamental Components of the Gameplay Experience: Analysing Immersion. Ermi & Mäyrä (2005)
 - <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.103.6702&rep=rep1&type=pdf>
- A grounded investigation of game immersion. Brown & Cairns (2004)
 - <https://dl.acm.org/citation.cfm?id=986048>
- Game Experience Questionnaire. IJsselstein et al (2013)
 - https://pure.tue.nl/ws/files/21666907/Game_Experience_Questionnaire_English.pdf
- Fundamentals of Game Design, Adams, chapters 11, 12