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Keeping it Simple

Mechanics Complexity Metrics for Use in Wargame Design

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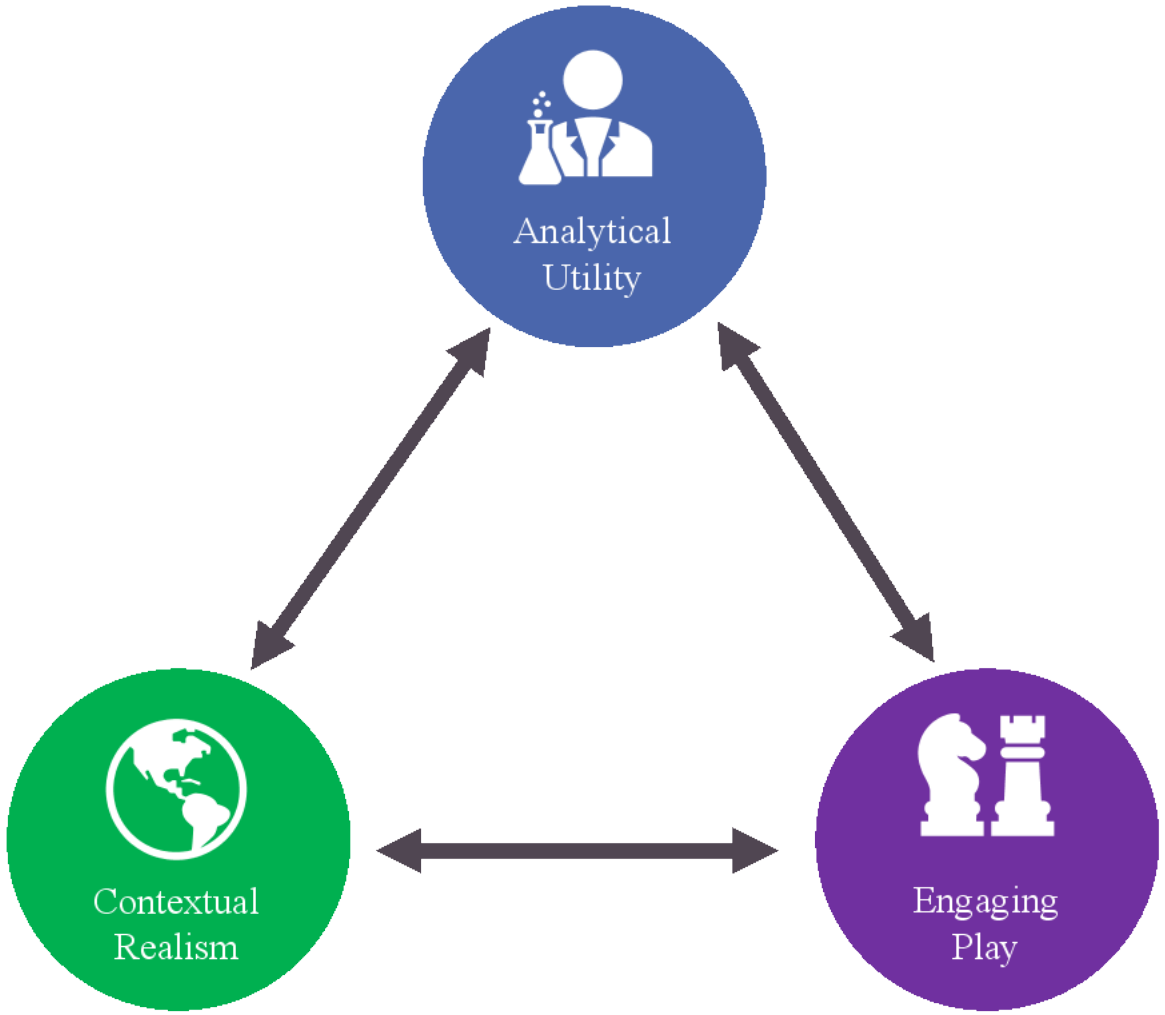
Relevant Contexts

- Experimental wargaming
- Hobby Games
- National Security contexts with elite samples

This approach is less relevant to:

- Contexts with mandatory participation
- Games intended to be played many times by the same participants
- Hobby games for a deeply invested audience who values 1) realism or 2) high complexity

The Wargame Designer's Trilemma



See: Reddie et al. (forthcoming)

Player engagement

What is player engagement?

a feeling of involvement and energized focus while acting within the game

Why does player engagement matter?

- improved attention
- realistic decision making
- concern with consequences

Why is disengagement a concern?

- attrition
- random actions
- inaccurate insights

Mechanics and Engagement

Mechanics: game rules and the game's structured response to those rules.

Complexity of game mechanics strongly affects player engagement

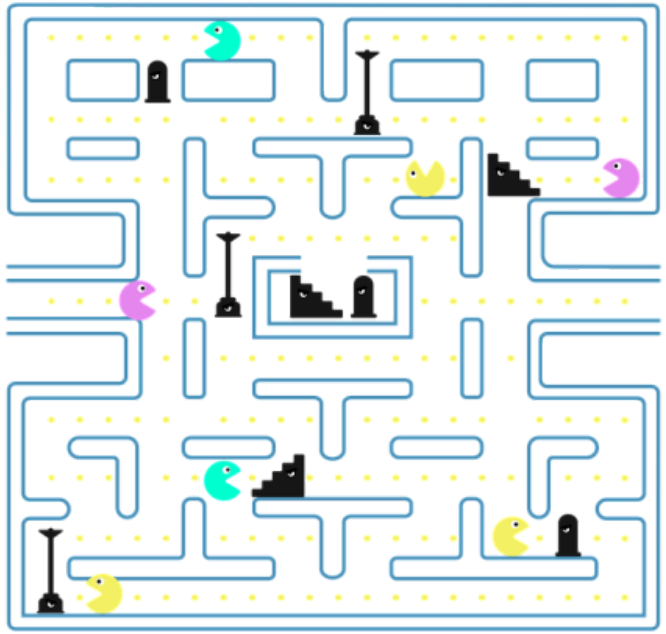
Signs a game is too simple?

- short play time
- minimal player impact on outcome
- highly random or completely deterministic
- requires external incentives
  (e.g., only fun if betting, etc.)

Complexity

What makes a mechanic complex?

- computationally demanding
- requiring memory or other information retrieval
- multi-stage
- dependent on game state
- contingent on forecasting
- counter to expectation



Determining when a game's mechanics are sufficiently complex to represent the problem of interest, but simple enough to allow for accessible play represents a meaningful and common design challenge.

Complexity points: game design by rule of thumb

Instructions

Review your rules and your white cell response.

Take every mechanic that is “complex” and mark down a point.

Recommendation

For novice players and inexperienced audiences: 2-4

For experienced audiences: 5-6

For repeated play with experienced audiences: 5-8

Mitigating your way to the goldilocks zone

How to mitigate the cognitive load of complex mechanics

computationally demanding

- let the system do the computation

requiring memory or other information retrieval

- provide access to what must be retrieved

multi-stage

- break the process into single stages

dependent on game state

- visualize the game state on the board

contingent on forecasting

- ???

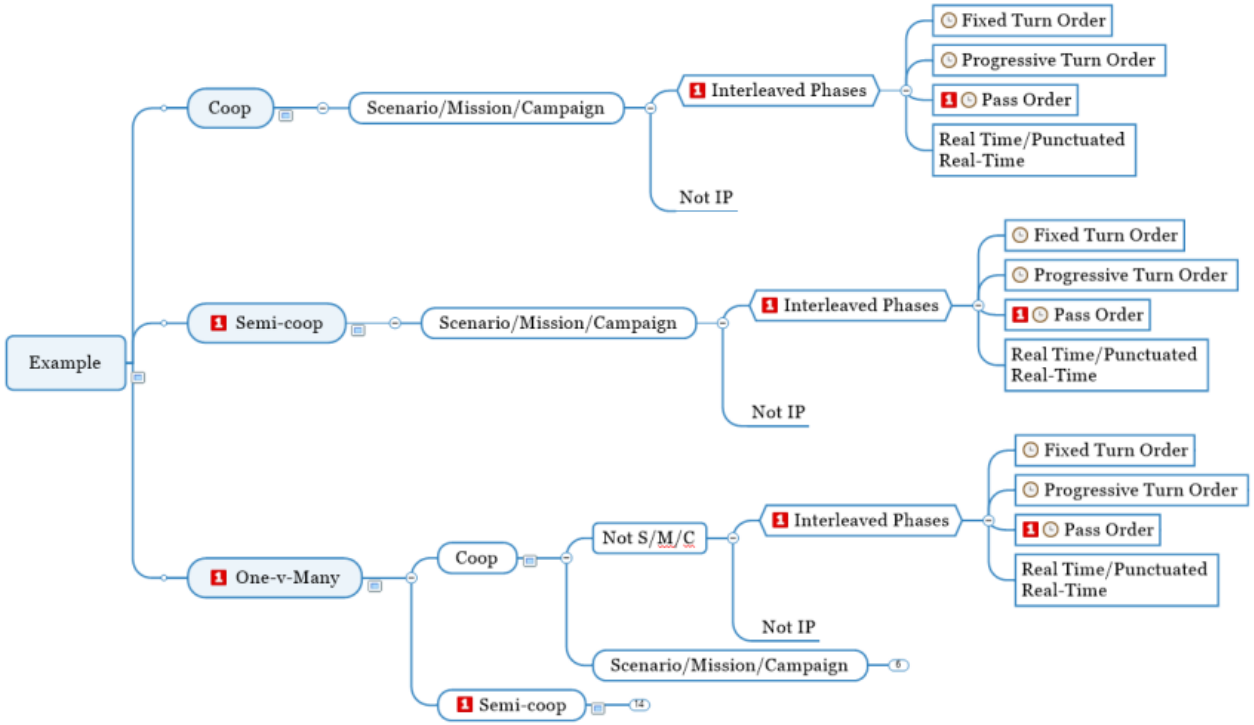
counter to expectation

- ???

Rule of Thumb: Illustrated

At present, designers generally rely on their experience, pilot playtests, and common sense to determine when a game has reached the right mix.

Our simple "count of complexity" approach provides an incremental improvement, by allowing designers to assess complexity in a structured way prior to play testing.




Questions?

Thank you.

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