

How we play matters: Overview of player typologies in game-related research

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INTRODUCTION

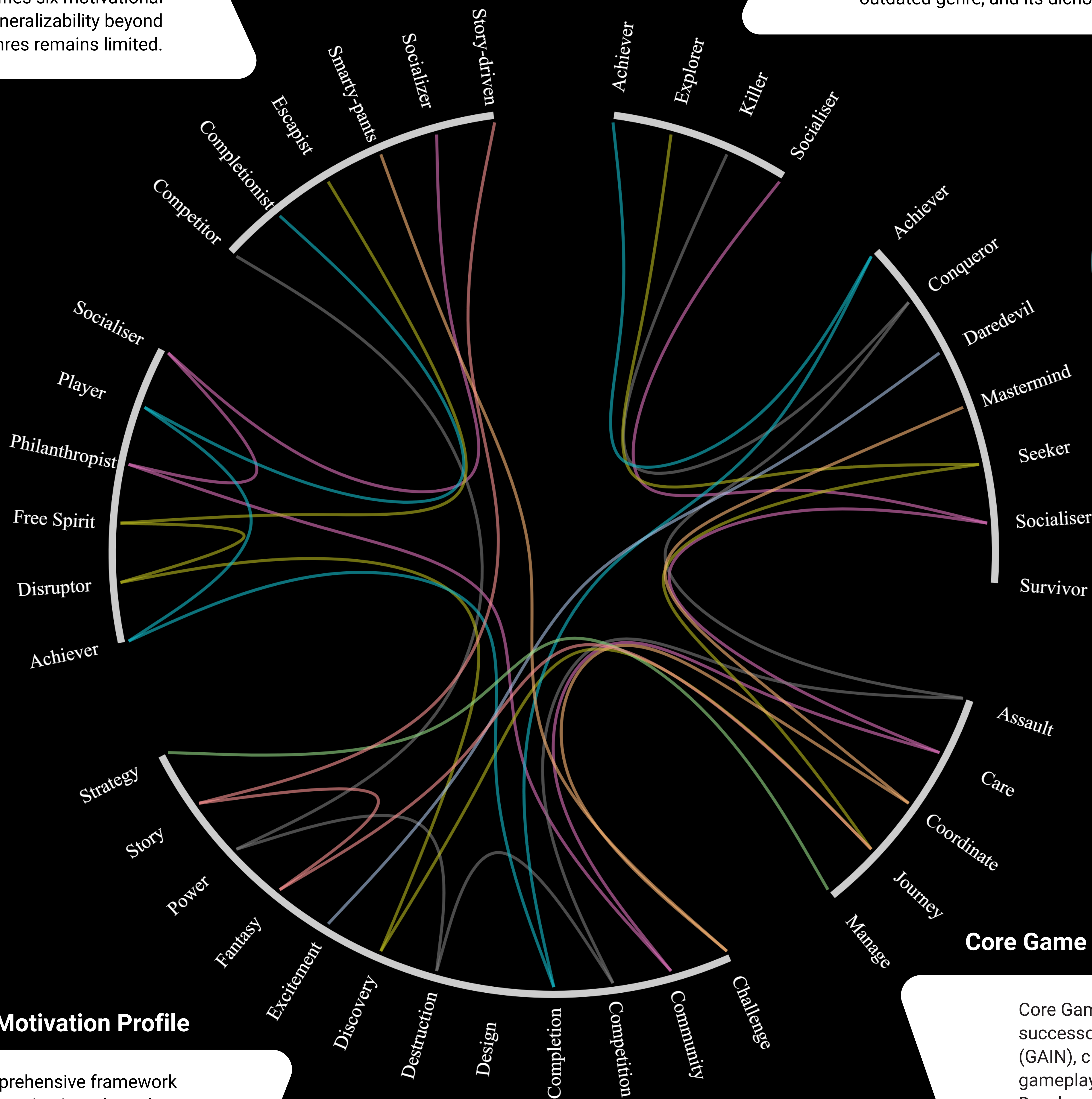
Video games require a wide range of cognitive skills, including attention, decision-making, memory, problem-solving, etc. Each game presents unique challenges, yet research often treats players as a homogeneous group, using simple metrics such as hours played or genre preference. The same game can be approached in very different ways by different players. These different approaches may place distinct demands on cognition, but this is often overlooked in research. Player typologies categorize gamers based on behavior and motivations, offering a valuable tool for studying cognitive processes. Understanding player profiles can inform VR design and other interactive environments, tailoring experiences to cognitive and emotional engagement. This poster presents an overview of various player typologies, which we refer to as classification systems.

The Trojan Player Typology

Kahn et al. (2015) developed a behaviorally validated system for measuring player motivations across genres and cultures. Based on data from over 37,000 MOBA and MMO players in North America and China, the system identifies six motivational dimensions, although its generalizability beyond these genres remains limited.

Hexad scale

The Hexad model (Tondello et al., 2016) was designed specifically for gamified environments and identifies six types based on intrinsic and extrinsic motivations rooted in self-determination theory. Developed through expert review and large-scale surveys, the system links each type to preferred game mechanics, although some subscales show lower reliability.



Gamer Motivation Profile

Yee's system (2016) is a comprehensive framework for understanding player motivations, based on surveys of over 30,000 participants. It identifies 12 motivational dimensions grouped into six categories (action, social, mastery, achievement, immersion, and creativity), conceptualized as continuous spectrums. However, the latest questionnaires and analyses are not publicly available, nor have they been published in peer-reviewed literature.

Bartle's Taxonomy

One of the earliest and most influential systems is Bartle's (1996) taxonomy. Based on discussions among MUD players, it identifies four archetypal types along two dimensions: action vs. interaction and world- vs. player-orientation. Although highly influential, it has been criticized for lacking empirical validation, relying on an outdated genre, and its dichotomous structure.

BrainHex

BrainHex (Nacke et al., 2011) is a neurobiologically inspired system linking player motivations to emotional and behavioral responses. Based on data from over 50,000 players, it proposes seven archetypes derived from gameplay preferences and psychometric correlates. Despite its scope, the system remains theoretically speculative and lacks consistent empirical validation.

Core Game Dynamics and GAIN

Core Game Dynamics (CGD) and its successor, the Gameplay Activity Inventory (GAIN), classify players based on preferred gameplay interactions (Vahlo et al., 2018). Developed through qualitative analyses of game reviews and manuals, these systems identify five core dynamics, with player types formed by clustering preferences and aversions to them. However, the resulting clusters are context-dependent.

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CONCLUSION and FUTURE

This review highlights recurring issues in video game player classification systems. **Problem of definition:** Systems vary in focus—behaviors, motivations, or activities—with inconsistent terminology, making categorization subjective. **Problem of development:** Tools often lack stability, use inconsistent items, combine pre-game and in-game behaviors unevenly, and rely on limited, sometimes biased, samples. **Problem of application:** Classification systems are sometimes applied outside their theoretical basis, reducing reliability.

Developing a robust questionnaire that captures both game-specific behaviors and motivations remains a key goal. Despite methodological differences, common dimensions consistently emerge across classification systems, suggesting that they can be reliably measured.