

Outlining the spectrum of values of self-identified gamers

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ABSTRACT

To understand the spectrum of different gamers, we recognize the need to study both the prevalence of self-identified gamers and the diverse identities they may represent. In this paper we present results from our exploratory survey study (N=894), broadly targeted to video game players in the USA, that allowed the respondents to identify themselves as gamers as well as non-gamer players. By utilizing gaming value measures and personal value measures, we explored what kind of latent groups of self-identified gamers and non-gamer players the survey sample yielded and how they differed from each other. The results of the cluster analysis identified five groups of active players, in four of which the self-identified gamers were overrepresented and which can be argued to be distinctive gamer subtypes. The results are discussed in reflection with the previous literature and discourses about gamer identities.

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Keywords

gamer, video game players, identity, gaming values, personal values

INTRODUCTION

Since the dawn of video games as a popular form of technology, the everyday use of the term ‘gamer’ has rather ubiquitously denoted people who enjoy playing games. According to Kirkpatrick (2012), the gaming media in the 1980s and 1990s were particularly involved in constructing a sense of community among gamers, while also distancing the gaming culture from other elements of computer culture, which predominantly deemed computers in terms of engineering or productivity. This has also contributed to the construction of the still commonly prevailing discourse that depicts (stereo)typical gamers as young white males (e.g., Alexander 2014; Cote 2018; Schelfhout et al. 2021). Since the 1980s, the consumption of video games has been radically extended to more diverse audiences. For example, the number of contemporary female players has increased to the level of a more-or-less equal distribution between the male and female genders (Kinnunen et al. 2020; ESA 2014). Against this backdrop, ‘gamer’ as a conceptual portrait of video game players has been debated by researchers (Shaw 2012; Grooten & Kowert 2015; Howe et al. 2019; Jung 2020). In provocative terms, it has been even stated that *the gamer is over* (Alexander 2014), at least as an identity that is exclusively shaped on the traditional male-based stereotype. Within contemporary discussions, it is increasingly understood that the term ‘gamer’ does not uniformly equate with people who actively play video games. By contrast, it has been recognized that it might be more important to focus on *how* different people identify themselves as gamers (Shaw 2012), as the identification perspective allows the researchers to focus on information on how people describe their own identity formation. However, there is still a lack of broad understanding of ‘gamers’ in terms of what kinds of active game players self-identify as gamers.

As a research approach, the question about game players’ identification as gamers is definitely not ‘over’. The concept of gamer is not static nor uniform in nature, but rather, it has a multifaceted construction that is constantly developing through sociocultural interactions (e.g., Grooten and Kowert 2015). Research on identification as gamers matters particularly, because (1) it illuminates social relatedness and personal alignment with other people in the broader gaming community and its social traditions and practices, while (2) it is also integrally related to one’s autonomic self-conception and self-actualization as an individual (see Ryan 1991). In regard to identity construction, both of these processes relate to individual and communal values and how these two align. Values, understood here broadly, may concern both basic human values (e.g., Schwartz 2012) as well as values relating to more specific cultural gaming practices and contexts. In the present study, we are interested in both personal values and the gameplay-oriented gaming values. All in all, our argument here is that values (i.e., valuation of certain ways games and play are meaningful, cf. Brosch and Sander 2016) are fundamental constituents of gamer identities.

Qualitative studies on self-identified gamers have focused on specific contextual issues of identifying as games, concerning, for example, marginalized gamer identities as targets of marketing (Shaw 2012) or construction of gendered gamer identities (Kivijärvi and Katila 2021). Also a few quantitative studies (e.g., Stone 2019; Yim et al. 2023) have investigated a set of factors that contribute to self-identification as a

gamer. The studied factors include, for example, gender, age, frequency of gameplay, social networks, and behavioral intent. Relevantly to the present study, values of self-identified gamers have not been addressed in the previous quantitative studies. For getting a grasp on the overall picture of the spectrum of different gamers, we recognize the need to broadly study the prevalence of self-identified gamers, focusing on the potentially diverse identities they represent, including their personal values and gaming values.

In this paper we present our exploratory survey study (N=894), broadly targeted on video game players in the USA, that allowed the respondents to identify themselves as gamers as well as non-gamer players. The other questionnaire elements in the study were used to unveil different characteristics in the respondents' identities. As our strategy, we used cluster analysis to explore what kind of latent groups of self-identified gamers and non-identified game players the survey sample yields, and then analyse how these groups differ from each other in terms of values that characterize their identities. In the following sections, we first briefly review the themes being attributed to self-identified gamers in the previous literature, and then consequently describe the research questions and methods in detail.

PREVIOUS STUDIES

Gamer is a recurring concept when looking at both everyday and academic discussions about game playing practices and game cultures. While the concept is common, it also has multiple interrelated functions and meanings. Gamer can refer to a popular conception or stereotype of what a person playing video games is like. While this stereotype is slowly changing, video game players are still often perceived as young men who are socially inept loners and the term carries with it a social stigma (Stone 2021). Despite the persistence of this negative stigma, gamers has and continues to be a way of self-identifying for some those playing video games - but not all. As such, there is an ongoing discussion in academia of what and who gamers are. Next we will present an overview of the previous studies done on the concept of gamer and gamer identity, starting with an overview of the prevalent themes attributed to self-identified gamers in research literature and then discussing the gamer as a discursive construct in research literature.

Prevalent themes attributed to self-identified gamers

We identified in total 11 studies in which self-identification as a gamer was either a participation criterion or in which self-identification as a gamer was asked as one of the questions (Table 1). We collected these studies by using Google Scholar search engine, with search string Gamer AND self-identification, and through references of the studies we had found. From these 11 studies, we mapped out 15 different themes which were found relevant to self-identification as a gamer in their respective studies. We looked at both qualitative and quantitative studies. In total we found five qualitative studies, four quantitative studies and two which utilized both approaches.

While some of the themes were present in multiple studies, some of them occurred only once. Below, we have listed themes that occurred multiple times in the research. It is important to note that even if a theme is not present in a study, this does not automatically translate that the study found the theme not prevalent - indeed, in most cases it meant that the theme was not asked in the study.

Playtime (7): The most prominent theme was playtime, which here includes both the time spent on playing and frequency of play. Those who identified as gamers spent more time playing video games than those who did not identify as gamers.

Gender (5): In five of the earlier studies, gender was identified as an important theme. In all these, men were more likely to identify as gamers than women. This is well recognized in academic literature, as gamer is often recognized as a gendered construct (Shaw 2012). However, while men were more likely to identify as gamers, across the studies there were still a considerable amount of women who did identify as gamers. For example, in the study conducted by Yim et- al. (2023) 30.7% of the self-identifying gamers were women.

Study	N	Playtime	Gender	Social Group	Genre	Age	Stigma	Technology	Other
Yim, Lepp, Dowdell & Barkley 2023	591	Yes				Yes			Esports team membership Intentions
Ćwil & Howe 2020	223	Yes	Yes		Yes			Yes	
Howe, Livingston & Lee 2019.	476	Yes	Yes		Yes	Yes		Yes	
Kuss, Kristensen, Williams & Lopez-Fernandez 2022	20	Yes	Yes				Yes		Changing societal perceptions of gaming
Stone 2019	238	Yes	Yes	Yes					Exposure to videogames
De Grove, Courtois & Van Looy 2015	100	Yes	Yes	Yes	Yes	Yes			
Shaw 2012	27		Yes				yes		
Vilasís-Pamos & Pérez-Latorre 2022	24		Yes				Yes		Social class
Jung 2020	1362			Yes	Yes				Game-related media usage Participating game related discussions
Winters & Williams 2021	10	Yes		yes					
Ruelos 2018	7								Representation

Table 1: The appearances of different themes, in regard to self-identified gamers, across the reviewed studies.

Social group/co-playing (4): Having others identify as gamers in one's social group or co-playing with others was a relevant theme for identifying as gamers in four of the previous studies. For example, in the study of De Grove, Courtois & Van Looy (2015) the respondents were more likely to identify as gamers if their immediate social group identified as gamers as well.

Genre (3): While differences in preferred genres were recognized as important in three previous studies, there were also slight differences between the studies in which

genres those most likely identifying as gamers played: in United States those identifying as gamers were most likely to play first-person shooters, strategy games massive-multiplayer online role-playing games (Ćwil and Howe 2020) and sport games (Howe et. al. 2019). In South-Korea those identifying as gamers were more likely to play role-playing games, aeon of strife (lane pushing) games, and strategy games (Jung 2020).

Age (3): In all of the studies in which age was found to be a significant factor for self-identifying as gamer, younger game players were more likely to identify as gamers.

Societal stigma (3): Societal stigma was recognized by three earlier studies (Kuss et al. 2022; Shaw 2012; Vilasís-Pamos and Pérez-Latorre 2022) as a significant theme in self-identification as gamers. Adriane Shaw (2012) discusses marginalized positions in game cultures as well as societal perceptions and stigma around gaming influence one's readiness to self-identify as gamer. In the two other studies those wanting to avoid societal stigma were likewise female and in the study of Vilasís-Pamos & Pérez-Latorre (2022) males perceived societal perceptions of gaming changing towards positive directions.

Technology (2): In two of the studies the survey questions included questions about preferred technology. In both, those who identified as gamers preferred to use other technology than mobile phones to play games. However, some regional differences also emerged: while gamers in the US preferred consoles over mobile phones and PC, gamers in Poland preferred both PC and console over mobile phones (Ćwil and Howe 2020).

Discursive and social construction of a gamer

Given the prevalence of men amongst those who self-identify as gamer, it is not surprising gaming has become understood as a gendered social construct in a number of studies (Cote 2018; Kivijärvi and Katila 2022; Shaw 2012). It has been argued, for instance, that gamer is a hegemonic identity position in relation to which other identity positions negotiate their access in gaming (Kivijärvi and Katila (2022). Kivijärvi and Katila (2022) suggest that women need to negotiate their identity as gamers in relation to the masculine gamer identity, which is often at odds with the feminine gender identity. This negotiation can take different forms, such as partial avowal. This is in line with Schelfhout et al. (2021), who suggest for men gamer identity can more easily co-inside with their gender identity, while, as suggested by Paaßen et al. (2017), women often have to choose between gender and gamer identity. Similarly, Schelfhout et al. (2021) argue that women and men also experience the societal stigma related to gaming differently, as there is, especially now, more flexibility to how men can perform their gendered gaming identities. It has been further argued that the rise of esports has been central to this, as it has alleviated the tensions between hegemonic masculinity and gamer identity (Voorhees & Orlando 2018; Taylor 2021).

The rise of esports, thus institutionalized competitive gaming, also highlights another aspect that is seen important for gamer discursive and social construct. That is the type of games that are valued within this construct. According to Paaßen et al. (2017), only so-called hard-core games are seen as true games in the construct of gamer, and

this makes it further gendered, as women are more likely to play casual games – which does not allow the claim to gamerhood.

Another factor in accelerating the construction of gamer as gendered social and discursive construct was the cultural struggle ignited by #gamergate and how it impacted the way gamers were seen – both amongst those playing video games and the general public and media. According to Mortensen (2018), a subset of self-identified gamers was central at the hate speech campaigns taking place during #gamergate in 2014, which has been seen as some gamers’ attempt to guard the boundaries of their hobby against changes provided by the diversity and other progressive cultural values (Arjoranta et al. 2020). In all, the struggle, and how media portrayed the gamer identity (e.g., Alexander 2014) during and after the events of gamergate, could be deemed as a pivotal element in generating the cultural stigma (identified by, e.g., Kuss et al. 2022; Vilasís-Pamos and Pérez-Latorre 2022) by imposing negative or discordant attributions to the identification as a gamer.

In this paper, we argue that it is central to study game players’ values (i.e., the ways they value games and the related practices) in order to understand their constructions of potentially different gamer identities. In previous works, however, values are rarely used as a lens of observation. Almost none of the abovementioned studies address values explicitly, but however, we still interpret that the previous literature on self-identified gamers and gamer identities indicate an indirect support to our argument. For example, discussions on the social stigma of being a gamer, the clash between feminine and masculine identities, or certain game genres associated with the gamer identity, can be seen as reflecting the involvement of both gameplay related values as well as more general personal values. In many ways, the depiction of a gamer much relates to canonized post-gamergate discourses that, for example, associate gamers with conservative (rather than progressive) values that oppose cultural changes. The overarching aim of this study is to unveil the potential diversity of values among gamers and non-gamers alike.

Research questions (RQs)

RQ1 What predicts self-Identification as a gamer?

To answer this RQ we utilize a regression analysis to test how certain predictor variables statistically relate to self-identification as an outcome variable. Three predictors (age, gender, and playtime) are chosen directly on the basis of how they have been identified as contributing factors to self-identification as a gamer in the previous work (see Table 1). Other predictors concern gaming values, which we aim to address through questionnaire measures focusing on gaming orientations, preferences and motives. Gaming values were at least implicitly included in factors attributed to self-identification (see Table 1) through the themes regarding what kind of games and technologies one prefers.

RQ2 Based on their gaming values, can it be said that self-identified gamers are similar to each other or are there latent subgroups of gamers?

Our strategy to address RQ2 involves conducting a cluster analysis on the entire sample to identify distinct groups based on their gaming values. This approach allows us to analyze the distribution of self-identified gamers across these clusters,

examining how they are represented within the spectrum of players with differing gaming values.

RQ3 If latent subgroups of gamers can be identified based on their gaming values (RQ2), how do these subtypes differ from each other in terms of personal values?

The third RQ concentrates on analysing how the reported personal values distribute across the spectrum of different types of self-identified gamers. Personal values are conceptually operationalised through questionnaire measures reflecting the respondent's basic human values and their stance on cultural debates regarding video games.

METHODS

Participants

A survey sample of 1,184 respondents was collected in the US in January 2023. Participants were recruited via Prolific Academic Ltd., a UK-based company that maintains an online panel of 130,000 participants worldwide, including representative panels in the UK and the US.

	Sample	Gamer	Active Player	Lapsed Player	Non-Player
N	894	442	354	67	31
Mean age	38.0	↓34.3***	↑41.0***	↑50.7***	41.3
Male gender	49.1%	↑61.2%***	↓39.4%***	↓9.7%***	38.8%
Female gender	48.2%	↓36.3%***	↑57.5%***	↑90.3%***	58.2%
Non-binary gender	2.5%	2.5%	2.5%	0.0%	3.0%
Weekly play hours					
SP on Computer/Console	7	↑10***	↓4.9***	↓1.6***	↓1.9***
MP on Computer/Console	4.6	↑7.5***	↓2.1***	↓0.5***	↓0.6***
SP on Mobile	3.4	3.4	3.6	↓2.4*	3.2
MP on Mobile	1.6	↑1.8*	1.5	↓0.6***	↓0.8*
Voting Behavior					
Votes the Democratic Party	58.4%	59.0%	58.8%	58.1%	52.2%
Votes the Republican Party	19.7%	17.6%	22.0%	22.6%	19.4%
Votes another party	9.7%	9.7%	9.3%	3.2%	14.9%
Inactive voter	12.2%	13.6%	9.9%	16.1%	13.4%
Minority Identity					
No minority identity	50.1%	46.4%*	↑54.5%*	61.3%	46.3%
Ethnic background	27.2%	29.4%	24.3%	22.6%	29.9%
Sexual orient./gender identity	20.9%	↑25.3%**	↓16.4%**	9.7%	20.9%
Neurodivergence	14.4%	↑17.6%**	↓11.0%*	6.5%	14.9%

Table 2: Descriptive statistics of the sample including demographics, voting behavior, and minority identity. Statistical tests report the difference of each value in comparison to the mean of other reported groups. * $p < .05$, ** $p < .01$. *** $p < .001$. The arrows (↑, ↓) signify statistically higher and lower values respectively.

The survey targeted adult US-based Prolific panel members, aged 18-80, who expressed at least a slight interest in playing video games on computers, consoles, or

mobile devices. At the time of data collection, 35,028 panel members met this criterion. The data were gathered using Prolific's balanced sample collection option, which aims to evenly distribute studies across genders. This 'balanced' approach ensures that a predetermined number of respondents can participate as long as their self-identified gender aligns with the criteria, based on the general US census data for representative gender distribution. This approach should therefore ensure that the basis for this research is as gender-neutral as possible, thereby better reflecting the presumably smaller number of female gamers' voices.

All participants provided written informed consent, agreeing to partake in the study, and taking the survey took 24 minutes on the average. Before analyzing the data, responses with a significant number of missing values were removed, adhering to our privacy notice that only complete submissions would be analyzed. Consequently, the final sample comprised 894 responses. Despite the data cleaning process also affecting gender balance, the final sample remained relatively balanced, consisting of 49.1% male respondents, 48.2% female participants, and 2.7% non-binary participants. The mean age of the respondents was 38.0 years. Table 2 reports descriptive statistics for the final sample (N = 894) as well as for the four mutually exclusive participant categories: self-identified gamers (n = 442), active video game players who do not identify as gamers (n = 354), lapsed video game players (n = 67), and non-players (n = 31).

Among the four groups, self-identified gamers were notably the youngest on average. This group also had a disproportionately high representation of male participants, although 36.3% of self-identified gamers identified as female. There was no statistically significant difference in non-binary gender representation across the groups. Self-identified gamers reported significantly higher weekly play hours for both single-player and multiplayer games on computers and consoles. Additionally, individuals with minority identities related to sexual orientation/gender identity, or neurodivergence were over-represented in this group. However, no statistically significant differences in voting behavior emerged between the groups. Across all categories, participants who were likely to vote for the Democratic Party clearly comprised the largest proportion.

Measures

The questionnaire consisted of three main sections. The first section invited participants to reflect on their gaming values by answering questions about their gaming preferences, orientations, play motives, and recently played games. The second section focused on cultural issues in video games, eliciting participants' opinions on topics such as inclusivity and diversity in games and gaming cultures. The third section collected information about participants' demographics, voting behavior, and personal values.

Gaming Value Measures

The respondents' gaming values were assessed using three survey inventories, each specifically designed to evaluate distinct aspects of gaming. Below, we describe these instruments and report their reliability, as measured by Cronbach's alpha for each of the factors they assess.

General player orientations toward gaming were assessed using an 11-item version of the Hedonic and Eudaimonic Motives for Activities (HEMA) scale (Huta and Ryan, 2010). Survey participants responded on a 5-point Likert scale (1 = Not at all, 5 = Very much), indicating the extent to which they agreed with the inventory statements. The scale measures two player dispositions: *Hedonic orientation* (e.g., "Seeking enjoyment", "Seeking fun"; $\alpha = 0.81$) and *Eudaimonic orientation* (e.g., "Seeking to use the best in myself", "Seeking to pursue excellence or a personal ideal"; $\alpha = 0.90$).

Survey participants' preferences for gameplay activity types were assessed using a 30-item version of the Gameplay Activity Inventory (GAIN). The GAIN inventory was selected because it was specifically developed and later cross-culturally validated to assess activities underlying prevalent game genres without relying on direct game genre classifications (Vahlo et al. 2017; Vahlo et al. 2018). Game genres are historical constructs tied to particular languages, cultures, and technological contexts, which makes them, at best, imprecise and, at worst, misleading for evaluating players' gameplay preferences (Starosta et al. 2024). The 5-point Likert-type GAIN measures gameplay preference factors (1 = Very unenjoyable, 5 = Very enjoyable) across the following dimensions: *Aggression* ($\alpha = 0.91$), *Management* ($\alpha = 0.87$), *Exploration* ($\alpha = 0.89$), *Caretaking* ($\alpha = 0.85$), and *Coordination* ($\alpha = 0.83$).

Survey participants' general motives for playing video games were assessed using the recently validated Motives of Autonomous Players (MAP) model (Vahlo and Tuuri 2025; see also Vahlo et al. 2023). The MAP identifies nine player motives, with the following reliability values in the current data: *Immersive Agency* ($\alpha = 0.84$), *Competitive Mastery* ($\alpha = 0.83$), *Social Interaction* ($\alpha = 0.91$), *Utility* ($\alpha = 0.88$), *Nostalgia* ($\alpha = 0.90$), *Addiction* ($\alpha = 0.89$), *Affective Engagement* ($\alpha = 0.80$), *Boredom* ($\alpha = 0.76$), and *Escapism* ($\alpha = 0.86$).

Personal Value Measures

Survey participants' personal values were measured using a 10-factor, 30-item version of the Basic Human Values Scale (Schwartz 2012). The original scale comprises 19 dimensions, but for this study, we included the following dimensions: *Self-direction–thought* ("Freedom to cultivate one's own ideas and abilities"; $\alpha = 0.73$), *Self-direction–action* ("Freedom to determine one's own actions"; $\alpha = 0.68$), *Hedonism* ("Pleasure and sensuous gratification"; $\alpha = 0.75$), *Universalism–concern* ("Commitment to equality, justice, and protection for all people"; $\alpha = 0.83$), *Universalism–tolerance* ("Acceptance and understanding of those who are different from oneself"; $\alpha = 0.73$), *Conformity–interpersonal* ("Avoidance of upsetting or harming other people"; $\alpha = 0.82$), *Power–dominance* ("Power through exercising control over people"; $\alpha = 0.77$), *Face* ("Security and power through maintaining one's public image and avoiding humiliation"; $\alpha = 0.70$), *Tradition* ("Maintaining and preserving cultural, family, or religious traditions"; $\alpha = 0.87$), and *Conformity–rules* ("Compliance with rules, laws, and formal obligations"; $\alpha = 0.86$).

Survey participants' views on cultural conflicts in regard to video game cultures were assessed using a nine-item inventory developed for this study. Participants were asked to reflect on ongoing debates and conflicts surrounding culturally or ideologically problematic video games. These debates were framed as "cultural wars", and participants were asked to indicate the extent to which they agreed or disagreed

with statements such as: “In my view, cultural wars are unwelcome as they only make things worse”, “In my view, cultural wars are required, because games need to be more inclusive”, and “In my view, cultural wars are not wished for as they are divisive and generate more conflicts between players”.

Since the cultural wars inventory was developed specifically for this study, an exploratory factor analysis (EFA) was conducted to identify its dimensionality. A parallel analysis indicated a three-factor solution, which was subsequently extracted. All items loaded onto a factor with loadings exceeding 0.50 and were retained (Hair et al. 2014). We labeled the first factor *Resistance*, as it reflected conservative views opposing cultural changes and inclusivity efforts in gaming. In contrast, items loading highly on the second factor expressed a progressive stance, valuing inclusivity as essential for the future of gaming and its diverse communities. This factor was labeled *Support*. The third factor captured a moderate stance, emphasizing the harm caused by conflicts between players or between players and developers, rather than clearly aligning with conservative or progressive views on cultural issues. We labeled this factor *Perceived Divisiveness*. Factor score variables were subsequently generated for all three factors for use in further analyses.

Identifying Principal Components of the Gaming Values

A principal component analysis (PCA) with Stata 17.2 statistical software was made on the measures that together assess gaming values of an individual. The purpose of this approach was to reduce the dimensionality of the data, facilitating the identification of types of self-identified gamers based on principal components rather than a large number of individual factors. To investigate principal components of gaming values, we employed the three distinct inventories that each measure core aspects of gaming: gameplay preferences (GAIN), gaming orientations (HEMA), and gaming motives (MAP). Before a PCA, we standardized the factors from each inventory at the individual level, which is a process called *ipsatization*, to ensure comparability across measures and to highlight variations unique to each respondent.

A PCA was then conducted on the standardized data to extract latent components. The analysis was guided by eigenvalues greater than 1 and a cumulative variance threshold of 70%, resulting in the selection of an eight-component solution. To enhance interpretability, the extracted components were rotated using the varimax method. The rotated component loadings, which highlight the underlying structure of the data, are presented in Table 3.

The gaming value components (Table 3) were named based on the factors that exhibited either highly positive or markedly negative loadings. For the first component, the gameplay preference factors Exploration and Aggression showed positive loadings, leading us to label it Aggressive Exploration (AE). The second component, defined by positive loadings for the preference factor Aggression and the Competitive Mastery motive, was named Fierce Competition (FC). The third component, influenced by loadings for Eudaimonic orientation and the Immersive Agency motive, was labeled Eudaimonic Engagement (EE).

The fourth component was named Hedonic Engagement (HE), as the Affective Engagement motive and Hedonic orientation demonstrated positive loadings on it. The fifth component, characterized by loadings for the Immersive Agency and

Escapism motives, was called Immersive Escape (IE). The sixth component was dominated by a very strong loading for the Nostalgia motive, with other factors showing only modest loadings, leading us to name it Powerful Nostalgia (PN). The seventh component was called Solitary Escapism (SE) as it was best described by a negative loading on the Social Interaction motive and a positive loading on the Escapism motive. Finally, the eighth component stood out for its drastically low loading on the Addiction motive and a positive loading on the Utility motive, suggesting Self-Controlled Engagement (SCE).

Measure/ Factor	AE	FC	EE	HE	IE	PN	SE	SCE	Unexplained
Hedonia	-0.11	-0.02	-0.04	0.67	-0.06	0.05	0.06	0.08	0.25
Eudaimonia	-0.44	0.03	0.39	0.07	0.01	0.13	0.09	-0.03	0.36
Immersive Agency	0.06	0.02	0.29	-0.14	0.50	0.21	0.10	0.03	0.33
Competitive Mastery	-0.18	0.32	0.05	-0.19	-0.04	-0.38	-0.17	-0.03	0.38
Social Interaction	0.01	0.01	0.00	-0.03	0.08	0.01	-0.86	0.09	0.10
Utility	-0.48	0.09	0.11	-0.12	0.05	-0.27	0.20	0.28	0.30
Nostalgia	-0.02	0.05	0.02	-0.08	-0.05	0.78	-0.03	0.06	0.23
Addiction	-0.01	0.02	0.01	-0.03	0.03	-0.04	0.07	-0.92	0.04
Affective Engagement	0.12	0.06	0.09	0.65	0.08	-0.15	-0.01	-0.01	0.27
Boredom	-0.05	-0.05	-0.66	-0.01	-0.06	0.03	-0.04	-0.01	0.29
Escapism	0.02	0.13	-0.46	-0.08	0.39	-0.01	0.33	0.13	0.27
Aggression	0.46	0.48	0.07	-0.07	-0.14	-0.10	0.06	0.10	0.23
Caretaking	0.02	-0.64	-0.03	-0.03	0.01	-0.04	0.00	0.07	0.23
Exploration	0.51	-0.07	0.24	0.00	0.13	-0.05	0.13	0.11	0.30
Management	0.16	-0.47	0.14	-0.16	-0.11	-0.26	0.06	0.05	0.31
Coordinate	0.03	0.04	0.04	-0.07	-0.73	0.11	0.18	0.08	0.24

Table 3: The eight principal gaming value components. AE: Aggressive Exploration, FC: Fierce Competition, EE: Eudaimonic Engagement, HE: Hedonic Engagement, IE: Immersive Escape, PN: Powerful Nostalgia, SE: Solitary Escapism, SCE: Self-Controlled Engagement. Highest and lowest values for each component are bolded. Unexplained: The variance of the factor unexplained by the eight components.

The eight gaming value components described in Table 3 were subsequently transformed into variables using Stata. This procedure enabled using the components in further analyses of describing self-identified gamers and other player groups (RQ1), and to also explore if distinct self-identified gamer types can be revealed based on these dimensions (RQ2, RQ3).

RESULTS

In this section, we will first address RQ1 by using regression analysis to examine how a set of predictors relate to self-identification as a gamer. Next, to answer RQ2, we will conduct a cluster analysis to identify distinct groups based on gaming values and analyze how self-identified gamers are distributed across these clusters. Finally, for RQ3, we will explore how personal values differ among the self-identified gamers across the identified clusters, focusing on basic human values and stances on cultural debates about video games.

What Predicts Self-Identification as a Gamer?

To examine how gaming value components (Table 3) were associated with self-identification as a gamer, a logistic multiple regression model was employed (RQ1). In this model, the eight gaming value components, age, male gender identity, and variables measuring weekly play hours on different technologies were included as independent variables. The binary dummy variable indicating whether a survey participant self-identified as a gamer or not was used as the dependent outcome variable (Table 4).

The inclusion of age, gender, and technology-bound playtime as independent variables was informed by prior literature, which frequently associates these factors with self-identified gamers (Table 2). Additionally, the eight gaming value components represent motives—such as the social and competitive motives—also argued to be linked with self-identified gamers. The gameplay activity type factors from the GAIN model were used to explore whether interaction modes of game genres were associated with self-identification as a gamer.

The social stigma of gaming was not included in the regression model, as the model was built using variables that are argued to positively predict self-identification as a gamer. Furthermore, social stigma associated with the gamer identity is subjective and rooted in historical and cultural contexts, making its predictive power unclear. Since the focus of the model is on identifying positive predictors of gamer identity, stigma was considered conceptually distinct from the other predictors.

Independent Variable	Estimate	Std. err.	<i>z</i>	<i>p</i>
Age	-0.04	0.01	-4.40	< .001
Gender identity: male	0.44	0.22	1.95	0.05
Gaming Value Components				
Aggressive Exploration	0.18	0.08	2.24	0.03
Fierce Competition	0.24	0.08	2.86	0.001
Eudaimonic Engagement	0.50	0.09	5.75	< .001
Hedonic Engagement	-0.04	0.08	-0.46	0.64
Immersive Escape	0.46	0.09	4.99	< .001
Powerful Nostalgia	0.09	0.09	1.01	0.31
Solitary Escapism	0.06	0.10	0.61	0.54
Self-Controlled Engagement	-0.05	0.10	-0.52	0.60
Weekly Play Hours				
SP on Computer/Console	0.10	0.02	5.60	< .001
MP on Computer/Console	0.16	0.03	6.19	< .001
SP on Mobile	0.02	0.02	1.04	0.30
MP on Mobile	-0.02	0.03	-0.57	0.57

Table 4: Logistic multiple regression between gaming value components, age, male gender, and weekly play time and the binary outcome variable of self-identifying as a gamer. Reporting estimates, standardized error, and *z*-value (N=894).

The logistic regression analysis revealed that weekly playtime for both single-player and multiplayer games on computer and console were the strongest predictors of self-identifying as a gamer. Similarly, the gaming value components Eudaimonic Engagement and Immersive Escape were also strong predictors of gamer self-

identification. The components Fierce Competition and Aggressive Exploration also predicted gamer identity with statistically significant, though weaker, effects. Age was the only factor found to be negatively associated with the dependent variable, indicating that younger individuals are more likely to self-identify as gamers. These results are largely in line with earlier research on self-identified gamers (Table 1) with the exception that male gender was not found to be a significant predictor of self-identification as a gamer in our data.

Do Self-Identified Gamers Share Similar Gaming Values?

The eight gaming value components (Table 3) were used to identify distinct player groups (RQ2). The gaming value approach was chosen over demographic variables because using demographic data for clustering analyses risks reinforcing stereotypes and framing external characteristics as defining features of player identity. By focusing on gaming value components, we highlight the diversity within the gaming population based on what players value and seek in their gaming experiences. This approach avoids reductive categorizations and supports a more inclusive understanding of gamer identity.

To determine whether self-identified gamers represent only a particular player type in terms of their gaming values, we conducted a K-means clustering analysis on the entire dataset, which also included active non-gamer players, lapsed players, and non-players (Table 2). This comprehensive approach was chosen to potentially uncover overlaps between groups, such as active non-gamers who share gaming values with self-identified gamers, or lapsed players who exhibit similarities to both active player groups. By including the full dataset, this method allows us to validate or challenge the relevance of existing subgroup definitions while providing a nuanced understanding of potential subtypes among self-identified gamers.

K-means was chosen as the clustering method because it is particularly effective for data in a continuous Euclidean space, as is the case with the principal components representing the gaming value dimensions in this study. To determine the optimal number of clusters, we analyzed scree plots based on the within-cluster sum of squares (WSS) and its logarithmic transformation $[\log(WSS)]$ for solutions ranging from 2 to 20 clusters (Makles 2012). The scree plots indicated a five-cluster solution, which we subsequently extracted from the data (N=891). Three respondents were excluded from these analyses because their scores across all eight gaming components were identical, leaving them without a distinguishable gaming value profile.

The first cluster (N=121) had a very high Fierce Competition value and low Aggressive Exploration and Hedonic Engagement, and we thus call it *Fierce Competitor*. The second cluster (N=235), named *Aggressive Adventurer*, showed high Aggressive Exploration and low Immersive Escape values. The largest cluster (N=248), *Immersive Escapist*, had very low Fierce Competition and high Immersive Escape values. The fourth cluster (N=150) coined as *Purpose-Seeker* exhibited very high Eudaimonic Engagement and positive Self-Controlled Engagement, but low Hedonic Engagement. Lastly, the fifth cluster (N=137) called *Peaceful Fun-Seeker* was characterized by high Hedonic Engagement, very low Aggressive Exploration, and low Eudaimonic Engagement and Powerful Nostalgia.

Self-identified gamers were significantly over-represented in the *Fierce Competitor* cluster and under-represented in the *Peaceful Fun-Seeker* group. They were also slightly over-represented in both the *Immersive Escapist* and *Purpose-Seeker* clusters. In contrast, active non-gamer players, lapsed players, and non-players were all over-represented in the *Peaceful Fun-Seeker* cluster. The *Aggressive Adventurer* group was evenly distributed among player types, with no over- or under-representation observed across self-identified gamers, active non-gamer players, lapsed players, or non-players.

	Fierce Competitor	Aggressive Adventurer	Immersive Escapist	Purpose- Seeker	Peaceful Fun-Seeker
Full Sample (N=891)	121	235	248	150	137
Aggressive Exploration	-0.71	1.09	0.49	-0.33	-1.78
Fierce Competition	1.92	0.29	-1.11	-0.23	0.08
Eudaimonic Engagement	-0.06	-0.24	-0.25	1.57	-0.80
Hedonic Engagement	-0.74	0.61	0.06	-1.27	0.89
Immersive Escape	0.59	-0.78	0.85	-0.36	-0.34
Powerful Nostalgia	0.54	-0.29	0.54	-0.21	-0.72
Solitary Escapism	-0.65	0.32	0.28	-0.52	0.09
Self-Controlled Engagement	-0.55	-0.06	0.15	0.67	-0.43
Self-Identified Gamer	↑68%***	46%	↑55%*	↑59%*	↓19%***
Active, non-gamer player	↓28%**	44%	35%	↓32%*	↑58%***
Lapsed player	↓0%*	2%	2%	3%	↑12%***
Non-player	4%	7%	8%	6%	↑12%*

Table 5: The five player clusters as identified by a k-means procedure. Reporting cluster sizes, standardized values for the eight gaming value components, and over- and under-representation values for the gamer identity question of the survey.

Are Personal Values Aligned Among Self-Identified Gamers?

Of the five identified player groups reported in Table 5, three were predominantly composed of survey participants who self-identified as gamers, suggesting these clusters represent distinct types of self-identified gamers. Additionally, the *Aggressive Adventurer* group, evenly contributed to by all player types, can also be considered a type of self-identified gamer. However, the *Peaceful Fun-Seeker* cluster cannot be classified as a self-identified gamer type, as it was primarily composed of other player identities. Next, we examined how self-identified gamers within each gaming value cluster (Table 5) compared in terms of similarities and differences in their personal values and background variables (RQ3). These results are reported in Table 6.

	PLAYER TYPES OF THE SELF-IDENTIFIED GAMERS				
	Fierce Competitor	Aggressive Adventurer	Immersive Escapist	Purpose- Seeker	Peaceful Fun-Seeker
Self-Identified Gamers (N=441)	82	109	136	88	26
Female	↓18%**	↓27%**	↑60%***	28%	39%
Male	↑81%**	↑72%**	↓35%***	72%	58%
Non-binary	1%	2%	↑6%***	0%	0%

Age	33.1	↑35.9*	↓32.3*	36.7	34.0
Weekly play hours					
Single Player on Computer/Console	8.3	9.9	↑11.8*	9.0	9.1
Multiplayer on Computer/Console	↑11.2**	6.3	↓5.8*	7.4	10.7
Single Player on Mobile	↓2.3*	3.1	↑4.7*	2.6	3.9
Multiplayer on Mobile	1.7	1.4	1.6	2.5	2.4
Personal values					
Universalism-Concern (UNC)	↓0.42*	0.55	↑0.70**	0.54	0.40
Universalism-Tolerance (UNT)	0.40	0.40	↑0.54*	0.52	0.34
Self-Direction Thought (SDT)	0.55	↑0.83**	0.72	↓0.50*	0.59
Self-Direction Action (SDA)	↓0.45*	↑0.69*	0.63	0.48	0.73
Hedonism (HE)	0.33	0.48	0.45	0.34	0.31
Conformity-Interpersonal (COI)	-0.28	↓-0.51**	↑-0.13**	-0.48	-0.24
Power-Dominance (POD)	↑-0.89*	-1.19	↓-1.34**	-0.99	-1.31
Face (FAC)	-0.11	-0.28	-0.20	-0.22	-0.14
Tradition (TR)	↑-0.67*	-0.89	↓-1.16***	↑-0.65*	-0.59
Conformity-Rules (COR)	-0.20	-0.09	-0.22	-0.05	-0.11
Stances on Cultural Issues in VGs					
Resistance	0.03	↑0.17***	↓-0.17***	0.07	-0.10
Support	-0.03	↓-0.17***	↑0.14***	0.00	0.04
Perceived Divisiveness	0.07	0.05	↓-0.11*	↑0.13**	-0.10
Minority Identity					
No Minority Identity	44%	↑57%**	↓34%***	↑60%**	36%
Ethnic Background	37%	30%	28%	25%	28%
Sexual Orientation/Gender Identity	19%	↓13%***	↑44%***	↓14%**	28%
Neurodivergence	↓6%**	↓10%**	↑34%***	↓8%**	20%
Social Media on Cultural Issues in VGs					
Does not follow the topic on social media	45%	↑52%**	36%	↓30%*	60%
Subscribed to a related content creator	31%	↓21%*	34%	38%	↓12%*
Reads posts/forum threads on the topic	44%	46%	53%	51%	32%
Participates in discussions on the topic	23%	↓8%**	21%	21%	12%
Reads media articles on the topic	↓17%***	35%	↑48%***	44%	24%
Notable Games					
Animal Crossing: New Horizons	↓9%*	↓8%*	↑24%***	13%	16%
Call of Duty series	↑41%***	28%	↓14%***	↑38%***	↓8%***
FIFA series	9%*	6%	3%**	↑14%***	↓4%*
Fortnite	15%	17%	↓8%*	16%	↓8%*
Genshin Impact	5%	4%	↑12%*	8%	↓1%*
League of Legends	13%	5%	5%	10%	12%
Mario Kart 8	17%	13%	16%	16%	16%
Overwatch 2	19%	12%	11%	13%	24%
Rocket League	9%	5%	3%	↑14%**	4%
Stardew Valley	↓4%**	↓6%**	↑32%***	8%	8%
World of Warcraft / WoW Classic	↑17%**	11%	5%*	9%	4%

Table 6: Reporting descriptive statistics and t-test comparison between each value and the corresponding mean value of the other four player types. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The *Fierce Competitor* cluster had the highest proportion of male participants (81%) among all the clusters. This group reported significantly higher playtime for multiplayer computer and console games and lower playtime for single-player mobile games compared to other gamer subtypes. In terms of personal values, *Fierce Competitors* scored significantly lower on Universalism-Concern and Self-Direction Action, while exhibiting relatively higher scores in Power-Dominance and Tradition. A total of 41% of the cluster participants reported to play *Call of Duty* (Activision et al. 2002) games actively. In addition to this, they also played in a statistically significant

way more *World of Warcraft* (Blizzard Entertainment 2004) and less *Stardew Valley* (ConcernedApe 2016) and *Animal Crossing: New Horizons* (Nintendo EPD 2020) in comparison to the mean of the other groups. However, their views on cultural wars did not differ significantly from the average of the other self-identified gamers.

The *Aggressive Adventurer* cluster also had an over-representation of males (72%), though not as pronounced as in the Fierce Competitor group. This subtype was the second oldest among the gamer types, with a statistically significant age difference compared to the mean of other clusters. In terms of personal values, *Aggressive Adventurers* scored the highest on Self-Direction Thought and also had significantly higher scores on Self-Direction Action, but lower scores on the Conformity-Interpersonal factor. This group emerged clearly as the most conservative of the five, showing significantly higher resistance and lower support for cultural changes such as inclusiveness in games. From the perspective of actively played games, this group did show higher values for any of the reported games but lower for *Animal Crossing: New Horizons* and *Stardew Valley* in comparison to the mean of the other four groups. Interestingly, they were over-represented by individuals with majority identities and exhibited lower social media engagement than the other groups.

The largest gamer group, the *Immersive Escapist*, differed significantly from both the *Fierce Competitor* and *Aggressive Adventurer* groups in terms of gender identity, with both females (60%) and non-binary participants (6%) being notably over-represented. This group also had the lowest mean age and reported significantly higher playtime for single-player games on computers/consoles and mobile devices compared to other clusters. *Immersive Escapists* exhibited high scores in pro-social values and low scores in Power and Tradition. They were also the most progressive group regarding cultural issues and the need for greater inclusivity in games—a stark contrast to the conservative *Aggressive Adventurer* group. In comparison to the mean of other groups, they played more *Animal Crossing: New Horizons*, *Stardew Valley*, and *Genshin Impact* (HoYoverse 2020) but significantly less *Call of Duty* games and *Fortnite* (Epic Games 2017). Additionally, the *Immersive Escapist* group included a notably higher proportion of participants identifying as part of minority groups, particularly in the areas of sexual orientation/gender identity and neurodivergence.

The *Purpose-Seeker*, the oldest gamer subtype, did not differ significantly from the other gamer groups in terms of gender distribution, age, or playtime. In personal values, this group scored significantly lower on Self-Direction Thought and higher on Tradition in comparison to the mean of other gamer clusters. From the perspective of actively played games, they showed higher values for *Call of Duty* games, *FIFA* games (EA 1993), and *Rocket League* (Psyonix 2015) than the mean of the other gamer groups. This group was relatively more worried about the perceived divisiveness of cultural wars than the other groups. Similarly to the *Aggressive Adventurer* group, they showed a notable over-representation of individuals with majority identities.

Lastly, the *Peaceful Fun-Seeker* cluster included only 26 self-identified gamers, as this group was more significantly represented by active non-gamer players, lapsed players, and non-players. Influenced by the low number of gamer participants, this cluster did not statistically differ from the mean of the four gamer clusters in terms of gender distribution, age, weekly play hours, personal values, or attitudes toward cultural change in video games. However, they reported to play less *Call of Duty*

games, *FIFA* games, *Fortnite*, and *Genshin Impact* in comparison to the other gamer subtypes.

DISCUSSION

This study sought to determine predictors of gamer self-identification (RQ1), uncover distinct subtypes of gamers and other players through clustering analysis (RQ2), and analyze how these subtypes differ in terms of personal values and cultural attitudes (RQ3). By addressing these research questions, we aimed to contribute to a deeper understanding of the multifaceted nature of gamer identity and its intersections with broader sociocultural dynamics.

The results suggest that gamer self-identification is predicted by a combination of demographic, behavioral, and value-based factors (RQ1). This aligns with earlier literature that associates self-identification with intensive gaming practices and demographic trends including younger age (e.g. Ćwil & Howe 2020; Jung 2020; Yim et al. 2023). However, contrary to expectations from previous studies (e.g. Howe et al. 2019; Kuss et al. 2022, Shaw 2012), male gender was not found to be a significant predictor in our sample, reflecting a possible shift in the traditionally male-dominated landscape of gamer identity. Likewise, contrary to earlier studies, gamers in our study played a wide variety of different kinds of games, from genres traditionally associated with gamer identity (de Grove et al. 2019; Stone 2019) to games usually understood as more casual games. Also, voting behavior was not associated with gamer identity, suggesting that self-identified gamers cannot be considered more conservative or progressive than the average survey respondent.

The cluster analysis revealed five distinct player types on the basis of the gaming values: Fierce Competitor, Aggressive Adventurer, Immersive Escapist, Purpose-Seeker, and Peaceful Fun-Seeker (RQ2). Among these, all other types than Peaceful Fun-Seeker predominantly consisted of self-identified gamers, indicating that gamer identity spans diverse gaming values. This diversity underscores the need to move beyond simplistic gamer stereotypes, embracing a nuanced understanding of the varying gaming orientations within the gaming community.

Our cluster based analysis truly unveiled a spectrum of diversity among gamers. Each gamer subtype displayed unique alignments between personal values and gaming values (RQ3). For instance, Fierce Competitors demonstrated lower universalistic values and a relatively high preference for dominance, aligning with their competitive gaming style. Immersive Escapists, with their progressive values and preference for games fostering inclusivity, embody a more socially conscious gamer identity.

The Fierce Competitor and Aggressive Adventurer clusters epitomize traditional gaming values, with strong preferences for competitive and action-oriented play. However, they differ in their cultural stances, with Aggressive Adventurers being notably conservative and resistant to cultural changes in gaming. This highlights an ongoing cultural dichotomy within the gaming landscape, where traditionalist and progressive identities coexist but remain distinct. The Immersive Escapist cluster, in contrast, represents a progressive gamer subtype, marked by high engagement in inclusive and fantasy-driven gaming experiences. This group's over-representation of female and non-binary gamers challenges the historically masculine framing of gamer identity (Schelfhout et al. 2021), indicating the increasing relevance of diverse voices

in shaping the gaming community. This subtype also engaged with games outside the genres usually seen as part of gamer identity (cf. Ówil & Howe 2020; De Grive et al. 2015; Howe et al. 2019). The Purpose-Seeker type introduces yet another dimension of gamer identity, where self-actualization and tradition intertwine. This group's preference for games that allow both personal achievement and reflection may reflect a growing trend of players seeking meaning and structure in their gaming experiences.

The tensions between traditionalist and progressive gamer subtypes highlight the need for nuanced dialogue within gaming communities. The persistence of conservative stances, as seen in the Aggressive Adventurer cluster, suggests that resistance to cultural changes in gaming is not merely a relic of the past but an active element in the current landscape. Addressing these tensions requires fostering understanding and bridging divides within the gaming culture. At the same token, most self-identified gamers were found to be indifferent towards the cultural wars or reflecting progressive rather than conservative values.

On a methodological and theoretical level, the findings of this study suggest that gaming preferences are deeply intertwined with broader personal values, making them a critical lens for understanding gamer identities.

CONCLUSION

In the midst of the Gamergate controversy, Leigh Alexander (2014) wrote that "'Gamers' don't have to be your audience. 'Gamers' are over." Now, a decade later, our results show that gamers remain a central audience for a wide range of game development. However, our findings reveal that there is no singular "gamer" identity; instead, at least four distinct gamer subtypes emerge, each defined by unique gaming values, personal values, and attitudes toward the evolving cultures of video games. The findings of this study thus reinforce the multifaceted nature of gamer identity, challenging prior stereotypes that paint gamers as a homogeneous group. By recognizing the diversity of gamer subtypes, both researchers and the gaming industry can better address the evolving needs and values of players, fostering a more inclusive and reflective gaming culture.

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