# Behind the Screens: An Exploratory Study on Gamer Types and Identities in Game Jams

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## ABSTRACT

Game jams are events where development teams collaborate to create games in days or weeks, sharing common themes and limitations. However, it is unclear how participants in game jams fit into the larger gaming culture regarding their motivations and identities as *gamers*. Our paper surveys two game jam populations to determine their player motivation profiles using the Hexad-12 questionnaire, roles in the development teams at a game jam, their correspondence to the *gamer* and *LGBTQ+* identity, and their playtime per week. The results show that the population in our samples does not differ significantly from the one reported in the original Hexad study. We found correlations between the Hexad player types and the development roles at a game jam. People interested in Game/Level Design and people reporting having fun as a reason for attending the game jam were more likely to be Achiever types, people interested in Art were more likely, while those interested in Programming were less likely to be Disruptor types, and the more participants identified as a gamer, the more likely they were Player types, and/or preferred the Game/Level Design role. Furthermore, we found that both samples identified to some extent with the term *gamer*. Additionally, the more participants leaned towards identifying as a *gamer*, the more likely they were Players and/or preferred the Game/Level Design hat.

## CCS CONCEPTS

• **Human-centered computing** → **Empirical studies in HCI**; *User studies.*

## KEYWORDS

gamer motivation types, game jam, video games

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## 1 INTRODUCTION

In the last two decades, game jams have become an increasingly popular phenomenon that revolve around the creation of video games. A game jam is an "[...] accelerated opportunistic game creation event where a game is created in a relatively short time frame exploring given design constraint(s) and end results are shared publically" [16]. They are closely connected to video game and development cultures, and attract participants who identify with gaming culture to some extent. Moreover, game jams can differ significantly from one another regarding their scale, settings, mode, and target population. The experiences of participants can therefore also differ greatly and are highly individual.

While game jams have a history of being tech- and programmer-focused [18], they have become more accessible toward less tech-savvy participants throughout the past two decades [7]. However, it is frequently noted that game jams are predominantly attended by people with similar identities [25] [6] [9], namely white, young, cis men, an identity that is also predominant in the game industry [1]. In contrast to this, as organizers of game jams, we have noticed that attendees have varying identities, motivations, preferred roles in game development teams, and come from differing backgrounds. To understand in more detail how these factors intersect within game jam populations, our research aims to uncover correlations between these aspects. Additionally, we aim to find the prevalent player motivation model based on the established Hexad model [31] and compare them to already published studies on general samples with the specific question: Is the distribution of player motivation types in game jam attendees different from a general population? Insight about how identities, motivations, preferred roles, and player types of game jammers intersect with each other can ultimately be transferred to bigger processes of game development as well as help organizers of game jams anticipate the needs of and dynamics between participants.

To collect a wide set of data that would cover our different areas of interest, we set up an exploratory quantitative study based on a survey that was filled out by the participants of two game jams, the *Klagenfurt Game Jam* and the *GSE Identity Jam*. The data we collected included demographic information, a set of questions to

determine participants' identification with the term *gamer* and/or the *LGBTQ+*, as well as their preferred roles within game jams. Additionally, we included the Hexad-12 questionnaire to determine the player motivation types of jammers. Our study thus combines multiple perspectives, ranging from a psychology perspective with the Hexad player type model aiming to categorize different motivations for playing games to game studies with the critical perspective on *gamer* identity, in order to find a potential synergy for future research. While the two game jams that served as samples in our study cannot be seen as representative for larger game jam populations or different game jam communities, the results of our study can be insightful about game jams with similar settings as well as provide a starting point for comparing the populations of different game jams to each other.

## 2 RELATED WORK

Research on game jams so far is varied and centers around different clusters of research objectives. In general, there is a growing trend of examining how the format of game jams can be utilized for different purposes, such as learning [5, 20, 29], software development [21], the empowerment of marginalized groups [9, 13] and for furthering diversity and inclusion [14, 27]. In their survey of literature on game jams, Lai et al. identify development practices, game jam criticisms, group forming, industry development and (the motivations of) game jammers as the main thematical clusters of research regarding game jams [18]. Kultima furthermore names education, game jams in relation to the video game industry, and cultural comparison as areas of interest [17].

In contrast to these mostly use-oriented objectives, some researchers have focused on understanding game jams and their participants and communities in general. A considerable amount of this research has centered around the Global Game Jam [12, 23, 24, 26, 34], as it offers a high number of participants from diverse backgrounds. For example, Steinke et al. surveyed participants of the *Global Game Jam* between 2013 and 2016 regarding age, gender, education, attitudes, and differing experiences of jammers in order to better understand the communities that partake in the jam [30]. Fowler, Khoshmood, and Arya similarly tracked the development of the *Global Game Jam* between 2010 and 2013 regarding its number of participants, number of games created, and origin of participants, concluding that the *Global Game Jam* in particular offers rich potential for future research into learning, innovation, experimentation, collaboration, as well as professional and cultural aspects of jams [8].

However, there is a lack of research operating from the understanding that game jam populations represent specific populations themselves, and inquiry into this can go beyond the mapping of the communities' demographics, experiences, and inner workings by observing their identities more closely and how these intersect with their motivations and experiences.

### 2.1 Player Types

Gaming is a popular medium, and research on the motivations for playing began early. Bartle's Player Type Model [3] from 1996 is one of the earliest and most influential models that categorizes Multi-User Dungeons (MUDs) players into four types: Achievers, Explorers, Socializers, and Killers.

In contrast, Yee's work [33] on player motivation in online games is a general approach to which proves useful in terms of multiple genres, platforms, and devices.

Another general approach is based on the Big Five personality traits: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (OCEAN) [10].

Graham and Gosling [11], for instance, investigate the relation between the Big Five and player motives. They use the model from [33] to classify motivations for playing, which identifies the three main components, Achievement, Social, and Immersion, with ten further subcomponents. Both Graham and Gosling as well as Yee focus on the MMORPG *World of Warcraft*.

A popular model in *gamer* motivation research is the Hexad player types model as proposed in [19]. This model was initially proposed by Andrzej Marczewski in 2015 as a way to understand player motivations and behaviors in gamified environments. It builds upon Richard Bartle's player types model but aims to better address the complexity and variability of player motivations. The Hexad model includes six player types:

- Philanthropists: Motivated by purpose and a desire to do good without expecting anything in return. They are altruistic and enjoy giving, sharing, and assisting others.
- Socializers: Driven by relatedness, they value social interactions and connections with others. They prefer cooperative over competitive play.
- Free Spirits: Motivated by autonomy and the desire to freely explore and express their creativity within the game world.
- Achievers: These players are driven by mastery and competence, focusing on progressing, learning, and accomplishing difficult tasks.
- Players: They are driven by extrinsic rewards and recognition, primarily interested in the game's incentives.
- Disruptors: These players aim to influence or disrupt the game system or the player community to instigate change.

Tondello et al. [31] further developed this model by creating a validated survey instrument for identifying a person's player type based on the Hexad model using 24 items. This was recently modified to a survey instrument with 12 items largely retaining the measure's effectiveness [15]. The availability of the Hexad tool, its small size with only 12 items, and its broad acceptance make it a good choice for our survey.

### 2.2 Gamer Identity

As game jams revolve around the creation of video games, we assume that game jams are cultural spaces where *gamer* identity becomes visible, or at least where many people can be found who either identify with the term or can be perceived as such from the outside.

According to Woodward, "Identity is relational, and difference is established by symbolic marking in relation to others[...]"[32]. Differences and/or relations include and are not limited to: race, ethnicity, gender and sexuality (*LGBTQ+*), age, hobbies such as gaming etc. Identity markers such as race, ethnicity and age are passive markers (not chosen actively), whereas identifying as a

non-cis gender or as a *gamer* is an active marker (A cis-gender person's gender correlates with the gender they were assigned at birth and to which their sexual organs and identity seems fit[2]. Hence, their body fits their gender identity). Therefore, actively and publicly identifying oneself as *gamer* or part of the *LGBTQ+* community carries meanings and connotations according to shared knowledge in the societies in which individuals live. Being a *gamer* therefore means more than playing games.

In a 2012 study by Shaw, it was found that "Interviewees [...] rejected gamer identity, in part, because they viewed games as peripheral to mainstream media culture [...] and as a medium that is inherently unimportant. [28]" This study was conducted solely with interviewees "who identified as non heterosexual, non-male, and not solely White/Anglo"[28]. According to Shaw, the rejection of the term *gamer* in non-heterosexual and non-cis-male communities bears various reasons. One being the missing representation in video games which hinders individuals from these communities from fully immersing into the narrative provided by the medium[28]. Other factors being their view of video games as "peripheral to mainstream culture" [28] and "the relationship between 'gamer' and other identities." [28] Furthermore, Shaw argues that emphasized marking of gender (e.g. girl games) further enables the marginalization of said group, therefore, distancing non cis-male players from mainstream games [28].

In 2021 a study by Oliveira et al., the *Global Game Jam 2021* was analyzed in order to find the amount of participants of the *LGBTQ+* community, their motivations to partake in a game jam and ideas to improve the experience of marginalized groups partaking in such events [22]. The outcome provided the researchers with recommendations such as "promote diversity-focused game jams and diversity-focused Global Game Jam hubs; make every participant aware of the code of conduct; foster collaboration over competition; introduce aspects that the *LGBTQ+* community can relate to, and promote learning activities. [22]"

A very different view of identifying as a *gamer* is demonstrated by Bogost in 2011. He argues that the identifier *gamer* will vanish as a whole [4]. According to him, the medium will gain more popularity in the everyday-live which ultimately will lead to people refraining from actively identifying with it: "If videogame playership is indeed broadening, then videogames will no longer fall under the sole purview of the games industry. [...] Instead, there will be many smaller groups, communities, and individuals with a wide variety of interests, some of them occasionally intersecting with particular videogame titles [4]".

However, research regarding identity of game jam participants and their respective player types has not been conducted yet. The outcoming data would provide insights into the video game development population, their identities and their playing habits.

## 3 BACKGROUND

The data was collected at two different game jams; the *GSE Identity Jam* and the *10th Klagenfurt Game Jam*, both of which took place at the University of Klagenfurt, Austria. The *GSE Identity Jam* took place on the 20th and 21st of May, 2023, as part of a university class, which was primarily aimed at students of the Game Studies and Engineering master's program. It was a stand-alone event that was specifically designed to be attended by university students and educate them on how the issue of (gender) identities can be represented in video games. Attendance in the jam was mandatory for all students taking the class.

The *Klagenfurt Game Jam* is a regular event that takes place twice per year at the University of Klagenfurt. It first took place in 2014 and attracts not only students, but also locals, alumni, game enthusiasts, and people who are generally interested in the event. While participants could join the jam in person or online, we only included participants in our study who participated in person, as well as visitors who visited the events on-site. The *10th Klagenfurt Game Jam* took place between the 2nd and 4th of June, 2023, with 78 people joining the jam online on itch.io and 84 people registering locally for the event.

## 4 METHOD

Print-outs of the survey were handed out at both game jams. The survey was divided into two sections, with the first part asking for participants' demographic data as well as motivations to join the jam, preferred jamming roles, and identification as *gamers*, and the second part assessing their player types according to the modified Hexad scale with 12 items based on [15]. The demographic data we raised included age, nationality, gender, identification with the *LGBTQ+* community, vocation, level of education, and study background. While the questions about age and nationality were open, pre-defined options were given in the questions regarding gender (non-binary, female, male, other, I prefer not to say) and identification with the *LGBTQ+* community (yes, no, I prefer not to say), in order to ensure comparability. The same was done with the questions on the participants' vocation (working, studying, both, neither) and level of education (primary school, high schools, graduate/professional school, college/university, other). The options for study backgrounds were split into 'humanities', 'STEM', and 'other', with the possibility to fill in a field of study that did not correspond to any of the given options. A question about the participants affiliation (e.g. university or company) was eventually left out, as pre-testers suggested that this may be a threat to the participants' anonymity.

Participants were additionally asked about their mode of participation (full, partial, visiting, or other), their main motivation in joining the jam (open question), and their preferred 'hats' (or roles taken on) during the game jam (Art, Programming, Game / Level Design, Writing, Sound, Music, or Other), which they could answer on 5-point Likert scales that ranged from 'strongly dislike' to 'strongly like'. While the first version of the survey used in pre-tests included only the different roles as options, the scale was introduced to give a wider range for analysis and enable comparability with the Hexad player types.

To assess the jammers' connection to video games, video game culture, and *gamer* identity, they were asked if they identify as *gamers*, which participants could answer on a 7-point Likert scale that denoted identification between 'strongly disagree' and 'strongly agree'. While the goal of this was to gain a subjective assessment, participants were also asked how many days per week they spend playing a video game for at least 30 minutes (0-1 days, 2-3 days, 4-5

days, 6-7 days) to assess this more objectively. Additionally, participants were asked to name up to three games they have recently played in an open question. To determine the participants player types, we used the 12-item version of the Hexad model by [15], which included 12 questions that participants could answer on 7-point Likert scales ranging between 'strongly disagree' to 'strongly agree'. The order was randomized as recommended by [31], and the following order was used: Q8, Q3, Q10, Q5, Q2, Q7, Q11, Q4, Q9, Q1, Q6, Q12. For the full list of questions, see [15].

At the *GSE Identity Jam*, the survey was filled out by a total of 20 participants. The participants identified predominantly as male (65%) and came from thirteen different countries. Even though the master's program connected to the game jam is of interdisciplinary nature, participants of the study primarily had study backgrounds in STEM fields (60%). A total of 53 participants filled out the survey at the *Klagenfurt Game Jam*. Participants predominantly identified as male (79.2%), nine participants (17%) identified as female and two participants did not share their gender. The participants come from thirteen different countries, with 56.6% of the participants coming from Austria. Most participants had a university degree (41 participants; 77.4%). Most participants reported a background of STEM (71.7%), humanities (20.8%) or both (3.8%). A total of eight completed surveys could not be used as they were either filled out by underage participants without parental consent or by participants who did not agree to the data protection consent forms we attached to the study.

For further analyses, the presence or absence of categories that produced nominal values (gender identification, identification as part of the *LGBTQ+* community, preferred jamming roles, and motivations to join the jam) were coded in dummy-variables as "1" (present) and "0" (absent).

# 5 RESULTS

## 5.1 Player Types

Overall, the distribution of the Hexad types in our sample resembles the distribution of the samples reported on in [15] (see Table 3). When looking at the data collected at the two jams separately, we observed that the Disruptor Type was slightly less prevalent at the *Klagenfurt Game Jam* ($M = 7.13$, $SD = 2.91$), and in the *GSE Identity Jam* sample, the Socializer Type was more prevalent ($M = 11.2$, $SD = 2.83$).

Possible explanations for this could be that social-oriented people are more likely to participate in team-working events such as game jams and that considering the team-working aspect, participants might answer less honest to fulfill their need of fitting in. However, as this trend was not observed in the overall data set, it can also be regarded as coincidental.

## 5.2 Motivations and Preferred Roles

Combining the data collected at both game jams, participants were overall most interested in Game/Level Design and Programming and least interested in Music and Sound (see Table 2 ). While the results of the *Klagenfurt Game Jam* are congruent with this, participants of the *GSE Identity Jam* were most interested in Writing ($M = 3.55$, $SD = 1.57$), followed by Game/Level Design ($M = 3.50$, $SD = 1.79$) and Programming ($M = 3.00$, $SD = 1.52$).

The difference between the jams could be attributed to the fact that the *GSE Identity Jam* was non-competitive and encouraged participants to create exploratory and narrative-driven games. However, the difference can also be attributed to the different sample sizes. In any case, differences in preferred roles in game jams with different settings can be examined in future research.

When asked about their motivation(s) to join the jam, participants of the *Klagenfurt Game Jam* named "fun and enjoyable environment" (56,6%) most often, followed by "socializing"(30,2%), "being creative"(24.5%), "gaining experiences"(18.9%), and "mandatory"(11,3%). In contrast, the most frequently named motivations of the participants from the *GSE Identity Jam* were "mandatory" (45%), "fun" (30%), "gaining experiences" (30%), and "interest in the topic" (25%). Again, this difference can be attributed to the fact that the *GSE Identity Jam* was held in a different context than the *Klagenfurt Game Jam*.

## 5.3 Findings on Gamer Identity

When looking at both samples combined, participants subjectively tended to identify with the term *gamer* ($M = 5.37$, $SD = 1.56$). However, twelve participants (16.5%) leaned toward not identifying with this term and four (5.5%) chose the middle option. When comparing the samples, 30 % of the participants of the *GSE Identity Jam* sample leaned towards not identifying as *gamers* while at the *Klagenfurt Game Jam*, 11.3% leaned towards this option.

In contrast to this finding, more participants at the *GSE Identity Jam* reported to be playing video games for at least 30 minutes during 4 or more days per week (70%) than participants at the *Klagenfurt Game Jam* reported to do so (56.6%). Overall, only six participants reported to play one day or less per week in both samples combined, meaning that the samples can be described as regular *gamers*, with participants of the *GSE Identity Jam* playing slightly more often. This could be because the *GSE Identity Jam* consisted solely of students.

This objective measure of identifying participants as *gamers* stands in contrast to the subjective identifications with the term when comparing our two samples. The fact that while at the *GSE Identity Jam*, overall more participants rejected identification with the term *gamer* while at the same time participants tended to play games more often can be attributed to several explanations. One explanation for this is illustrated through the following anecdote from the *GSE Identity Jam*, where the question of identification with the term *gamer* was met controversially by some participants, with some of them unsure of the exact meaning behind the term. Several participants reported that there are different understandings of what a *gamer* is, and their answer to the question if they identify as one would differ depending on that meaning. One participant for instance commented that they would answer this question differently when asked by a fellow *gamer* as they would when asked by an *outsider*. This correlates to Woodward's claim that "identity is relational"[32]. We can assume that there is a partial awareness about the discourse around *gamer* identity and the negative connotations of the term among at least a part of the participants of our survey, because this discourse is frequently discussed in classroom settings of the GSE master's program. This awareness might have

**Table 1: Distribution of Hexad-types in our sample.**

| Type | Min | Max | M | SD |
|---|---|---|---|---|
| Philanthropist | 5 | 14 | 12.41 | 1.83 |
| Achiever | 5 | 14 | 11.60 | 1.98 |
| Free Spirit | 6 | 14 | 11.01 | 2.28 |
| Socializer | 2 | 14 | 10.90 | 2.83 |
| Player | 3 | 14 | 10.68 | 2.59 |
| Disruptor | 2 | 14 | 7.47 | 2.81 |

**Table 2: Preferred roles or 'hats' by participants.**

| Interest in Hats | N | M | SD |
|---|---|---|---|
| Game/Level Design | 72 | 4.03 | 1,28 |
| Programming | 72 | 3.46 | 1.45 |
| Writing | 71 | 3.31 | 1.33 |
| Art | 70 | 3.06 | 1.42 |
| Music | 70 | 2.40 | 1.43 |
| Sound | 70 | 2.34 | 1.3 |

influenced some participants' choice of answering in how far they identify as *gamers*.

## 6 SIGNIFICANT CORRELATIONS

Several connections between participants' respective gamer types according to the Hexad model, their preferred roles in the jams, their motivations to join the jam, their gender and *gamer* identities, and the time they spend playing games per week were found. As this is a work in progress, the data we collected will be subject to further analysis to come to more conclusions about links between participants' gender identities, study backgrounds, identification as gamers, and their respective player types, preferred roles, and motivations to jam.

### 6.1 Hexad-types, Roles, and Motivations

Next to our finding that the game jammer population in our samples does not differ significantly from the general population as reported on in [15], several significant correlations could be drawn between the respective Hexad types of jammers and their preferred roles to join the jams when looking at the data of both game jams combined (note on Table 3: * indicates p < .05. ** indicates p< .01). We can speculate about possible reasons for these connections, keeping in mind that they can be influenced by the specific settings of our sample jams.

Participants reporting to prefer the **Game/Level Design hat were more likely to be Achievers**. Here, a positive correlation with a moderate effect size was found: $r(70) = .447$, $p < .01$. Based on this, the assumption can be made that the people with this player type are more drawn to the leading role in the project. This could explain the appeal of the Game/Level designer position which entails the conceptualization and being in charge of the main direction of the development of the game.

A positive correlation with a small effect size was found between the Hexad Disruptor and the preference of the Art hat: $r(70) = .239$, $p = .047$. **Participants reporting to prefer the Art hat were therefore more likely to be Disruptors.** Similarily, another positive correlation with a small effect size was found between the Hexad Disruptor type and the preference of the Programming hat: $r(70) = -.284$, $p = .016$. **Participants reporting to prefer the Programming hat were, therefore, less likely to be Disruptors.** One possible explanation for this dichotomy is that people interested in programming might be more predisposed to an analytic and rule-based type of thinking which opposes the Disruptor player type. Artists, on the other hand, possibly adhere to a more rule-breaking and out-of-the-box thinking style that prompts creativity and self-expression.

The following positive correlation was found regarding participants Hexad player types and their motivations to join the jam: **Participants reporting having fun as a reason for attending the game jam were more likely to be Achievers** ($r(71) = .241$, $p = .04$). At first this finding might seem like a contradiction, but we propose the following explanation for this phenomenon: for the Achiever player type population the "fun" part of the game jam is in its competitive nature and the ability to push oneself to accomplish tasks under pressure.

### 6.2 Hexad-types and Gamer Identity

In regards to *gamer* identity, the following correlation was found: **The more participants identified as a gamer, the more likely they were Players**: $r(71) = .383$, $p < .01$; **and/or preferred the Game/Level Design hat**: $r(70) = .367$, $p < .01$ (moderate effect size). The correlation of identifying as a *gamer* and more likely being a Player indicates that *gamers* might be driven by extrinsic rewards and recognition, primarily interested in the game's incentives, such as the Players described in the Hexad player types. Another possible connection comes from the correlation between people with the Game/Level Design hat and participants identifying as *gamers*. Continuation of the previous assumption could lead into a direction of a correlation between the three groups (*gamers*, Game/Level Design hat and Achievers). A hypothesis can be made that the people who have a lot of experience with gaming and share Achiever traits go into the Game/Level Design for the reason of wanting to create a game that has not been made before and that proves enough of a challenge from a game-play, as well as a game development point of view.

A further finding was that **the more days participants reported to play per week, the less likely they were Socializers**: $r(71) = -.230$, $p = .05$. This connection could indicate that players with more play time do not prefer cooperative games and are not interested in social interactions and connections with others ingane. However, this was found with a small effect size and should be treated as such.

### 6.3 Hexad-Types and Gender

W.r.t. gender identities, the following connections were found:

- **Female participants were more likely to prefer the Art hat**: $r(61) = .406$, $p < .01$ (moderate effect size).

**Table 3: Correlation between Hexad-types and preferred game jam roles.**

| Type/Role | Art | Programming | Design | Writing | Sound | Music |
|---|---|---|---|---|---|---|
| Philanthropist | -0.004 | -0.004 | 0.187 | 0.212 | 0.176 | 0.052 |
| Socializer | -0.038 | 0.082 | 0.197 | 0.089 | 0.014 | -0.029 |
| Achiever | 0.094 | 0.191 | .447** | -0.006 | 0.013 | 0.003 |
| Player | 0.055 | 0.163 | 0.143 | -0.024 | 0.035 | 0.078 |
| Free Spirit | -0.110 | -0.071 | 0.005 | 0.162 | -0.027 | -0.025 |
| Disruptor | .293* | -.284* | -0.062 | 0.154 | 0.093 | 0.123 |

- **Male participants were more likely to be Socializers**: $r(64) = .246$, $p = .047$ (small effect size).

However, as this study is of moderate size in regards to gender representation, it can be counted as non-interpretive.

Lastly, no significant correlations were found between the identification with the *LGBTQ+* community (coded as 1 = identifying and 0 = not identifying) and the Hexad-types or preferred roles.

## 7 DISCUSSION

One of our main findings that can be taken up by future research is the connection between the Achiever type, identifying as a *gamer*, and having a preference for game design. One possibility is to examine whether Achiever types and people interested in game design are more prevalent in competitive game jam settings. Another direction is to look into different conceptions of fun for the various player types as well as preferred roles. Further research regarding the dichotomy between the Art/Programming role and the Disruptor type can explore the connection between analytical/creative ways of thinking and the affinity to the Disruptor player type.

Our findings about *gamer* identity - though very limited through our small sample size - indicate that actual time spent playing might not correspond directly to in how far a person identifies as a *gamer*. Furthermore, future studies can look into if this is connected to people's age, or if and why people do or do not identify with the term. In addition to that, future research can look into the distribution of gender and *LGBTQ+* markers among the player population and their identification with the term *gamer*, while assessing the time played per week.

The validity of our study is limited in several ways. Two aspects in which our sample differed from the sample used in [15] were population size and gender distribution, which has to be kept in mind when looking at our results. Overall, our findings may not be applicable to all game jammer populations. Results may differ depending on the setting of the respective jams, and our findings may stand in relation to the setting of the two jams covered (competitive/non-competitive, academic context, international participants). Results may differ at game jams that are for instance held in connection to companies, schools, that are topic-driven, or appeal to larger or more specific (online) communities. Future research can focus on mapping differences between types of jams while using our findings as starting points.

As this is a work in progress, the data we gathered can be further analyzed, correlated, and interpreted. We can for instance further compare demographic data such as age and study background to the jammers' Hexad player types or their preferred roles in game jams. Furthermore, as our samples are both relatively small and are arguably influenced by their specific settings, our findings have to be viewed critically and cannot be applied to all game jam populations. Our findings could be strengthened or invalidated through conducting similar studies at more different game jams.

## 8 CONCLUSION

Based on the analysis of the survey responses, we found that the game jammer population in our samples does not differ significantly from the general population as examined in the original Hexad study. However, separately the samples show that at the *Klagenfurt Game Jam* the Disruptor type was slightly less prevalent and in the *GSE Identity Jam* the Socializer type was more prevalent than in the original study.

Additionally, we found correlations between the Hexad player types and jammer's preferred roles in a game jam. Game/Level Design hats were more likely to be Achievers, Art hats were more likely, and Programming hats were less likely to be Disruptors, and the more participants identified as a gamer, the more likely they were Players, and/or preferred the Game/Level Design hat.

Furthermore, participants of both samples identified with the term *gamer*. Nonetheless, people from the *Klagenfurt Game Jam* identified more with the term than the compared sample participants of the *GSE Identity Jam*. Interestingly enough it was found that the latter group's play-time of 4 or more hours per week was greater, 56.6% and 70% respectively. Additionally, the more participants identified as a *gamer*, the more likely they were Players and/or preferred the Game/Level Design hat.

Less significant correlations could be found which showed that the more days participants reported to play per week, the less likely they were to be Socializers, female participants were more likely to prefer the Art hat and male participants were more likely to be Socializers. No significant correlation was found between identification as *LGBTQ+* and any of the variables.

As this is a work in progress, the data we collected will be subject to further analysis to come to more conclusions about links between participants' gender identities, study backgrounds, identification as *gamers*, and their respective player types, preferred roles, and motivations to jam. Our research can be utilized by game jam organizers who wish to better understand the communities they cater to. For instance, a competition for outstanding games or a ranking of game submissions will provide a good experience for Achiever and Player motivation types, while Socializers and Philanthropists may enjoy a cooperative atmosphere, where everyone helps out wherever they can.

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