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ABSTRACT
Autonomy experience constitutes a core part of the intrinsic motivation of playing games. While research has explored how autonomy is afforded by a game’s design, little is known about the role of the social context of play. Particularly, engaging with serious games or gamified applications is often obligatory, which may thwart autonomy. To tease out contextual factors that affect autonomy, we conducted a qualitative interview study that compared gameplay experience in leisure and work contexts. We found that leisure contexts, particularly solitary play, support autonomy through a time and space shielded from outer demands, the license to (dis)engage with and configure the situation to fit one’s spontaneous interests, and a lack of social and material consequence. Thwarted autonomy occurs both in leisure and work contexts when players’ spontaneous interests mismatch socially demanded gameplay. We discuss implications for entertainment and applied gaming.

Author Keywords
Games; play; video games; motivation; autonomy; context; gamification; self-determination theory.

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous; K.8.0. Personal Computing: Games.

INTRODUCTION
Over the past decades, serious games, gamified applications, and other forms of applied gaming have tried to harness the motivational pull of game play for non-entertainment purposes across various contexts [3,40]. The underlying logic is simple: games are intentionally designed to afford engaging play activity. Hence, redesigning (presumed) non-engaging activities in contexts like work or learning into a game or infusing them with the ‘active’ ingredients of game design should make them more engaging as well [10].

One immediate question regarding this endeavor is whether these various contexts themselves affect the desired motivational pull of gameplay: In the eponymous 1876 novel, Tom Sawyer famously convinced his friends pay him for the privilege of whitewashing Aunt Polly’s fence in his stead because he made said chore appear to be something he wanted rather than had to do, suggesting not just that “Work consists of whatever a body is obliged to do, and that Play consists of whatever a body is not obliged to do” [49] – but that this lack of obligation itself is part of what makes play appealing. If that were the case, it would cast a gloomy light on applied gaming that turns voluntary play into obligatory homework or job tasks.

Indeed, play is commonly defined as “voluntary”, “free”, or “autotelic”, it’s own goal [1,2,21,32,52], unlike formal schooling, work, and other applied gaming contexts. Several scholars in human-computer interaction (HCI) [8], informatics [31], and game studies [58,59,61,63] hypothesize that mainstream forms of gamification – behavior tracking, quantitative progress feedback, and reward systems – might thwart rather than support the openness, inconsequentiality, and voluntariness characteristic for play. And evidence suggests that forced serious game play results in negative affect and reduced performance [19], and that worker consent moderates whether imposed workplace gamification results in positive or negative affect [29].

Such potential demotivating effects of play contexts and their (lacking) voluntariness are relevant for entertainment game design as well: Journalists and ethnographers of massively multiplayer online role-playing games (MMORPGs) for instance observed that “instrumental play” – play that is work-like in its repetitive tedium and instrumentality, or even performed as obligatory wage labor – is sometimes described by its players as not enjoyable or play at all [11,30,46,51]. Social network games have been repeatedly critiqued for their “dark patterns” [62] that coerce players to play through timers or social pressure, with presumed negative effects on play experience. A recent survey [60] indicates that solitary and multiplayer playing differ in autonomy experience. Yet existing conceptualizations of the voluntariness of play have remained quite muddled and definitional [23]: they merely state that play is voluntary by definition. They do not provide a systematic theorization of “voluntariness”, nor functional explanations how this quality comes about.
A promising approach to theorizing the impact of contexts on game play motivation, especially the role of voluntariness, is self-determination theory (SDT) [6]. SDT argues that human beings actively seek out and engage in activities that satisfy basic psychological needs of competence, relatedness, and autonomy: perceiving oneself as the causal origin of one’s actions. Basic need satisfaction explains why activities like play are intrinsically motivating, while autonomy provides a well-established construct for “voluntariness”. SDT-informed research has identified contextual features that affect autonomy and demonstrated that need satisfaction can explain game play motivation. Finally, most critiques of gamification draw on SDT in some form to theorize its potential adverse effects [8,31,58,59,61] – yet have remained at the stage of hypothesizing.

In this paper, we therefore ask how the situational context of game play affects autonomy experience. To answer this question, we used SDT to theorize gameplay motivation, the voluntariness of play, and how it is impacted by social context (theoretical background). SDT-informed work has explored the effects of game design on autonomy, but not of the social contexts of gameplay (previous work). We conducted a qualitative interview study following grounded theory, inviting participants with video gaming experience in both leisure and work contexts to compare gameplay moments of high and low autonomy (method). Results indicate that autonomy is the unspoken norm for leisure play contexts. They support autonomy by socio-materially enabling a meta-process of (dis)engagement and configuration: players can choose what to play when and how such that fits their spontaneous inclinations. A time window without pressing demands and a space safe from potentially disapproving observers allows players to let go of autonomy-thwarting observers – particularly in single-player games. In multi-player gaming, in contrast, concerns for the enjoyment of others or one’s reputation may compel players to play against their spontaneous interests, thwarting autonomy. In leisure contexts, lacking situational choice and severe social consequences of gameplay outcomes often thwart autonomy. The discussion aggregates these observations into a theoretical model and derives ramifications for entertainment and applied gaming.

**THEORETICAL BACKGROUND**

Self-determination theory (SDT) is a well-established need theory of human motivation that argues that human beings actively strive towards growth [6,38]. This active tendency manifests itself in intrinsic motivation: people seek out, engage in, and enjoy certain activities “for their own sake”, because these activities satisfy three basic psychological needs essential to psychological well-being, namely competence, relatedness, and autonomy [6,38]. Experientially, intrinsic motivation and the underlying need satisfaction manifest as enjoyment, engagement, and “wanting to” – what game researchers variously call “fun” or “enjoyment” [39]. Autonomy is defined as “being the perceived origin or source of one’s own behavior” ([38], p. 8). “To be autonomous means to behave with a sense of volition, willingness, and congruence; it means to fully endorse and concur with the behavior one is engaged in.” ([6], p. 85). SDT emphatically does not equate autonomy with independence or the presence of choice [38]: If a monk is woken up at 6 a.m. in a cloister and told to attend morning service, she may still perceive attending service as autonomous if she realizes that attending service is congruent with her goals, values, and needs, and thus actively endorses the activity. Choice is merely a facilitating condition that makes it more likely that individuals find a self-congruent activity and perceive themselves as the causal origin of that activity.

Autonomy in fact plays a triple conceptual role in SDT [6]. First, it is a basic need that fuels intrinsic motivation. Second, it describes a qualitative spectrum of all motives. This spectrum of self-determination ranges from fully autonomous intrinsic motivation to fully controlled extrinsic motivation, where an activity is motivated by social, psychological, or material consequences separable from the activity, such as rewards or punishments. Controlled motives are experienced as an unpleasant, effortful, strained “having to”. Between these two poles sit multiple degrees to which an individual has integrated the value of activities originally brought to it from outside. Introspectively, internalized autonomous motives are internalized “musts” and “shoulds” from parents and peers – these are still overall controlled. In contrast, internalized and integrated extrinsic motives are overall autonomous: the individual understands and actively embraces the activity as beneficial to its own goals, values, and needs, even if the activity isn’t (yet) intrinsically motivating.

According to SDT, individuals are typically energized by multiple motives at once: we may both enjoy riding a horse and feel we have to ride to make a good impression on someone at the same time. This brings us to the third aspect of autonomy: The sum of motives – their aggregate degrees of perceived self-determination – determines whether an activity is experienced as overall autonomous or controlled, and thus, whether it satisfies or thwarts the basic need for autonomy [6]. Hence, giving people extrinsically motivating rewards for an activity they already intrinsically enjoy may paradoxically reduce overall motivation, as it may tilt the activity’s overall perceived self-determination toward the controlled and thereby thwart its original autonomy need satisfaction [64]. As a corollary, autonomy support can be improved by both adding circumstances that evoke autonomous motives and removing circumstances that evoke controlling motives.

Besides autonomy, SDT has been fundamentally concerned with the social-contextual nature of motivation. Social contexts strongly affect the satisfaction or thwarting of basic psychological needs. Specifically, following cognitive evaluation theory, a sub-theory of SDT, any environmental event holds potential controlling, autonomy-thwarting aspects (pushing an actor into a certain direction), and poten-
Designing New Player Experiences

PREVIOUS WORK

Beyond such theoretical appeals, much empirical work supports the promise of SDT for tackling the contextual voluntariness of play. A rapidly growing number of experimental studies is successfully using SDT to explain video game play enjoyment and motivation [33–37,39,41,44,45]. Following the SDT-derived Player Experience of Need Satisfaction model (PENS) [37], games satisfy autonomy needs through a number of ways (see [7] for a design-focused review): particularly so-called “sandbox games” provide players with “meaningful choice” such as choosing different goals, strategies, and actions [37]; customization [25]; improving or customizing one’s avatar [33,47,48]; back stories that provide rationales for activity [37]; wide-open, explorable worlds [50]; and the possibility to create and inhabit a character that is highly congruent with one’s ideal self [34].

A rich body of SDT work corroborates that and how particular strategies facilitate an autonomy-supporting contextual climate and thus, autonomy satisfaction and intrinsic motivation across education, parenting, coaching, work, health and psychotherapy (see [43] for a review). These strategies chiefly revolve around providing meaningful rationales for activities (enabling conscious integration), acknowledgement of negative feelings, the use of non-controlling language, the provision of choices, and appealing to basic needs. When it comes to social contexts of gameplay, research has focused on the effect of social presence and social interaction – the general argument being that more social presence and interaction equals a better gaming experience [5,14,17,24,27]. Some studies have explicitly linked the effect of social presence on game enjoyment to SDT, namely the satisfaction of relatedness needs [24].

To summarize, SDT is a promising theoretical approach to the motivational effect of context in game play, particularly to the “voluntariness” of play contexts. In SDT terms, voluntariness can be construed as perceiving one’s activity as overall autonomously motivated, which satisfies a basic autonomy need and thus, intrinsically motivates and generates enjoyment. Research indicates that basic need satisfaction correlates with and predicts gaming motivation and enjoyment, and research on non-gaming domains indicates that particular contextual circumstances can facilitate or thwart overall autonomous motivation. Theory suggests that the obligatory contexts of serious games or gamification may thwart autonomy. But there has been no empirical study so far exploring whether and how the situational context of leisurely game play exactly supports autonomy, and in turn, how non-leisurely contexts may thwart it. To address this gap, we formulated the research question: How does the situational context of video game play affect autonomy experience?

METHOD

Although there is considerable work on autonomy-supporting and thwarting features in non-play contexts, we opted for a theory-generating approach since existing work has been chiefly theory-derived, not empirically grounded, and many scholars have argued for the idiosyncrasy of play [42], cautioning against straightforward generalization from existing work. Notably, we did not intend to generate a general theory of gameplay motivation, gameplay context, or the voluntariness of play, but to construct a local theory within the framework of SDT how gameplay contexts affect autonomy.

Given our theory-generating interest, we chose a qualitative method. We collected data using biographical episodic interviews [12], as these provide efficient access to a wide variety of relevant incidents. Interviews were enriched with researcher field notes on interview situations.

We recruited a purposive sample of German adult gamers (aged 19–62, 15 male, 4 female) who engaged both in (presumed high-autonomy) leisurely gameplay and (presumed low-autonomy) gameplay as work, i.e. professional e-sports athletes engaging in high-stakes e-sports tournaments and training, game journalists playing games to review them, and game designers and researchers playing games to ana-
lyze them. We explicitly invited participants to compare and contrast their memories of leisurely and work gameplay contexts, with the rationale that such would help foreground otherwise taken-for-granted aspects of leisurely play. In a sense, we viewed the ‘atypical’ cases of work as play as quasi-natural “breaching experiments” [15]: deviations from usually unconscious social norms and routines that reveal the presence of these norms in the shape of actors voicing unease, moral indignation, or difficulty making sense of the situation. We aimed to maximize diversity in participants’ age, gender, and experience across different game genres, devices, and social contextuals in our initial sample.

We constructed a semi-structured interview script with a first section on basic aspects of social contexts taken from frame analysis [16], and a second section on autonomy support, which generated the bulk of data for the present paper. The section invited participants to freely report remembered episodes of high and low experienced autonomy, high and low voluntariness, high and low choice, and high and low consequence, since these regularly appear in the literature as ways of describing and supporting autonomy. Participants then described what kinds of enjoyment or motivation (if any) they experienced in these moments, and what aspects of the given situation they thought gave rise to these experiences. Given that previous research focused exclusively on autonomy-supporting game features, we intentionally tried to capture gaming moments of low autonomy to identify what autonomy-thwarting features might be absent in leisurely gameplay.

We recorded and transcribed all interviews using the conventions of [22], and coded and analyzed data using the qualitative data analysis software MAXQDA (version 10.0), following grounded theory in the Corbin and Strauss tradition [4]: To ensure our concepts were empirically grounded and that we remained open to new concepts emerging, we followed the principles of constant comparison and theoretical sampling [4]: We gathered and coded data in parallel, comparing each new datum against existing concepts. In the course, we revised or added concepts and relations as required by the data, revised the interview script, and chose new participants based on emerging questions and hypotheses.

We conducted 19 interviews with an average length of 90 minutes until we reached theoretical saturation [4], in tune with previous findings that qualitative interview studies reach 90% code saturation around 12 interviews [18]. We collected roughly 1,900 minutes of audio recordings together with field notes and participant illustrations, which included 245 passages coded under the main code “autonomy”, with 18 sub-codes and further sub-sub codes. Interviews were conducted in German and translated into English for this paper. German originals and the final interview script can be accessed at [56].

RESULTS

Autonomy as Social Norm in Leisurely Gameplay

Our first observation was that participants viewed intrinsically motivated, autonomous play as the expected norm for leisurely play. Despite recent critiques that phenomena like instrumental play break down the “work/play dichotomy” articulated by scholars like Huizinga or Caillois [2,21], our participants used just these terms to make sense of their experience: autonomous, intrinsically motivated gaming they described as “work” or “work-like” (see [30] for a similar observation). As one game designer unpacked her experience having to play competitor games as part of her job:

“Yes, it is a game somehow, […] in its basic substance, because it has game rules, and those I follow. But I wouldn’t say that I play it very passionately. So it’s still a game as such, and defined as such, but I would not say that *I* play it at that moment. Because that has a different meaning for me, that- if I play in that moment, then I would have fun with this thing.” (P9/285-288)

Similarly, another player noted that even leisurely play of MMORPGs could turn from “play” into “work” once it became a social obligation: “Then it feels like working, […] <<I have to do this now. Do it as productively and quickly as possible.>> […] That is a form that you also find in other contexts, in working, actually.” (P2/54)

This led different participants of the same MMORPG session to frame and experience it differently, “where I said at a certain point, that I don’t want to partake regularly in battles. And when […] I say: <<I don’t want this to become an obligation for me>>, then I am representing in that situation the position, then it’s no longer play, and they represent the position: <<Why? It’s fun>> (laughs)). Then the definitions are different.” (P2/276-279)

In contrast, in non-leisurely gameplay contexts, it is an understood and expected norm that gaming should serve the respective instrumental purpose, irrespective of whether one wants to engage in gaming or enjoys it at that moment. Indeed, it would be inappropriate to let enjoyment get in the way of the instrumental outcome: “At the office, […] I have to focus on the game analytically, and not say, I let myself go and play the whole day, and at the end no results. That would be inappropriate.” (P9/142)

This basic social norm of leisure play contexts – that gameplay ought to occur autonomously, for the sake of enjoyment – fuels a set of further social licenses that directly support autonomy by allowing players to reconfigure and (dis)engage with the play situation as fits their spontaneous needs and interests.

License to Autonomous (Dis)engage with Play

Participants noted that in leisure contexts, they expected to and typically could choose whether to play, when to play,
and how long to play, that is, when to stop (and potential restart) playing. Participants would start to play when they have “the feeling, I want to play on the computer now, and nothing speaks against that, because I don’t want to do anything else as well, then I do that, and then I start that.” (P4/384) In turn, participants would play “until [they] don’t want to anymore” (P11-1/248), stopping when they “simply lost interest again” (P10/125). This license was reported to instill a sense of autonomy:

“When I in principle have no time limit, that is, when I can say, I can play until I say: <<I don’t want to anymore.>> No appointments and no obligations, both inside the game and outside of the game, then I find, that’s an experience of freedom.” (P9/308)

In non-leisure contexts, participants reported often having little choice whether and when to start or stop playing. The instrumental demands of a fixed training time, a review that had to be submitted in time, or data that had to be gathered in time for a project or research paper often created the experience of time pressure, which is known to thwart autonomy [38]. Asked when gaming felt non-autonomous to him, one game researcher answered:

Participant: “At most in situations where there is a certain time pressure.”

Interviewer: “Okay. For instance?”

Participant: “So if I’m, whatever, in two or three days there’s a project, some workshop and there we need, I don’t know, these five or ten games have to run on all computers. You have to, you have to know your way around the games at least a bit but you don’t really want to do it, but you nevertheless have to make yourself acquainted with them once more.” (P10/314-317)

Notably, this license to (dis)engage with gameplay at will was most pronounced in solitary leisurely gaming. In multiplayer gaming, participants reported sometimes not having this license. They played although they didn’t want to any longer, which instilled unenjoyable experiences of control. The underlying motives participants mentioned were on the one hand, basic “participation norms” [54]: Especially for adults with many responsibilities, scheduling and setting up a gameplay session can require significant effort, and many multi-player games require the continued participation of all participants until the end to bring gameplay to a satisfying closure (i.e., determining who wins). Since the basic normative goal of leisurely play situations is (shared) enjoyment [54], participation norms ask players to be respectful of the other players’ enjoyment and not spontaneously decide to not join or leave prematurely. Says one player:

“So if you play together in a clan, then there are situations where things aren’t over yet, where you just have to finish the session. There I cannot, of course I could decide voluntarily to leave, but that would be inappropriate, if I would leave. Because then I would let my team hang.” (P9/290)

Notably, social participation norms interact with the games’ design features: the more practical effort it requires to organize a gaming session, the bigger the “closure point span” (155, p. 349) of the game (the time it takes to come to a satisfying closure), and the more closure is dependent on all players participating through to the end, the more participation norms are enforced, and the more likely it is that some players will experience having to play beyond their spontaneous desire. For instance, the online multiplayer game StarCraft features short matches and easy access to players, allowing individual players to configure play time to their liking: “So there I know for sure, a match takes between ten and twenty minutes on average, that’s something I, that’s something you can simply time very well. […] I can, when I want to, simply play my two matches and thereby have two closed experiences, so to speak.” (P10/68) Similarly, in a multiplayer game than can be played with different numbers of players, “if you’re not in the mood anymore, then you simply say: Hey, guys, I’m not in the mood anymore […] the others say: Yes, okay, we’ll continue to play a little longer. Because there it’s not so important, there you can, you can play it with two people, you can play it with three people or with four or alone.” (P15/297)

In contrast, so-called “raids” in MMORPGs may require active participation from as many as 40 bespoke players for several continuous hours. Here, loss of reputation and status was a negative consequence that in addition to fear of embarrassment and hurting social relations by violating basic participation norms compelled players to play against their spontaneous interest. Said one participant about his experience raiding in World of Warcraft (WoW):

“I had the conflict, for instance, that I played soccer […] and sometimes during the evenings, where there was soccer training, there was also a raid. […] And then sometimes there were some people missing and then I said: <<Come, I let soccer training slide for once.>> And then you join in there […] if you don’t really feel like it. You also enter a kind of commitment towards the other people. And I don’t find it decent if you then say: <<Yeah::: I put my interests definitely over the, over those of the others>>, because that’s a social group that wants to reach a goal. […] So with other games I never had it like that, that if I didn’t feel like it, that I would then go. […] especially with WoW you somehow had […] a social coercion behind it. Because as I said, this reputation and then also the social contexts that you maintained through it. Or found there. […]You don’t feel like training in the evening, or something, and you still go there. Because you feel socially obliged somehow.” (P19-2/68-78)

License to Autonomously Choose Games

Beyond choosing when to play, leisure play contexts come with the social license to choose which game to play, and to change games during a play encounter. As an e-sport athlete compared his experience of playing the e-sport game Coun-
terstrike during training with his experience of playing his favorite leisure time game, Commandos:

“No, Commandos we always only played when we felt like it. [...] Apart from Counterstrike I would never play any other game when I don’t want to. [...] when Diablo 3 comes out now, then I will really want to play it, so I will play it very much. But if I don’t want to play it at a certain point, [...] then I will not play it if somebody asks me: Do we want to play a round of Diablo? When I don’t want to, then I don’t want to, and then I don’t play it.” (P15/195)

In contrast, in non-leisure contexts, participants would often play specific pre-ordained games even if they didn’t feel like it, which instilled a controlled experience. Said one game designer: “Especially in the work context it’s not always voluntary. So voluntarily I wouldn’t prefer this genre very much. That’s more unfree”. (P9/284)

Apart from the basic autonomy of making self-determined choices, this license to choose which game to play also supports autonomy in another way: Players can pick games that suit their current preferences and needs, making it more likely that they will play a game that instills intrinsic motivation, supporting overall autonomous motivation. During one field observation, we found that players would cycle through many games in a row, change game modes or difficulty levels, until they arrived at a game setup that was enjoyable for everyone involved – and when it wasn’t any longer, they switched games again. As one journalist observed, leisurely playing is characterized by the fact that people do not put up with games they do not find enjoyable:

“I mean, many people play games very, very briefly, so [...] there is a moment when you play and it’s not fun, unless you just spent seventy Euros and know after four hours this will get awesome, then maybe you still play it. Otherwise you rarely find people crammed, well, maybe not crammed, but grumpy in front of a console. And the typical video game journalist, he sits angrily and lost in soliloquies in front of a console.” (P3-1/438)

Again, this license was reported to be most pronounced in solitary leisure play. In multiplayer gaming, players need to agree on a game that is jointly enjoyable for all, which means that sometimes one player bows to the enjoyment of the group and plays a game she would not have chosen:

“We also do that, but it’s, it’s like this in this group, that we like to play cards together, and the ladies suggest that. I’m actually not the type for that. [...] I wouldn’t necessarily have to have that, but they, they suggest it again and again and then we just do it.” (P17/692-696)

License to Autonomously Choose Play Style

In addition to choosing when and what to play, leisure contexts come with the license to change how to play to optimize (shared) enjoyment. In non-leisure contexts, the targeted instrumental outcome of the activity was reported to require specific, goal-oriented styles of gameplay: be it focusing a particular game state to record it for a research study, be it efficiently yet systematically exploring the possibility space of a game to be able to report on it. As a game researcher described it: “And when I play for the job, then it’s [...] goal-oriented. [...] I wouldn’t play if I could get directly to the point I want to get to, let’s put it that way. So there the activity of playing is more [...] purely utilitarian”. (P10/406)

In e-sports, for instance, gaming was constrained by the agreed-upon strategy, enforced by other team members: “You could say that the tactics [...] force your game. [...] when the tactician of the team is of the opinion that you have to play static, then you’re bound to these instructions or to the ways he wants to see from you, although you might not like them.” (P13/411)

Lack of play style choice also could occur in leisurely multiplayer gaming, as this MMORPG player put it:

“there are bosses, where, I don’t know, some special jobs have to be allocated. And where you are then for a time, so I was DD, so damage dealer, and usually my job is to make damage, when you then get certain special jobs with that boss and you know well, yes, you will only run around or search around or you have to keep your eye out for something, and you can’t make as much damage as you could do, then it’s the case that you sometimes think: <<I’d rather do to something else.>>” (P18/339)

Like participation norms, the license to choose play styles showed an interesting interaction between context and game features. Providing meaningful choice is commonly seen as a premier way of in-game autonomy support [37]. Yet as a game journalist noted, this freedom to choose can flip into an oppressive demand to exhaust if encountered in the context of playing a game to review it:

“And as a reviewer you have to look: How does an, an adventure like Heavy Rain, which plays a lot with the freedom to act, and suggests it, there you have to- as a normal, contemplative player you just play it through, and afterwards you think: <<Maybe I’ll do it again.>> And here you indeed have to play the same scenes immediately again and look, how, what is different, so. [That is] Interviewer: “[That is,] you have to actually exhaust the possibility space?”

Participant: “Exactly. Yes, yes. You are forced to do it, it’s no longer an optional possibility. Whenever you’re forced to do something, then in becomes more work.” (P3-2/669-672)

A Relaxed Temporal Field: Making Time for Play

Beyond social norms allowing to choose whether, when, how long, what and how to play, leisure contexts support autonomy through a relaxed temporal and spatial field. Specifically for adults, the ability to (dis)engage in leisurely play was reported to be an effortful accomplishment. As participants stated, to feel free to play meant to first attend to one’s adult responsibilities for work and family. As a re-
sult, leisure play typically only occurred in ‘free’ time windows to begin with: “Those are the really regular windows ... after work and after I have brought the little one to bed. ... And otherwise, if it works out time-wise on the weekend, then it depends. Well, the, the family has priority, for sure.” (P5/29) “I- if it’s dark, I can somehow say to myself, it’s evening somehow, I can call it a day, and then I perhaps also simply play with a cleaner conscience.” (P10/21)

On top of that, participants reported actively creating time windows cleared from other pressing needs:

Interviewer: “So that’s the usual process, that you, that you pick a day, and then on that day start in the afternoon and stop in the evening?”

Participant: “That’s, yes, you can almost see that as the usual case with me. [...] If it is that way and I can focus on the afternoon, then I also plan it like that, such that I have finished everything until then, until that point, that could make me go to the door or interrupt the game.” (P7/62-65)

This matches findings that spontaneous play in animals and children only occurs in a “relaxed field” where no immediate outer threats or more pressing inner needs (hunger, pain) are present [1,32]. From the perspective of autonomy support, one can phrase this as follows: First, the practically accomplished absence of outer responsibilities (typically motivated by controlling motives of internalized demands or external negative consequences) already creates a time space that is overall more autonomous. Second, players don’t experience a goal conflict between the intrinsic motivation to play and another, competing motive to attend to a responsibility, which would thwart full absorbed engagement in gameplay, reducing the maximum of intrinsic need satisfaction that could otherwise be derived from gameplay.

A Relaxed Spatial Field: Making Place for Play

The relaxed field of leisure play contexts is as much a temporal as a spatial shielding from the demands of others. In everyday life, internalized social norms compel us to continually monitor and regulate our attention and emotion display to ‘fit’ the demands of the particular social situation – an experience of controlled motivation [9]. In leisurely play, this demand doesn’t disappear: We can’t be “spoilsports” who take no visible interest in the game, nor “sore losers” who display “too much” negative affect over losing, etc. However, games are typically designed to spontaneously hold our attention and elicit specific intense emotions that fit the norms of leisure play contexts: Players are allowed and expected to get fully attentively involved in gameplay, and to experience and display more intense emotion than in other everyday situations. This fit of spontaneous and socially demanded engrossment and emotion dissolves the need to actively self-regulate [9]. Since non-leisure contexts typically don’t allow the deep engrossment or intense emotion afforded by gameplay, situational norms and spontaneous affordances mismatch, requiring perceived-controlling self-regulation. As one game designer described it, playing a game at the workplace – even if it was part of her work – would trigger fears of appearing to do something inappropriate for the work context: not noticing a colleague who has a question, shouting in frustration in an otherwise very silent office environment. In contrast, her experience playing alone at home was “Freedom I would also say, certainly in the private context, because there I can simply show all emotions that I develop when I play this game. And that I of course don’t have when I’m sitting in the office. That’s not a feeling of freedom. I would say, if I had the opportunity to play Battlefield in the office, I would enjoy it less because I then don’t have this feeling of freedom.” (P9/309)

Again, this freedom from having to regulate one’s attention and emotion is most pronounced in solitary play. As the same participant continued, when playing with friends on a couch, “the considerateness for the friends dominates, for the people with whom I’m sitting there. Then it’s less the case, that I focus on the game and say: <<I am now, now I am free and can determine this.>> Instead it’s also more about me being the host, and being a guest of somebody and still take regard of that.” (P9/309-311)

In short, the moment co-present others observe gameplay, players need to potentially self-regulate engagement, which brings us to spatial shielding. Participants noted that they would undertake practical efforts to create a space that would give them the license to play leisurely. This entailed that they would typically set up gaming equipment in a private room that is materially shielded from the interruptions and eyes of others who don’t participate in play. Thus, uninterrupted engrossment in gameplay would become more likely (increasing intrinsic need satisfaction, thus overall autonomous motivation), and players did not need to self-regulate emotion display to fit the “normal appearances” of public settings (reducing controlled motivation): “in my private rooms, then I can show any emotion, because there would be nothing inappropriate in doing so, because I wouldn’t offend anyone with it” (P9/225) This feature became obvious when participants compared their experience of playing in private rooms with their experience playing mobile games in public, which one participant described as follows: “Since I am then mostly in a public surrounding, loud screaming or throwing that thing in the corner are not an option. Although you would really want to do it, you have to restrain yourself a bit there and, let’s put it this way, appear a bit more suited for public.” (P7/269-271)

In addition, participants reported actively configuring those private spaces to further minimize any potential distraction: locking doors, moving their game equipment to a part of the room most distant from other rooms to avoid overhearing noises from other inhabitants, “and I switch off the lights and put on headphones and somehow try to have more immersion”. (P2/59)

Minimized Consequence

We already saw that participants reported controlled motives in multiplayer gaming when negative consequences were attached to play: Not showing up to a multi-player
Designing New Player Experiences

The thrill is bigger because "for cents instead of " (P8/297-303) To be sure, some deemed some involvement of money acceptable. The point participants made is that material consequence is acceptable as long as it contributes to enjoyment rather than becoming the purpose of the game. Playing Poker for money is acceptable because "the thrill is bigger", but only if one plays for cents instead of "for real money" (P11/337-345).

**Autonomy Experience as Interest-Choice Mismatch**

Notably, the mere absence of choice or presence of controlling consequences did not necessarily lead to an overall experience of controlled motivation. When gameplay itself generated intense intrinsic motivation, this could outweigh or make participants forget controlling motives. As one participant observed, MMORPG raids to him became "these outer commitments that got you to join in at times where you don’t want to", yet "the activity itself was in any case still playful from its feeling. Especially if it were challenging opponents and such, then (3s) it definitely was a playful activity". (P2/79) And true to SDT’s contention that autonomy depends not on choice or obligation per se but the individual’s active endorsement of an activity, one e-sport player reported experiencing mandatory training as autonomous when it was either enjoyable or he reminded himself that he chose to make the training commitment: "If you, somebody gets you to, so says *have to*, "<You should play now>>", but when you really want to […] that’s voluntary for me. […] When you’re in a team […] you have to know that it’s a time investment. And then I don’t find that involuntary, instead you enter a compromise, and that’s voluntary. That’s a decision of a person.” (P14/156-157)

In short, experiences of controlled motivation only became salient when spontaneous interests and provided choices mismatched and perceived-controlling motives kept players to given choices, without players being able to construe said choices as self-congruent on some level (P77). As another e-sport player answered the question whether he experienced pre-scheduled training times as non-autonomous:

"In::: 95 percent of the cases no. It's still a hobby. You-it's still a passion. You enjoy playing it, also because something like:: a professional level comes in, money and you get around and you get to know new people. That's nice, no question. And those remaining five percent, those are the percentages where you say: "<Hm, not training again from seven to ten pm? Now I could have gone to the movies with my girlfriend.>> For example. Where you would say: "<I so would have wanted to go with her to the movies. Damn, damn, damn. Why do I have to train now?>>” (P16/97-99)

**DISCUSSION**

This paper combined episodic interviews with a grounded theory methodology to identify how social contexts – particularly leisure and non-leisure contexts – affect autonomy experience in gameplay.

Analysis suggests multiple direct and indirect routes of autonomy support, propelled by social norms interacting with material circumstances (fig. 1). First, leisure play contexts entail the social license to choose whether, when, how long and how to play, directly supporting autonomy. Non-leisure contexts lack this license, thwarting autonomy. Second, leisure contexts enable this license and directly reduce controlled motives by minimizing social and material consequence of gameplay. Again, this is typically not the case in non-leisure contexts. Third, leisure contexts typically entail a field shielded from outer demands and public observers. This directly reduces the amount of controlling demands, as well as the need to fit one’s engagement to ‘normal’ public appearances. More indirectly, the leisure play license to (dis)engage with and configure the total play situation enables players to choose games and play styles that best fit their spontaneous interests and needs (within the range of what is accessible), and the relaxed spatio-temporal field reduces (concern for) outer distractions interfering with play. This facilitates players experiencing a maximum of intrinsic need satisfaction from play, which increases the overall perceived autonomy of the activity.
In sum, leisure play contexts support autonomy by socio-materially affording a relaxed spatio-temporal field shielded from non-play demands, and a meta-process of configuration and (dis)engagement in which players can fit the situation to their interests and needs thanks to minimized consequence. Play becomes a controlled experience when spontaneous interests and socio-materially available choices mismatch, and perceived-controlling motives keep the individual from leaving or changing the situation, and these controlling motives outweigh whatever intrinsic need satisfaction the activity itself generates, such that the individual doesn’t construe the activity as overall autonomous. Consequently, even leisurely play can become overall controlling, particularly in multiplayer encounters when the regard for other players’ enjoyment (including consequences of embarrassment or loss of status) compels players to play against their inclinations. Hence, solitary leisurely play is the most autonomy-supporting context, as players don’t need to take others into account here.

Limitations
As a qualitative study with a small and culturally homogeneous sample, the present study cannot (and does not want to) make claims toward broad generalizability. It can also not claim reliability in any statistical sense, though in the qualitative sense that data collection, transcription, and analyses were transparently documented [13]. Hence, one main task for future research is the experimental testing of the grounded theory developed here.

Implications for entertainment games
That being said, our findings do hold a number of interesting ramifications. First, they identify several ways in which contexts support autonomy that have not been described in the SDT literature on games or social contexts in general. Second, existing research has chiefly treated “voluntariness” as a defining feature of “play” without unpacking the construct further [23]. Several scholars pointed to phenomena of instrumental play that contradict this straightforward definition, leaving the relation between play and voluntariness unclear [11,30,46,51]. Our results offer a theoretical model how “voluntariness” comes about in and relates to “play”. The experience of autonomy is a social norm for the type of context people label “play” (cf. [57]). As part of (re)producing a play context, people accomplish a socio-material setup that strongly affords autonomy. The resulting autonomy experiences lead participants to then recognize and label the situation as “play”. Conversely, if the setup of a gaming situation affords little autonomy, this experience may lead participants to label it “work” and flag it as inappropriate: something that should be autonomous isn’t. This model opens to the wider question how labeling or framing and autonomy experience interrelate. For instance, does labeling something as “play” increase experienced autonomy? There are several interesting starting points for this research trajectory [20,26,28], but it essentially remains an open question.

Third, our results indicate that non-autonomous (“involuntary”) play not only happens in the rarefied circumstances of instrumental MMORPG play, goldfarming, or e-sports. It is an everyday occurrence in multiplayer gaming. Contemporary game enjoyment research has mainly argued that more players equal a better gaming experience thanks to social facilitation, presence, and relatedness. Against this thrust, a recent study found that people experience more autonomy in solitary than social play [60]. Our study lends further support that multiplayer gaming may buy gains in social motives with a loss of autonomy support. It also provides an empirically grounded theoretical model how co-present others affect autonomy: by binding situational configuration, (dis)engagement, and self-regulation of conduct to regard for the others’ enjoyment. One design implication here is to support autonomy by reducing the closure point span and participation dependency of multiplayer games, for instance with design patterns like pick-up groups [55].

Connected to this, we found that play in public, for instance on mobile phones or with public installations, can be less autonomous because players need to actively self-regulate
attention and emotion display to fit normal public appearances, against the intense engrossment and arousal playing the game may stir. Designers of public play installations may consider using walls and other physical covers to minimize these negative effects.

Finally, our study revealed meta-processes of people setting up, (dis)engaging with, and configuring the total play situation which could not have been observed in a laboratory study, as the experimental control of conditions would have prevented it by definition. We also found instances where game design and context interact: a design feature like ample meaningful choice can support or thwart autonomy depending on what kind of play style is socially mandated. Not only have these processes and interaction effects not been reported: they suggest that there may be a larger number of situational processes and factors of gaming enjoyment missed by experimental designs – tasking game enjoyment researchers to devise more ecologically sensitive and valid methods.

**Implications for applied gaming**

Although our study did not explicitly explore autonomy experiences with gamified applications or serious games, its results still arguably speak to the frequent concern that gamification may create demotivating coercion rather than engaging play. Most critiques of this kind draw on SDT in some form [8,31,58,59,61], hypothesizing that the progress feedback and reward elements central to gamification (points, badges, leaderboards) produce the well-documented effect of extrinsic rewards undermining existing intrinsic motivation by thwarting autonomy [64]. In a sense, although gamification criticism is concerned with differences in autonomy between entertainment and applied gaming, like game enjoyment research, it has chiefly focused system design not social context. Yet our results indicate that context is what matters.

First, obligatory contexts like work or formal schooling lack a relaxed spatio-temporal field shielded from outer demands and observing others. Even in voluntary contexts like personal fitness, gamified applications may thwart autonomy by making participants’ conduct visible to others (e.g. through public leaderboards), instilling autonomy-thwarting self-regulation and controlled motives of social recognition (cf. [8,58]) – suggesting that physical shielding is a relevant design feature for applied game design as well.

Obligatory contexts furthermore provide little or no license to configure and (dis)engage with the situation to fit one’s interests and needs. Beyond directly thwarting autonomy, this also makes it less likely that people will engage in an activity that supplies intrinsic enjoyment. Thus, where engagement with a serious game or gamified application is mandated, and/or the game or application reinforce existing restrictions of conduct, this will likely reduce people’s autonomy. Several scholars and practitioners have suggested that ‘good’ gamification should be voluntary to participate in; only involve activities that are voluntary to begin with, or in the case of workplace gamification, not involve core job tasks necessarily linked to remuneration and promotion; and rather than reinforce existing regulations, it should restructure activity such that participants have a greater ability to align what they do when, how, and with whom with their own interests and needs, analogous to e.g. Montessori pedagogy or results-only work environments [31,58,61,65-68]. Our study provides a theoretical model why and how these recommendations work to support autonomy.

The prescription of particular goals and activities in obligatory contexts receives its motivational power from social and material consequences attached to outcomes of people’s activities. Here our findings most directly speak to the hypothesized undermining effect of gamification: We found ample evidence that players feel coerced when consequences – extrinsic incentives – compel them to play against their inclination. Yet our observations qualify the undermining effect hypothesis in two regards. First, undermining should not be caused by the mere presence of progress feedback like points or badges. It should only occur if such measured progress is connected to perceived-controlling social or material consequences (money, work hours, reputation, embarrassment). This linkage is part of the system’s socio-material context – what other people and things do with the progress data it collects. Second, we found that gameplay experience only became controlled when players were compelled to do something they did not spontaneously feel like doing, could not construe the activity as autonomous on a higher level, and when intrinsic enjoyment didn’t outweigh salient controlled motives. This would suggest that even obligatory engagement with serious games or gamified applications with undermining consequences attached may be experienced as autonomous when it fits the participant’s spontaneous inclinations, generates strong intrinsic enjoyment, and/or is actively endorsed by the participant. This is not to deny a potential undermining effect; but it clarifies that it is far from the sole mechanism potentially affecting autonomy in applied gaming.

In summary, our results support the concern that serious games and gamified applications in non-leisure contexts face the challenge that these contexts lack a core source of gameplay enjoyment: the autonomy experience of “free” play. However, they suggest that this is not exclusively (or even primarily) due to an undermining effect automatically caused by progress feedback. Progress feedback likely only becomes undermining when it is contextually connected to perceived-controlling consequences. And even with consequence-laden progress feedback attached, participants can perceive play as overall autonomous. Last not least, non-leisure contexts like work or formal schooling thwart autonomy through other contextual routes as well: they lack the relaxed spatio-temporal field and license to configure and (dis)engage with the situation that is the (social) norm in leisurely play contexts. Put differently: Unlike Tom, his friends really weren’t obliged to whitewash Aunt Polly’s fence.
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Designing New Player Experiences


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