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Sustainable Play in Video Games: A Case Study of *Stardew Valley*

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Abstract

Research on video games and sustainability has predominantly focused on game design — examining how serious games, gamification, and narrative design can transmit ecological knowledge or shape sustainability-related behaviour. This design-centred approach, however, treats sustainability as a property to be embedded in the game system and received by players, leaving a theoretical blind spot: it cannot explain why, in games without any explicit sustainability-education intent, players nonetheless develop ecological awareness, behavioural change, and lasting community attachment through sustained play. This study proposes that play behaviour itself — not merely game design — can serve as a generative practice of sustainable value, and develops the concept of ‘sustainable play’ to articulate this possibility.

Drawing on *Stardew Valley* and its player community as a case study, the research adopts an interpretivist qualitative method that combines netnography of r/StardewValley and Xiaohongshu with semi-structured interviews of eleven long-term players. Through thematic analysis, five core themes were identified: ecological meaning-making, behavioural spillover, place attachment, social connection, and community cohesion.

The findings reveal that play generates sustainable value along two parallel but distinct pathways. At the individual level, players translate in-game engagement with farming, seasonal rhythms, and resource cycles into ecological awareness and concrete real-life practices such as gardening, slower consumption, and renewed attention to nature. At the community level, sustained play and interaction transform the digital community into a third place that produces belonging, emotional support, and both bridging and bonding forms of social capital. Together, these two pathways constitute sustainable play: a mode of play in which playing behaviour, while remaining non-instrumental, continuously generates value at both the individual and the community level.

This study contributes to video game research by shifting analytical attention from game design to play as practice, and to sustainability research by extending its conceptual reach to a domain — video gaming — long excluded from sustainability discourse. It argues that play, when sustained and embedded in community, is not merely a transient form of entertainment but a practice through which ecological meaning and social relations are continuously produced.

Keywords:

Play Behavior; Sustainable Play; Stardew Valley; Netnography; Digital Third Place; Sustainability

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1.Introduction

1.1.Problem Background

"I never imagined a video game could become this kind of anchor for me — as an adult woman dealing with a serious mental health condition. I've written something along these lines before, but I feel it matters to say again just how much of a therapeutic role this game has come to play in my life. ... What surprised me most when I started playing and discovered this sub was the support here. The kindness and the willingness to help one another are genuinely refreshing. People here don't seem to care who you are, where you come from, how old you are, or — perhaps most importantly — where you stand politically. There's a real sense of being in this together. This is the way people ought to treat one another, and look out for one another, all the time. Even as a grown woman, I feel proud to be part of this sub. ... I know this might sound a bit silly, but Stardew and this community have helped me reconnect with parts of my life beyond the game that I'd drifted from but really needed to hold on to — and honestly, it's helped keep me going. It's a kind of medicine I'm happy to be on. With love to all of you. "--Stardew Valley Reddit Group

"Stardew Valley always has a next spring, and so do you. I love this line; it carries a sense of release, as if one had acquired a resilience synchronised with nature. Spring in Stardew Valley arrives right on time: on Spring, the frozen soil thaws and vast patches of grass seedlings immediately sprout up. The rhythms of this pixel world seem to whisper quietly: the troughs of life, like the seasons, are fundamentally temporary — unemployment, heartbreak, failure, loss, measured against the long scale of a human life, are merely one season in a cycle of seasons, not the permanent end." — Xiaohongshu community post

On r/StardewValley, currently one of the most active gaming communities on Reddit, a player posted a lengthy thread in 2023 that received hundreds of replies. She wrote that she had stumbled upon Stardew Valley during a mental health crisis and that, through the community, she had “re-learned how to talk to others kindly”. For her, the 2016 farming simulation game was not just for fun, but a “place to return to when real life falls apart”. This post is not an isolated case — over the nearly ten years since the community's inception, thousands of similar stories have emerged: players describe how the game inspired them to start growing tomatoes on their balconies, cook with their families again, rethink their understanding of rural labour or continue referring to the community as 'home', even after years of playing.

These observations raise a question worth exploring: How can an activity that has no external instrumental purpose — neither educational, productive nor political mobilisation — continue to generate meaning for participants over a span of ten years and spill over into their daily lives? In other words, when play exhibits the most enduring social and ecological impacts as a purely non-instrumental act, how should we understand 'play' itself?

At the same time, the forms and meanings of play continue to evolve alongside social development. Academic research has gradually begun to attend to the cognitive, psychological, and lifestyle-level impacts of play. For instance, ecological games have been recognised as carrying educational significance (Farca et al., 2025), and certain games have been shown to alter players' cognition and mental states through narrative (Foureaux & Simon, 2025; Pearce et al., 2007). Within these discussions, however, the research focus has tended to shift from play behaviour itself to the concrete object of the game — scholars have begun to study how the game, conceived as a pleasure-oriented consumer product (the so-called "fun machine"), satisfies players' experiential motivations (Daneels et al., 2020). This research paradigm is closely aligned with the non-utilitarian nature of play, yet it has a deficiency along the dimensions of time and meaning: it can explain why people begin to play, but it cannot explain why play behaviour persists after the fun has faded. The paradigm of treating games as consumer products has accordingly entered the field of consumption research, while the exploration of the meaning of play behaviour itself appears to have stalled. Beyond the familiar categories of "learning behaviour," "energy expenditure," "hedonic behaviour," and "recuperative behaviour," how else might play be interpreted and developed? In concrete cases, why do some games make people feel comfortable while others induce fatigue, even giving rise to the phenomenon of "playbour"? Why are some games capable of transforming players' cognition and behaviour, converting game experience into real-life practice, while others undermine players' social behaviour, leading to "addiction" and "overconsumption"? These most fundamental questions about the value of play still require a new perspective.

This study proposes that "sustainability" may be precisely such a perspective for understanding the value of play. Introducing this perspective does not mean forcing play into a framework of environmental protection or pollution management. Rather, it draws on a key insight internal to sustainability theory — namely, that sustainability concerns not only the maintenance of material resources but also the ongoing production of social relations and the transmission of culture — to rethink why play, in certain contexts, exhibits effects that endure beyond immediate gratification. Specifically, the question of play's value and sustainability theory converge on a shared concern: both ask how a given practice can be more than transient and consumptive — how it can continuously generate something meaningful.

Classical sustainability theory takes finite resources, environmental protection, and intergenerational equity as its core concerns. The concept of "sustainable development" can be traced back to the 1950s, and the term "sustainability" was first formally used in 1972. In 1987, the United Nations World Commission on Environment and Development defined "sustainable development" in its report *Our Common Future* as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Although this definition centres on material resources, sustainability is also a narrative about the "unsustainability" of oppression, destruction, and injustice, and has accordingly been applied within the domain of social organisation (Giovannoni & Fabietti, 2013; Gray, 2010; Kidd, 1992). The concept of social sustainability took shape roughly two decades after the introduction of sustainable development. In their review of the social sustainability literature, Vallance et al. (2011) summarised it along three dimensions: first, "developmental sustainability," concerning the fulfilment of basic needs, the creation of social capital, and social justice; second, "bridge sustainability," referring to the achievement of biophysical environmental goals through behavioural change; and third, "maintenance sustainability," referring to the social and cultural characteristics that are preserved or maintained in the face of change, and the ways in which people

actively accept or resist such changes. Unlike sustainability in its material sense, social sustainability attends more closely to the underlying logic of social functioning, enabling people to view the future through a new set of values.

It is against this theoretical background that the present study attempts, from a sustainability perspective and using *Stardew Valley* as a case, to characterise a certain type of play behaviour as sustainable play. This mode of play is linked to both social sustainability theory and ecological sustainability theory, and seeks to address the unresolved questions about the practical value of play outlined above.

The selection of *Stardew Valley* as a case is not arbitrary. It is a free-form farm management game in which the player takes on the role of a character who has inherited a grandfather's farm and begins a pastoral life. In the game, players are free to choose among farming, fishing, animal husbandry, winemaking, and other activities. Since its release in 2016, the game has been translated into twelve languages and has attracted millions of players worldwide. A decade later, the game still maintains a large active player base, and its developer, ConcernedApe, continues to release updates and has stated his intention to maintain the game for life. What is more notable is that the player community formed around *Stardew Valley* exhibits a quality uncommon in other gaming communities: many players report that it is the most inclusive and harmonious community they have ever encountered — one in which they have found a sense of belonging and happiness, made new friends, and even found "a home they can always come back to." It is precisely this sustained production of meaning within play — spanning a decade, permeating players' real lives, and sustaining a lasting collective atmosphere at the community level — that makes *Stardew Valley* a suitable entry point for discussing "sustainable play."

In the research that follows, we draw on netnography and semi-structured interviews to conduct an in-depth analysis of player practices within this community, exploring how play behaviour generates sustainable value at both the individual and community levels.

1.2. Problematization

These limitations are not accidental. There are sound methodological reasons why existing "Games and Sustainability" research focuses heavily on game design — conveying ecological knowledge through serious games, incentivising eco-friendly behaviour through gamification, and shaping sustainability awareness through narrative design. As a designed system, the rules, feedback and narratives of a game are elements that researchers can operationalise and intervene in through experimental design (Beke et al., 2024; Gordon & Thomas, 2018; Kriglstein, 2024). Design is studyable, so design is studied.

However, this methodological convenience obscures a theoretical blind spot. When researchers view sustainability as an attribute that can be 'embedded' in game systems and then 'received' by players, the focus is placed on the game itself, while play — as the player's practices, attitudes and ongoing interactions within the game — is reduced to a mere conduit for executing design intentions. While this framework enables us to answer the question, 'What kind of game design can convey sustainable values?', it makes it difficult to address another equally valid yet overlooked question: When a game lacks explicit sustainability education objectives yet players gradually develop ecological awareness and social

connections through long-term gameplay, how does this occur? Is this sustainability, which emerges from the practice of play itself, fundamentally different in nature to sustainability embedded through design?

This blind spot is particularly evident within the Stardew Valley player community. The game was not designed as a 'serious game', and its developer, ConcernedApe, has never cited 'sustainability education' as a development goal in public interviews. Yet the player community has widely demonstrated the adoption of ecological practices, the cultivation of a sense of community belonging, and ongoing reflection on the relationship between 'rural life, nature, and labour' — phenomena that a design-oriented research framework struggles to fully explain.

Therefore, rather than focusing on 'a missing piece of the puzzle in the existing literature', this study poses a research question that considers a more fundamental shift in perspective: moving from viewing games as vessels of value to viewing play as a practice that produces value. Theoretically, this shift implies that sustainability is not an attribute that can be designed, but a process that can emerge, accumulate and spread into other areas of life through play. The core concept of this study, 'sustainable play', serves to describe this process.

Furthermore, the viability of this research also rests on the properties that virtual, digital communities possess as "places." Virtual game communities, although they do not involve real geography or physical environments, nonetheless carry the same significance as real communities (Ducheneaut, 2007; Goosen & Cilliers, 2020). Within existing research frameworks, discussions of sustainability have been confined to communities with a physical presence, on the grounds that such communities involve the consumption and regeneration of tangible resources and real environments and geographies. Although virtual communities lack visible environments, geography, or physical substance, resources nonetheless exist within them. In virtual game communities, these resources include players' attention, creativity, and emotional investment. From the perspective of sustainable play, the sustainability of virtual communities can likewise be explored. A number of scholars have argued that virtual communities can be analysed as a form of third place through the lens of "placemaking," thereby providing theoretical support for examining the sustainability of virtual communities (Halegoua & Polson, 2021; Basaraba & Nicole, 2023; Markiewicz & Ewa, 2019).

The problematisation of this study originates primarily from a myth within existing research — a perspectival absence. Current research on "play" and "sustainability" concentrates on top-down game design, emphasising the influence of game design on player behaviour while neglecting play as a behaviour and practice in its own right. We therefore argue that a new perspective is needed to examine the relationship between play behaviour and sustainability: play behaviour, like any other behaviour, can, through its own repetition, practice, and interaction, construct meaning that transcends the behaviour itself.

1.3. Aim and Research Question

Based on the research questions outlined above, this study aims to propose and develop the new concept of 'sustainable play' through qualitative research on Stardew Valley players and their communities. The

study will reveal how gameplay generates sustainable value that transcends immediate pleasure at both individual and community levels.

As a 'sensitising concept' (Blumer, 1954) — that is, a conceptual tool designed to guide sensitive empirical observation rather than provide a strict definition — sustainable play is tentatively operationalised in this study as a form of play that transcends immediate pleasure and continuously generates value at both the individual and community levels. This concept will be fully elaborated upon in the empirical analysis in Chapter 5. Therefore, this study does not presuppose a complete definition, but rather gradually develops the concept through abductive reasoning (Timmermans & Tavory, 2012) by engaging in an iterative dialogue between existing theories and empirical data.

The main research question is:

How does play, as understood and practiced by Stardew Valley players, generate sustainable value at different play behavior levels—and what does this reveal about 'sustainable play' as a concept?

The following two research questions are:

How do players make sense of ecological content through repeated play, and how do they relate this to practices outside the game?

How do sustained play and interaction shape the player community, and how do players experience it as a place?

This thesis takes a qualitative research approach to examine the relationship between players' gaming behaviour and sustainability. Data is collected and analysed using online ethnography, with abduction employed as the methodological framework throughout the research process.

This thesis is divided into six chapters. Chapter 1 serves as an introduction, presenting the research background, problem formulation, objectives and questions. Chapter 2 is a literature review examining the theoretical traditions and value discourses surrounding the concept of 'play', as well as the existing research context regarding games and sustainability. Chapter 3 develops the theoretical framework of the study by integrating the interrelated resources of 'placemaking' and 'the third place', and spillover theory. Chapter 4 outlines the research methodology, which includes a mixed qualitative design combining online ethnography and semi-structured interviews. Chapter 5 presents an empirical analysis of five core themes, while Chapter 6 concludes by addressing the research questions and elaborating on the study's theoretical contributions and limitations.

1.4. Delimitation

In terms of game genres, this study uses Stardew Valley solely as a case study and does not attempt to make generalisations about all games. The game was chosen because it is representative in terms of its player base, community activity and long-term lifespan. However, the study does not assume that its conclusions can be directly applied to other game communities. How such conclusions might be applied and to what types of games are questions that require further exploration in future research.

In terms of data sources, this study's online ethnographic data is limited to the r/StardewValley subreddit and related Xiaohongshu topics. It does not include other spaces for player interaction, such as Discord, Twitch, the official forums or the Steam Community. Interviewees were also limited to players capable of engaging in in-depth conversations in either Chinese or English. Therefore, this study primarily presents the practices of 'sustainable play' within English-speaking and Chinese-speaking communities, and does not consider their manifestations in other linguistic and cultural contexts.

In terms of sustainability, this study specifically refers to social sustainability and individual ecological awareness when using the term 'sustainability'. It does not address technical environmental issues, such as the economic sustainability of the gaming industry or the energy consumption associated with gaming operations. Nor does it quantify players' actual environmental behaviours. Instead, the study focuses on how players understand and express these relationships through discourse and practice rather than on their objective effects.

2. Literature Review

2.1. Play and Value

This section primarily reviews relevant studies in the fields of play and value, examining how play has been defined and approached from different research perspectives, and how scholars have employed "play" as a key analytical concept. The discussion proceeds through the perspectives of Huizinga, Caillois, and Suits in turn, and on this basis explains how the present study draws upon and reconstructs these three traditions in its understanding of play, in order to establish the definition of play adopted in this research.

Subsequently, this section discusses the value of play by reviewing major scholarly discussions on play value. It identifies two dimensions of the value of play: the intrinsic value of play — arising from the activity itself and lacking instrumental purpose — and the derived value of play, which "emerges" through repetitive practice rather than being designed in advance. Through the discussion and reflection on the intrinsic and derived values of play, the research direction of this study is clarified.

2.1.1 What is Play?

Research paradigms concerning what play is have traditionally fallen into four major categories: (i) the surplus energy theory (play as a way of releasing excess energy); (ii) the recreation theory (play as an activity through which individuals recover psychologically and physically from stress and tension); (iii) the recapitulation theory (play as a reenactment of past behavioral patterns); and (iv) the instinct-practice theory (play as training activities preparing individuals for adulthood) (Huizinga, 1944; Giddens, 1964). Regardless of how scholars have defined play, play in early sociological research was still regarded as "insignificant" and "trivial" due to its non-instrumental and non-productive characteristics. Play was considered "not serious." In particular, early studies often treated play primarily as a "children's activity."

In terms of function and meaning, Huizinga (1944) regarded play as non-functional and voluntary. The fundamental reason for this lies in the assumption that play is "not serious." In other words, unlike activities with fixed purposes, play is considered a "free activity": it strongly absorbs participants while remaining detached from material interests, and it unfolds within its own specific temporal and spatial boundaries. This distinguishes play from other forms of activity such as competition, war, or litigation, which are generally not regarded as forms of play because of their association with interests and utility. However, Huizinga (1944) also proposed the notion of the "play element" in human activities, arguing that even if such activities are not play themselves, they may still contain elements of play. Rationalization, formalization, and standardization, however, all reduce the "play" element. Due to this non-serious and non-functional nature, early research naturally emphasized the "cathartic" social function of play.

This notion of the non-functionality of play runs throughout discussions of play. However, Caillois (1961) argued that such discussions of the essence of play excluded material interests while failing to consider the role of bets and games of chance in play. He classified play ontologically into four categories: agon,

competitive games in which skill or ability produces success; alea, games of chance in which luck determines outcomes; mimicry, simulation games in which one plays a role or represents something or someone other than oneself; andilinx, games in which vertigo or disorientation is the goal. Drawing on the ancient Greek terms paidia and ludus, he further described the two poles of play: paidia represents free-form play, an impulse through which desires emanate via discovery and communication; ludus represents opportunities for training that often lead to the acquisition of specialized skills or mastery over particular devices or systems. The two form a continuous spectrum of variation.

The definitions of play proposed by Huizinga and Caillois derive respectively from phenomenological and typological perspectives. Huizinga's inquiry into what play is sought to understand the experiential characteristics and cultural functions of play, whereas Caillois's classificatory approach and spectrum theory directed play studies toward typology. Later scholars argued that play should instead be understood from an ontological perspective (Suits, 1988). Suits argued that play exists within any form of behavior, and distinguished between "game" and "play," claiming that the two do not refer to the same thing dimensionally. He regarded play as an attitude — "the lusory attitude." Suits later defined a game as "the voluntary attempt to overcome unnecessary obstacles," providing an essentialist explanation of games as a category of being. A game is a particular kind of activity, whereas play, as an attitude, can exist within any possible activity. The two are therefore distinct. He further argued that game-playing possesses value in itself and developed a utopian theory that maximized the value of gaming, suggesting that under conditions in which survival, material needs, and desires are fully satisfied, game-playing could become the meaning of life.

These three theories differ conceptually in their philosophical backgrounds, yet each also has limitations.

Huizinga's (1944) contribution lies in liberating play from biological and psychological functional explanations and repositioning it within a socio-cultural context. In his account, play is no longer merely the release of surplus energy or a rehearsal for adult life, but rather a "free," "non-serious," and "culturally embedded" fundamental human experience. It operates within its own spatiotemporal boundaries, detached from external material interests, while deeply organizing participants' attention and emotions. This cultural-phenomenological perspective is particularly important for the present study because it suggests that play cannot be reduced to function, but instead constitutes a social experience with its own structure of meaning. However, subsequent research has repeatedly pointed out two problems in Huizinga's argument. First, he frequently conflates play and game without distinguishing them ontologically. Second, his definition of play is simultaneously too broad — incorporating non-essential features such as "secrecy" — and too narrow, excluding games of chance. This creates unclear analytical boundaries when using his theory as a research tool.

Caillois (1961), from a sociological-typological perspective, partially revised Huizinga's framework. He explicitly incorporated games of chance into the discussion of play and proposed the famous four categories (agon, alea, mimicry,ilinx) alongside the paidia–ludus spectrum. Caillois's real contribution lies not in the classification itself, but in his implicit methodological proposition: play and game are not sharply separated categories, but differ in degree. Paidia approximates the free form of play, whereas ludus approximates the rule-bound form of games, and the two slide along the same continuum. However, while this spectrum perspective provides greater descriptive flexibility, it also further blurs the ontological distinction between play and game.

Suits (1978, 1988), by contrast, responded to this ambiguity through analytical philosophy. He argued that play and game belong to fundamentally different ontological categories: games are a class of activities ("the voluntary attempt to overcome unnecessary obstacles"), whereas play is an attitude ("the lusory attitude") — an autotelic orientation in which the activity itself is the end. In other words, a game is a specific activity, whereas play can permeate any activity. The cost of this distinction is Suits's essentialist stance: critics have argued that his concept of the "unnecessary" remains philosophically contentious, and that the strict separation of play and game does not always hold in language or experience (Carlson, 2026; Nguyen, 2026). Nevertheless, for the present study, Suits's ontological separation provides a crucial conceptual resource, allowing play to be analytically separated from the rule systems of games and examined as an independent form of behavior and attitude.

Synthesizing these three traditions, the present study adopts the following conceptual position. Regarding the relationship between play and game, this study adopts Suits's ontological stance: game is understood as a specific activity possessing rules and entity-like properties, whereas play is understood as a form of behavior and attitude. This distinction is particularly important because existing research on "games and sustainability" frequently conflates the two, causing sustainability to be treated implicitly as a property of game design while obscuring the agency of play as practice itself (this issue will be further discussed in Section 2.2). In its understanding of play itself, however, the present study aligns more closely with Huizinga's socio-cultural perspective, treating play as a non-instrumental social practice embedded outside ordinary life rather than as the expression of biological or psychological functions. This study does not seek to provide a complete and closed definition of play; rather, it approaches play as a practical phenomenon, describing how it manifests within player communities and everyday life, and what forms of value are produced through such manifestations.

2.1.2 Value of Play: Itself and Beyond

Once play is understood from a socio-cultural perspective, it ceases to be merely a functional behavior at the biological or psychological level of the individual and instead becomes a social practice possessing its own structure of meaning. Accordingly, discussions of the value of play necessarily expand from "what functions play serves for individuals" to "what kinds of value play produces within social life."

Before discussing the value of play, it is necessary first to clarify what "value" means in the context of this study. In his *Theory of Valuation*, Dewey (1939) liberated the proposition of value from purely personal emotional perception and relocated it onto an objective plane. He rejected both the emotivist claim that "values are merely emotional exclamations, possessing neither truth nor falsity" and the apriorist claim that "there exist absolute value standards that transcend experience." He advanced a proposition of critical importance: value is not an expression of emotion but a proposition concerning the relationship between means and ends, and as such is in principle subject to empirical examination. Value is thereby directly connected to action. Value judgment, in turn, centers on the assessment of ends and of the means employed in their pursuit. Drawing on Dewey's (1939) theory of value judgment, Graeber (2001) re-examined what "value" represents within the anthropological context. Borrowing from Nancy Munn's study of Gawa Island, Graeber argued that value is the meaning actors assign to their own actions when those actions are incorporated into some larger social whole. The Gawans give food and thereby create alliances; alliances enable participation in the kula exchange of shells; exchange extends actors' influence

across time and space — value resides not in the objects themselves but emerges within the network of social relations constituted by this chain of actions. As Graeber writes: "Value emerges in action; it is the process by which a person's invisible 'potency' — their capacity to act — is transformed into concrete, perceptible forms. If one gives another person food and receives a shell in return, it is not the value of the food that returns to one in the form of the shell, but rather the value of the act of giving it. The food is simply the medium" (Graeber, 2001, p. 45).

The theories of value advanced by Dewey and Graeber carry crucial significance for the definition of play's value in this study, and constitute what the term "value" refers to when we speak of "play's value" in our research context. Two points are essential. First, value possesses no a priori existence; its existence depends upon action, and its assessment takes place in the course of action's unfolding. Second, value is not equivalent to the action or the object itself, but emerges when action is woven into a larger social whole.

If we understand the value of play within this framework, we can say that play, as a form of action, must be understood in terms of the social networks into which it is woven. The value discussed here is therefore not grounded in the economic discourse on value — where value derives from individual preferences and scarcity and pursues utility maximization — nor in the linguistic discourse on sign-value. The value referred to in this study is an anthropological mode of understanding; following Graeber, it denotes the meaning actors assign to their own actions when those actions are incorporated into some larger social whole.

Existing studies on the value of play have not explicitly defined what "value" means. Different game scholars operate within quite different theoretical traditions, and research has primarily revolved around intrinsic value. Huizinga (1944), through the metaphor of the "magic circle," located the value of play within a special sphere temporally and spatially separated from ordinary life. Participants temporarily suspend external utilitarian logics and instead submit to the rules of the game itself; value is therefore generated internally within this enclosed sphere. Suits (1978, 1988) further clarified this structure of value through the concept of the autotelic — that is, an orientation in which activity is pursued for its own sake. Play is valuable because its value does not point toward any external purpose. After systematically reviewing philosophical discussions on the value of play, Ridge (2022) further divided the intrinsic value of play into two dimensions: fun-as-value and unscripted value, the latter emphasizing the autonomy of play and closely aligning with Suits's autotelic proposition. Although these discussions differ in emphasis, they share a common underlying assumption: the value of play is either internal to the closed system of game rules (the magic circle perspective) or internal to the attitude of play itself (the autotelic perspective). In both understandings, the value of play is already "there" at the moment play begins, waiting to be activated by participants.

However, this value discourse centered on "intrinsicity" struggles to explain a phenomenon that has been sporadically observed but insufficiently theorized: namely, the values produced through repetitive play practices that spill beyond the game itself. Traces of this phenomenon can be found across interdisciplinary research. Sini (2022) discussed how play intervenes in urban planning and public space design in Singapore as a form of practice, while Buldu (2022) demonstrated how repetitive play reshapes children's learning practices and cognitive patterns. Although these studies do not explicitly frame the phenomenon through the concept of "spillover," they share a key observation: play produces social effects

that exceed its internal rules through sustained practice. Importantly, this spillover does not arise from the instrumental use of play (such as educational or serious games), but emerges naturally while play retains its non-instrumental and autotelic orientation. In other words, players do not engage in play with explicit goals such as "I want to learn" or "I want to change." The production and spillover of value emerge through the accumulation of repeated play itself.

Based on these observations, the present study defines this obscured dimension of value as the spillover value of play: the value produced through repetitive practice — encompassing both the individual player's engagement with the game and interactions among players — that extends beyond the internal rule system of play and enters broader social and everyday contexts, while play remains non-instrumental. It is important to emphasize that this concept does not deny the intrinsic value of play. The fundamental motivation of play remains fun and autotelic orientation. Spillover value and intrinsic value are not contradictory; rather, they address two different levels of play value. Intrinsic value answers the question "Why is play meaningful to participants?" whereas spillover value answers "Why is play meaningful to the social spaces participants inhabit?" This distinction is particularly crucial for the present study because it allows us to move beyond the binary opposition of either treating play as purely self-contained pleasure or instrumentalizing it as a means toward external purposes. Instead, play can be understood as a practice that continuously produces social value precisely through its non-instrumental operation — a theoretical premise essential for the concept of sustainable play.

Preliminary observations of the player community surrounding *Stardew Valley* provide direct phenomenological support for this theoretical position. The value experiences expressed by players in comments, community conversations, and gameplay narratives extend far beyond what can be captured by "hedonic pleasure" or "rule-based satisfaction." Players intuitively describe gameplay as bringing about changes in life attitudes, renewed understandings of relationships with nature, or a sense of community belonging. These expressions cannot be reduced to intrinsic fun value, nor do they point toward any external instrumental purpose; rather, they fall precisely within the domain of "spillover value" defined in this study.

2.2 Game and Sustainability

Existing studies generally approach the issue from the perspective of "games as designed systems," focusing on how games present ecological and social issues through narrative expression, rule structures, and interactive mechanisms. Within this research trajectory, sustainability is typically understood as a property embedded within game content in advance, encoded into systems through design and perceived and experienced during gameplay.

2.2.1 Game and Ecological Sustainability

Within the field of ecological sustainability, research initially focused on how games represent environmental problems through simulation and scenario construction. Studies on climate change and environmental education show that serious games often construct concrete decision-making scenarios that integrate resource allocation, policy choices, and environmental consequences into dynamic systems,

enabling players to understand the complexity and long-term effects of climate change through interaction (Ouariachi et al., 2017). In this process, environmental issues are no longer presented as abstract knowledge but are concretized through system feedback and causal relationships, thereby deepening understanding (Wu & Lee, 2015).

Such studies often emphasize the importance of system simulation. By embedding human behavior and ecological consequences within the same feedback structure, games can represent cycles and delayed effects within socio-ecological systems, enabling players gradually to understand the relationships among variables through repeated attempts (Meya & Eisenack, 2018). Similarly, in games concerning resource management and environmental governance, simulations of water resources, energy systems, or land use require players to make trade-off decisions under multiple constraints, thereby experiencing the long-term consequences of different strategies (Madani et al., 2017). In these designs, understanding does not arise from a single experience but gradually forms through repeated interaction.

At the level of mechanisms, gamified design has been employed to guide individuals toward more sustainable behavioral patterns. Through goal-setting, immediate feedback, and reward structures, games reinforce particular behavioral pathways at the systemic level, making them more attractive during interaction and thereby influencing behavioral choices (Douglas & Brauer, 2021). This process does not rely on direct persuasion, but rather on structural guidance through which behaviors gradually become internalized as habitual responses. Immersive experiences further deepen this influence. Embodied interaction within virtual environments—for example, directly participating in processes of resource consumption or environmental change—can transform abstract ecological issues into concrete and perceptible experiences, thereby strengthening individuals' sense of environmental responsibility and willingness to act (Ahn et al., 2016). Such experiential design prevents environmental issues from remaining merely cognitive concerns and instead makes them directly connected to players' actions.

At the same time, narrative and representation also play important roles in ecological sustainability. By constructing virtual worlds centered on human–nature relationships, games shape players' understandings and imaginations of ecological systems, making nature no longer a mere background but a system that can be interacted with, maintained, or destroyed (Chang, 2019). The ways in which issues such as climate change are represented in games—for example, whether emphasis is placed on crisis, responsibility, or pathways to action—also influence players' interpretive frameworks regarding environmental problems (Abraham & Jayemanne, 2017). In this sense, games not only present environmental issues but also participate in the construction of environmental meaning.

Overall, this research trajectory unfolds across multiple dimensions: on the one hand, system simulations represent complex ecological relationships; on the other hand, mechanism design and immersive experiences influence behavior, while narratives construct understandings of nature. Across these different approaches, a shared logic emerges: ecological sustainability is treated as a property that can be embedded through design and subsequently experienced by players.

2.2.2 Game and Social Sustainability

Within the field of social sustainability, research likewise primarily focuses on how games embed social issues and values at the level of design. Games are understood as rule-driven systems whose meanings derive not only from narrative content but also from players' actions within rule frameworks. While organizing behavior, rules also constitute important mechanisms of meaning production, allowing social relationships and value structures to be presented systematically (Salen & Zimmerman, 2004).

On this basis, games have been widely used to express social values and ethical issues. By embedding themes such as fairness, responsibility, and social justice within mechanisms and scenarios, games can guide players toward value judgments through interaction, allowing such issues to be experienced through action rather than explanation (Flanagan & Nissenbaum, 2014). Such design often embeds values within players' decision-making pathways through structures of restriction, feedback, and choice, causing these values gradually to emerge through operation.

Game rules themselves may also function as expressions of social and political issues. Through the design of systemic logics, games can concretize particular social relationships or power structures, enabling players to "experience" these logics through operation rather than merely understand their narratives (Bogost, 2007). In this sense, games not only represent reality but also model and reconstruct it to a certain extent.

This expressive mode is closely connected to the simulative properties of games. By constructing systems composed of rules, resources, and role relationships, games can present the structures of social relations, allowing complex issues to be observed and experienced within simplified models (Frasca, 2003). Furthermore, such systems are not neutral; their rules and feedback structures often imply particular value orientations, thereby transmitting ideologies through interaction (Treanor & Mateas, 2011).

In practical applications, games have also been used for the communication of and intervention in social issues. Serious games construct scenarios that place players within particular social problems—such as public decision-making, resource allocation, or social conflict—allowing them to understand the circumstances of different groups through participation (Michael & Chen, 2005). In this process, understanding does not come from external explanation but gradually forms through participation. Role-playing and situational experience further intensify this process. By entering specific roles and making choices within those circumstances, players are able to experience others' perspectives, thereby enhancing understanding of others' behaviors and situations (Peng et al., 2010). Through repeated interaction, such experiences may even influence individual attitudes, making players more inclined toward prosocial behavior (Ruggiero, 2015).

Moreover, the ethical dimension occupies an important position in game design. By presenting moral dilemmas and multiple pathways of choice, games construct spaces that require value judgments, encouraging players to weigh different consequences and thereby reflect upon responsibility and outcomes (Sicart, 2009, 2013). Such ethically charged situations constructed through interaction make games important media for carrying social values (Grace, 2018).

Overall, research related to social sustainability unfolds across rules, mechanisms, and narratives, focusing on how games express social issues through design and guide players toward understanding them through interaction. Across these studies, a common tendency can likewise be observed: social sustainability is understood as a value embedded within game systems and made perceptible through design and experience.

2.2.3 From Game Design to Play: A Missing Perspective

Although the studies discussed above provide relatively systematic discussions across both ecological and social dimensions, they remain grounded in a shared premise: sustainability is understood as a property derived from design. Within this framework, research primarily focuses on what games “present” and “how design influences players,” while gameplay itself is treated largely as a process through which design intentions are realized.

This understanding appears in different forms across various research trajectories. Whether through system simulations representing ecological relationships (Meya & Eisenack, 2018), rule structures expressing social values (Bogost, 2007; Treanor & Mateas, 2011), or scenario designs guiding behavior and attitudes (Douglas & Brauer, 2021; Ruggiero, 2015), these approaches share a common assumption: the source of meaning lies in the game system itself rather than in the unfolding process of play. In this sense, play is understood primarily as the experience of pre-existing structures rather than as a process capable of generating new meanings.

However, this design-centered perspective struggles to explain the evolution of meaning during long-term engagement with games. Actual play is not a one-time act but a process constituted through repetition, choice, and sustained participation. Throughout this process, players continuously act within existing rules while simultaneously developing understandings of the game through action, thereby adjusting and extending its meanings. The values within games are not always accepted as preconfigured but are instead reinterpreted within concrete situations.

From this perspective, sustainability may also exist not only within game content but emerge gradually through play processes. Long-term interaction and repeated participation allow play experiences to accumulate effects across different levels, extending beyond the boundaries originally defined by design. Such effects may manifest not only in cognitive and behavioral changes at the individual level but also in broader forms of practice.

Therefore, understanding the relationship between games and sustainability solely from the perspective of design cannot adequately explain how gameplay continuously generates meaning over time. By contrast, treating gameplay itself as a form of practice helps shift attention from “how games transmit value” toward “how value is generated and sustained through practice,” thereby providing a new perspective for understanding the relationship between games and sustainability.

2.3 Toward a Theoretical Framework

Synthesizing the discussions in Sections 2.1 and 2.2, the theoretical position of the present study can be summarized as follows. First, conceptually, play should be distinguished from game: the former is a form of behavior and attitude, whereas the latter is a rule system. This distinction enables play to be analyzed as an independent object of study rather than being absorbed into the perspective of game design. Second, in terms of value, the value of play should not be limited to intrinsic fun-as-value, but should be extended to the derived values generated through repetitive practice—values that neither depend upon design intentions nor negate the non-instrumentality of play. Third, at the level of analytical units, it is insufficient merely to focus on how individual players generate meaning through gameplay, because player practices never occur in isolation; they are embedded within community spaces constituted by other players, shared cultures, and ongoing interactions. This means that understanding sustainable play requires attention to both the individual dimension (how players produce ecological meanings through repeated gameplay) and the community dimension (how player communities function as social spaces possessing their own sustainability).

These dual dimensions place specific demands on theoretical resources. A theoretical framework is needed that can both explain how practices produce meaning through repetition and interaction, and treat community spaces themselves as analytical objects rather than merely as the background for individual behavior. The present study argues that the interconnected concepts of placemaking and the third place provide precisely such theoretical resources. Placemaking offers a processual perspective that understands “place” as something constructed through ongoing practice, while third place provides a framework for analyzing social space, allowing gaming communities to be discussed as independent sites possessing their own productive capacities. The next chapter will elaborate this theoretical framework in detail.

3.Theory Frame

To understand play and to select an appropriate theoretical lens for analysing play behaviour, this study proceeds from two perspectives. Play is both an individual behaviour and an interactive, communal one. Play can take place purely at the individual level — particularly in single-player video games, which afford the possibility of play that follows only the game's internal rules and its preset objectives. At the same time, on a larger scale, play is also a communal behaviour: by virtue of the very nature of play, it occurs not only within individual conduct but also between players, with different players together constituting a collective form of "play." In Caillois's (1958) typology of play — agon (competition), alea (chance), mimicry (simulation), andilinx (vertigo) — competition and mimicry are inherently social: they cannot be carried out without the presence of others. The constitution of play, then, does not lie solely in the individual behaviour of the player. The present study seeks to investigate the social value of play by examining how individual play and play among groups jointly compose what play means.

This study is accordingly divided into two main parts. One focuses on understanding and interpreting social sustainability as constructed by the interactive play community; the other examines how ecological sustainability awareness is shaped by individual behaviour and cognition. To understand sustainable play, we believe that the practice needs to be examined from both the "community" level of play and the "individual" level of play, using *Stardew Valley* players' gameplay as a case. In terms of theoretical selection, we have therefore adopted the perspectives of placemaking and third place to understand and interpret community-level sustainable practice. Placemaking theory explains why a place becomes attractive through the creation of community culture, community participation, and a sense of place-based belonging, and how such a place can become a "third place" beyond work and daily life, influencing sustainability through gameplay behaviour. Spillover theory, in turn, focuses on the transfer of well-being from one domain to another, encompassing both positive and negative possibilities. Together, these two theories provide an appropriate interpretive framework for our analysis. Through analysis at both the community and the individual level, we arrive at our articulation of "sustainable play."

3.1. Placemaking

The concept of placemaking can be traced back to *The Last Landscape*. Whyte (1968) argued that urban sprawl negatively impacts people's behaviour in urban environments, contending that it leads to the disappearance of the landscape. Consequently, a new approach to urban planning was required. Similarly, Jane Jacobs (1961) wrote about the negative impact of urban sprawl on people's behaviour in urban environments. She opposed government intervention in cities, arguing that citizens should experience city streets firsthand and establishing a relationship between city streets and living organisms. Both Whyte and Jacobs focused on the effect of urban development on the social environment. These concepts led to the development of the placemaking theory, which was created for real cities and communities. However, neither of them directly identified the concept of 'placemaking'. Placemaking existed more as an underlying idea within these arguments and discourses, despite not being explicitly defined.

The term 'place making' first appeared in Relph's (1976) book *Place and Placelessness*. In it, he explores the idea that 'places are made', and considers what constitutes an authentic or contrived place. In his

discussion, he situates placemaking within the binary opposition of 'sense of place' and 'placelessness'. Relph argued that place is one of the fundamental structures of human existence: 'To be human is to have and to know your place.' However, mainstream geography, planning and architecture have consistently reduced place to a quantifiable location or abstract space, neglecting people's deep emotional connections to, and sense of identity in, a place. In his book, he primarily uses the term 'place making' to discuss the idea that places can be either falsely created or authentically generated. He views placemaking as a process rather than a single event. Furthermore, like Jacobs and Whyte, he maintains that placemaking is a bottom-up process achieved through residents' daily practices.

In *Place-Making and Urban Development*, authors Palermo and Ponzini (2015) define 'place-making' as 'the creation of better places'. This definition is intentionally broad, aiming to encompass the scope of placemaking in current professional practice and provide a quantitative perspective. Ellery and Borkowsky (2021), however, redefine placemaking from a constructivist and qualitative perspective, constructing a process-centred framework for understanding it. They redefined placemaking, formulating three principles:

1. The process of placemaking creates an attachment or connection between the community member and the place in which they live, work, and play that is often referred to as an individual's sense of place;
2. An individual's "sense of place" can be either positive or negative in nature;
3. Placemaking as a process can occur along a continuum from change that is imposed upon an individual to change that is created by the individual.

Ellery and Borkowsky emphasises that the third principle involves a dual interactive process in placemaking: moving first from 'the community to the individual', and then from 'the individual to the community'. This differs from placemaking theory in spatial planning, as this approach places greater emphasis on placemaking within a social constructivist framework. It also highlights the application of placemaking theory from a psychological standpoint.

Thus, from its inception, the term 'placemaking' has not been understood as a fixed framework, but as a process-oriented approach to producing a sense of place. This theoretical framework is interpreted in distinctly different ways across various interdisciplinary fields. Even the spelling of 'placemaking' varies, with several forms in use, including 'place-making', 'placemaking', and 'place making'. In this discussion, we do not distinguish between these variations; we consider all three spellings to refer to the same theoretical framework: placemaking theory. Given the lack of a clear theoretical paradigm in previous research on placemaking, we will interpret how places are constructed based on Relph's (1976) original usage, as well as the process-oriented perspective and dual interactivity emphasised by Ellery and Borkowsky (2021). In this study, placemaking is understood as a process of social construction, whereby 'place' is transformed into a 'place' imbued with a sense of belonging and attachment through continuous practice, interaction and the attribution of meaning.

3.1.1 Digital placemaking

Current research on how placemaking functions in digital spaces focuses primarily on digital placemaking. The core definition of digital placemaking refers to the use of digital media to create a sense of place for oneself or others, utilising the capabilities of digital media to cultivate or maintain a sense of attachment to a place (Halegoua & Polson, 2021). Digital placemaking practices may reveal or amplify existing inequalities, exclusion or erasure experienced by specific groups when engaging with digital media in the context of place and placemaking (Halegoua & Polson, 2021). Current theoretical frameworks on digital placemaking also have limitations as they primarily consider 'placemaking' to be a practical process involving the transfer of physical, offline places to the online realm (Fernandez de Osso Fuentes et al., 2024). For instance, museums, archives, and libraries are using VR, AR, 360-degree video, and 3D architectural reconstructions to create immersive experiences and transform 'memory institutions' into interactive digital spaces. Alternatively, they use technology to enhance the interactivity and sense of belonging in urban spaces by combining sensors, digital installations, and citizen participation. (Basaraba, 2021).

Some scholars have conducted literature reviews of papers on digital placemaking focusing primarily on online mobile spaces. They argue that, in the new media environment, placemaking manifests as a 'fluid sense of belonging'. For instance, individuals utilise digital platforms to organise offline activities, thereby maintaining a consistent sense of belonging to a particular location despite traversing different geographical areas (Halegoua & Polson, 2021). Hamilton et al. (2014), for instance, conducted research on the Twitch live-streaming community. Rather than confining the scope of digital placemaking theory to the transition from offline to online, as other studies have done, they viewed the platform as functioning as a virtual third place. By broadening their perspective, they demonstrated that virtual online communities possess the core characteristics of the 'third space' concept: informal gatherings, a culture of regulars and social interaction centred on casual conversation and shared activities. Not only do video game communities share similar 'third space' characteristics, but their sense of place is also collectively constructed through player interaction. At the same time, the sense of reality in video game communities — though this reality is not physical in nature — allows them to be discussed as tangible spaces. The key to a sense of place lies not in whether the physical foundation is 'real', but in the sincerity of the emotional connection between people and place. Although digital media has altered the way places are constructed, it has not changed the fundamental logic of place-making.

3.1.2 Third place

As a theory closely tied to placemaking, the concept of the 'third place' has gradually been applied to the analysis of online communities, evolving alongside the development of digital media. First introduced by Oldenburg (1989), this sociological concept argues that informal public gathering places, such as cafés, bars, and barbershops, are indispensable to the healthy functioning of a democratic society. Distinct from home (the first place) and the workplace (the second place), Oldenburg described the third place as a space where people gather, interact, and experience a sense of community belonging. He identified eight key characteristics of the third place: neutral ground; levelers; conversation as the main activity; accessibility and accommodation; the regulars; a low profile; a playful mood; and a home away from home.

Steinkuehler and Williams (2006) systematically demonstrated the similarities between 'massively multiplayer online games' (MMOs) and Oldenburg's original concept of the third place, presenting MMOs as a new form of the latter. Drawing on Oldenburg's eight dimensions of the third place, they argued that online communities have the potential to function as a 'third place' in the modern era. They also claimed that this type of third place is particularly effective in fostering bridging social capital.

Characteristic	Description
On neutral ground	A place where people are free to come and go as they please, where nobody is required to play host, and in which all feel at home and comfortable (p. 22).
A leveller	Accessible to the general public without formal criteria of membership or exclusion (p. 24); a place where all shed their social uniforms and insignia and reveal more of what lies beneath or beyond them (p. 25).
Conversation is the main activity	Talk is lively, scintillating, colorful, and engaging (p. 26); everyone is expected to contribute, and all seem to talk just the right amount (p. 28).
Accessibility and accommodation	One may go alone at almost any time of the day or evening with assurance that acquaintances will be there (p. 32).
The regulars	Regulars give the place its character and assure that on any given visit some of the gang will be there to make the space come alive (pp. 33–34).
A low profile	Likely not to impress the uninitiated (p. 36); without the shiny appearance of franchise establishments, third places do not attract a high volume of strangers or transient customers (p. 36).
The mood is playful	The playful spirit is of utmost importance; joy and acceptance reign over anxiety and alienation (p. 38).

A home away from home	Though a radically different kind of setting from the home, the third place is remarkably similar to a good home in the psychological comfort and support that it extends (p. 42).
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Table 1

Characteristics of Third Places According to Oldenburg (1989)

Note. Adapted from The Great Good Place, by R. Oldenburg, 1989, Paragon House.

Soukup (2006) discussed the potential of chat rooms and multi-user virtual environments (MUDs) as 'third places', noting that they are spaces that are distinct from workplaces and homes. They feature light-hearted and humorous conversations, as well as a core group of 'regulars'. Despite the lack of physical presence and limitations on accessibility, they remain viable 'virtual third places'. However, Oldenburg (1989) rejected the possibility that video games could serve as a third place: 'Not all games stimulate conversation and kibitzing; hence, not all games complement third-place association.' A room full of individuals intent on video games is not a third place, nor is a subdued lounge in which couples are quietly staring at backgammon boards". He believed that games such as cribbage, dominoes and boules, which spark conversation and the expression of personality among players, are integral to the concept of the third place. However, video games that focus solely on the gameplay itself are not. Although Oldenburg rejected the possibility of video games serving as a 'third place', their attributes as 'place and space' can still align with the definition of a 'third place' following the evolution of video games. Rather than saying this: in modern society, video games are beyond what Oldenburg used to think that only happened within individuals. Video games are the same as cribbage, dominoes and boules, and have tons of conversation happening in the digital community every minute. McArthur and White (2016) examined whether regularly held Twitter chat events could function as a 'third place' in the same way as physical venues such as cafés and bars.

Collectively, the above studies indicate that the ability of a virtual community to function as a third place hinges on participants engaging in sustained, meaningful interactions, including regular gathering patterns, shared norms, and the resulting sense of belonging. However, these studies focus more on 'what' a virtual third place is — that is, which characteristics it possesses — and less on 'how' it is formed. Through what process does a virtual community transform from an open digital platform into a space with a sense of belonging and placeness? This question leads us to integrate placemaking theory and third-place theory. Placemaking theory posits that a place is not a fixed physical entity, but rather a meaningful space co-constructed by people through ongoing social practices. This perspective provides a crucial analytical framework for understanding how virtual communities acquire a sense of 'placeness'.

In practice, the third place is considered to be more effective in promoting sustainable social development (Goosen & Cilliers, 2020; Camp, 2015; Hickman, 2013; Cabras & Mount, 2017). Camp (2015) further validated this assertion through long-term ethnographic research on a community pub and community-level surveys. He discovered that frequent engagement with third places had a significant and positive impact on residents' sense of place, particularly in terms of emotional attachment, local identity and social ties. Individuals who frequently engaged with third places developed deeper emotional connections to their communities and internalised these as part of their self-identity. This confirmed the constructive role of third places in fostering emotional community bonds and social capital. Hickman

(2013) emphasises that providing third spaces fulfils a critical social function in urban areas by offering 'public' social spaces. These public social spaces are recognised as indicators of an urban area's 'health' and 'vitality'. Third places are also considered essential for promoting diversity, sustaining a robust local economy and fostering community cohesion, while simultaneously enhancing overall economic development and social capital. Here, social capital refers to the trust, norms of reciprocity and interpersonal connections that people accumulate through social networks. It is the foundational resource that enables a community to function effectively (Putnam, 2000). Thus, by providing neutral, egalitarian and dialogue-centred informal public gathering spaces, the third place fosters social capital, a sense of place and community cohesion, thereby promoting sustainable social development. Much like real, physical cities and communities, we believe that cyberspace can function as a third place and undergo a similar 'placemaking' process. Consequently, we can use a theoretical framework combining placemaking and the third place concept to analyse the sense of belonging, social cohesion, and social connection within online communities, which contribute directly to social sustainability.

In summary, this study uses a theoretical framework combining placemaking and the concept of the 'third place' to analyse three dimensions of the Stardew Valley community that contribute directly to social sustainability: place attachment (the emotional attachment of players to the idea of belonging), social cohesion (the bonds that unite the community as a whole) and social connection (the networks formed through interaction).

3.2. Spillover Theory

Spillover theory can be understood as a response to the earlier questions raised. As discussed previously, the cognitive, emotional and value orientations that players develop in specific gaming contexts may influence subsequent life contexts. However, the process of 'context-internal generation' leading to 'cross-contextual extension' remains inadequately explained within existing play-centred theories. While existing research focuses on how play generates meaning internally, it rarely elaborates on how these meanings are sustained, transformed and reactivated across different contexts. It is precisely in this sense that spillover theory offers a crucial analytical perspective for addressing this issue.

Spillover theory addresses a seemingly simple yet significant question: how do individuals' experiences in one context persist and influence their behaviour and judgements in others. (Dolan & Galizzi, 2015; Truelove et al., 2014). This theory precisely explains the earlier-revealed phenomenon that experiences formed through play practices do not disappear when a specific context ends, but can be carried over and drawn upon in different contexts. These experiences continue to influence individuals' understanding and actions in new situations. In the field of sustainability research, the theory is employed to illustrate how behaviours and value orientations formed by individuals in specific contexts are not confined to the original setting, but can extend beyond situational boundaries into other areas of daily life (Truelove et al., 2014; Nash et al., 2017). Thus, spillover theory shifts the analytical focus from behavioural manifestations within a single context to the mechanisms linking different contexts, providing a theoretical tool for understanding the connections between practices.

Upon closer examination, it becomes clear that this cross-situational extension does not occur automatically, but is closely linked to the meaning structures formed by individuals through practice. As

emphasised earlier, repeated practice reinforces cognitive structures and facilitates the transformation of context-dependent experiential understandings into relatively stable frameworks of meaning (Shove et al., 2012). From the perspective of spillover theory, this transformation process can be understood as an 'integration mechanism': when experiences from a specific context are incorporated into an individual's self-identity or value system, they no longer exist solely within the original context, but instead become internal resources that the individual can draw upon in different contexts. Consequently, individuals are significantly more likely to exhibit behavioural consistency in subsequent contexts (Whitmarsh & O'Neill, 2010; Dolan & Galizzi, 2015).

From this perspective, spillover effects are not simply the repetition of a behaviour in different contexts; rather, they are cross-contextual manifestations that are based on the gradual stabilisation of cognitive and value structures. This aligns with the earlier concept of play as a practice: if play involves generating meaning through repetitive actions, spillover theory explains how these meanings, generated and internalised through practice, can transcend their original context and continue to influence the broader lifeworld. It is precisely within this theoretical framework that the 'spillover value' proposed earlier is given further interpretative foundation, providing a conceptual link for introducing this perspective into the context of digital games.

4. Methodology

This study aims to introduce the concept of 'sustainable play' in digital games. Through the collection and analysis of relevant data, it seeks to elucidate how this concept gradually emerges and is understood within play behaviour and community interactions. 'Sustainable Play' is defined as a multidimensional concept that encompasses individual and group dimensions of play. In our context, play is considered both an individual and collective behaviour, so our research design will address both aspects.

At the individual level, sustainable play involves absorbing and interpreting relevant meanings through interaction with game content that embodies ecological values. Specific practices such as planting, resource management and routine interactions form part of the gaming experience and gradually shape players' understanding of the relationship between humans and nature. This understanding is not confined to in-game scenarios; it extends beyond the game as contexts evolve, influencing practices and behavioural attitudes related to ecological sustainability.

At the community level, sustainable play encompasses the social aspect of gaming behaviour and interaction within online communities. Exchanges centred on gaming experiences enable related insights to be shared, responded to and perpetuated through interaction. Such communities can be viewed as a digital 'third space', where interactions tend to be relatively egalitarian and inclusive. In this context, gaming evolves from an individual practice into a socially meaningful shared activity, supported by shared norms, mutual respect, and a sense of belonging.

To explore the construction processes of these two dimensions within a community context, this study employs a qualitative research approach, analyzing data drawn from both online communities and interviews. This chapter will sequentially present the philosophical foundations, research methods, research design, data collection and analysis processes, as well as the ethical considerations and limitations of the study.

4.1 Research philosophy

This study is based on the philosophical foundation and epistemological stance of interpretivism. According to interpretivism, social reality does not exist independently of individuals; rather, it is continuously shaped through social interaction and the process of meaning-making (Silverman, 2013). From this perspective, therefore, the focus of the research is not on measuring the frequency of a particular behaviour or verifying universal causal relationships, but rather on understanding how individuals interpret their own experiences, and how these interpretations gradually form shared meanings through interaction. Social reality can be indirectly understood through accounts of experiences provided by individuals.

This study addresses the central question of how players ascribe meaning to their play behaviours, and how these meanings relate to sustainability. In digital gaming environments, players' experiences are not isolated, but continuously embedded within community interactions. They share their experiences, discuss game mechanics, exchange strategies and express their interpretations of the game world and its values on

online forums, social media platforms and in gaming communities. These interactions constitute part of the gaming community's culture and shape players' understanding of game content, behavioural practices, and sustainability issues. Therefore, to understand these practices, it is necessary to examine how players express, negotiate and construct them through interaction and discourse.

Adopting this epistemological stance, this study neither attempts to access players' mental states directly, nor claims to provide causal proof that games lead to behavioural changes in the real world. Instead, it analyses the structures of meaning that players articulate through language and interaction. Within an interpretivist framework, these structures of meaning constitute an integral part of social reality rather than merely reflecting some 'true inner mental state'. In other words, the way players talk about games, describe their experiences and respond to others' perspectives within the community are crucial pathways for generating meaning from an interpretive perspective.

Therefore, this study considers discussions within the player community to be valuable research material. By analysing the content of players' interactions within the community, we can observe how they understand their play behaviour, how they describe in-game interactions and how they connect certain in-game values to their real lives. This research perspective emphasises understanding the process of meaning-making rather than verifying behavioural outcomes quantitatively.

4.2 Research approach

This study adopts an interpretive research approach based on induction; more accurately, however, it falls under the category of an 'abductive approach'. Unlike purely inductive research, this study does not proceed with data analysis without any theoretical assumptions whatsoever. Instead, it first proposes the concept of 'sustainable play' based on existing literature and preliminary observations, and then explores and refines this concept further through empirical data.

Drawing on existing research into hedonic consumption, experiences of well-being and gaming communities, this study initially proposes two dimensions of sustainable gaming. It encompasses ecological and social sustainability, including the internalisation and externalisation of ecological values at an individual level and the formation of inclusive, socially supportive interactions within online gaming communities at a collective level. However, this concept has not yet been systematically explored in existing research and therefore remains speculative.

Throughout the data analysis process, the study did not treat this concept as a fixed framework to be validated. Instead, it moved back and forth between data and theory, analysing discussions within the player community and interview materials. For instance, certain discussions among players may have reinforced existing dimensions during the analysis, or they may have offered new interpretive pathways or boundary conditions. Consequently, the research process was characterised by constant adjustments between empirical data and theoretical concepts.

This research approach aligns with the abductive logic typically employed in qualitative research. This logic involves developing an understanding of the research phenomenon through an iterative dialogue between theory and data (Timmermans & Tavory, 2012). Using this method helps to maintain theoretical

sensitivity while avoiding excessive preconceptions about the data, providing a more accurate reflection of players' actual experiences.

4.3 Research design

This study employs a qualitative research design, as this approach is particularly well-suited to exploring complex social phenomena, particularly those related to meaning-making and cultural practices.

Regarding the specific methodological approach, the study initially planned to use netnography as the sole primary research method. Netnography effectively captures players' expressions in natural settings by observing and analysing texts, interactions and cultural practices within online communities. Therefore, it is highly applicable to the study of digital gaming communities as online cultural spaces. However, during the initial data collection and preliminary analysis, it was found that the existing online corpus alone was insufficient to fully support the analytical framework of the thesis.

Specifically, data collected through online ethnography primarily comes from publicly expressed content. While this content can reflect behavioural patterns and some aspects of meaning-making processes, it often has interpretive limitations with regard to deeper-level motivations, emotional experiences and the extension of meaning across contexts. The reasons why players remain engaged in a particular game over the long term, including their emotional investment, personal experiences and subjective understanding of 'sustainable play', are often not fully reflected in public discussions. Consequently, relying solely on observational data may result in a superficial understanding of the research questions.

Based on this methodological reflection, this study incorporates semi-structured interviews into the online ethnography framework to deepen the research perspective further. Through direct dialogue with players, the study can obtain more detailed and reflective narratives, thereby supplementing the subjective experiential dimension lacking in online texts. This combination of methods facilitates cross-validation of data and establishes a more comprehensive analytical framework that bridges 'observable cultural practices' and 'individual meaning-making'. Field notes from the online ethnography are used as the primary data source for preliminary coding and the construction of the analytical framework, and semi-structured interviews are employed as a supplementary tool to deepen and triangulate the coding results.

Based on this, the primary data sources for this paper are as follows:

1. The Stardew Valley Reddit community, collected through netnography;
2. Semi-structured, in-depth interviews with Stardew Valley players who are active members of the game's community.

Consequently, this study adopted a qualitative research design that combined netnography with in-depth interviews. The aim is to achieve complementarity by integrating macro-level observations of community culture with micro-level interpretations of individual experiences. This will provide a more comprehensive understanding of why players engage with digital games and the significance of this engagement for sustainability.

4.4 Data collection

In terms of data collection, this study uses a combination of netnography and semi-structured interviews to obtain naturalistic, in-depth data. Netnography captures players' spontaneous expressions, interaction patterns, and collective meaning-making processes within authentic online communities. Semi-structured interviews further explore motivations, feelings, and reflections that players find difficult to articulate fully in public forums through probing questions and personalised dialogue. Combining these two methods facilitates data triangulation, thereby enhancing the credibility and interpretive power of the research findings.

As a long-time player of Stardew Valley (with over 100 hours of gameplay), who is also familiar with the relevant community culture and discourse, the researcher has an insider's advantage. This enables them to understand players' common terminology, community humour, interaction norms and the cultural implications behind game mechanics. It also makes it easier to identify implicit emotional expressions and value judgements within the text.

However, this insider status also carries the risk of rapport bias, whereby the researcher may overlook negative phenomena such as conflict, exclusion, consumerist tendencies or superficial 'healing narratives' due to shared experiences. To mitigate such biases, this study employs the following measures:

1. Reflexive fieldnotes: The researcher continuously documents their preconceptions, emotional reactions and immediate judgements throughout the data collection and analysis process.
2. Seeking disconfirming evidence: Actively identifying discourses that contradict existing expectations, such as discussions that criticise the community atmosphere, deny the game's value, or question its sustainability.
3. Complementary methodologies: Incorporating players' emic perspectives through interviews to avoid relying solely on the researcher's interpretation of online texts.
4. Adhering to the principle of non-interventional observation: Data is collected as an observer during the netnography phase, without actively influencing the community discussion process.

4.4.1 Netnography

Netnography is a qualitative research method designed specifically to study online communities. It was first proposed by Kozinets (2010). It involves analysing interactive texts on digital platforms to understand the cultural practices, identity construction and social relationships within these communities. Unlike interviews or surveys, online discussions usually take place in natural settings where the researcher is not present, revealing more spontaneous and everyday expressions of opinion.

The netnography data for this study was primarily collected from the r/StardewValley community on Reddit. As one of the most active forums for Stardew Valley players, this community has a large membership and has accumulated a wealth of discussions over time regarding gameplay experiences, lifestyles, emotional investment and community interactions. This makes it an ideal setting for studying the discourse on 'sustainable play'.

During the collection of this data, the researcher engaged with the community through 'non-participant observation', refraining from posting content or participating in discussions. Instead, they conducted purposeful browsing, filtering and recording. The focus of the data collection was on posts and comment threads containing substantive discussion rather than mere screenshots, technical Q&As or interactions lacking textual content.

To ensure the data was highly relevant to the research questions, the researchers used purposive sampling to select posts and comments related to the following themes:

1. Players' long-term experiences with Stardew Valley and their reasons for continued engagement.
2. Players' perceptions of the game community, their sense of belonging and their interaction experiences.
3. How players' gaming experiences influence real-life practices (e.g. gardening, consumption habits and daily rhythms).
4. Players' discussions about the game's content, values and social significance.
5. Players' expressions and interpretations of themes such as nature, labour, cooperation and the slow-living movement.

In terms of the operational procedure, the researchers first conducted keyword searches to identify relevant discussions (e.g. “real life”, “community”, “peaceful”, “farm”, “changed me”, “helpful”, etc.). They then filtered the results based on interaction volume, text richness, and thematic relevance. The final texts included in the analysis comprised original post titles, main text content, comment threads and any necessary contextual information (e.g. posting time and discussion threads).

All data was anonymised during the organisation phase by removing usernames, links, and other identifiable information. It was then converted to text format and imported into NVivo 15 for subsequent coding and discourse analysis. This approach enables the study to examine how Stardew Valley is understood, disseminated and imbued with the meaning of sustainable play at the community level, based on naturally generated player discourse.

4.4.2 Semi-structured Interview

In addition to analysing data from online communities, this study will conduct a series of semi-structured interviews to gain further insight into how players interpret their gaming experiences on a personal level. Topics for the interviews may include the reasons why players continue to play a particular game, their views on sustainability within the game and whether these values influence their perspective on certain real-world issues.

The interviews will consist of open-ended questions designed to encourage participants to share their personal experiences freely, while also enabling researchers to ask follow-up questions based on the conversation.

Participants will be selected through two methods: open recruitment and snowball sampling. Open recruitment helps us to identify community members whose interests closely align with our research

questions. Snowball sampling, on the other hand, involves identifying other players with extensive gaming experience through the participants' social networks.

As both researchers are native Chinese speakers, we primarily posted on Chinese gaming community platforms. Conducting interviews in our native language provided a rich contextual framework for understanding the interviewees' responses. At the same time, we attempted to collect interview data from Reddit. However, after reviewing the Stardew Valley community guidelines on Reddit, we found that, to protect privacy, the community discourages members from communicating outside the platform. Therefore, we limited our involvement to conducting online ethnographic research within the community and did not recruit participants from it.

Furthermore, to ensure that the collected player data was relevant to the research and to avoid situations in which interviewees had no experience of participating in the gaming community or had played for too short a time to understand the game and community, we asked players about their playtime and the frequency with which they interacted with the gaming community before beginning the interviews. This was done to ensure that players had experience of both community interaction and gameplay.

In accordance with academic ethics, and to prevent participants from taking part in interviews solely for the stipend, we make it clear during the recruitment process that the interviews are unpaid. All participants are also asked to sign an informed consent form before the interview begins. This form details the title and content of our study, as well as the email addresses and contact information of the two researchers. To ensure the privacy of participants is not compromised and to ensure their comfort, in accordance with ethical considerations, we inform participants that they may stop or leave the interview at any time.

4.5 Data analysis

Within the interpretive epistemological framework, thematic analysis is a suitable method for this study. It enables the systematic identification of patterns of meaning across a large body of text, helping researchers to identify recurring expressions of values, narratives of experience and understandings of behaviour among players in various discussions (Braun & Clarke, 2006). Unlike discourse analysis, thematic analysis does not require researchers to conduct a detailed linguistic deconstruction of individual discourses; it focuses instead on relatively stable structures of meaning and thematic patterns within texts. As this study aims to understand how players collectively construct meanings related to sustainable gameplay rather than analyse micro-level linguistic structures, thematic analysis is better suited to addressing the research questions and objectives.

In terms of data analysis, the study focuses on how players interact within online communities through their behaviour. The research began with the organisation and anonymisation of posts, comments and interactive texts collected from the Reddit community, as well as transcribed interview transcripts. These were then imported into NVivo 15. Through repeated readings of the raw data combined with open coding, preliminary tags were then assigned to capture analytically significant expressions, narrative styles and interactive logic within the text. The initial coding remained as close as possible to the original context. Examples include: 'The game inspired me to start gardening', 'Exchanging resources with others

is very rewarding', 'The community atmosphere is very healing', and 'I've started reducing waste in real life'.

After completing the initial coding, a hierarchical coding approach was employed to organise the nodes into three levels, thereby forming a more interpretive analytical structure.

The coding process employed the constant comparison method, which involves continuously comparing similar and divergent expressions across different posts, comments and discussion threads. The node structure is then adjusted based on the emerging discourse content. Some text fragments may correspond to multiple codes simultaneously. For instance, a player's description — 'Since I started growing herbs in the game, I've also been sharing my experiences on the forum' — relates to both behavioural spillover and the formation of social capital.

Therefore, in this study, coding is not treated as an end result in itself, but rather as an analytical tool for organising the corpus and identifying meaningful structures. The final analysis focuses not only on which themes emerge, but also on explaining how players transform their Stardew Valley gaming experiences into an understanding of ecological responsibility, daily practices and community relationships through continuous interaction, collectively constructing the concept of 'sustainable play'.

4.6 Ethics

This study integrates online ethnographic data and interview materials. Therefore, ethical considerations extend beyond traditional informed consent and anonymisation to address the contextual nature of data use and interpretation responsibility in online contexts.

Firstly, although the Reddit data used in this study originates from a publicly accessible online community, it is not simply regarded as a 'fully public' data resource. Rather, it is understood as a 'contextually bounded public space': while users technically speak publicly, their expressions are often embedded within specific community norms and intended audiences. During data processing, therefore, this study anonymised usernames and performed de-identification by paraphrasing the original text, thereby reducing the risk of original post authors being identified via keyword searches.

Secondly, this study places particular emphasis on the 'contextual integrity' of online expressions. In online ethnographic analysis, researchers avoid interpreting individual statements in isolation from their original discussion context. Instead, they preserve relevant topics, interactive relationships and contextual background to prevent misinterpreting or over-interpreting the user's original intent. This is especially important when dealing with topics that have normative and ethical implications, such as ecological values and reflections on lifestyle, since quotations taken out of context may exaggerate or distort individuals' positions.

Regarding the interview component, the study adhered to the principle of informed consent. All participants received an explanation of the research and signed a consent form prior to the interview, ensuring they clearly understood the research objectives, how the data would be used and their right to withdraw. However, given that the subject matter of the study involves the expression of individual values

and self-identity, the researcher took care to avoid leading questions or value judgements during the interviews. This approach aimed to reduce normative pressure on participants' expressions and foster an open narrative space.

Furthermore, throughout the process of integrating methodologies, this study has remained sensitive to the ethical boundaries between different data sources. Online ethnographic data and interview data differ in their contexts of generation: the former consists of naturally occurring online interactions, while the latter comprises guided narratives within a research setting. Consequently, in the analysis and presentation, this study avoids direct comparisons or individual-level correlations between the two types of data to prevent the “re-identification” or cross-contextual tracking of online users without explicit consent.

Finally, this study acknowledges the researcher’s ethical responsibilities in the processes of data selection, interpretation, and presentation. Particularly when addressing normatively oriented themes such as “sustainability” and “ecological awareness,” researchers must be cautious not to overinterpret individual expressions as shifts in values or behavioral changes, thereby inadvertently reinforcing a particular moral judgment framework. Consequently, this study strives to maintain interpretive restraint in its analysis and, where possible, presents diverse and contradictory voices to avoid reproducing a single-value narrative.

4.7 Limitations

Although this study attempts to understand the process of meaning-making among players from multiple perspectives by combining online ethnography with semi-structured interviews, the research design still has several fundamental limitations.

Firstly, the design is suitable for addressing questions of 'meaning-making', but not for addressing questions of the 'causal effects of behavioural transformation'. In line with the earlier mentioned interpretivist stance, the focus is on how players construct the relationship between play and sustainability through discourse and narrative rather than measuring the objective effects of this construction in terms of real-world behaviour. For instance, when a participant said that they had started growing vegetables on their balcony after playing, this study analysed this statement as the player’s interpretation of their experience. However, it did not attempt to verify the frequency, duration or environmental impact of the gardening behaviour through observation, documentation or measurement. This implies that the study's conclusions regarding 'sustainable play' remain at the level of meaning. It reveals how players understand the relationship between play and sustainability but does not demonstrate whether players' behaviours are objectively more sustainable. The latter would require a mixed-methods approach based on behavioural tracking, longitudinal studies or experimental designs. Furthermore, as virtual communities lack the unique characteristics of real-world locations and physical entities, the researcher’s netnography cannot be linked to offline interactions.

Secondly, the collected discourse data is embedded within specific community contexts and shaped by community norms, discursive styles and strategies for self-presentation. As public platforms, neither Reddit nor Rednote host neutral 'raw accounts of experience', but rather self-presentations intended for others. Due to prevailing discursive styles within the community (such as the repeatedly affirmed narrative modes of 'healing', 'Eden', and 'non-competitive'), players may tend to present their experiences

in specific ways. This contextual dependence of discourse may reinforce certain themes, such as a sense of belonging and inclusivity, while suppressing others, such as disappointment, conflict, and withdrawal. This study addresses this issue through two strategies. During the online ethnography phase, the researcher actively sought counterexamples, paying particular attention to critical, contradictory, or marginal voices. During the interview phase, the researcher supplemented the limitations of forum discourse by introducing the subject's subjective perspective. However, these strategies cannot completely eliminate the context-dependence of discourse.

Thirdly, the analytical logic of this study implicitly assumes a relatively linear process: from gaming experience to emotional response, and then to the internalisation of values, which may ultimately result in behavioural spillover. However, the available data is insufficient to support such inferences regarding temporality or causality. Online ethnographic data is fragmented and discontinuous, and interviews consist of retrospective narratives, both of which make it difficult to capture the dynamics of change. Consequently, the study is closer to a static reconstruction of 'structures of meaning' than to process-oriented tracking of 'transformative processes'.

Furthermore, the findings of this study are limited to specific game genres, player communities and linguistic and cultural contexts. As a typical 'cozy game', *Stardew Valley*'s design orientation (non-competitive, low commercialisation, primarily single-player) gives its player community a relatively unique atmosphere — characteristics that are precisely the conditions under which 'sustainable play' emerged in this study. Therefore, the findings of this study should not be directly applied to the community contexts of MOBA, FPS or MMORPG games, or other competitive genres.

Taking these four limitations into account, this study's contribution should be understood as a systematic, interpretive analysis of the mechanisms of meaning-making within a case conducive to sustainable play. The scope of this contribution is defined by both methodological choices and the case selection itself. Future research could proceed in the following ways:

1. Conducting longitudinal studies to link 'meaning-making' with 'behavioural transformation' over time.
2. Conducting comparative studies to examine differences in the manifestation of sustainable play across different game types and cultural contexts.
3. Incorporating the perspectives of 'silent players' and 'dropout players' to challenge whether current findings, based primarily on active discussants, are overly optimistic. While this study does not aim to provide a definitive definition of sustainable play, it does hope to open up a new space for future research and discussion using this case.

5. Analysis

Drawing on semi-structured interviews with eleven participants and approximately two months of netnographic observation, we collected approximately 40,000 characters of interview transcripts and 80 pages of fieldnotes. After coding both interview and netnographic materials in NVivo, we identified five overarching themes concerning sustainable play: Ecological Meaning-Making through Gameplay, Behavioral Spillover, Place Attachment, Community Cohesion, and Social Connection, together with eighteen sub-codes nested within them. The following sections will unpack the meaning of each theme and code in turn.

In this study, we define sustainable play as a mode of play that enables play behaviour to transcend immediate hedonic gratification and to continuously generate value at both the individual and the community level. Regarding the definition of "sustainable play," we have held from the outset that this is not a fixed framework. Just as the definition of sustainability itself remains in flux (WCED, 1987; Vallance et al., 2011; Mensah, 2019), the concept of sustainable play likewise admits of contextual variation. What remains constant, however, is its most central and important kernel: the generation of sustainable value through play behaviour.

This definition emerged from the abductive logic of the research process. The researcher entered the field with a set of preliminary assumptions about what sustainable play "could be," and gradually refined a clearer and more layered understanding of the concept through ongoing dialogue with the data — in order to address our central research question: how do players understand the relationship between play and sustainability?

In this study, we consider the play-based sustainable value associated with the kind of "cozy game" exemplified by *Stardew Valley* — a categorisation grounded in game design that refers to a genre of low-competition, leisurely games that subjectively feel "cozy" to players (Waszkiewicz & Bakun, 2020; Lopes, 2024) — to manifest along two main facets: a social-sustainability value and an ecological-sustainability value. The creation of social-sustainability value depends on community, and the game community furnishes an excellent virtual community as the carrier of such sustainability. Ecological sustainability, by contrast, attends more to how game design influences players and how play behaviour cultivates them. Accordingly, in our study, these two dimensions of sustainable value are treated as the principal facets of "sustainable play."

Through observation and interviews, we have constructed the practice model of sustainable play depicted in Figure 1. Within the practice of play, players engage with sustainability through two routes:

(1) Out of an understanding of the game's own content and the practice of playing it, players come to influence their personal perspectives and real-life practices, producing a unidirectional spillover of sustainability-related ideas. As players engage in play, they become attentive to sustainability- and ecology-related content in the game, subsequently internalising and extending such content into everyday life. This pattern differs from the eco-games examined in earlier game research, the principal distinction lying in the contrast between the *direct* role of "education" and the *indirect* role of play behaviour in our case. In earlier research, eco-games have typically been designed with explicit ecological or

environmental themes and clear pedagogical aims (Chen, 2021; Fjællingsdal & Klöckner, 2019). In the play practice of sustainable play, however, the generation of value from game content depends on the very act of playing: players cultivate fields, rotate crops with the seasons (I1), replant trees after felling them for construction (I11), or care for in-game animal NPCs (I7). These activities carry no direct educational intent; they are related to game design but are not the purpose of game design. Yet through "play," players reshape their own perspectives and link them with sustainability-oriented orientations — thereby realising the individual-level dimension of sustainable play.

(2) Within the player-to-player play interactions inside the game community, the player community gradually forms a new place — a third place distinct from work and home. The attachment players develop in interaction mutually shapes the community itself, making the community a place that sustains members' well-being and cohesion. For instance, in the course of play interactions, players describe entering a kind of "Eden" (I1, I6, I11) and re-establishing positive connections with others (T17, T13). The community thereby provides a space characterised by belonging, fairness, inclusivity, supportiveness, resilience, and diversity. Such a positive social space not only shapes players' play experience but also fulfils a particular social function: it generates new forms of social connection for players and helps them either consolidate or develop their existing social relationships through play. Prior research has identified third places as sites of diversification, of sustaining local economies, of fostering community cohesion, and of producing social capital — sites widely regarded as offering social benefits with direct effects on social contact, health, and wellbeing (Goosen & Cilliers, 2020). In this light, when game communities can themselves come to operate as third places, the social benefits and the sustainable potential of such communities as social spaces become evident.

Figure 1 below depicts how players in the practice of *Stardew Valley* gameplay come to perceive sustainability. Through awareness of in-game content — primarily ecological and environmental themes — sustainability concepts spill over from the game world into everyday life, completing the individual-level dimension of sustainable play. Meanwhile, the game community functions as a place that affords players attachment and multiple forms of wellbeing impact, constituting a sustainable community that continuously offers belonging, builds social ties, sustains and develops social relationships, and shares and transmits game subcultures. Through the ongoing interaction between sustainable play practice and these individual- and community-level processes, ordinary play behaviour gradually develops into sustainable play.

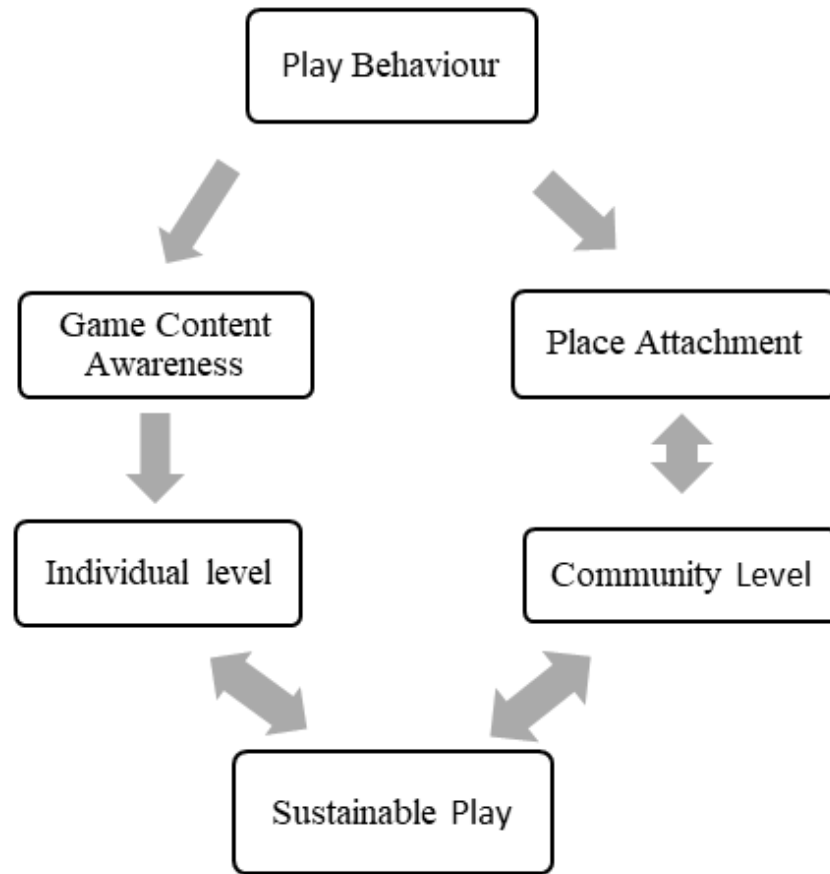


Figure 1. The practice of sustainable play

Through coding our netnographic and interview material, we ultimately identified eighteen sub-codes nested within five themes. The five themes, their associated codes, and representative quotes are summarised in Table 2 below, with each code unpacked in the discussion that follows.

Theme	Code	Representative Quotes
Ecological Meaning-Making	Ecological awareness	“It falls back on agricultural practices that are not ideal when it comes to the health of soil, water, and climate...” (T19)
	Reflection on real life	“I am running a ruthless industrial-scale wine monopoly.” (T1)

Behavioral Spillover	Behavioral spillover	“This game has convinced me to start my own Vegetable Garden.” (T17)
	Value internalization	“I had ‘inherited’ a lot of knowledge from the game.” (T3); “I intuitively know how they're doing based on their leaves.” (T3)
Social Connection	Knowledge sharing	“I see people learning new things every single post!” (T20); “How many crops should I be planting every day?” (T10)
	Bridge social relations	“Stardew valley also connect some relations with my friends”(I2); “i feel like even everyone is one screen away, but we already friends”(I7)
Community Cohesion	Inclusivity	“Many fellow villagers were very generous with their likes. You could feel that many people were very close and loving towards each other.” (I8)
	Belonging	“This really is the best sub on Reddit... my go to every time.” (T16); “I get really defensive when they’re like ‘so it’s like FarmVille’.” (T1)
	Equality	“In Stardew Valley, at least in terms of gender, there doesn't seem to be such a clear distinction; everyone who comes in is a farmer anyway.”(I8)
	Diversity	“There were people of all races and skin colors, and everyone seemed to enjoy the concert. I think the atmosphere was fantastic”(I1)
	Resilience	“I don't see the community as a binary for me, either stay or not stay. It's a private plot where I can come in and leave at any time. Whenever I want to come in, it's always there”(I11)
	Supportive	“Don’t compare yourself... it isn’t a competitive game.” (T10); “Helping one another to succeed and not compete...” (T16)
	Non-competitive	“Games like MOBAs or FPSs are generally very aggressive and highly competitive. I think this game itself is about a slow-paced life, living your own life in a small town where the villagers are quite nice”(I1)

Place Attachement	Creation	“if no one creates fan art for the game anymore, it will affect my interest in it. A large part of my continued interest in the game comes from these fan creations and other people's work”(I7)
	Separation	It's a place where I can temporarily escape from real life. For example, me. Lately, when things aren't going well in my real life, I want to escape back to Stardew Valley. (I10)
	Familiarity	“So I think Stardew Valley might be like a childhood friend to me. I won't play it for a long time, but I'm still familiar with it enough.” (I4)
	Speciality	“I think it's purer compared to other games...the community is quite different from other games I play”(I7); “Compare to the games that people are easily be angried... it will make players' mindset more peaceful and also more friendly to other players”(I8)
	Identity	“In Stardew Valley, at least in terms of gender, there doesn't seem to be such a clear distinction; everyone who comes in is a farmer anyway.”(I8)
	Cozy	“Your survival resources and time are unlimited, so you won't feel stressed. Therefore, the game environment itself provides a very relaxed vibe, allowing us to naturally unwind and immerse ourselves in the game experience”(I11)

Table 2. The five themes, eighteen codes, and original quotations

Because the present study attends to how players construct the meaning of sustainability within the gameplay and community interaction of *Stardew Valley*, our coding logic is concerned not only with "what players say," but also with the cognitive shifts, behavioural tendencies, social relations, and affective ties that these expressions index. The five themes and eighteen sub-codes together constitute an analytical pathway running from individual cognition to community culture.

First, within the Ecological Meaning-Making theme, we selected Ecological awareness and Reflection on real life as the two sub-codes, because players' understanding of ecology and sustainability rarely takes shape abstractly; rather, it is gradually "perceptualised" and "made real" within the gaming experience. Ecological awareness corresponds primarily to players' perception of ecological notions such as natural cycles, slow-paced production, and self-sufficiency — for example, many players discuss how the game has led them to reconsider agricultural labour, resource use, and the human–environment relationship. Reflection on real life, by contrast, further captures how players begin to set their game experience alongside real life — for example, reflecting on the fast-paced consumerism, urban pressures, or human alienation from nature in their actual circumstances. These two codes therefore correspond, respectively,

to "the formation of ecological awareness" and "the extension of meaning to the level of reality," and together constitute the process of players' ecological meaning-making.

Second, within Behavioral Spillover, we deliberately retained the two codes Behavioral spillover and Value internalization. This is because the research does not merely wish to show that players are "influenced," but rather to distinguish short-term behavioural change from deeper absorption of value. Behavioral spillover places greater emphasis on the extension of behaviour at the concrete level — for example, players beginning to try planting, conserve resources, or adjust their lifestyles; Value internalization, by contrast, reflects how players gradually come to incorporate the cooperative, non-utilitarian, and sustainability-oriented ideals of the game into their own value systems. In other words, one code attends to "behavioural practice" and the other to "the sedimentation of value"; together they show how the influence of the game moves from the experiential level into real life.

Within the Social Connection theme, we selected Knowledge sharing and Bridging social relations as the core codes, because community interaction is not merely an exchange of information but exhibits a clear "relation-generating" character. Knowledge sharing reflects the mutual-aid relations formed among players through the sharing of strategies, experiences, and creative work, whereas Bridging social relations captures how the game community becomes a medium through which players across cultures and regions establish connections. In particular, within our netnographic material, players frequently form long-term interactions on the basis of shared interest — a connection that goes beyond mere discussion of the game itself. This theme therefore underscores not only interactive behaviour itself but also how the game becomes a node of social connection.

By comparison, Community Cohesion attends more to the overall atmosphere and cultural structure of the community, which is why we selected codes such as Inclusivity, Supportive, and Non-competitive. Inclusivity reflects the community's acceptance of players with different backgrounds and ways of playing — for example, the patient assistance that new players typically receive. Supportive is manifested in the abundance of encouraging and emotionally supportive interactions within the community. Non-competitive is an especially crucial code, because it directly captures the cultural feature that distinguishes the *Stardew Valley* community from many competitively oriented game communities. Players place greater emphasis on cooperation, companionship, and sharing rather than ranking and confrontation. Together, these codes help us to explain why players come to perceive this community as possessing qualities of "comfort," "safety," and even "healing."

Finally, within Place Attachment, we further unpacked the theme into codes such as Creation, Identity, and Cozy. Creation corresponds to players' active relationship with the game world established through practices such as farm design and spatial layout. Identity reflects how players gradually incorporate game experience into their self-identity — for instance, taking "slow living" or a "rural sensibility" as part of what they aspire to. Cozy reflects the repeatedly mentioned experiences of comfort, security, and emotional healing. These codes together show that the relationship players form with the game is not a transient relationship of entertainment but an affective, spatially inflected attachment.

These eighteen sub-codes therefore do not stand in isolation from one another; they in fact assume different functions at different analytical levels: some codes are used to explain how players form ecological awareness; some, to explain how such awareness is transformed into real-life behaviour; and

some, to disclose community relations and culture and thereby to make better sense of how the community itself produces "sustainability." Through this coding logic, we hope to present more systematically how the sustainable experience within *Stardew Valley* continuously flows and is generated between individual, behaviour, and community play.

At the same time, our attention has not been confined to positive coded material. We likewise coded content with a negative orientation, marking it as "negative." However, because the negative content reported by players could not be subsumed within any single theme, we did not develop these negative experiences in further analysis. As stated in the methodology section, our collection of negative information was undertaken principally to guard against the risk of over-report, and served as a researcher-side analytic check. We did not, however, treat the negative content as a separate object of analysis. There are two principal reasons for this. First, the negative content was wide-ranging, occurring in differing degrees within every theme, which made integration difficult and rendered it hard to bring into the analytic frame. Second, the negative content does not alter our central concern with how players come to understand sustainability through play. The construction of sustainability does not depend wholly on "edification" through positive content; a healthy play process, and a healthy game community, should contain negative content within an acceptable range.

5.1 Ecological Meaning-Making and Value Internalization at the Individual Level

Our findings indicate that play behaviour functions not only as a medium for the presentation of ecological content, but also as a practical site within which ecological meaning is gradually generated. Game interaction does not merely transmit pre-given environmental narratives; rather, through sustained operations such as planting, harvesting, resource management, and everyday decision-making, game experience is continually interpreted and evaluated, and is set in mutual reference with real-world experience. As a result, ecological understanding does not arise as an instantaneous cognitive reaction but accumulates gradually through repeated interaction. It is precisely within this back-and-forth between game and reality that originally situational experience begins to settle into relatively stable value orientations, providing the foundation for subsequent real-world practice. As one discussion puts it: *"The game has given me an even greater appreciation for nature and spending time outdoors"* (T11). This suggests that the influence of play extends beyond the completion of in-game tasks to alter the very mode in which nature itself is felt. Nature here ceases to be a background scenery; it becomes an object worth actively approaching and cherishing. The formation of ecological meaning therefore involves both cognitive understanding and an affective re-positioning.

Such meaning-making typically begins with observation of game details and gradually extends to reflection on real-world environmental issues. For instance, with regard to agricultural production — a central element of gameplay — one discussion notes that the in-game approach is *"not ideal when it comes to the health of soil, water, and climate"* (T19). Although ostensibly evaluating game mechanics, this judgment indicates that in-game farming has been placed within the framework of real-world sustainability assessment. In other words, play behaviour has here become an object that can be examined, rendering the relationship between agricultural activity and ecological consequences once

again visible. Likewise, when one expression states that *"This line actually made me think of how we are treating nature"* (T14), its significance lies not in emotional stimulation per se, but in the fact that the game context has prompted a cross-contextual reflection that extends understanding of nature from inside the game to wider society. Play behaviour functions here not as knowledge transmission but rather as a cognitive medium that brings habitual real-world relationships back into consciousness.

Beyond macro-level environmental issues, mundane handling of resources also serves as an important entry point for ecological meaning-making. In a discussion of the lifestyle of the character Linus, one observer notes that *"He doesn't have a trash can in or around his house"* (T4), and goes on to ask *"Is it his trash all around the beaches and borders?"* (T4), even joking that *"The ocean is his trashcan"* (T4). These seemingly light-hearted exchanges in fact circle around waste management, public-space responsibility, and pollution of the natural environment. Play behaviour, in other words, does not only direct attention to overt "environmental themes"; through interaction with and discussion of the small details of life, it also brings into view those small, easily overlooked ecological issues.

The capacity of game experience to produce such effects is also closely tied to the player's pre-existing values and life experience. Game interaction does not always create entirely new understandings; in many cases, it operates more like the activation of existing experience and the reaffirmation of existing values. For example, one participant remarks: *"I'm environmentally aware, I reduce/reuse/recycle wherever I can"* (T11). Here, game experience resonates with existing real-world environmental practices, further reinforcing a pre-existing ecological orientation. Likewise, when in-game agricultural life is interpreted as *"this is how most people in my town grew up doing"* (T1), play presents not an unfamiliar imagining but the reactivation of a familiar mode of life. It is precisely this familiarity that allows in-game practice to be more readily endowed with reality and legitimacy, and to be assimilated into existing value structures.

Other discussions show that the meaning-making triggered by play does not always unfold unidirectionally along ecological lines; rather, it often reveals more complex interpretive paths through contrast with real-world experience. In some contexts, game interaction in fact becomes an occasion for re-examining real-world modes of production. For example, one expression describes the speaker's real-life work situation as *"running a ruthless industrial-scale wine monopoly"* (T1). When this real-world experience is brought into the game context, it stands in stark contrast with the slower, de-competitive, everyday-oriented agricultural imaginary of the game. Play behaviour here does not simply offer a fantasy of escape; through this very contrast, it renders visible the logics of efficiency, expansion, and profit-orientation that organise real-world production. Ecologically relevant understanding does not derive directly from the game text itself, but emerges gradually through this comparison and tension. Play behaviour thereby functions as a triggering mechanism, enabling individuals to rethink the relationships among production, nature, and ways of life.

Taken as a whole, ecological meaning-making at the individual level can be understood as a process continuously driven by play behaviour. Through the interpretation, comparison, and recontextualisation of game experience, environmental cognition, life experience, and socio-economic logic are progressively integrated into a relatively stable framework of understanding. This framework not only shapes how players come to grasp game content, but also provides the cognitive grounding necessary for the subsequent unfolding of ecologically sustainable practices in everyday life.

5.2 From Meaning to Action: Ecologically Sustainable Practices

As ecologically relevant understandings sediment over the course of play, the influence of play behaviour does not remain at the cognitive level; it begins to enter everyday life, manifesting as concrete practices linked to ecological sustainability. What the data reveal is not a simple imitation of game content but a process moving from understanding to action. Game experience, in this process, offers more than inspiration or interest: it constitutes a condition that renders the corresponding practices imaginable, attemptable, and ultimately sustainable.

In some contexts, this transformation takes a fairly direct form. For instance, one expression states that *"this game has convinced me to start my own Vegetable Garden"* (T17), while a more concrete account describes actually growing *"strawberries... and sunflowers"* (T3). Such practices are not random; they tend to centre on small-scale, self-directed activities that involve direct contact with nature. The planting mechanics within the game, in this sense, do more than provide operational experience: they implicitly outline a way of life closer to everyday rhythms and to nature, lending feasibility to ecological practices that might otherwise remain abstract.

A similar influence is also evident in domestic life and dietary practices. One discussion mentions: *"Made the cheese cauliflower with my daughter"* (T6), suggesting that game content does not remain confined to planting itself but may extend into food preparation, family interaction, and shared labour. Although small in scale, such practices reveal how game experience enters the granular fabric of everyday life and gently reshapes relationships between people and food, and between family members. Ecological sustainability here is not a grand slogan but is embodied in concrete and minor everyday practices.

Such changes do not always take the form of "from nothing to something." In many cases, play behaviour operates more as a deepening and expansion of existing practices. For example, one participant remarks: *"I now grow a few dozen types of crops on my apartment balcony!"* (T11) — what appears here is not the emergence of a new behaviour, but the further extension of pre-existing horticultural interest under the influence of game experience. Another discussion notes: *"After playing Stardew Valley, I've gotten back into gardening lol"* (T18), showing that previously interrupted or attenuated practices may also be reactivated through play. Game experience thus does not merely trigger new behaviour; it can also reintegrate marginalised or unstable ecological practices into everyday life and gradually consolidate them as more enduring habits.

This behavioural extension is often accompanied by a renewed familiarity with, and mastery of, ways of interacting with nature. One expression notes that the speaker has *"inherited a lot of knowledge from the game"* (T3), and is able to *"intuitively know how they're doing based on their leaves"* (T3). What such expressions point to is not merely the acquisition of knowledge but the formation of a kind of perceptual capacity for ecological processes. Repeated planting, observation, and waiting in the game gradually generate an understanding of the relationships among growth states, seasonal change, and resource input. When this understanding is brought into real-world contexts, interaction with nature ceases to depend entirely on external guidance and rests instead on a slowly accumulating experiential judgment.

From a broader perspective, the behavioural spillover triggered by play essentially manifests as the unfolding of ecologically sustainable practices in everyday life. The interactional logics of the game — attention to resource cycles, attunement to growth rhythms, and engagement with non-industrialised modes of production — are reactivated within real-world contexts and translated into concrete actions. This process is generally not driven by a single motivation; it arises naturally as understanding, practical experience, and feasibility of action gradually align. Play behaviour, in this sense, manifests not only as behavioural change but also as the slow formation of a way of life oriented toward ecological sustainability within everyday practice.

5.3 The Community as a Third Place: Eden

If Sections 5.1 and 5.2 set out the cognitive internalisation and behavioural spillover that play behaviour induces at the individual level — a pathway concerning the sustainable feeling and value of individual play practice — then a parallel pathway points toward the collective level: through sustained player-to-player interactive play, players have gradually transformed the *Stardew Valley* community into a place distinct from work and home. The existence of such a place is itself a manifestation of social sustainability.

Interviewee I11 noted that, although she used to play the game often, she has gradually reduced her playtime as fellow players have left. Yet even when her playtime has dwindled or she has not opened the game in a long while, she feels she has never left the community itself. She describes the feeling the community gives her in the following terms:

I think the Stardew community, for me, is not a binary of "stay or not stay." It is a kind of private plot — you can come in any time, leave any time, and it never makes me feel as though I am required to belong. I want to keep this identity, and the community always feels open to me. Whatever; whenever I want to come in, it is always in this embracing state. (I11)

The online community provided I11 with the feeling of a "private plot." This feeling closely resembles the experience that Oldenburg's (1989) "third place" affords its participants:

In fact, however, third places compete with the home on many of its own terms and often emerge the winner. One suspects that it is the similarity that a third place bears to a comfortable home and not its differences that poses the greater threat. Aye, there's the rub — the third place is often more homelike than home.... though a radically different kind of setting from the home, the third place is remarkably similar to a good home in the psychological comfort and support that it extends. (Oldenburg, 1989)

Within the *Stardew Valley* digital community, many similar feelings can be found. Although the community exists virtually, the connections it generates and the place-attachment it sustains are no less real. As players engage in community interaction, they develop a deep attachment to and sense of belonging in this place — as if it had become "their own." Moreover, free from the physical constraints of conventional offline spaces, the digital game community arguably exhibits even stronger accessibility and

accommodation than traditional third places. Players can enter and leave at will, as I11 expresses; even after a prolonged absence, they may return, and their identity within the community remains intact.

Notably, in describing this community, players repeatedly invoke a strikingly mythological image — that of "Eden." Interviewee I5 remarks:

...with its alternating seasons of spring, summer, autumn, and winter, [the game] creates a small, idyllic, secluded atmosphere. Therefore, I think many players of this game, to some extent, harbor a longing for a better life... (I5)

This image is not isolated. I1, I6, and I11 likewise, in different interviews, describe the community as a place one can "enter," "reconnect" with others within, and find "tranquillity" in. Owing to cultural variation, some players invoke the Western image of "Eden" — a sacred and tranquil place — to describe their feelings toward the *Stardew Valley* community, while others draw on the East Asian image of "Peach Blossom Spring" (*shiwaitaoyuan*), which similarly evokes an unpolluted and pure place. Although the cultural vocabularies differ, the feeling expressed is much the same: within the *Stardew Valley* community, players genuinely experience a kind of purity and joy rarely encountered elsewhere. We take this image as our entry point for examining how this sense of place is generated.

Third-place theory holds that human social life is composed of three kinds of space. The first place is the home — the private domain that hosts intimate relationships and rest. The second place is the workplace — a productive site that hosts labour, efficiency, and hierarchy. Beyond home and work, however, there exists the third place, which hosts informal public sociability and conversation. In the period when Oldenburg first wrote about third places, public conversation indeed unfolded primarily in cafés, pubs, barber shops, and similar settings. Since the advent of digital space, however, such conversation has increasingly migrated online. Third-place theory remains applicable and meaningful, but its forms of manifestation now require reconceptualisation. Whether digital space can serve as a third place has been examined in prior research, which has argued that, although the form of interaction has changed, the core ideal of the third place — conversation — has indeed been realised within new digital spaces. Accordingly, despite formal and interactional differences, digital space can be regarded as a third place in its own right, or as a complement thereto (Ducheneaut et al., 2007; Markiewicz, 2019).

In this section, we unpack the *Stardew Valley* community as a digital third place by examining its similarities with and divergences from Oldenburg's third-place characteristics, and, drawing on placemaking theory, we further analyse how this community space comes into being as a place.

5.3.1 From Play to Place: Eden and the Third Place

Neutral ground is the most fundamental characteristic of the third place. In Oldenburg's account, it is neither home (the first place) nor work (the second place); members may enter and leave freely, without committing themselves to any obligation:

There must be places where individuals may come and go as they please, in which none are required to play host, and in which all feel at home and comfortable.... Where neutral

ground is available it makes possible far more informal, even intimate, relations among people than could be entertained in the home. (Oldenburg, 1989)

In the present study, this characteristic is articulated through the imagery of "Eden" and "shiwaitaoyuan" (Peach Blossom Spring). Neutral ground can be unpacked along two dimensions: a non-individually-organised character, and a domain affording intimate sociability outside the home. Both dimensions are well realised in the *Stardew Valley* community and correspond to the codes of separation and bridging social relations. As I11 remarks:

It is a private plot — you can come in any time, leave any time. It never makes me feel as though I am required to belong. I want to keep this identity, and it always feels open to me; whatever, whenever I want to come in, it is always in this embracing state. (I11)

Come in when one wishes, leave when one wishes — members "come and go as they please." There is no required procedure or rule, and no one is obliged to take responsibility for someone else's comings and goings. The community is a fully open site. Members do not need to maintain any particular posture in their interactions, nor must they observe specific rules — although the *Stardew Valley* community does have rules, these are primarily directed at curbing destructive behaviour, such as verbal abuse, discrimination, repeated spam, and advertising.

At the same time, the *Stardew Valley* community is also a place that provides space for members to converse. Consider, for instance, T3's post "*This game helped me to become a gardener :)*", in which the poster shares the trajectory by which playing the game led them into gardening — a conversation that concerns not merely the game and play but reaches into members' real lives. Most replies in the post maintain a friendly and non-judgmental tone:

Ever since I started playing, I've daydreamed about inheriting a farm, and growing beautiful, bountiful produce.... Last year, just after the pandemic hit, I won the proverbial lottery: I inherited an amazing apartment from a friend, and it came with a private backyard and a large pre-built garden plot....

Reply 1: *Congrats!! Your garden sounds lovely.*

Reply 4: *That sounds amazing! I'm also trying to take up gardening as well.*

Reply 5: *What a wonderful story. Thank you for sharing. I hope you enjoy seeing the bounty your garden creates! So wholesome. <3*

Within these conversations, players experience a sense of intimate companionship. While the intimacy here may not reach the threshold of Oldenburg's "far more intimate than it could be at home," the openness and intimacy of the interaction are nonetheless evident.

Leveler refers to the third place's quality of suspending differences in status, identity, and background:

A place that is a leveler is, by its nature, an inclusive place. It is accessible to the general public and does not set formal criteria of membership and exclusion. (Oldenburg, 1989)

In the *Stardew Valley* community, "farmer" functions as a shared identity that flattens many real-world differences. The community's overall inclusivity in cohesion, together with equality at the level of identity, jointly produce its leveling quality. As I11 puts it:

People will not mock or look down on others just because someone plays the game better, devises smarter strategies, or is more clever. I think this is quite common in MOBA games or other multiplayer combat games — if your skill is poor, if you "play badly," you get flamed. But in the Stardew community, this kind of thing simply does not happen. (I11)

I1 likewise observed this at an offline *Stardew Valley* event:

I had previously attended one of the Stardew Valley concerts offline, the one in Washington, D.C. I was honestly surprised — I had not expected so many people to love Stardew. In our venue there were people of all ethnicities and skin colours, and everyone was happy to be at the concert. The atmosphere was excellent. (I1)

Within the game community, players suspend not only real-world differences such as ethnicity, but also the game-skill- and gender-based hierarchies common in other gaming communities. This resonates with Oldenburg's claim that "*Worldly status claims must be checked at the door in order that all within may be equals.*" In some game communities, players' in-game skill is itself treated as a tool of stratification, generating an internal hierarchy in which "good players" or "high-spenders" naturally enjoy a status analogous to that of social elites. Such status, in turn, fuels competitive jostling among players. In the *Stardew Valley* community, however, both external hierarchies and internal hierarchies are flattened and dissolved. Player relations are not differentiated by skill, playtime, gender, or ethnicity. All can enter this place on equal terms and engage in interaction and conversation.

Conversation as the main activity — for Oldenburg, conversation is what fundamentally distinguishes the third place from other public sites such as shopping malls and cinemas:

Neutral ground provides the place, and leveling sets the stage for the cardinal and sustaining activity of third places everywhere. That activity is conversation. Nothing more clearly indicates a third place than that the talk there is good.... (Oldenburg, 1989)

Conversation emphasises connection. While digital communities cannot deliver embodied conversation, they nonetheless provide a place for conversation to unfold. As I3 recalls:

At one point I came across something in the game I didn't quite understand, so I took a screenshot and posted it on Xiaohongshu. Very quickly, many people replied to me. It made me feel quite happy — I didn't have to remain stuck in confusion for long. It was as though everyone was a fellow villager from Pelican Town, just as people online describe. (I3)

I8 likewise recounts:

Sometimes I scroll past question posts and there are many "fellow villagers" enthusiastically responding — sometimes you don't even get the chance to reply yourself. (I8)

And I6:

When I encounter Stardew players on social platforms, I have a sense that — although we're separated by a screen — we are already friends. (I6, translated)

Within the player community, interaction itself unfolds in the form of conversation. Frequent in- and around-game exchanges not only facilitate the sharing of knowledge but also generate emotional ties and social relationships. Functionally, this is nearly equivalent to what the situated, place-based third place affords.

Accessibility manifests as a platform-level affordance, providing the "low-threshold access" that Oldenburg (1989) emphasised in his original account. Whereas accessibility for physical third places is constrained by opening hours and travel distance, the accessibility of digital third places takes the form of asynchronous, anytime, geographically unbounded entry — an important extension of traditional third-place theory. Regardless of the community in question, anyone with an account can, anytime and anywhere, enter and post.

The regulars — for Oldenburg, the existence of regulars is the key to the third place's atmosphere. The presence of regulars marks the moment at which strangers become part of a group within the third place:

The third place is just so much space unless the right people are there to make it come alive, and they are the regulars. (Oldenburg, 1989)

Regulars constitute a form of social connection; it is this connection that prevents the third place from being merely a location. The same holds in the player community.

Low profile and playful mood are articulated in the present study through the mutually echoing codes of *cozy* and *non-competitive*. On its surface, "low profile" might appear ill-suited to digital space, since digital communities have no spatial profile to speak of in the first place. However, in Oldenburg's account, "low profile" actually expresses a quality of low commercialisation. *Playful mood*, in turn, more directly designates a ludic disposition: it transforms the third place into a setting akin to a "game," in which participants are better able to be "apart together." For instance, I7 considers that *Stardew Valley*'s buy-once business model lends the overall atmosphere a less commercialised feel, generating a healthier community environment:

I think the community is somewhat purer compared to other games. There is some over-commercialisation that I do dislike, but Stardew Valley is fundamentally different from other games — it can be played single-player or multiplayer, and in-game purchases are relatively limited. I have also encountered other mobile games, like [xxxx], where you can really feel that, because of in-game purchases, when they push out new updates with stronger items, you have to spend money. With Stardew Valley, since it is buy-once, the kind of forced spending is much rarer. So when you compare them, the [xxxx] community has more money tangled up in it than the Stardew community overall. The Stardew circle therefore feels purer than such other circles. (I7)

Playful mood is, moreover, a tendency that emerges naturally within the *Stardew Valley* community, arising primarily from the cozy gameplay experience members share. I3 describes how communicating within the community consistently elicits supportive responses, which lift her mood:

First, the community can answer my questions — objectively, regarding the game's content, it gives me a clear direction. Subjectively, when I have a problem, others are willing to help me solve it. It feels quite happy. (I3)

A home away from home is the most affectively resonant feature of third-place theory. It is also the feature most strongly resonant with the *Stardew Valley* community's "Eden" or "shiwaitaoyuan". This feature of the third place expresses people's affective attachment to a specific site — to the point that it almost reaches the status of home. It is what renders a place not merely a coordinate but a space, a place of belonging. The *Stardew Valley* community generates such belonging, allowing affect to be lodged within play. As I11 puts it, despite the absence of a physical site, the digital community has nonetheless created a place of belonging:

Although we may exist on different versions and worlds within this single-player game, never actually meeting in-game, when we discuss it, it feels as though we really do live together in Pelican Town. (I11)

I1 likewise describes how, in viewing other players' shared posts, one feels as though one is creating a home both within and beyond the game:

I really enjoy collecting these kinds of posts. Looking at them gives me a sense of order, which I find lovely — when you arrange your cottage and farm tidily in the game, it feels as though you're also living a beautiful life. So I really like browsing these layout posts. It feels as though one is creating another home. (I1)

In addition, Oldenburg also argues that, when stress within home and work renders home no longer home-like, people may re-create the feeling of home in the third place. A similar dynamic exists in the *Stardew Valley* community, as in T16's post:

The support was the biggest surprise when I started the game and found the sub. Your kindness and helpfulness toward one another is so refreshing to see. No one cares who you are, where you're from, how old you are, or (most importantly) your political standing. We're all in this together.... I'm proud to be a part of this sub. The humor I find here is an unexpected bonus (looking at you with your villager drama and love triangle marriage stories). You're all the best. I want nothing but great things for you all, both inside and outside of the game....

Reply 1: This really is the best sub on Reddit. I very rarely post but it's my go-to every time I open up Reddit. I found Stardew Valley last year during the height of the pandemic. I'm a Ward Matron and I found that I was cracking open the wine as soon as I got home to "help" with the stress (it didn't). I saw someone on another sub recommend it and I've not looked

back. A lovely game with an equally lovely community. I'm so happy it's made a positive impact on your life.

Original Poster Reply: I don't know what has been driving me to find the strength to talk about it recently but, reaching out to this sub has given me a soft space to admit out loud that I am sick, accept the fact that I am sick and do my best to help others. I want others to find their voice too. I posted this without thinking this morning. I just sat down, wrote it, and without allowing myself to hesitate — hit send. I'm glad I did because the responses are lovely and brave. It's only adding to the strength I need and reminding me I'm not alone.... Also, I'm so glad you have the game! Thanks for reading.

By placing the theoretical features of the third place alongside our codes, we can see that the *Stardew Valley* community has, within the digital virtual world, created an Eden for players — a place akin to a second home. Here, people can speak freely, engage in conversation that extends beyond the game itself, and, through play, build connections and meanings with others outside the game. These features make the community an excellent specimen of a digital third place. Within the new paradigm of social interaction, sociality is no longer confined to in-person encounters; online communities and interactions are equally meaningful. By comparing the features of the *Stardew Valley* community with the theory and concept of the third place, we can therefore say that the *Stardew Valley* community is more than a complement to the offline third place — it is itself a kind of third place. Its existence constitutes an "Eden"-like form of place attachment. Such attachment allows people to find respite amid the demands of work and life and to re-establish a continuous, even sustainable, mode of play. The next section will examine how this place is itself produced.

5.3.2 The Making of Eden: Three Mechanisms of Digital Placemaking

Third-place theory provides a powerful descriptive framework for understanding the form of the *Stardew Valley* community, but as researchers such as Markiewicz (2019) have noted, Oldenburg's original account is better suited to describing "what a third place looks like" than to addressing the more processual question of "how a third place comes to be." Yet to understand fully how the *Stardew Valley* community has become a digital third place, mere description of its features is not sufficient — we must also ask: how, in fact, was this Eden-like place produced? Why did it come to be created? This question leads our analysis toward the perspective of placemaking. In what follows, we analyse how a digital third place is brought into being along three dimensions: place attachment, social connection, and community cohesion. Considered together, these three are not parallel phenomena but constitute a mutually generative cycle of placemaking. Through creation, identity, and separation from reality, players develop attachment to the place; this attachment drives them into community interaction, building both bridging and bonding social connections; sustained social connection accumulates into observable community atmosphere — inclusivity, equality, resilience, supportiveness — which in turn deepens players' attachment to the place. It is precisely within this cycle that the sense of place of the *Stardew Valley* community as "Eden" is continuously produced, sustained, and reproduced.

Place Attachment

The transformation of the *Stardew Valley* community into a *place* is bound up with the affect players invest in it and the attachment they develop toward this site. In writings on third places, sense of place is similarly often tied to the affective bonds places afford. Our interviews suggest that the capacity of this community to generate an "Eden-like" sense of belonging rests primarily on three sources: meaning produced through creation; identity afforded by the in-game role; and the separation of the community from real-world life.

Players engage in derivative creation around the game — including mods, fanfiction, and fan illustrations. As I6 remarks:

If no one were to do derivative work or fan creation around this game any longer, it would affect my interest in it. A large part of why I have stayed interested in this game comes from these derivative works and from what others have made — like the mods. So I think this is owed to the community: especially mods and fan works are quite effective in attracting more people to play and in retaining players. (I6)

I6 explains that what has retained her in the game is the fan creation produced within the community. Although she frequently engages in community interaction, she rarely produces game-related works herself; rather, she enjoys watching others' fanfiction, which sustains her sense that her relationship with the game has not yet ended.

I8, by contrast, is herself a mod author. She creates many decorative or functional mods that help players better dress their characters and decorate in-game houses. When asked how this kind of derivative creation has shaped her relationship with the community, she replies:

In terms of interaction, in the later period — going from using mods, to modifying them, to making my own mods — I started to communicate with other authors and other users. This communication has its effects: some "laoxiang" might say to you, "could you make a mod that does such-and-such?" And then you feel more motivated to keep playing this game.... You inevitably want to share some of your gameplay experience and discuss related content with everyone. The currently rich modding ecosystem is, I think, a very important part of this.... Previously, modding was mainly a way to relieve stress; now it has also become a source of supplementary income. Because I draw, I also help laoxiang with mod art, which earns me some extra income. (I8)

This kind of creation has not only generated meaning for I8's play (as her work is recognised and engaged with by others) but has also brought tangible real-life benefits, through paid commissions. As a result, I8's enthusiasm for the community has not diminished; rather, it has increased alongside the creative production and the meaning that production generates for her.

The meaning generated through such creation echoes Jenkins's notion of the "textual poacher" (Jenkins, 1992). Drawing on the metaphor of poaching, Jenkins explains the popularity of fan culture and how fan culture practises itself: textual poaching, he argues, resembles the movement of nomads — traversing land they have never themselves cultivated, taking only what is useful and pleasurable to them, and thereby transforming cultural consumption into "reappropriation." This reappropriation reframes the game

community as more than a simple gathering of "fans": the game itself becomes "their own thing." The sense of belonging fan-creators experience in the community arises precisely because the game or work, although originally "someone else's," has, through such poaching, been turned into their own. Likewise, the *Stardew Valley* player community, with meaning production as one of its essential components, has shifted from a mere "gathering of fans" to "a home for creators themselves." This offers one way of interpreting how the *Stardew Valley* community comes to be constituted as a place of attachment. As meaning is produced, the location is elevated beyond being merely a place — and this is precisely the core insight of placemaking.

The identity afforded by the in-game role functions in a manner similar to creative meaning-making, but what it produces is not exchangeable artefacts (such as fanfiction, fan art, or mods) but rather a *collective identity*. As I11 notes:

A second point is that there is an inherent sense of closeness within the Stardew community, because everyone calls one another "laoxiang." I think this is a very interesting phenomenon. In other countries, this kind of "rural-folk" culture does not really exist; even in Pelican Town itself, there isn't all that pronounced a sense of neighbourly tie among the villagers — they simply happen to live together in a small town and each tends to their own duties. But once it was brought into China — because Chinese civilisation is grounded on agriculture — we naturally embed our imagination of "the rural" into it. We call players "laoxiang," and I think this term immediately closes the distance between players. Even though we may live on different worlds and saves of this single-player game, never actually meeting in-game, when we discuss it together, it feels as though we really live in Pelican Town. (I11)

In I11's account, "laoxiang" — the Chinese term for someone from one's own village or region, conveying a sense of kinship — designates a shared identity. Within the Chinese-language *Stardew Valley* community, players frequently use this term to address and recognise one another. This identity furnishes players with a *rural imagination*: although players do not live in the same region, or even in the same country, the creation and widespread use of identities such as "laoxiang" and "farmer" let players feel as if they are jointly inhabiting Pelican Town. As I8 likewise observes:

Broadly speaking, everyone calls each other "laoxiang." Most of the time, when people communicate, it feels somehow different from other contexts — there's not so much of that sense of distance. (I8)

The shared identity among players generates connection and attachment both among players themselves and between players and the place. As a result, after this kind of interaction playing, they no longer figure as isolated "players": they are former co-residents of Pelican Town — as if they had truly lived as neighbours.

The separation of the game community from real-world life is manifested principally as a form of demarcation: the community can offer a "utopian" imaginary while at the same time maintaining clear boundaries with reality. As replies to T16's post (the original of which has been quoted above and is therefore not repeated) illustrate:

Reply 1: This game is comfort, distraction, and a meditation on real life — which (for many of us) is a hard, unforgiving place. I love hearing stories like yours, where everyone can find peace and joy in this game. Not silly at all! For me, it's both meditation and a place to connect with my daughter. Whatever we get from it — it's a powerful positive force in the world. How lovely to be able to celebrate that!

Reply 2: I'm in a similar situation — this game and this fan community have helped me in much the same way. You're not alone at all, and I'm glad you're here (in many senses <3). Anything that makes you feel good, safe, and that you want to stick around is absolutely worth it <3. I think one of the great things about this game and this fan circle is that it doesn't shy away from dark elements (Shane's story, Kent's PTSD, Penny's family life, etc.) — and there's a lot of dark humour. But the game still gives you the chance to find inner calm, and that adds depth to the story. I think it also gives each of us the hope to carve out moments of calm in our lives, especially together.

The feeling the community offers is of a sharply different texture from real-life mental illness or a difficult life situation. Within the community, people can separate real life from the game world: the game world is pure, the community is friendly, and the meaning the game generates is genuine. Within the community, people no longer experience the pressures and pains of real life. Whether actively or passively, the community effects a separation from real-world life.

Social Connection

The generation of place is also bound up with the building of social relations. People build and develop social relations within the community. Establishing and maintaining social relations is widely recognised as a key function of community, and as a key mechanism through which community produces social sustainability. In the *Stardew Valley* community, social relations primarily take two forms: maintaining players' pre-existing social relations (interacting through the community with players who were already friends, kin, or partners), and developing new ones (befriending newcomers within the community).

For example, I4 was recruited via snowball sampling. Her relationship to the researcher was initially a "weak tie" — mutual followers on social media — and the two had not been in contact for many years following an earlier exchange. I4 noted that she had no particular interest in participating in research as such, but, upon learning that the researcher was recruiting interviewees for a *Stardew Valley* study, she actively reconnected:

Another point is that you do remain attached to this game. This time, I happened to scroll past your post in the community and saw the Stardew Valley-related content. I had no real interest in your research as such, but seeing it was Stardew Valley-related, I reached out to you. Perhaps that is why this interview has come about — you might find that talking to someone about this is rather interesting, too. (I4)

By sharing knowledge, players also establish new relationships with newcomers to the game and the community. As I3 puts it:

When I came across something I didn't quite understand, I took a screenshot and posted it. Very quickly, many people replied to me, and I felt quite happy — I didn't have to remain stuck in confusion for long. It felt as though everyone was a fellow villager from Pelican Town.... It's basically that, when entering this game, you need someone to guide you, which makes it easier to integrate into the community or to play the game better. (I3)

Such community-grounded relations even prove transferable. I6, for instance, recounts an instance of social-relational migration she has observed elsewhere:

I think people have a sense that, even though we're separated by a screen, we are already friends. Let me give you an example: an idol I follow likes to play Stardew Valley, and her fan accounts often post Stardew-related content. Although not all of her fans necessarily play Stardew Valley, many of those who do post very cute Stardew images under her account. I think the game has become a kind of bond connecting fans. Normally, idol fans can be quite confrontational with one another, but because of this game, they become very peaceful and discuss the game in a harmonious way. (I6)

This community-internal atmosphere and these social relations have even migrated into other communities and forms of social interaction beyond the game. The community as a place provides the site within which players generate connection; this in turn reshapes social connection. One of the elements of placemaking summarised by Ellery and Borkowsky (2021) is precisely *bidirectional interactivity*. The creation of sense of place arises from the building of social relationships, and the construction of the place is accomplished in everyday social-relational practice.

Community Cohesion

Community cohesion refers to the *atmosphere* of the place. The atmosphere of a sense of place is the macro-level product of placemaking; at the same time, it bidirectionally shapes participants' experience of the place. Cohesion here designates the objective character — the way the community ultimately presents itself to participants and observers — and the place's objective qualities, such as belonging, diversity, equality, inclusivity, resilience, and supportiveness.

The feature of *belonging*, for example, is what players come to articulate after engaging with the community. As I1 notes:

On Xiaohongshu in particular, there are some foreign authors who post in the Stardew community, including some house-layout posts that I have come across. They may have already posted these on other foreign social platforms, but they bring them over to Xiaohongshu — and underneath, many people express appreciation and admiration. (I1)

Diversity is an objectively present feature, as I1 observes:

In our venue too there were people of all ethnicities, all skin colours; everyone was happy listening to the concert. The atmosphere was excellent. (I1)

I9 likewise:

First of all, I think the difference lies in the content of the game itself: as a farming game, it is fundamentally different from competitive games — that's a content-level difference. But in terms of player gender, I don't think you can say men play it more or women play it more — among the friends I know, both men and women play it. (I9)

Equality is principally manifested in gender equality, and in the absence of hierarchies among players based on playtime or skill. This appears in T22, I11, and I9:

T22: I just wanted to say how much I appreciate this sub! A lot of subreddits can have a very harsh tone (which I can appreciate sometimes) and not really be welcoming. But I love how you guys have created a cozy and supportive space that's easy to enjoy. I'm new to posting but the responses I've gotten, and see other users receive, make me happy! Stardew fans are usually engaging and kind — we need more of that in the world right now. So pat yourselves on the back!

I11: I think the Stardew community is a very equal community, very different from those that are more "hardcore" or more male-skewed. People won't mock or look down on others just because someone plays better, devises smarter strategies, or seems more clever. In MOBA or multiplayer combat games, it is common for poor performance to be flamed; in Stardew, this kind of thing simply does not happen.

I9: I can only give one example by comparison. When the so-called "bros" play Black Myth, they're constantly bragging, as though playing this game raised their own status — making themselves feel exalted by association with the developers' brilliance. I find it really annoying. With Stardew, on the other hand, people don't ask weird questions, and there is very little of that "gaze." I feel everyone is just a farmer; everyone loves to farm.

Inclusivity manifests in the community's wide tolerance toward members' different backgrounds, preferences, questions, and even their negative emotions. As T23 illustrates:

I can't think of a single way this subreddit or players of this game have ever been toxic. However, the one thing people disagree about is who the best bachelor/bachelorette in the game is. That's really it. No one here complains about how some foods don't sell for more or how mad people get when they die in the mines. This is the most wholesome community in all of Reddit and the world. Thank you for not showing any form of toxicity!

Resilience is the community's capacity to recover and to maintain its own functioning. As I8 mentions, in connection with a phrase widely circulated within the community:

I do think the community has this quality. One thing that distinguishes Stardew Valley from many other games, I think, is that people often say "Stardew always has another spring." Whatever you didn't finish this year, you can finish next year; there's no sense that you must

urgently complete or accomplish something, or that if you miss something it cannot be recovered. (18, translated)

"Stardew always has another spring" — for players, this phrase captures both the quality of the game and the character of the community. Players continuously cultivate, or stop playing, or return after a period of absence. Yet the community remains stable and resilient against the influx and outflow of members. Regardless of how players come and go, the atmosphere and culture of the community remain consistent with what they were at the outset. This is the resilience of the game's culture, and it constitutes an important precondition for the sustainable value the *Stardew Valley* community generates.

Supportiveness manifests as mutual support among players. As shown in T16's post quoted earlier, the original poster engaged with the game and its community while suffering from mental illness, and reported improvement in mental health as a result. The replies under that post not only offer many shared accounts of comparable experiences but also extend collective support to players living with mental illness.

5.4 The Sustainable Digital Third Place and Play

Section 5.3 has revealed how the *Stardew Valley* community, as a digital third place, is continuously made by players, through analyses across the three dimensions of place attachment, social connection, and community cohesion. Yet placemaking itself is not the endpoint of the argument. The deeper significance of a place that is continuously made and affectively invested in lies in what it continuously generates after it has been made — and in why such a form of play can be called "sustainable." This section addresses this question, and on this basis articulates the precise meaning of sustainable play at the community level.

The argument unfolds in three steps. First, we examine how the *Stardew Valley* community as a third place generates social capital and social cohesion. Second, we ask in what sense these outputs constitute "social sustainability." Third, we consider how this social sustainability returns to playing behaviour itself, thereby constituting the irreducible community-level dimension of sustainable play.

5.4.1 The Third Place as a Site for the Generation of Social Capital and Cohesion

The connection between the third place and social capital has been established repeatedly in the existing literature. In their integrated planning framework, Goosen and Cilliers (2020) argue that the third place — through neutral ground, social leveling, conversation orientation, and the production of belonging — directly fosters social cohesion, accumulating social capital through repeated interactions among members and thereby supporting broader social sustainability. The social capital referred to here, borrowing Putnam's (1995, 2000) definition, designates the trust, norms of reciprocity, and social connections embedded within social networks — a resource that no individual possesses in isolation, but rather a value jointly produced and sustained through the repeated interactions of group members. Within this argumentative chain, the third place is not an ornament of social sustainability but its principal site of production: it is precisely the "fine-grained, everyday, regulars-accumulated social interaction" of the third place that makes social sustainability at the macro level possible.

This argumentative chain operates within digital communities as well. Putnam (2000) distinguishes social capital into bridging social capital (weak ties that span social differences) and bonding social capital (strong ties grounded in shared identity); the two jointly support the sustainable functioning of community. Within the play-based interactions of the *Stardew Valley* community, both forms of social capital are present at once.

Bridging social capital is manifested in the way players, through their shared play experience, span differences in culture, region, and gameplay preference. I2 remarks: "*Stardew Valley also connect some relations with my friends*" — the game here serves as a relational bond. I7 elaborates: "*I feel like even though everyone is one screen away, we are already friends.*" This "one screen away" mode of connection typically exhibits the operation of bridging social capital in digital settings: geographical distance, time-zone difference, and linguistic-cultural variation no longer constitute obstacles to connection; shared play experience becomes the sole prerequisite for relationship formation.

Bonding social capital, by contrast, is manifested in the community's capacity to hold members in moments of vulnerability. T16's post on mental illness, already quoted in 5.3, exemplifies this: replies such as "*No one cares who you are, where you're from, how old you are.... We're all in this together*" embody the typical features of bonding social capital — deep affective support grounded in shared identity. Such support is independent of physical co-presence and does not rest on pre-existing offline relations; it rests on the shared identification "we are all *Stardew Valley* players."

At the same time, the community as a whole exhibits the cohesion qualities described in 5.3.2 — inclusivity, equality, resilience, supportiveness. These are not "additional qualities" external to the community but the atmospheric conditions under which social capital is continuously reproduced. If bridging and bonding social capital are the community's concrete outputs, cohesion is the environmental ground that allows these outputs to occur repeatedly.

5.4.2 From Social Capital to Social Sustainability: Establishing the Maintenance Dimension

To note that "the community generates social capital," however, is not yet to establish that it generates "social sustainability." The two are not synonymous: social capital can be temporary, situational, or even consumable; social sustainability requires a capacity for continuous self-maintenance. The formation of social capital within a space is undoubtedly the foundation upon which social sustainability is built, but the extent to which the broader concept of social sustainability is realised within the digital community of *Stardew Valley* requires further elaboration.

Vallance et al. (2011) distinguish three dimensions of social sustainability: development sustainability (meeting basic needs and reducing inequality); bridge sustainability (transforming the human–environment relationship); and maintenance sustainability (the capacity of social groups to maintain their own existence). Maintenance sustainability concerns whether a community possesses the capacity to persist as a community, including the stable production of belonging, the preservation of cultural continuity, the intergenerational transmission of caring relations, and the capacity for self-recovery in the face of external pressure. The community slogan — "Stardew always has another

spring" — precisely conveys the core spirit of such maintenance sustainability: the community is able stably and continuously to generate belonging for its members, and the community constituted by the experience of play remains forever open to everyone. Whether for a year or for ten years, the culture and the people here seem unchanged: it is still a gentle game, still a group of people ready to welcome you back at any time. I11's "private plot" metaphor, mentioned earlier, likewise points to this dimension: members can leave and return, and the community is "always there" — an availability that no external agent guarantees but that is shaped by the overall culture of the community and borne by the community's resilience.

It is worth noting that Vallance's bridge dimension — the transformation of the human–environment relationship — is also corroborated by the present study. This is precisely what Sections 5.1 and 5.2 analysed: through play, players' understanding of nature shifts. This implies that the two pathways of sustainable play (the cognitive–value pathway and the affective–relational pathway) in fact correspond simultaneously to two of the three dimensions of Vallance's framework — bridge sustainability and maintenance sustainability — and are jointly produced through one and the same mechanism: players' play with, and placemaking of, the digital site. This correspondence makes the two pathways not two isolated findings but two theoretical projections of one and the same phenomenon.

5.4.3 Reconsidering the Value of Play: The Limits of the Critical Narrative

We have reason to reconsider a long-standing critical narrative within game research — one that has framed digital game play as a space of "alienation," "addiction," and "antisocial" disposition (Kowert et al., 2014; Schiano et al., 2014). This narrative is not entirely without warrant: in certain game genres — especially highly competitive MOBAs and FPSs, and the player communities formed around heavily monetised gacha mobile games — the dissipation of communal relations, the depletion of affective energy, and the accumulation of aggressive interaction are indeed empirically observable phenomena. The present study does not deny the validity of these findings.

However, the validity of this narrative is bounded. This may occlude an important counter-case: in the context of non-competitive cozy games such as *Stardew Valley*, the game community does not constitute a site of dissipation for individual well-being but instead becomes a site of its reproduction. What distinguishes these two situations is not "game" or "the digital" as such, but rather the interactional logic the game is designed around (competitive vs. cooperative), its business model (one-off purchase vs. continuous monetisation), and the community culture these conditions in turn shape (homogenising vs. hierarchising). Although our research focuses primarily on play and players' play behaviour, game design clearly also bears on play behaviour. Both our netnographic and our interview material demonstrate this. Yet the position of the present study is maintained: although we acknowledge that the influence of game design on player behaviour is far-reaching, this study's exposition centres principally on play behaviour itself. Whether in the construction of the community or in the individual's solo engagement with the game, both are regarded as expressions of the act of play.

The genre-level distinction matters for game research. It suggests that "the digital game community" should not be treated as a homogeneous research object but should be further typologised according to its

internal interactional logic. The critical narrative is valid for some types; the constructive narrative is equally valid for others — and the present study furnishes a concrete empirical case for the latter.

We are now in a position to articulate directly the core proposition of sustainable play at the community level: it refers to a form of community sustainability that is continuously produced by playing itself. Sustainable play conceives of playing as the productive mechanism of sustainability. On this understanding, play and sustainability are not parallel terms but stand in a constitutive relation — without players' continuous play, the *Stardew Valley* community would not exist as a community; and the reason players' play can continuously produce community is precisely that, through the multiple practices analysed in 5.3 (creation, returning, conversation), it persistently makes this place. In this sense, community sustainability is not an external condition or supplementary effect of sustainable play, but an intrinsic emergent property of playing behaviour at the community level.

This framing also responds to the question with which the present study began — what, in fact, is the relationship between playing behaviour and sustainability? At the community level, the answer is clear: playing is not an activity parallel to or in opposition to sustainability, but a micro-level productive practice of sustainability in a particular sense. When play behaviour generates social capital, maintains the persistence of community, spans social differences, and carries affective support through the continuous making of a digital third place, it ceases to be merely the autotelic activity Suits (1978) defined as "the voluntary attempt to overcome unnecessary obstacles," and becomes a practice with social–ecological externalities. This is what fundamentally distinguishes sustainable play from play in general, and is the specific contribution this study aims to offer to the theoretical dialogue between play and sustainability.

6. Conclusion and Discussion

The primary aim of this study is to open up a new perspective for understanding play and the values produced through play. Through a review of the existing literature, we found that research on play—both classical and contemporary—has, to a considerable extent, become paradigmatic and fixed. The value of play is often treated either as something delivered top-down through game design, or as an internal value existing solely within the rules of the game itself. Discussions concerning the value produced by play as a behavioral practice in its own right, however, have not yet formed a systematic body of research. This study attempts to dismantle this assumption, reopen the discussion of the value of play, and on this basis rethink the sustainable value of play—more specifically, to examine from the players’ perspective how play produces sustainable value.

To achieve this, the study adopts two interconnected theoretical perspectives: spillover theory, and placemaking together with third place theory. Through these perspectives, play is re-distinguished into two intertwined forms of practice: individual gameplay behavior, and interactive gameplay behavior occurring within communities. On this basis, the study examines the sustainable values produced through play at different levels. At the individual level, spillover theory helps explain why play behaviour can generate values that exceed the original intentions of game design. At the community level, placemaking and third place theory help explain through what processes interactive play reshapes the value of play itself.

Building on this foundation, the study seeks to make preliminary contributions to three areas of research: play studies, placemaking studies, and sustainability studies.

For play studies, this research attempts to revise a long-standing understanding of play. In Suits’s (1978) classic definition, play is conceptualized as an autotelic activity involving the “voluntary attempt to overcome unnecessary obstacles”—its meaning exists within itself and does not point toward changing the external world. While philosophically clear in its boundaries, this definition also limits, to some extent, further discussions of the value of play. Through an analysis of player practices in *Stardew Valley*, this study argues that play is not entirely autotelic under certain conditions. When players develop awareness of game content through repeated play, and when they form attachments to game communities, play begins to carry a force of outward spillover. It brings ecological consciousness from the game into real-life practices, while simultaneously creating digitally sustainable communities through ongoing interaction. In this sense, play is not necessarily only an autotelic activity; it can also become an externalized micro-practice capable of producing sustainable value. This constitutes the central adjustment that this study seeks to make to play research.

For placemaking and third place studies, the contribution of this research lies in extending these theoretical resources—traditionally rooted in physical space—into digital game communities. The third places described by Ray Oldenburg (1989)—cafés, bars, barber shops—are structured through characteristics such as accessibility, social leveling, and conversation as the core activity. This study demonstrates that the player community of *Stardew Valley* substantially reproduces these characteristics in digital form, and in some respects even extends beyond what physical spaces can achieve, such as asynchronous accessibility and cross-geographical participation. Furthermore, drawing on the

placemaking perspective of Ellery and Borkowsky (2021), this study argues that third places are not pre-existing containers, but are continuously produced by players themselves. Through everyday practices such as creation, emplacement, conversation, and identity formation, players gradually transform a virtual communication space into an “Eden” characterized by attachment and belonging. This provides a concrete empirical pathway for discussing third places in the digital era.

For sustainability studies, the contribution of this research lies in extending the concept of “sustainability” from typical domains such as production, consumption, and urban space into play, a form of practice that has long been excluded from such discussions. Drawing upon the three-dimensional framework proposed by Vallance et al. (2011), the study suggests that the phenomena observed here correspond simultaneously to bridge sustainability (transformations in human–environment relationships) and maintenance sustainability (the ability of communities to sustain themselves). Importantly, the mechanisms through which these forms of sustainability are produced do not lie in large-scale institutional design, but in players’ continuous, low-intensity, and seemingly purposeless acts of play. This suggests that the micro-sites through which sustainability is produced may be far broader than existing research has recognized, and that play represents one such long-overlooked site.

It should be emphasized that the contribution of this study does not lie in proposing a closed theoretical category, but rather in attempting to “open up a perspective.” Just as play itself is always situated within processes of movement and becoming, sustainable play should not be understood as a fixed concept, but as a processual concept continuously emerging, expanding, and changing through practice. Precisely for this reason, the study also contains several limitations that must be acknowledged.

First, the central concern of this research remains at the level of “how meaning is produced,” rather than the causal level of “whether behavior is actually changed.” What we observe is how players reinterpret their relationships with nature, labor, and community through narrative, rather than whether these interpretations ultimately become stable, measurable long-term actions. Players mention beginning to grow plants, reduce waste, relearn cooking, or reconnect with nature, but such accounts function more as expressions of meaning than as objectively verifiable outcomes. Consequently, this study is better understood as an interpretive analysis of how perception is shaped, rather than a causal study proving behavioral change. Future research may require longitudinal observation over much longer timescales—for example, tracing players’ practices months or even years later—in order to further examine whether sustainable play can sediment into a stable way of life rather than remaining a temporary emotional resonance.

Second, the case selected for this study possesses a specificity that cannot be ignored. *Stardew Valley* is not a typical mainstream competitive game. Its slow-paced, low-pressure, and non-confrontational design naturally facilitates the emergence of gentle and enduring community atmospheres. In a sense, it resembles a deliberately preserved digital pastoral landscape—offering players an almost “counter-temporal” emotional structure within an internet culture characterized by acceleration, efficiency, and competition. As such, the “Eden-like” digital third place presented in this study may depend heavily on the distinctive cultural temperament of the cozy game genre and may not necessarily apply to other game types. Future studies could investigate communities centered around MOBA, FPS, or MMORPG games, where competition, ranking, and resource struggle are more strongly emphasized, in order to ask whether some form of sustainable play can still emerge when play is embedded within

high-pressure and efficiency-oriented logics—or whether sustainable play itself can only emerge within games that permit players to “slow down.” This limitation therefore represents both an acknowledgment of the study’s boundaries and an opening for future inquiry.

Third, although this study emphasizes the inclusiveness, supportiveness, and low competitiveness of the Stardew Valley community, such a description inevitably carries a degree of utopian risk. No digital community is truly a pure land; it may equally contain silence, exclusion, exhaustion, and withdrawal. Compared with other gaming communities, however, these negative experiences appear more concealed within discussions surrounding Stardew Valley. The voices of those who failed to integrate into the community, gradually left it, or felt alienated by so-called “cozy culture” remain relatively limited within this study. Future research should therefore also attend to the “cracks” of sustainable play: why some players cannot enter these structures of belonging, why some feel emptiness after long-term play, and whether originally low-commercialized communities can maintain their sense of “purity” once they become increasingly commercialized and platformized.

Of course, this study does not deny the important role of game design in the formation of sustainable play. In fact, in both interview materials and netnography data, players frequently mentioned how elements such as the agricultural system, seasonal cycles, low-competition mechanics, slow-paced lifestyle, and community interaction design in Stardew Valley influenced their gaming experience and value understanding. This indicates that game design itself does provide important conditions for players to form specific play experiences and construct meaning. However, this paper does not take game design itself as the core research object, but rather focuses on how players, through continuous play behavior and community interaction, further transform these design elements into practices with ecological and social significance. In other words, game design in this paper is closer to a trigger condition (affordance) or practical foundation than the ultimate focus of the research analysis; what this paper truly focuses on is how players continuously produce, maintain, and reproduce the meaning of “sustainable play” during the play process.

It should also be noted that the data in this study primarily derive from Reddit and Xiaohongshu, with Chinese- and English-speaking player communities serving as the main observational contexts. This is not so much a limitation as a deliberate delimitation of scope. Indeed, this cross-contextual design enabled the study to observe an interesting phenomenon: Chinese players described their feelings toward the community as a “shiwaitaoyuan” (a utopian retreat detached from the mundane world), while English-speaking players employed the notion of “Eden” in a similar yet not entirely equivalent manner. The two expressions share comparable emotional structures, yet each carries culturally specific imaginations concerning escape, purity, rurality, and sacredness. This observation suggests that the concrete forms of sustainable play may be deeply shaped by cultural contexts. Future research extending into additional linguistic and cultural settings may help answer how players in different societies understand “sustainable play” in distinct ways, and how the sense of place within digital communities shifts across cultural contexts.

Finally, the most important significance of this study may not lie in offering a completely new and closed definition, but rather in reintroducing a question that has long been neglected: if production, consumption, social interaction, and even urban space can all be discussed in terms of “sustainability,” why not play? For a long time, play has been understood as a temporary, purposeless, and ultimately disposable form of

entertainment. This study, however, attempts to demonstrate that certain forms of play do not end when the game is closed. Instead, they seep into players' everyday lives in slower, softer, and more concealed ways, reshaping how people understand nature, others, and even themselves. In this sense, sustainable play does not point toward the grand proposition that "games make the world better." Rather, it refers to a small yet enduring practice through which people, via repeated play, interaction, and emotional investment within digital worlds, relearn how to remain connected to the world around them.

References

- Abbasi, A. Z. (2017). Playful-consumption experience of videogame-play influences consumer video-game engagement: A conceptual model. *Journal of Media and Communication Studies*, 9(1).
- Abbasi, A. Z., Ting, D. H., Hlavacs, H., Costa, L. V., & Veloso, A. I. (2019). An empirical validation of consumer video game engagement: A playful-consumption experience approach. *Entertainment Computing*, 29, 43–55. <https://doi.org/10.1016/j.entcom.2018.12.002>
- Abraham, B., & Jayemanne, D. (2017). Where are all the climate change games? Locating digital games' response to climate change. *Transformations: Journal of Media, Culture & Technology*, 30, 74–94.
- Ahn, S. J., Bailenson, J. N., & Park, D. (2016). Short- and long-term effects of embodied experiences in immersive virtual environments on environmental locus of control. *Computers in Human Behavior*, 39, 235–245. <https://doi.org/10.1016/j.chb.2014.08.025>
- Arefi, M. (2014). *Deconstructing placemaking: Needs, opportunities, and assets*. Routledge.
- Au, C. H., & Ho, K. K. (2021). The anti-ageing secret of massively multiplayer online game: Managing its lifecycle. *Australian Journal of Management*, 46(4), 652–711. <https://doi.org/10.1177/0312896220981119>
- Basaraba, N. (2023a). The emergence of creative and digital place-making: A scoping review across disciplines. *New Media & Society*, 25(6), 1470–1497. <https://doi.org/10.1177/14614448211044942>
- Belk, R. W. (2013). Extended self in a digital world. *Journal of Consumer Research*, 40(3), 477–500. <https://doi.org/10.1086/671052>
- Bogost, I. (2007). *Persuasive games: The expressive power of videogames*. MIT Press.
- Bottino, R., Jeuring, J., & Veltkamp, R. C. (Eds.). (2016). *Games and learning alliance: 5th international conference, GALA 2016, Utrecht, The Netherlands, December 5–7, 2016, proceedings* (Vol. 10056). Springer International Publishing. <https://doi.org/10.1007/978-3-319-50182-6>
- Boudreau, K. (2024). Beyond aesthetics: Players, player-characters and interactivity-as-demand in cozy games. *Replay: The Polish Journal of Game Studies*, 12(1), 7–22. <https://doi.org/10.18778/2391-8551.12.04>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Buldu, E. (2022). Understanding the value of play: Recasting playful learning by early childhood teachers. *Open Journal for Educational Research*, 6(1), 57–68. <https://doi.org/10.32591/coas.ojer.0601.05057b>

- Cabras, I., & Mount, M. P. (2017). Assessing the impact of pubs on community cohesion and wellbeing in the English countryside: A longitudinal study. *International Journal of Contemporary Hospitality Management*, 29(1), 489–506. <https://doi.org/10.1108/IJCHM-12-2015-0717>
- Caillois, R. (2001). *Man, play, and games*. University of Illinois Press.
- Camp, B. H. (n.d.). *A study of third place: Benefits of shared leisure practices in public gathering places* [Master's thesis, University of North Carolina].
- Chang, A. Y. (2019). *Playing nature: Ecology in video games*. University of Minnesota Press.
- Chang, Y.-J., Yu, T.-Y., Lin, Y.-K., & Lin, Y.-C. (2025). From gameplay to green choices: Paper Goes Green, a board game for fostering life cycle thinking and sustainable consumption. *Sustainability*, 17(21), 9571. <https://doi.org/10.3390/su17219571>
- Chen, S.-C., & Lin, C.-P. (2015). The impact of customer experience and perceived value on sustainable social relationship in blogs: An empirical study. *Technological Forecasting and Social Change*, 96, 40–50. <https://doi.org/10.1016/j.techfore.2014.11.011>
- Courage, C., Borrup, T., Jackson, M. R., Legge, K., McKeown, A., Platt, L., & Schupbach, J. (Eds.). (2021). *The Routledge handbook of placemaking*. Routledge. <https://doi.org/10.4324/9780429270482>
- Cui, Y., Li, J., & Zhang, Y. (2022). The impacts of game experience and fanwork creation on game loyalty: Mediation effect of perceived value. *Technological Forecasting and Social Change*, 176, 121495. <https://doi.org/10.1016/j.techfore.2022.121495>
- Daneels, R., Bowman, N. D., Possler, D., & Mekler, E. D. (2021). The ‘eudaimonic experience’: A scoping review of the concept in digital games research. *Media and Communication*, 9(2), 178–190. <https://doi.org/10.17645/mac.v9i2.3824>
- Daneels, R., & Maes, K. (2025). Curled up with a good game: A survey study on personality traits and game motives of cozy game players. *Eludamos: Journal for Computer Game Culture*, 16(2), 185–215. <https://doi.org/10.7557/ejcg.v16i2.7938>
- De Beke, L. O., Raessens, J., Werning, S., & Farca, G. (2024). *Ecogames: Playful perspectives on the climate crisis*. Amsterdam University Press. <https://doi.org/10.5117/9789463721196>
- Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development*, 19(5), 289–300. <https://doi.org/10.1002/sd.417>
- Dewey, J. (1939). *Theory of valuation*. University of Chicago Press.
- Dolan, P., & Galizzi, M. M. (2015). Like ripples on a pond: Behavioral spillovers and their implications for research and policy. *Journal of Economic Psychology*, 47, 1–16. <https://doi.org/10.1016/j.joep.2014.12.003>

- Douglas, B. D., & Brauer, M. (2021). Gamification to prevent climate change: A review of games and apps for sustainability. *Current Opinion in Psychology*, 42, 89–94. <https://doi.org/10.1016/j.copsyc.2021.04.008>
- Ducheneaut, N., Moore, R. J., & Nickell, E. (2007). Virtual “third places”: A case study of sociability in massively multiplayer games. *Computer Supported Cooperative Work (CSCW)*, 16(1–2), 129–166. <https://doi.org/10.1007/s10606-007-9041-8>
- Eizenberg, E., & Jabareen, Y. (2017). Social sustainability: A new conceptual framework. *Sustainability*, 9(1), 68. <https://doi.org/10.3390/su9010068>
- Ellery, P. J., Ellery, J., & Borkowsky, M. (2021). Toward a theoretical understanding of placemaking. *International Journal of Community Well-Being*, 4(1), 55–76. <https://doi.org/10.1007/s42413-020-00078-3>
- Ergas, C. (2010). A model of sustainable living: Collective identity in an urban ecovillage. *Organization & Environment*, 23(1), 32–54. <https://doi.org/10.1177/1086026609360324>
- Flanagan, M., & Nissenbaum, H. (2014). *Values at play in digital games*. MIT Press.
- Foureaux, S., & Daum, T. (2025). “But don’t think it is a game”: Agricultural videogames and “good farming”. *Journal of Rural Studies*, 117, 103686. <https://doi.org/10.1016/j.jrurstud.2025.103686>
- Frasca, G. (2003). Simulation versus narrative: Introduction to ludology. In M. J. P. Wolf & B. Perron (Eds.), *The video game theory reader* (pp. 221–235). Routledge.
- Gabler, H. W. (2018). *Text genetics in literary modernism and other essays* (1st ed.). Open Book Publishers. <https://doi.org/10.11647/OBP.0120>
- Gandolfi, E. (2022). Playing is just the beginning: Social learning dynamics in game communities of inquiry. *Journal of Computer Assisted Learning*, 38(4), 1062–1076. <https://doi.org/10.1111/jcal.12663>
- Ghavampour, E., & Vale, B. (2019). Revisiting the “model of place”: A comparative study of placemaking and sustainability. *Urban Planning*, 4(2), 196–206. <https://doi.org/10.17645/up.v4i2.2015>
- Gillin, J. L., & I9izinga, J. (1951). Homo Ludens: A study of the play-element in culture. *American Sociological Review*, 16(2), 274. <https://doi.org/10.2307/2087716>
- Goosen, Z., & Cilliers, E. J. (2020). Enhancing social sustainability through the planning of third places: A theory-based framework. *Social Indicators Research*, 150(3), 835–866. <https://doi.org/10.1007/s11205-020-02350-7>
- Grace, L. (2018). Ethical gameplay. *Journal of Game Design and Development Education*, 1(1).
- Graeber, D. (2001). *Toward an anthropological theory of value: The false coin of our own dreams*. Palgrave.

- Guillen, G., Hamari, J., & Quist, J. (2021). Gamification of sustainable consumption: A systematic literature review. *Hawaii International Conference on System Sciences*.
<https://doi.org/10.24251/HICSS.2021.163>
- Halegoua, G., & Polson, E. (2021). Exploring ‘digital placemaking’. *Convergence: The International Journal of Research into New Media Technologies*, 27(3), 573–578.
<https://doi.org/10.1177/13548565211014828>
- Hansen, A., & Bo Nielsen, K. (Eds.). (2023). *Consumption, sustainability and everyday life*. Springer International Publishing. <https://doi.org/10.1007/978-3-031-11069-6>
- Hollebeek, L. D., Abbasi, A. Z., Schultz, C. D., Ting, D. H., & Sigurdsson, V. (2022). Hedonic consumption experience in videogaming: A multidimensional perspective. *Journal of Retailing and Consumer Services*, 65, 102892. <https://doi.org/10.1016/j.jretconser.2021.102892>
- Jenkins, H., III. (1988). *Star Trek* rerun, reread, rewritten: Fan writing as textual poaching. *Critical Studies in Mass Communication*, 5(2), 85–107.
- Jenkins, H., III. (1991). "It's not a fairy tale anymore": Gender, genre, *Beauty and the Beast*. *Journal of Film and Video*, 43(1/2), 90–110.
- Jiang, S., Zhang, L., Xu, H., I9ang, J., He, Q., Zhou, X., I9ang, L., & Jiang, J. (2024). GameTrail: Probabilistic lifecycle process model for deep game understanding. *Proceedings of the 33rd ACM International Conference on Information and Knowledge Management*, 994–1003.
<https://doi.org/10.1145/3627673.3679736>
- Karacor, E. K. (2014). Placemaking approachment to accomplish social sustainability. *European Journal of Sustainable Development*, 3(4), 253–262. <https://doi.org/10.14207/ejsd.2014.v3n4p253>
- Khan, F. A., Yadav, N., Beena, F., & Kumar, M. (2019). Sustainability for the community by the community: CSR and community involvement through gamification. *International Journal of Engineering and Advanced Technology*, 8(6), 3087–3092. <https://doi.org/10.35940/ijeat.F9031.088619>
- Kozinets, R. (2010). *Netnography: Doing ethnographic research online*. Sage.
- Kumar, S., & Yadav, R. (2021). The impact of shopping motivation on sustainable consumption: A study in the context of green apparel. *Journal of Cleaner Production*, 295, 126239.
<https://doi.org/10.1016/j.jclepro.2021.126239>
- Kummer, L. B. M., Nievola, J. C., & Paraiso, E. C. (2017). *Digital game usage lifecycle: A systematic literature review*.
- Kuo, Y., Lee, J.-C., Chiang, K., Wang, R., Shen, E., Chan, C., & Hsu, J. Y. (2009). Community-based game design: Experiments on social games for commonsense data collection. *Proceedings of the ACM SIGKDD Workshop on I9man Computation*, 15–22. <https://doi.org/10.1145/1600150.1600154>

Licata, S. F. V. (n.d.). *VFR leisure experiences of Italians and Chinese in Sweden: A new study approach to migrants' personal networks influence on place participation during (im)mobility times*.

Lim, W. M., Das, M., Sharma, W., Verma, A., & Kumra, R. (2025). Gamification for sustainable consumption: A state-of-the-art overview and future agenda. *Business Strategy and the Environment*, 34(1), 1510–1549. <https://doi.org/10.1002/bse.4021>

Lin, C. A., Wang, X., & Yang, Y. (2023). Sustainable apparel consumption: Personal norms, CSR expectations, and hedonic vs. utilitarian shopping value. *Sustainability*, 15(11), 9116. <https://doi.org/10.3390/su15119116>

Lin, R., Chiang, I.-Y., & Wu, J. (2022). Sustainability: Cultural industries and sustainable development. *Sustainability*, 15(1), 128. <https://doi.org/10.3390/su15010128>

Lin, S.-Y. (n.d.). *Ready Player Green – A case study of sustainability in the Swedish games industry*.

Madani, K., Pierce, T. W., & Mirchi, A. (2017). Serious games on environmental management. *Sustainable Cities and Society*, 29, 1–11. <https://doi.org/10.1016/j.scs.2016.11.007>

Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society & Natural Resources*, 23(5), 401–416. <https://doi.org/10.1080/08941920903305674>

Markiewicz, E. (2019). Third places in the era of virtual communities. *Studia Periegetica*, 28(4), 9–21. <https://doi.org/10.26349/st.per.0028.01>

Martikainen, S.-J. (n.d.). *Meaningful work and eudaimonia: Contributing to social sustainability in the workplace*.

Meya, J. N., & Eisenack, K. (2018). Effectiveness of serious games for environmental education: A meta-analysis. *Ecological Economics*, 154, 185–195. <https://doi.org/10.1016/j.ecolecon.2018.07.001>

Michael, D., & Chen, S. (2005). *Serious games: Games that educate, train, and inform*. Thomson Course Technology.

Nash, N., Whitmarsh, L., Capstick, S., Hargreaves, T., Poortinga, W., Thomas, G., Sautkina, E., & Xenias, D. (2017). Climate-relevant behavioral spillover and the potential contribution of social practice theory. *WIREs Climate Change*, 8(6), e481. <https://doi.org/10.1002/wcc.481>

Nguyen, C. T., & Sageng, J. R. (2025). *The Routledge handbook of philosophy of games* (1st ed.). Routledge. <https://doi.org/10.4324/9781315304991>

Oldenburg, R. (n.d.). *The great good place*.

Olejarnik, S. Z., & Romano, D. M. (2025). The PMDWell framework: A confirmatory factor analysis of video game players' wellbeing. *Computers in Human Behavior Reports*, 20, 100806. <https://doi.org/10.1016/j.chbr.2025.100806>

Oliver, M. B., & Raney, A. A. (2011). Entertainment as pleasurable and meaningful: Identifying hedonic and eudaimonic motivations for entertainment consumption. *Journal of Communication*, 61(5), 984–1004. <https://doi.org/10.1111/j.1460-2466.2011.01585.x>

Ouariachi, T., Olvera-Lobo, M. D., & Gutiérrez-Pérez, J. (2017). Serious games and climate change: A systematic review. *Renewable and Sustainable Energy Reviews*, 80, 579–589. <https://doi.org/10.1016/j.rser.2017.05.277>

Palermo, P. C., & Ponzini, D. (2014). *Place-making and urban development*. Routledge. <https://doi.org/10.4324/9781315885469>

Park, C., & Kim, Y. (2025). Does digital space shape physical space? Unraveling spatial characteristics of third places distinguished by online platform using explainable AI. *Cities*, 165, 106144. <https://doi.org/10.1016/j.cities.2025.106144>

Pearce, C., Fullerton, T., Fron, J., & Morie, J. F. (2007). Sustainable play: Toward a new games movement for the digital age. *Games and Culture*, 2(3), 261–278. <https://doi.org/10.1177/1555412007304420>

Peng, W., Lee, M., & Heeter, C. (2010). The effects of a serious game on role-taking and willingness to help. *Journal of Communication*, 60(4), 723–742. <https://doi.org/10.1111/j.1460-2466.2010.01511.x>

Pérez, E. (2023). Turning it sustainable: Implementing sustainability goals in theatre productions at NTNU. *Nordic Journal of Art & Research*, 12(2). <https://doi.org/10.7577/ar.5247>

Quoquab, F., & Mohammad, J. (2020). A review of sustainable consumption (2000 to 2020): What we know and what we need to know. *Journal of Global Marketing*, 33(5), 305–334. <https://doi.org/10.1080/08911762.2020.1811441>

Rezvani, Z., Jansson, J., & Bengtsson, M. (2018). Consumer motivations for sustainable consumption: The interaction of gain, normative and hedonic motivations on electric vehicle adoption. *Business Strategy and the Environment*, 27(8), 1272–1283. <https://doi.org/10.1002/bse.2074>

Ridge, M. (2022). Why so serious? The nature and value of play. *Philosophy and Phenomenological Research*, 105(2), 406–434. <https://doi.org/10.1111/phpr.12826>

Ruggiero, D. (2015). The effect of a persuasive game on attitude change. *Computers in Human Behavior*, 45, 213–221. <https://doi.org/10.1016/j.chb.2014.11.062>

Salen, K., & Zimmerman, E. (2004). *Rules of play: Game design fundamentals*. MIT Press.

Schneekloth, L. H., & Shibley, R. G. (n.d.). *The practice of placemaking*.

Shahzad, M. F., Wang, W., Yuan, J., & Zafar, M. Z. (2025). Ethical ideologies and sustainable consumption: Insights from Chinese consumers. *Sustainable Development*, 33(6), 8894–8906. <https://doi.org/10.1002/sd.70133>

Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE Publications.

Sicart, M. (2009). *The ethics of computer games*. MIT Press.

Sicart, M. (2013). *Beyond choices: The design of ethical gameplay*. MIT Press.

Silverman, D. (2013). *Doing qualitative research*. Sage.

Sini, R. (2022). The social, cultural, and political value of play: Singapore's postcolonial playground system. *Journal of Urban History*, 48(3), 578–607. <https://doi.org/10.1177/0096144220951149>

Steinkuehler, C. A., & Williams, D. (2006). Where everybody knows your (screen) name: Online games as 'third places'. *Journal of Computer-Mediated Communication*, 11(4), 885–909. <https://doi.org/10.1111/j.1083-6101.2006.00300.x>

Suits, B. (1977). Words on play. *Journal of the Philosophy of Sport*, 4(1), 117–131. <https://doi.org/10.1080/00948705.1977.10654132>

Suits, B. (1988). Tricky triad: Games, play, and sport. *Journal of the Philosophy of Sport*, 15(1), 1–9. <https://doi.org/10.1080/00948705.1988.9714457>

Sutherland, L.-A. (2020). The 'desk-chair countryside': Affect, authenticity and the rural idyll in a farming computer game. *Journal of Rural Studies*, 78, 350–363. <https://doi.org/10.1016/j.jrurstud.2020.05.002>

Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *American Sociological Review*, 77(2), 167–186.

Tölg, R. (2025). *The (im)possibilities of circular consumption: Producing and performing circular clothing consumption in retail and household settings*. Lund University.

Treanor, M., & Mateas, M. (2011). Proceduralist readings: How to find meaning in games with graphical logics. *Proceedings of the 6th International Conference on Foundations of Digital Games*, 313–315. <https://doi.org/10.1145/2159365.2159428>

Truelove, H. B., Carrico, A. R., Weber, E. U., Raimi, K. T., & Vandenberg, M. P. (2014). Positive and negative spillover of pro-environmental behavior: An integrative review and theoretical framework. *Global Environmental Change*, 29, 127–138. <https://doi.org/10.1016/j.gloenvcha.2014.09.004>

Vallance, S., Perkins, H. C., & Dixon, J. E. (2011). What is social sustainability? A clarification of concepts. *Geoforum*, 42(3), 342–348. <https://doi.org/10.1016/j.geoforum.2011.01.002>

Welden, R., Hewett, K., Yoo, K., Haenlein, M., Smith, K. M., Pauwels, K., Kannan, P. K., & I9lland, J. (2025). Leveling up retail: How retailers and brands thrive in the video game ecosystem. *Journal of Retailing*, 101(4), 583–600. <https://doi.org/10.1016/j.jretai.2025.06.002>

- Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviours. *Journal of Environmental Psychology*, 30(3), 305–314. <https://doi.org/10.1016/j.jenvp.2010.01.003>
- Whitson, J., & French, M. (2021). Productive play: The shift from responsible consumption to responsible production. *Journal of Consumer Culture*, 21(1), 14–33. <https://doi.org/10.1177/1469540521993922>
- Whyte, W. H., & Hiss, T. (2012). *Last landscape*. University of Pennsylvania Press.
- Wu, J. (2007). The effects of trust and enjoyment on intention to play online games. *Journal of Electronic Commerce Research*, 8(2).
- Wu, J. S., & Lee, J. J. (2015). Climate change games as tools for education and engagement. *Nature Climate Change*, 5(5), 413–418. <https://doi.org/10.1038/nclimate2566>
- Wu, J., Ju, L.-H., Lin, P.-H., & Lyu, Y. (2022). The relationship between form and ritual in cultural sustainability. *Sustainability*, 14(15), 9157. <https://doi.org/10.3390/su14159157>
- Yang, J., & Černevičiūtė, J. (2017). Cultural and creative industries (CCI) and sustainable development: China's cultural industries clusters. *Entrepreneurship and Sustainability Issues*, 5(2), 231–242. [https://doi.org/10.9770/jesi.2017.5.2\(6\)](https://doi.org/10.9770/jesi.2017.5.2(6))

Appendix I Interviewguide

Hello, we are Master's students from the Department of Service Management at Lund University. We are currently conducting our thesis research on "Sustainable Play in Digital Games." Thank you for agreeing to participate in this interview. Our project mainly focuses on how digital games construct sustainability through player communities and ecological perspectives embedded in gameplay.

This interview will be audio recorded. All information will be treated confidentially in accordance with academic ethical standards. Your personal information, as well as any names, locations, or events mentioned during the interview, will be anonymized. The interview material will be used solely for academic purposes within the Master's thesis project at Lund University. Do you have any questions regarding these arrangements before we begin?

Introductory Questions

Background Information

How did you first learn about Stardew Valley?

Approximately how many hours have you played the game?

From the first time you played to the last time you played, roughly how long was this period?

What was your general playing frequency like during this time?

Comparing your feelings, emotions, and overall state when you first started playing the game with your feelings, emotions, and state the last time you played it, do you think there has been any change?

If not, the interview may move to the concluding questions.

If yes, why do you think these changes occurred?

Do you think these changes are related to interactions with the community or other players?

Community Co-Production

This section explores the values produced through collective interaction in play, how players perceive the community, how the community relates to their everyday lives, and whether gameplay contributes to the creation of a sustainable community.

Have you ever participated in any Stardew Valley communities (such as Weibo, Xiaohongshu, Douban, QQ groups, or similar platforms)?

How do you mainly participate in these communities, online or offline?

Can you describe what you usually do, post, or look at within the community?

How frequently do you interact with the community?

Are there any posts, discussions, or pieces of content that left a particularly strong impression on you?

Why did you find these posts memorable or meaningful?

For you personally, what kind of place is the Stardew Valley community?

What types of posts or interactions do you like or dislike the most within the community?
Could you explain why?

How do interactions within the Stardew Valley community generally make you feel?
Can you describe specific events, posts, or experiences that created these feelings?
What words would you use to describe the atmosphere of the community?
Why do you think this kind of atmosphere has formed?

Have these community interactions or atmospheres influenced your gameplay experience?
Did they make you want to stay in the community more, or less?

Have these interactions or the overall atmosphere influenced your everyday life in any way?
For example, changes in mentality, attitudes, or perspectives?

Do you think the Stardew Valley community is different from communities surrounding other types of games?
If yes, why do you think such differences exist?
If no, are there other game communities you consider similar? Are those games similar to Stardew Valley itself?

If communities centered around player interaction did not exist, do you think your experience of the game would be different?
If not, what motivates you to participate in the community?
If yes, what would be the biggest difference?

What does this game community mean to you personally?

Spillover of Gameplay into Everyday Life

This section focuses on whether and how gameplay may influence players' perspectives and everyday practices, particularly in relation to ecological sustainability.

Have you ever done something in your real life, or noticed something different about yourself, and then realized it might be related to playing Stardew Valley?
If not, the interview may move to the concluding questions.
If yes, could you describe what happened and how it made you feel different?

Have you paid attention to ecological or environmental elements within the game? For example, animals that cannot be killed, recycling machines that turn trash into useful items, Linus's relationship with nature, or the grandfather's letter.
Which storyline or element left the deepest impression on you, and why?

Before playing the game, were you already interested in topics such as ecology, nature, or environmental protection?
How did you feel about these topics at that time?

Did these storylines or gameplay experiences give you any new feelings or ideas about ecology or nature?

If not, the interview may move to the concluding questions.

If yes, how do you understand or interpret these changes?

Have these ideas influenced your behavior or everyday life in any way? If so, how?

If you were to describe it in your own words, what kind of role does Stardew Valley play in your life?

Concluding Question

Do you have any questions about this research, or anything else you would like to add?

Appendix II Information Letter and Consent Form



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Research Project Information Letter and Consent Form

Hello, we are Yiran Wang and Yikang Chen, currently master's students in the Department of Service Studies at Lund University. We are writing to cordially invite you to participate in our master's research project, "Sustainable play in Video Games." Please find details about the project and the specific requirements for participation in this document.

What is the project about?

In this project, we hope to better understand how games connect with values related to "sustainability" by exploring players' experiences in *Stardew Valley*. The study focuses on your long-term gameplay experience and how you understand, engage with, and experience these elements during the game. We also want to examine whether these experiences influence your feelings and behaviors in other contexts to some extent. More specifically, we are particularly interested in your interactions and communication within the game community—for example, how you communicate and collaborate with other players, and how you perceive these interactions. This is a unique experience because it extends beyond the game itself and is connected to your daily life, your emotional experiences, and your relationships with others. We'd love to hear your perspectives and experiences, learn about the choices you make and how you engage in the game, and discuss your understanding of the game's content—such as the environment, the community, or interpersonal relationships—as well as the feelings and thoughts these experiences evoke in you.

What does it mean to participate?

It means to participate in a conversational interview, where we will discuss your long-term experience playing *Stardew Valley*. The interview will include open-ended questions designed to encourage a natural conversation. The session is expected to last approximately 30–45 minutes and can be conducted either in person or online.

Participation is voluntary.

Your participation is voluntary, and you can choose to withdraw from the research at any time. If you choose not to participate, not to answer some questions or want to cancel the interview, you do not need to

state any reason. You are not entitled to compensation for travel, lost earnings or other expenses related to the project.

What happens to my information?

The project will collect personal information about you. If you agree, the interviews will be recorded digitally and transcribed. However, your anonymity will be kept, and you will be free to choose which personal information you wish to share. The information you give us will be handled confidentially, so that no-one unauthorized will have access to it. All data will be strictly anonymized and kept confidential in accordance with the requirements of the Academic Ethics Committee of Lund University.

How do I get information about the result of the project?

You can get information about your individual data and the results of the entire project by contacting us (see my email address below). The result will not be sent to you automatically.

Responsibility for the project

Responsible for the project is Yiran Wang and Yikang Chen, master students in the Department of Service Management at Lund University.

Phone: +46 762810579 / +46 737718107

Email: yi4651wa-s@student.lu.se / yi8741ch-s@student.lu.se

If you have any further questions or you need more information or clarifications, you can contact us at any time, before or even after the interviews.

Consent to participate in the research project

“Sustainable play in Video Games”.

I have been given oral and written information about the study and have had the opportunity to ask questions. I have also been informed that my participation can be cancelled at any time without the need to explain why. I have been informed that people, places and other details are handled so that I as well as other people whom I mention cannot be identified.

☐ I agree to participate in this project and that information conveyed in interviews and conversations may be used for research purposes.

☐ I agree that information about me is processed in the manner described in the research project information.

Place and Date	Signature

Appendix III Coding Form

Name	Document	Point
Behavioral spillover	0	0
Environment protection	3	6
Identity spillover	3	7
Reflection on real life	7	17
Value internalization	3	3
Community cohesion	0	0
Belonging	5	10
Diversity	4	6
Equality	6	9
Inclusivity	7	15
Resilience	1	2
Supportive	6	9
Low-Competitive	10	18
Ecological Meaning-Making	0	0
Ecological awareness	7	12
Knowledge gaining	5	7
Sense of duty	2	3
Place attachment	1	1
Cozy	8	12
Creation	5	6
Familiarity	2	2
Identity	7	10
Separation	6	9
Speciality	9	14
Social connection	0	0
Bridge social relations	8	9
Knowledge sharing	4	6
Negative code	2	1