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Article

Play, Flow and Wonder – Reassessing the Notion of Optimal Experience

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Abstract: Since its introduction almost 50 years ago, the concept of 'flow' has been descriptive of optimal experiences, also in relation to play. However, the explorative nature of play leads to some discrepancies between flow and the optimal experience of play. In this paper the differences between flow and play are explored, leading to proposing the state of 'wonder' (directed at exploration) as an alternative to 'flow'. From this perspective, the study further explores how we may design toys that enable meaningful experiences of play, identifying opportunities in designing for toys as the enablers of immersed experiences of wonder.

Keywords: Play; Flow; Design; Wonder; Toys

Introduction

In the early 1970's Mihaly Csikszentmihalyi (Csikszentmihalyi 1975b; Csikszentmihalyi and Bennett 1971) proposed the concept of Flow as the state of optimal experiences, where a person becomes totally immersed in the experience and feel a deep sense of enjoyment. Csikszentmihalyi and Bennett (1971) noted that "a most outstanding quality of this state of ambience or participation with the environment is the actor's lack of an analytic or "outside" viewpoint on his conduct: a lack of self-consciousness" (Csikszentmihalyi and Bennett, 1971: 47). The main idea of flow is that the optimal, immersed, experience is reached when there is an optimal correlation between challenge and competencies. They (ibid: 46) note that this state of flow can be obtained when "the actor's ability to act matches the requirements for action in his environment", and relieves the actor from worry and boredom.

The optimal experience is generally considered to be the experience of full immersion in the experience, where one forgets about everything else than being in the moment. In this concept of total immersion there is a great deal of resemblance between playing, competitive gaming, sports, and other activities. Holst (2017: 93) for instance notes that "the more the play seizes the players, the less aware they are of what they are playing."

While Csikszentmihalyi and Bennett (1971) link the concept of flow directly to games and use examples of competitive activities such as chess, soccer, golf, baseball, they tend to use the terms play and games interchangeably, seeing games as a large (and the most important part) of play, albeit also noting that "formal games are but one of the forms in which play can be". (Ibid :48). In 1975 these ideas were defined specifically as the concept of 'flow' in two publications by Csikszentmihalyi (1975a; 1975b). The concept of flow has since been used as the overarching concept of optimal (fully immersed) experiences in play, games, learning and work (see e.g. Paras, 2005; Whalen and Csikszentmihalyi, 1991; Engeser and Rheinberg, 2008; Thomson and Jaque, 2016; Warren and Donaldson, 2017; Chan and Ahern, 1999).

The reason that play and flow has been linked is evident, seeing that there are overt commonalities between the notion of flow and experiences of play. A person in a state of flow fully immerses himself in the experience and continues to work on a task simply for that task's sake (Csikszentmihalyi 2008). Analogously, play experiences are considered to

be bracketed in their own time and space (Gordon 2009) with the player becoming fully absorbed in the activity (Huizinga 1949). Sicart (2014: 16) notes that "Play is autotelic—an activity with its own goals and purposes, with its own marked duration and spaces and its own conditions for ending."

Gray (2015) compare play and flow, focusing on five characteristics of play which he links to flow. The five characteristics are as follows:

- Play is self-chosen and self-directed.
- Play is intrinsically motivated.
- Play is guided by rules (or always has structure).
- Play is imaginative.
- Play is conducted in an alert, active, but relatively nonstressed frame of mind.

While some of these characteristics are certainly comparable (e.g. that it is self-chosen and intrinsically motivated) others seems more questionable. Play generally has a structure, but the structure is always open for reinterpretation and reconstruction, and thus not directed towards a specific obtainable goal as flow must be. Play requires an open and explorative mindset, and is not as rigid as e.g. games and competitions. The fit between flow and the imaginative nature of play could also be questioned. Gray (2015: 134) notes that imagination "fits with the idea that the person is able to concentrate on a limited stimulus field, thereby forgetting his or her own problems". This seems, however, a slightly skewed idea of imagination, seeing that imagination is typically viewed as an exploratory rather than limiting concept. Harris (2021: 1) for example writes that "in developmental research, the imagination is often linked to the generation of creative or unusual possibilities and children's early capacity for make-believe". It seems that where the concept of flow requires pre-defined goals and enables focused concentration, play requires a flexible structure without pre-defined goals and enables exploration and creativity. Following Jensen (2014), flow would be related to goal-orientation, and play, based on its open and explorative nature, would be related to omni-orientation and thus open to the twists and turns that may emerge during the activity.

Van Leeuwen and Westwood (2008: 159) defined gameplay as 'performance-oriented stimulation' and toyplay as 'unorganized stimulation'. What van Leeuwen and Westwood describe as unorganized stimulation can be aligned with what other researchers (e.g. Legaard (2018) refer to as exploration. Sicart (2014: 5) noted that "through play we experience the world, we construct it and we destroy it, and we explore who we are and what we can say" similarly to how Winnicott (1971) aligned play with exploration, describing play as taking place in a transitional space between the inner and outer reality which enables creative action.

In later publications by Csikszentmihalyi following his widely popular book 'Flow: The psychology of optimal experience' first published in 1990 (Csikszentmihalyi 2008 [1990]) he no longer explicitly equates flow with play, which may also indicate that he himself started to experience discrepancies between the concepts. Pavlas (2010: 137) notes that "while flow and play were strongly related in the prior studies, these findings may not be externalizable to non-game contexts.". The fact that play is not always goal-oriented (e.g. in non-game contexts) suggests that there are many instances where the concept of flow is not appropriate for describing the immersed state of explorative play experiences, for instance when children play house, play with dolls or use the swings and slides at a playground. In fact, most attempts to define play refer to it as an intrinsically motivated activity free of extrinsic goals or consequences (Huizinga 1980; Caillois 1961; Sicart 2014; O'Connor and LaPoint 1980), meaning that play is in most occasions not directed towards a specific goal. So, in many play experiences, the main requirements of flow (that there is a task to accomplish, the ability to concentrate on the task, and to have clear task goals (Csikszentmihalyi 1990)) are not met.

The perspective presented in this article explores the differences between play and the concept of flow, proposing an alternative state of optimal experience within play that

accounts for the explorative nature of play experiences rather than a focus on tasks. In the following sections I will also focus on objects of play (toys) in comparison to task-related objects (tools), seeing that “a study of play needs to pay attention to the objects of play, to the playthings we create.” (Sicart 2014: 35). The examples of toys in comparison to tools also serve to further explicate the differences between flow and play.

The meaning of toys and play

The purpose of the following section is to establish a foundational understanding of the origin of meaningfulness in the design of toys versus the design of other objects - for simplicity purposes denoted as tools. Where tools are designed in adherence to accomplishment, toys are designed in adherence to exploration.

Understanding how an object affects the experience for the user requires an understanding of different layers of meaning that the person perceives from it. Vygotsky (2016: 17) states that “in play, action is subordinated to meaning, but in real life, of course, meaning is subordinated to action.” Fleer (2011) follows this line of thought, describing how the child immersed in play has a switch of attention from the object to the meaning the child has given the object. You could say that during the process of immersion, the object dissolves into the meaning that can be approximated from it, and thus the meaning is foregrounded in the child’s attention. It is important to note, though, that not only in play experiences do we see this switch of attention from the object to the meaning. Hassenzahl (2011) describes this stage of deep immersion, where attention is fully directed at the meaning, as transcending the material.

The difference between play and most flow-related types of experiences is that the immersive state of play relates to the imagined realm of the play situation, which is not bound by any purpose or outcome, but is free and explorative. Kudrowitz and Wallace (2010) describe play as a ‘free movement with given affordances’, in line with (Caillou 1961) who notes that “there is no doubt that play must be defined as a free and voluntary activity, a source of joy and amusement”. In play, framing of the play situation (‘within given affordances’) and the purpose of the play activity is considered a free movement, always open for exploration and negotiation between players. Sicart (2014) similarly writes that “play has a purpose of its own, but the purpose is not fixed. Play activities can be described as diachronically or synchronically autotelic, focusing on how the purpose of play evolved through the play session or looking at what particular purpose a particular instance of play had in a particular session.” This also means, that play experiences only occasionally leads to what Csikszentmihalyi (2008) defines as flow. He (ibid: 216) writes that “to experience flow one must set goals for one’s actions: to win a game, to make friends with a person, to accomplish something in a certain way.” Play, in contrast to this, is non-goal oriented, meaning that it allows us to be in a state that is open and explorative.

The optimal experience of play

If we, in line with Gordon (2009) consider play to be ‘bracketed’ in its own experiential space, it means that play forms a meta-reality that you immerse yourself in when you play. Gray (2015: 126) notes that play is always imaginative, stating that “play always involves some degree of mental removal of oneself from the immediately present real world”.

The moment in a play experience when someone immerses themselves in the imagined meaning of the experience, is denoted by Legaard (2022: 77) as the “Point of Wonder”. He (ibid) notes that at this stage in the play experience, both curiosity and creativity are simultaneously stimulated. The idea that creativity and curiosity are important constituents of ‘wonder’ is in line with the perspectives of Descartes, referred to by Buchanan (2007: 44), who writes that “for Descartes, wonder signifies surprise. It is the primary human passion, and it marks the beginning of desire in the human soul, giving the first in-

dication that an object before us merits our attention and further exploration". Here, Buchanan (ibid) underlines the importance of curiosity as a key concept of wonder. He (ibid: 44) further notes (about 'wonder' and 'astonishment') that "these emotions are both the sign and the source of creativity and originality", linking wonder to creativity as well as curiosity.

The concept of "Wonder" refers in this case to both reflection-in-action (deeply exploring the possible meaning of the activity) and the wonder as a touch of "magic" (when the person playing buys into the enchantment, and unicorns come alive). So where immersive experiences related to e.g. difficult challenges or competitive games can lead to the mental state of 'flow', play experiences can lead to a different, non-goal oriented, mental state here denoted as the state of 'wonder', which emerges when those playing become fully immersed in the play experience. This state is closely linked to exploration, building on curiosity and creativity.

It does not mean that a play experience can never be experienced as a state of flow. If, for example, a group of children are playing on a pirate ship, and they decide to split up in two groups of pirates that are fighting against each other, they will orient themselves towards a purpose and goal (fighting the incoming foes), pushing them towards a state of flow. But in this case, it is still within the realm of the pretend state of the play activity, where an exploration of own abilities, and some degree of measurement of strength and competencies against ones friend's competencies are in focus, and not an explicit goal of real achievement and winning. Karoff (2013) also identified instances of flow in play situations. She proposed four different moods of play, where especially the play mood she defines as 'devotion' links to the state of flow. She (ibid: 9) writes that the 'devotion' mood is:

...characterised as a feeling of being in a flow, continuously being in the moment, which is accompanied by lightness. There is no hardness when being in this state, merely concentration and focus, and the body is often quiet or moving in slow motion. Often when children are playing with lego blocks, dolls or drawings in their own room, this play mood will be in focus.

The dependency between the explorative and goal-oriented states were also mentioned by Jensen (2014) who note that goal orientation and omni orientation are co-dependent, so a framework of experience needs to support the juxtaposition of elements that relate to both. Similarly to how omni-oriented play experiences may switch to become goal-oriented, games can also be played in manners that are explorative rather than goal-oriented. Pavlas (2010: 57) notes that "While a game may impose a rule-based structure in which behavior takes place, the actual behavior the player can exhibit within that space can still be free (i.e., unrestrained beyond the base rules of the game)." Rather than seeing 'flow' and 'wonder' as two mutually exclusive mental states, they are thus to be regarded as two ends of a scale, albeit connected to different enabling objects, these being toys and tools. Considering objects in relation to these states, it follows that toys will ultimately relate to play (and thus the state of wonder), and other objects – considered to be tools in a broad sense – will ultimately relate to the state of flow. A toy has no utilitarian function other than enabling the play experience in itself. A tool – as the counterpart to toys – is defined by its utilitarian function. A dress is made to cover the body and keep us warm. A car is made to bring us somewhere. A hammer is made to punch a nail into a wall. Conversely, a princess dress is made to constitute the imaginative role of being a princess. A toy car enables those playing to travel anywhere instantly. The hammer of Thor creates lightning and thunder.

Tools for Achievement, Toys for Exploration

Anything can be appropriated to be a toy, if that is the intended experience of the person playing (Thibault, 2015; Sicart, 2014). Considering something a toy then affects how the item is used, and the state it relates to. Anything considered to be a toy will first

and foremost relate to the immersed state of wonder, and be related to the purpose of exploration in an (imaginary) play experience. Sicart (2014: 36) notes that “through toys, we realize that play is possible, and we start playing. The toy is a gate to the world understood through play.” If I were to incorporate a real hammer in a play experience, it would not be used to actually put up a picture on the wall, but it would be used to create thunder and lightning or other pretend activities. Thibault (2015) notes that “Seen from outside play, toys are perceived as a commodity, an object covering the function of entertaining children. On the other hand, toys seen from inside play, have some “magic” feature that transforms them into something else, something more.” The perception of those having the experience - in the play state of wonder – enables them to give the toy a specific meaning, eliciting exploration of the fantasy of the play activity. A tool, on the other hand, will in an immersed experience relate to the state of flow, and be related to the purpose of achievement in a (real) challenging experience.

The XY-diagram below illustrates these connections, where the Y-axis represents the foregrounded attention in relation to immersion, ranging from ‘Object/activity’ focus to a focus on the deeper layers of ‘Meaning’. The two realms of meaning (‘Reality’ and ‘Fantasy’) are placed along the X-axis. This aids to visually unfold the relations between what Csikszentmihalyi (2008) refers to as FLOW, and what, in connection to play, is referred to as WONDER. Reality relates to tools because they are bound by their – real – purpose as utensils, whereas toys per definition are meant for ‘pretend’, meaning that they relate to an imagined fantasy, in which they can be and do anything the player decides.

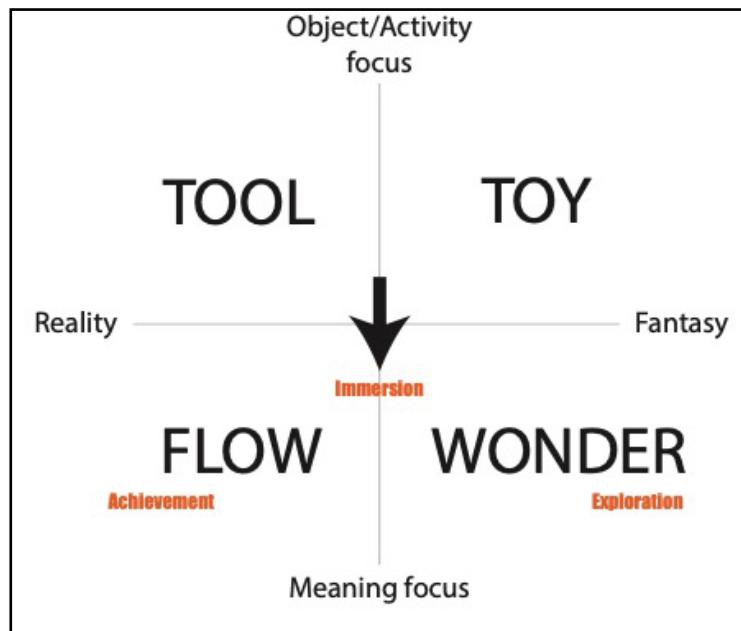


Figure 1: The Flow and Wonder model.

What Csikszentmihalyi (2008) describes as the good challenge - a key point in the state of flow - would instead be a matter of enabling exploration in relation to the state of wonder. Play does not require a certain level of skill, seeing that the play situation emerges between those who play, and the requirements are whatever the players are capable of.

For someone in the state of wonder, their perspective on the object will be that of a toy, no matter what the object was originally designed to be. That is how, for instance, a cardboard box can be actively appreciated as a toy by a child playing with/in it. Leeuwen & Westwood (2010: 6) similarly note that “ascribing meaning to it which exceeds its physical characteristics makes the object part of both the subjective and objective world of its owner.” Sicart (2014: 14) likewise notes that “the play object, be it a game or a toy, is just a prop for play. Regardless of all the intentions and meanings embedded in the design of

play objects, play will always force us to contextualize the meaning of the things involved in playing. Play appropriates the objects it uses to come into existence."

We can rapidly switch between free play (for instance playing around with a ball) and playing within a structured game-like framing (turning the play with the ball into a match) or using an object for a functional purpose. (Verbeek 2011) noted how both human beings and the world of objects should not be considered pre-existing entities, but rather something that become constituted through the perception and meaning making in the relation between them. In relation to the XY-diagram above, this also means that a toy can switch between the states of flow and wonder, if the meaning of the toy becomes re-contextualized, e.g. that playing around with a ball turns into a 'real' football match with the objective of winning. At this point, the ball also loses its freedom of interpreted meaning, when the ball becomes a tool, containing specific possibilities of action, locked in on a set purpose. The ball is now an object intended for achievement rather than an object for exploration.

Aesthetics of toys in adherence to 'Wonder'.

Toys do not need exuberant aesthetics in order to elicit meaningful experiences of play. And yet, much research about design principles for play focus on exuberant design aesthetics, for instance in the description of 'semantics of fun' by Blythe & Hassenzahl (2003: 99). They write that "during fun the senses must be engaged, there must be spectacle. The bright and luminous colours of children's toys, the gaudy kitsch sets of the popular game show, the explosions of light and sound in popular film are instances of the spectacle of fun. ... If there is an aesthetic of fun then it is gaudy, and fleeting, it bursts at the eye like a firework." Blythe and Hassenzahl (*ibid*) focus on the intensity of perceptual stimulation as the main point in designing for fun. However, most play activities do not demand such intensity in the perceptual stimulation. Zosh and Hirsh-Pasek (2017) write (as an advice to parents when choosing toys) that: "by thinking more about the experience and less about the toy, you will quickly begin to separate fact from fiction when it comes to fun, educational, meaningful toys versus fads and chocolate covered broccoli." Considering the described meaning of toys in relation to wonder, we may be able to design objects that has a more profound impact on the experiences of play, rather than only initial attraction. Aesthetics in relation to meaning has the ability to elicit immersion in play experiences, and affect how the playful exploration may unfold. If the aesthetics of a toy, for instance, prescribe the play context (e.g., the design of a castle), the person(s) playing will be led towards exploration of the imagined narrative within that setting. Objects that are more simple in their form and designed for interconnectivity (e.g., standard LEGO bricks) requires/allows the user to construct and develop new objects and narratives themselves, in the attempt to better approximate the reality of the construction to the envisioned meta-reality. Another argument for being mindful of the level of stimulation in regards to the design for experiential meaning was noted by (O'Neill et al. 2019), who did a study focused on language development of small children. They found that a more subtle design of a toy could increase the quality of parent-child talk as they play with, and talk about, the toy together.

Looking at how aesthetics of play relate to what might be viewed as 'beautiful' objects, (Withagen and Caljouw 2017) did a study on the design of playgrounds, where they found that there was no correlation between what children found aesthetically pleasing and the quality of play. On the contrary, messy structures with a fair amount of variation appeared to enable a heightened level of genuine play. This underlines how design aesthetics of play experiences are experienced as subordinated to the meaning of the play activity, i.e. supporting curiosity and creativity, in order to enable an immersed state of wonder through possibilities for exploration. As such, toy designs should indicate – but not prescribe – possibilities of a play experience. A play house that is crooked and tilted, may provide freedom of interpretation as to who might live there and the narratives that

could unfold, but may, on the other hand, be less conducive to 'playing house' in which case the design should instead support a familiar notion of an 'ordinary' house.



Figure 2: Playhouse. Image from Pixabay.com.

One is thus not viewed as better than the other – but they relate to, and should be designed in accordance with, different play scenarios and possibilities for exploration.

Conclusion

As explicated through this paper, optimal experiences should not only be regarded experiences of flow, but can also be experiences of wonder, when related to the experience of play. Play experiences are explorative by nature, and builds on curiosity and creativity in order to open and enter the immersed play space. As such, immersion in play experiences does not refer to the state of flow, but instead to a state of wonder which is focused on exploration rather than achievement. A toy, as an entry point for this exploration, should not only provide clues of possible formations of meaning, but should also consider an openness of interpretation, enticing the player to start exploring freely. The aesthetics of toys should not relate to e.g. the functionality of a hammer, but rather how the concept of a hammer might be explored in the state of wonder. Instead of usability of tools, we need to consider the potentiality of toys.

The author suggests that there may be unexplored design opportunities in understanding meaning as relating to the state of wonder, eliciting explorative experiences of play. The research presented in this paper is intended as a foundation for how we understand and discuss play, and provides approaches to enabling meaningful play experiences. It is considered a starting point for further studies in this area.

It is also the intention of the paper to advocate for an explicit awareness of the difference between designing tools for immersed experiences of flow, and toys for immersed experiences of wonder, but the author also suggests to consider how they may draw inspiration from each other, allowing indications of either flow or wonder in other types of design. Toys (and other playful objects) that encourage and support explorative play experiences may just lead to experiences that are ... wonderful.

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