Step Right Up

Applying Wolfgang Iser, Stuart Brown, and Scott Eberle's theories of play to the relationship between Interactive Installation and those who participate in them

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Frameworks of Play

In Wolfgang Iser's 1993 book *"The Fictive and the Imaginary: Charting Literary Anthropology"*, the fundamental idea of "Play" is broken down into two distinct categories dependent on their relationship with the motivating factors present in the activity (Iser 1993, 237). The first version that Iser defines is "Free Play". In Iser's words "[...] fictionalizing is free play. It oversteps what is, and turns in the direction of what is not". Iser's definition of Free Play is in direct conversation with his background as a literary scholar, but the fundamental idea of Free Play according to this theory can be boiled down something akin to "children chasing each other around a field for no reason other than because it felt fun in the moment" (Olson 2022) and applied to a wide variety of physical practices. Play without guides, goals, or external motivators is the essence and definition of Free Play. On the other side of the theory is "Instrumental Play". Iser defines Instrumental Play as "work[ing] against its own being played away. This play of difference, although triggered by fictionalizing, can no longer be controlled by it; it can only be acted out" (Iser 1993, 238). Free Play *becomes* Instrumental Play the moment an end goal, motivation, objective, or "Win Condition" enters the activity. Again, while Iser's definition is

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specifically tailored to the relationship between reader and author, the idea can be applied to essentially any interactive activity. Iser's distinctions of Free Play and Instrumental Play have been applied to a variety of categories ranging from Iser's own application to fictional literature to T.L. Taylor's 2006 application of the theory to online video games (Taylor 2006).

Iser's Theory of Play operates on a very absolute basis, demanding that all work be placed on a spectrum between two extremes. This theory is particularly useful when applied as exactly that: *a theory*. When examining both literary and exhibitive work as a theoretical practice, Iser's theories provide a universal foundation on which deeper analysis can stand. However, for all the use that Iser's theories provide for theoretical analysis, the extremes and absolutes that are established by the poles of "Free Play" versus "Instrumental Play" allow a great deal of nuance to fall through the cracks when applied to practical work. Iser's theory largely ignores the psychological foundations of the individuals taking part in any sort of play, and therefore tends to completely miss the unique aspects of interaction that each individual brings to any given work. Literary works cannot inhabit a space of either Free or Instrumental Play without the presence of an individual (or individuals) to interact with them. This same principle governs the interactive design of Digital Interactive Installation (DII). Without the presence of participants, there can be no interaction. In order to properly assess the qualities of Play present in any given DII, one must turn to a more psychosocial study of the subject; which is where Stuart Brown, founder of the National Institute for Play, enters the conversation.

In his 2010 book "*Play: How it Shapes the Brain, Open the Imagination, and Invigorates the Soul*" Brown argues that Play is a necessary facet of social life. In order to support this, Brown establishes a framework for exactly what can be considered "Play" in the context of personal/social value. This framework includes the following requirements:

1. *Purposeless*

2. *Voluntary*

3. *Inherent Attraction*

4. *Freedom from Time*

5. *Diminished Consciousness of Self*

6. *Improvisational Potential*

7. *Continuation Desire*

Any activity, Brown argues, that successfully meets these seven requirements can be considered play in the social/psychological sense (Brown 2010). While Iser's theory assumes that an activity (in this case interaction with literature or an exhibitive work) is already "Play" and therefore seeks to categorize it, Brown's theory stands to question whether or not any specific activity can be considered "play". This creates an important order of operations when considering the psychology of interaction with any given DII. Before Iser's theory can be applied, and a designation of a *type* of play can be established, Brown's theory can be used to delineate whether or not a given type of interaction can even be considered play at all. In doing so, a crucial clue into the interactive philosophy behind the design of an installation can be found. Was the artist thinking about their work in the context of Play? Did they design the piece with a playful interaction in mind? These questions can be answered through the application of Brown's framework of what can and/or cannot be considered play.

While Brown's theory designates whether or not an activity can be considered play, and Iser's theory categorizes this play into a linear spectrum, neither theory explores exactly what play involves, and how it develops. In order to fully examine the impact of Play in a DII, three questions must be answered:

- Can the interaction be considered play?

- What type of play is taking place within the work?

- *What stages of play does any given participant go through when interacting with the work?*

The first two are established by Brown and Iser's theories respectively, but the last is equally as important. The final facet of the examination presents itself in Scott Eberle's essay "*The Elements of Play: Toward of Philosophy and a Definition of Play*". Play, according to Eberle, is broken down into six distinct stages, with individuals moving from one to the next until they move to the next activity. These stages are as follows:

- Anticipation

- Surprise

- Pleasure

- Understanding

- Strength

- Poise

These six stages, or "Elements" as Eberle calls them, present a timeline of sorts for any given activity that can be designated as Play (Eberle 2014, 222). Eberle uses this proposed timeline to aid in his pursuit of defining play, but in doing so he provides insight into a crucial progression of psychology that participants go through when interacting with a DII. Similar to Iser's theory's relationship with literature, both Brown and Eberle's writings are not specifically tailored to thinking about exhibitive work, but instead are focused on play as a developmental/social activity. On the surface this may seem counterintuitive, but in practice the combination of these three theories allows for a deep examination of the relationship between participant and work;

and thus paves the way for the application of a plethora of multidisciplinary studies, opening the world of exhibitive work to a much larger and more accessible audience of both scholars and participants.

In order to provide a proper example of how these theories can be applied to DIIs, a combination of Brown, Iser, and Eberle's theories will be used to examine two specific exhibitive works. Both works share a similar design philosophy but employ a drastically different relationship with play. The works in question are:

- *Text Rain*; by Camille Utterback

- *Snow Fall*; by FUSE° Studio

Both works utilize similar technology, though their relationship with play is distinct enough to set them apart thematically. Through the application of the three theories of play (Iser, Brown, Eberle), they can each be thoroughly examined for the unique relationships that their participants have with them.

Text Rain (1995); by Camille Utterback

Debuting in 1995, Camille Utterback's *Text Rain* is perhaps the most classic example of Digital Interactive Installation. A video camera points at a white wall, sending a live feed to a nearby computer, which in turn processes it and sends the processed feed to a display (projector or otherwise). Without participants present in the frame, colored letters in a bitmap typeface fall in seemingly random order down the image. However, the moment a participant enters the camera's field of view, the digital letters begin "landing" on the image of the participant. This creates an interactive illusion and guides the participant to move within the frame, "catching" the

letters as they fall. As they do so, it becomes clear that the letters are not random, they are lines of a poem, and thus begins the process of learning as the participants try to piece together Evan Zimroth's poem titled "Talk You"(Lindhé 2016). This relationship between virtuality and reality, body and language, self and "avatar" demonstrates a distinct relationship with play, but according to Eberle's theory, it begins much earlier than the point of discovery.

Before analyzing *Text Rain*'s specific relationship with Play, it is necessary to apply Brown's framework and decide if the actions performed within the installation can truly be considered play (at least in Brown's developmental/social sense). In order to do this, the actions taking place in *Text Rain* must meet the seven requirements set up by Brown's framework.

- *Purposeless*: Stuart Brown is explicit in his book that play activities cannot fulfill a specific, immediate, survival need. This distinguishes things like fishing for sustenance from "catch & release" fishing for sport. The activities in *Text Rain* (and any other DII) do not fulfill a survival need, and therefore meet this requirement.
- *Voluntary*: No participants in *Text Rain* are there against their will. This also applies to most other DIIs (consent in public works such as Rafael Lozano-Hemmer's *Under Scan* is dubious).
- *Inherent Attraction*: At this point in Brown's framework, the requirements become more nuanced. Brown defines "Inherent Attraction" as "It's fun. It makes you feel good" (Brown 2010). While this may not apply to every single participant that comes across *Text Rain*, the documentation present on Camille Utterback's website shows a majority of participants smiling, laughing, or otherwise showing physiological signs of excitement.

- *Freedom From Time*: While this is a complex requirement, and detailed accounts of participation time are lost to the ether, one can delineate the freedom from time by the language used in press about the piece. According to a 2008 spot on NPR about the 21C Museum Hotel in Kentucky, "and if you stand there long enough, the letters eventually form a poem on your outstretched arm" (Blair 2008). The discovery of language present in *Text Rain* is not immediately apparent, and requires a time commitment. While this is not the most empirical way to satisfy the requirement, it serves well enough for this purpose.

- *Diminished Consciousness of Self:* While complex on the surface, this is one of the main tenets of *Text Rain*. Largely featured in nearly all instances of documentation are people assuming extreme poses in the hopes of "catching" more letters on the screen. Participants stretch their arms, lean to the side, even link hands in an attempt to find the language. This directly informs the next requirement *Improvisational Potential*, satisfying both requirements.

- *Continuation Desire:* In order to find that this requirement is satisfied, one must look no further than the more than 20 years of continual exhibitions that *Text Rain* has been a part of since its inception.

With all seven requirements for the distinction of Play, according to Brown's framework, satisfied, the examination of *what kind* of play can begin.

According to Iser's theory, all play can be boiled down to one of two categories: Free or Instrumental. *Text Rain* is not a unique case, and can be quantified into these categories, but not without caveats. In order to provide an accurate designation of the kind of play present in *Text Rain*, a timeline of events must first be established. Participants begin the installation in a state of

Free Play, unaware of any additional information that might be garnered from the work. As they move freely and experiment with interfacing their body as a controller, something clicks. The text that falls from the top of the screen is not random, they form words, and those words form phrases. Thus begins the transition from Free Play to Instrumental Play for those that wish to uncover exactly what the words might say. The presence of language as a concept provides enough of a motivating factor for those participating in the installation to mark a distinguishable difference in *how* participants interact with *Text Rain*. In the transition from Free to Instrumental Play, *Text Rain* embodies an installation designed with a goal in mind. The inclusion of an understandable poem heavily encourages viewers and participants to engage with the piece in the way that it was designed to be engaged with. The interaction is not necessarily conceptually deep, but it is effective in its tactics. When observed in the context of Free vs. Instrumental Play, it could be argued that *Text Rain* occupies a space between the two, that Iser might define the experience as transitory or middling. However, this reading of *Text Rain* requires that experience be had in a vacuum consisting of *only* the experience.

Those that have visited museums, galleries, or other forms of exhibitions know that it is extremely rare work to be displayed in this fashion. Wall Text, instructional graphics, posters, audio guides, and even verbal explanations are all part of the work's didactic materials. These materials, while not explicitly part of the work itself, alter the experience of participants that come across them. Gérard Genette defines these types of didactic materials as "Paratexts" in his 1991 book "Paratexts: Thresholds of Interpretation", and his definition includes a great deal more than the didactic materials that have been previously mentioned (Genette 1991). Genette's definition of Paratext includes any and all adorning information that is not *explicitly* part of the work itself. This includes accompanying information such as the name of the author/creator,

illustrations, prefaces, and even the very title of the work. Each of these things, Genette argues, surround the work but distinctly do not belong to it. Genette's theory of Paratext, when observed in proximity to Iser's theory of Play, creates a tangible spectrum between Free and Instrumental Play that can be used to classify Digital Interactive Installation.

When on display at the Smithsonian American Art Museum in 2015. *Text Rain* was accompanied by the following wall text:

> *"Text Rain is a groundbreaking interactive artwork that explores the correspondence between language and the body. The projection activates a living space of simultaneous reflection and activation as participants engage with animated type from the poem "Talk, You" by Evan Zimroth. Jumbling the language of visual representation with the dynamics of spectatorship and interactivity, Text Rain draws attention to the symbolic codes embedded in our machines, further compounding the spaces we inhabit both virtually and physically. Reading the text places viewers in unusual positions and creates figures of speech that locate the sensation of a work of art within one's physical experience."*
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> *(Achituv & Utterback 2015)*

This paratext, when presented along with the work itself, cements *Text Rain* firmly in the territory of Instrumental Play for those that wish it. Participants can find out exactly what their interaction will generate, and continue on to interact with that exact goal in mind. The methods

in which these interactions take place vary from participant to participant, with some using only their own bodies and others opting to experiment with tools such as dark sheets or umbrellas (taking the idea of Text *Rain* quite literally). Although these experimentations show a wide variety of interactivity, and might lead one to consider the interactions a form of Free Play, they are all done with a singular goal in mind: To understand and decipher the language that is being presented to them. The motivation of comprehension distinguishes these interactions as Instrumental at their core.

Now that both Brown and Iser's theories have been applied, it is pertinent to examine the process that participants go through when interacting with *Text Rain* through the application of Eberle's framework. Eberle states that the beginning of a play activity begins significantly before a participant might ever set foot in front of *Text Rain*. "[T]o ready for play is already to be at play" (Eberle 2014, 222) establishes the first stage of the framework as "Anticipation". In the context of *Text Rain*, this can be interpreted as the act of entering the exhibition, or even making the decision to go to the exhibition. Eberle equates this to watching a dealer cut a deck of cards or hearing the opening whistle of a sports game, but in conversation with exhibitive work, the very entrance to a gallery, the passing through a threshold, holds the same significance. From Anticipation, participants give way to the next element of play "Surprise". This can be interpreted as the "catch" that keeps participants in the active area of *Text Rain*. A viewer walks by the live camera and catches a glimpse of themselves on a screen. Surprised, they mimic animal behavior and move their body to test the reality of being mirrored. This directly paves the way for the next stage: "Pleasure", which can be defined in a similar way to Brown's requirement of "Inherent Attraction". The pleasure/attraction that is felt by participants within *Text Rain* drives them to the next phases: "Understanding" and "Strength". Eberle's framework

defines "Understanding" mostly as an empathy garnered from play activities shared between individuals. In the context of *Text Rain*, this is only applicable in select circumstances, but does appear in the form of cooperation as multiple participants work together to cover more active area than either could alone. This cooperation, however, is a direct result of the fifth phase, "Strength", which manifests as "mastery and control" (Eberle 2014, 224). Participants experiment with the rules of the installation, often utilizing objects as they seek to interact with larger swathes of text at the same time. As participants come to master the rules of their newfound virtual environment, they transition into the final phase of play, "Poise". Now that the participants have total control and understanding of the basic rules, they apply this understanding to the deeper goal present in *Text Rain*, and use their bodies as controllers to read the lines of the poem. Of course, not every participant reaches this phase, many will become bored or frustrated before losing their sense of time and reading the entirety of "Talk You". Those that do end up in what Mihaly Csikszentmihalyi calls a "Flow" (Csikszentmihalyi 1990), fully engulfed in the interaction with the installation. While Eberle intentionally avoids usage of the term "flow" as it can be less inclusive when examining the larger concept of play, it largely applies to the state that participants enter when the interaction with an installation is mastered.

Through these three frameworks of play, it is clear that *Text Rain* has a deep and complex interactive philosophy. Not only does the work fulfill all requirements for Play according to Brown's framework, it also possesses aspects of both Free and Instrumental play in the context of Iser's theory. While the examination of play through the lens of Brown, Iser, and Eberle's theories have been specifically tailored to *Text Rain*, much of what has been examined is applicable to many other DIIs, including the similarly programmed *Snow Fall* by FUSE° studio in 2009.

Snow Fall (2009); by FUSE° Studio

Over ten years later, Italian studio FUSE° would premiere the interactive installation *Snow Fall* in Modena, Italy. On the screen (or screens) white dots fall from top to bottom in a light diagonal, like snow influenced by a gentle wind. Without participants present, the digital snow will fall uninterrupted; however when the space is occupied by one or more participants, the gentle silhouettes of figures start to emerge from the piling up of digital snow. Viewers present experiment with their body positions, seeing where the snow might fall, testing the limitations of the software (FUSE° 2015). People join hands, make shapes, dance awkwardly, and otherwise simply experience blurring of reality and technology. Participants present in the active area of *Snow Fall* engage in a sort of play that is visually extremely similar to that of *Text Rain* while simultaneously having distinct mental/emotional differences[1].

As an installation *Snow Fall* is devoid of an end goal. It simply *is*, and the very presence in the installation is the purpose of the installation. The Paratext provided by FUSE° reads the following:

> *"With this installation, fuse° explored the potential of artificial viewing techniques in the artistic field for the first time. The system processes the images captured by a number of video cameras in real time, picking out the silhouettes of people, and blocking the fall of snowflakes on the shadows that people project onto the wall."*

> *(FUSE° 2020)*

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[1] *It is pertinent to note that in the spirit of brevity, the qualification of "play" will be assumed as per Brown's framework. Since* Snow Fall *and* Text Rain *have a great deal of overlap (in this area specifically), one can refer to* Text Rain's *breakdown of Brown's framework for exactly how interaction in* Snow Fall *can be considered "play" at all. As a result,* Snow Fall's *examination will begin with Iser's theory, and continue into Eberle's framework.*

At no point in the paratext presented alongside the installation does a goal or motivation arise. This lack of goals places *Snow Fall* firmly in the space of Free Play, seemingly opposite of its similarly programmed predecessor *Text Rain*.

In a sense, the relinquishing of intrinsic motivators or goals frees the installation to expand, contract, and evolve in natural ways. Iterations of *Snow Fall* have been changing for the past 10 years as the work has traveled around the world. In a 2015 show in Manchester, the installation totally enveloped a single room with one large screen. People were projected in life size scale and had ample space to move around. In a 2019 show in Washington DC, the installation added an auditory component and separated the display to be split between a series of smaller screens. The core concept and sense of Free Play remained, while the vessel that delivered that concept changed from iteration to iteration. In contrast to Camille Utterback's *Text Rain*, which has remained relatively rigidly designed, the sense of Free Play allows for wider flexibility at the cost of intentionally designed and conceptually complex interaction. Where *Text Rain* utilizes the form of language, and the conceptual weight that accompanies it, to create a transition from Free to Instrumental Play, *Snow Fall's* sense of play never evolves past the initial designation. Participants will still go through each of the phases of Eberle's framework, but at an expedited pace, as there is no progression of understanding necessary.

As both *Text Rain* and *Snow Fall* share a similar technological base, as well as a similar presentation/setup, the first stages (Anticipation - Pleasure) of Eberle's framework remain consistent between the two. Where participants in *Text Rain* had a shift in their understanding when confronted with the recognition of language, those in *Snow Fall* develop their understanding in a different form. Due to the work's highly stylized nature (rather than greyscale

video, the live feed is processed through a Threshold and displayed as exclusively pure black or pure white), viewers have to engage in more complex physical experimentation in order to come to an understanding with the work. The development of understanding in *Snow Fall* is less about developing the tools in order to uncover information intentionally hidden under layers of engagement, and more about the experiential nature of a DII and one's presence within it. Therefore, once an understanding is reached in *Snow Fall*, participants engage in the next two phases simultaneously. While there is no "Flow" present in *Snow Fall* as there may be for some in *Text Rain*, there is a meditative experience that occupies "Poise" in Eberle's framework. When participants relinquish the presence of their physical bodies to fully interact with their digital counterparts, *Snow Fall* achieves its creative mission.

Conclusive Thoughts

Play is a complex area of study, with a plethora of resources ranging from Literary theory, to Game Theory, to developmental/social theories. When applying these theories to the subject of DIIs, a wide net must be cast in order to provide any sort of theoretical base on which further examination can stand. This base can be found in the cross-application of Stuart Brown, Wolfgang Iser, and Scott Eberle's theories to distinct aspects of a DII. Stuart Brown provides a framework of classification to separate play activities from other daily tasks, Iser provides a theoretical relationship between artist and audience, and Eberle lays out a conceptual order of events that individuals go through when engaging in a play activity. Each of these theories provides a unique view on play, and can be used to dissect the interactive philosophies of any given DII. Applying these theories to both *Text Rain* and *Snow Fall* allows for a clear view into the early creative processes that each of these works went through when the artists were considering both *how* and *why* participants might interact with them.

In the application of Brown's framework of classification to *Text Rain* and *Snow Fall*, both works (as well as any DII) easily meet the necessary requirements for their interaction to be considered play. Although Brown applies his theory specifically to the social learning that is a direct result of play (in both humans and animals), the application of this theory allows interactive artists to have a solid classification that they can either embrace or rebel against. The presence of this classification also provides both a conceptual and practical starting point for an interactive work in its early stages.

In examining both *Text Rain* and *Snow Fall* it can be decided that Iser's theory of play can provide a great deal of insight into the scalability, flexibility, and adaptability of a given installation at the cost of meaningful, directed engagement. While *Text Rain* utilizes Instrumental Play to guide participants' engagement with the piece in a controlled manner, *Snow Fall* takes a different approach and creates an environment where the presence in the space *is* the meaning of the engagement. *Snow Fall* uses Free Play to give itself significantly more flexibility in its presentation and exhibition, often fully adding or subtracting significant portions of the installation to fit the space it will be displayed in. This comes at the cost of directed and/or prolonged engagement, as participants might (on average) spend less time interacting with *Snow Fall*, as the lack of a motivating factor creates less desire to occupy the space for an extended period of time.

While rigid on the surface, Eberle's framework of *how* individuals play provides an intricate view of exactly how participants interacted with both *Text Rain* and *Snow Fall*, as well as the important distinctions between the two. Both of these works are similar on a technical level, but through the application of Eberle's theory, the exact differences can be magnified and broken down for further understanding. It is important to note that Eberle's theory does not

provide a perfect timeline for every individual that will interact with either of these works. As is the case with any DII, there will always be a not insignificant number of people that simply truncate their experience, and choose to walk away before even "Surprise" can set in. Not every participant in *Text Rain* made it to "Poise", and was able to master their body in a way that allowed them to read all of "Talk You". Not every participant in *Snow Fall* was able to feel the blurring of boundaries between their physical and digital bodies; and that is not an issue. Eberle does not claim that this timeline applies to every play activity for every individual, but rather he aims to provide a framework of understanding for those that do go through a fully fulfilling play activity. Those that *did* read the entirety of "Talk You" in *Text Rain* likely went through each distinct phase of Eberle's framework.

All of these things considered, the application of these three theories (Brown, Iser, Eberle) provide a platform on which a further discussion about play in DIIs can be held. It is valuable for the creators of DIIs to have a conceptual starting point, as well as an anchoring idea to return to when in the midst of theory crafting. Although these theories do not directly address the psychology of interaction within a DII, Play is a universal subject. The ideas presented in studies about developmental/social play are equally applicable when put in context with literature, and the ideas presented in the literary theories of play are equally applicable when put in context with video games. All of these theories of play can be nearly universally applied to any activity that might necessitate them, and in doing so, they open up the works they are applied to to a significantly wider and more diverse audience.

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