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# Our Ludic Sins – A Survey on Belief in Videogame Axioms

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**Abstract**

Creativity has not been as pervasive an element in the videogame medium as would be desired. In this paper is proposed that one underlying cause resides in an imperfect study of the game design discipline, permeated by a number of prescriptive axioms on videogames' form, value and expression that impair creative processes. To support the contention that these have become ubiquitous in the medium, reaching the community as a whole, a survey intended on testing the agreement of subjects to these misconceptions was realized. 95 subjects replied to 41 sentences in Likert scale responses, and 10 responses had high agreement. Results indicate that the majority of subjects sees videogames as both an art form and an extension of games and narratives, consisting necessarily of interaction, rules and challenges, and serving primarily as a form of intellectually stimulating entertainment. Conversely, there was no agreement to videogames being a qualitatively new medium, nor as a medium that need be emotionally expressive or mediator of discourse on real-life issues.

**Author Keywords**

Games, Art

**ACM Classification Keywords**

K.8.0 [Games]: General

## General Terms

Theory, Design

### Introduction

What are videogames? Are they games? Art? What should they express? And how do we value them in an increasingly complex media landscape? Questions such as these are at the heart of a heated conversation that never seems to subside in the videogame community. The Game Design discipline has been the stage in which this debate occurs, with different authors from vastly different backgrounds proposing alternative answers to these questions. Recently we published a position paper [5] where we proposed that, despite the richness of perspectives, there are dominant currents of thought underlying analytical discourses on videogames. Our thesis is that both form, value and expression have been subject to constraining normative reasonings, that in an attempt to study videogame qualities, created a biased view of the medium that fails to encompass its more creative and heterodox currents. Thus, we claim that this perspective can constrain creative acts, for subscribing heavily to these conventions tends to guide production efforts to repeat the same formulas from which they were extracted in the first place. This analysis however, was strictly rhetoric, resulting of a review of several papers, design books and media articles. Therefore, there is no empirical evidence to even support that these axioms have been adopted, let alone that they have an effect in actual game design. Thus, to clarify which, if any, of the claimed normative paradigms have been subscribed by the community, a survey was carried out, testing subjects' agreement with sentences that were representative of the normative assertions extracted in our previous work [5].

The paper will go on to provide a literature review briefly

summarizing our thesis on this subject [5], so as to justify the survey. Then, the survey's setup will be detailed in section and its results presented in section . Finally, section will provide our own interpretation of what this results mean, followed by some final conclusions.

### Thesis

Salen and Zimmerman acknowledged the dubious, infantile, unoriginal nature of games in stores [18], and Bogost bitterly recognized that our society tends to view videogames as a children's medium [2]. Chris Crawford believed videogames should aspire to be art, stating that *"computer games constitute an as-yet untapped art form"* . . . back in 1982 [6]. Meanwhile, videogames *"are still struggling to emerge from their arrested adolescence"* [17], remain *"focused on fantasy genres, monsters and trolls"* [8] and are *"emotionally shallow"* [10]. Even today, though their cultural relevance is beyond questioning [17, 2, 18] it is common to find videogame authors that present serious doubts, criticisms and ambiguities when qualifying their medium (see, as examples, [4, 10, 13, 1, 15]). While other causes are surely at work, we propose that this is, in part, a consequence of normative thinking.

When studying existing videogames, all members of the community conjure videogames based on an abstraction, a prominent parcel of the medium they can perceive, analyze, catalogue. Then, a number of axioms, in the form of definitions, rules, tendencies and biases - or "norms" - are extracted as knowledge. This is what we are addressing as normative thinking. The problem with this process is that, in a creative medium, everything is in constant flux. Definitions, currents, movements, styles, forms, expressions, valuations, these are ever changing in time, place and context, as different trends gain or lose

favour from artists, scholars and audiences. Nowhere is this more evident than in the History of Art [11]: *“[the artist] does not follow any fixed rules. [...] some artists and critics in certain periods have tried to formulate laws of their art; but it always turned out that poor artists did not achieve anything when trying to apply these laws, while great masters could break them and yet achieve a new kind of harmony no one had thought of before. [...] The truth is that it is impossible to lay down rules of this kind because one can never know in advance what effect the artist may wish to achieve.”*

The study of a medium by way of these norms is certainly useful when their limitations are properly understood and communicated. But when they are conveyed as absolute truths, creators become mentally constrained to repeat those same reasonings, by implementing artifacts of the future that sustain that perception of the past. This normative reasoning then becomes a constraining box that obscures creative approaches, by inducing a vicious cycle of reproduction. Creativity is the act of creation. And creation, by definition, presupposes the coming into existence of something that did not exist before . . . something new. Thus, every creative act is implicitly an act of disruption with the past. To avoid normative assertions pernicious bias, it is necessary to know which norms have become implicitly accepted by the community, so that they can then be framed in a way that facilitates the design of artifacts that are creative to the point of countering those. In [5], we dissert on a number of different norms which appear to have become accepted in the community’s discourse, both in its academia and outside of it. For reasons of space, it is not possible to provide the theoretical rationale that supports their inclusion in this article’s survey, so refer to the article for an in-depth look at their justification.

## Experimental Setup

To test whether or not these preconceptions had been adopted by the community at large, a survey was carried out. Two samples of the population were incorporated in this study: one consisting of 41 Computer Engineering and Multimedia and Design students (inscribed in a Game Design and Study Course) that were queried in a class by paper questionnaires, and another consisting of 54 subjects that were invited to participate through social networks via an internet form. The sample had an age average of 25.5 years, standard deviation of 5.47, and was comprised of 87 male and 8 female subjects, 79 were regular videogame players, 46 accessed regularly videogame related media, and 78 had read at least one article concerning the study of videogames.

The survey consisted of Likert Scale with responses ranging from Strongly Agree (5) to Strongly disagree (1), with 41 sentences divided into 5 groups. Each group was designed to test normative assertions that seemed predominant in our review [5]. Two groups concern form, two refer to how value is assessed, and finally, one covering expression. Questions either follow normative assertions from our review (e.g. “Videogames are games”), or present alternatives (“Videogames are something new which despite similarities cannot be accurately assigned to any of the above categories.”). The goal was to verify if there was a tendency for popular acceptance or rejection of normative assertions and other alternatives.

Analysis was done by doing, for each question group, a first pass to verify which questions had average responses above or below the middle point in the Likert scale ( $avg < 2.5 \vee avg > 3.5$ ); when the average was very close to borderline values, the median was used as tiebreaker



Figure 1 : Complete list of survey questions and their average and median level of agreement from subjects, in a Likert scale that ranges from Strongly Agree (5) to Strongly disagree (1). Standard deviation is also presented, fit to the Likert scale by starting at 1.

criteria. Whenever this occurs, to validate that value, we test to see if the answer is statistically higher or lower than the remaining responses in its category, by means of Wilcoxon signed-rank test for related samples (a non-parametric test suited for ordinal scales)<sup>1</sup>. Figure 1 shows all the questions, as well as responses' average, median and standard deviation.

## Results

The first two groups of answers (F1–F4 and F5–F16) concern form. The the initial four questions directly questions subjects on whether they consider videogames equivalent to other artifact classes (F1–F3) or a new class of its own (F4). As can be seen in figure 1, both F1 and F3 are clearly above the middle point, F2 is slightly above (with a 4 median), and F4 is in the lower bound of the middle point. Analysis with Wilcoxon signed-rank tests, with a Bonferroni correction applied for level of confidence of 95% (for 3 comparisons per question), results in a significance level set at  $p < 0.017$  ( $= \frac{0.05}{3}$ ). F1 was statistically superior to F2 and F4 ( $p < 0.001$ ), though not to F3 ( $p = 0.446$ ); F3 was also superior to both F2 and F4 ( $p < 0.001$ ); and it is also possible to ascertain that despite its mid-scale result, F4 was statistically inferior to all other answers ( $p < 0.001$ ).

The second form group questions subjects whether they agree that a series of formal qualities (associated with artifact classes other than videogames) have to *necessarily* be a part of videogames. F5 proposes interaction as an essential quality of videogames, F6–F10 propose formal elements typically mentioned in definitions of traditional games as essential. F11 proposes simulation as a core formal quality of videogames (following the simulational

proposals by Frasca [8]), F13 does the same for story or narrative (following narratological authors such as [14, 16, 7]), and F12 for soundtrack and F14 for visual graphics. F15 proposes as essential all previous elements and F16 none of those. Only F5, F6 and F7 have high averages, and F16 has a very low average. Analysis with Wilcoxon signed-rank tests, with the Bonferroni correction, results in a significance level set at  $p < 0.0045$  ( $= \frac{0.05}{11}$ ). F5 agreement is significantly superior to all other responses with ( $p < 0.001$ ). F6 agreement was significantly higher than F8 to F11 and F15 and F16 ( $p < 0.001$ ), F12 and F13 with ( $p = 0.001$ ), though not to F7 ( $p = 0.507$ ) or F14 ( $p = 0.010$ ). F7 was significantly higher than F8 to F16 ( $p < 0.001$ ). Finally, F16 was significantly lower than all other group replies ( $p < 0.001$ ).

In what concerns the formal perception of the medium of videogames, F1 (“Videogames are games”) and F3 (“Videogames are digital art”) presented statistically higher replies than the remaining two answers in the first group. The sample also gave a high agreement to both F6 (“Videogames consist of rules”) and F7 (“Videogames consist of challenges”), further underlining the perception that videogames are games, as according to general reply, they need to have two fundamentally game qualities (these are mentioned in most traditional game definitions, such as [18, 12, 3, 19]). This means that this sample tends to strongly perceive videogames first and foremost as ‘games’.

In respects to ‘digital art’, agreement in the first group on form is equally high, but there is no further agreement in the second group that relates to traditional notions of art (see, for example, F12–F14). F2 (“Videogames are narratives”) was moderately positive, which means there was also slight concordance with videogames being stories

<sup>1</sup>For ease of space and added clarity, we will only present significance levels for each of these tests, and will not specify the Z-statistic.

or narratives, though this effect pales in comparison with the “games” and “art” responses. Again, when it comes to stories being a fundamental quality of videogames, replies were generally neutral (F13). Besides this, F5 (“Videogames consist of interaction”) had the highest agreement in the second form group, higher than all the rest. Finally, F4 (“Videogames are something new”) presented the least agreed upon answer in the first group (and its absolute value is in the lower bound of the neutral band).

The second group (E1-E9) is composed of 9 sentences that concern possible expression avenues for videogames, by providing normative assertions common in game design literature (that videogames should be easy and accessible forms of hedonic entertainment) while presenting eudaimonic alternatives, such as a strive for complexity and the mediating of emotion and serious subjects. With a Bonferroni correction applied, the significance level is set at  $p < 0.00625$  ( $= \frac{0.05}{8}$ ). Of the 9 replies, only 2 stand out as positively assessed by a majority of the population, E1 and E2. Both were significantly higher than all the remaining answers ( $p < 0.001$ ), and E1 is statistically higher than E2 ( $p = 0.003$ ).

Value was addressed in two distinct groups (V1–V6 and V7–V16), the first querying subjects on which expressive qualities they think provide value to videogames and the second which formal structures. As to the first 6 questions, V1 and V6 stand out positively. Wilcoxon signed-rank tests, using a Bonferroni correction, result in a significance level set at  $p < 0.0083$  ( $= \frac{0.05}{6}$ ). V1 is statistically superior to V2, V3 and V4 ( $p < 0.001$ ), though not to V5 ( $p = 0.555$ ) or V6 ( $p = 0.065$ ). Likewise for V6 in respect to V2, V3 and V4 ( $p < 0.001$ ). For the second group of value, however, there was no

answer out of the middle bounds of the Likert scale.

## Discussion

The vast majority of sentences did not provoke either acceptance or rejection by this population’s sample. Of the 41 questions, only 10 had average values diverging from the Likert scale’s midpoint. This, in itself, is a positive global result, that signals that the population sample as a whole did not present a high number of normative biases in the covered areas of this study. It did however, present a tendency to subscribe to the more prevalent axioms in the literature [5].

The survey sample seems to be neither inclined or declined to perceive videogames as something new that does not fit with these other artifact classes. The danger in not seeing videogames as a fundamentally new medium has already been discussed in detail in [5]; this result merely adds further evidence of this problematic belief by the population at large. Videogames, despite whatever inheritances they might have from narrative mediums and traditional game forms, are a new medium. Analogously, just as to define film as equivalent to drama or literature or photography would be problematic, the same should be true for videogames.

Subjects also subscribed to both the relationship with games and narratives, and this can be interpreted as an acceptance of the dual nature of videogames as both a storytelling and ludic medium, in line with some attempts at a definition of videogames [20]. However, the equivalence of videogames to games was stronger than its equivalence to a narrative-form – so, to some extent, in people’s minds ludologists do seem to have won the definitional debate [9, 12].

The growing consensus on videogames being art presents

its own set of challenges. First and foremost, there is the issue of incompatibility between games and art, noted by distinct personalities as being historically distinct artifact classes with different qualities. As Brian Moriarty, LucasArts designer, states in his defense of Roger Ebert's view that videogames are not art: *"In preparing this lecture, I plowed through a 700-page anthology on Western art philosophy, including the writings of Plato, Aristotle, Plotinus, Augustine, Ficino, Kant, Schelling, Hegel, Schopenhauer, Shaftesbury, Croce, Nietzsche, Dewey and Heidegger. I also read a deadly-boring book on 20th century art definitions, including the writings of Weitz, Dickie and Danto. Nowhere in 25 centuries of philosophy did I find a single author who regarded games or sports as a form of art"*[15]. So, can videogames be art and games simultaneously, as both our sample seems to believe? If so, either there is a needed revision on what constitutes art, what constitutes a 'game' or how videogames can mediate these seemingly different artifact classes.

That videogames present interaction as a fundamental quality seems acceptable, given that there is an absolute consensus that interaction is at least, one of the the distinguishing qualities of videogames in respect to other audiovisual media such as cinema (this consensus is also visible in this survey, as this is the question with the lowest standard deviation in responses). More so, there is little prescriptive bias in terms of creativity by accepting that videogames have to be interactive (whilst the same does not hold when defining them in respect to challenges, which is already a specific type of interactivity, not necessarily shared by all types of videogame experiences). Interaction, however, also presents a challenge if accepted in conjunction with the notion that videogames are an art form (see, once again, [15]).

As hypothesized in [5], the majority of responses denote a look unto videogames as a means for entertainment (E1) and 'fun' (E2), more so than a means for artistic (E4) or emotional (E5) stimulation or a means for sprouting debate on real life issues (E8). Videogames' expression is thus perceived as hedonic first and foremost. Though there seems to be distinction between the concepts associated with the words 'entertainment' and 'fun', signaling perhaps a different connotation to the second (perhaps even a pejorative one). High responses of agreement to "V1. A fun videogame is better than one that is not fun" further give credence to this view, showing the perception of value primarily lies in an entertainment perspective. For reasons explored in [5], this perception severely constrains honorable aspirations of videogames to more creative and artistic forms of design and production.

Despite subjects preference for videogames function as entertainment, "V6. The more a videogame makes me think about new ideas the better it is", though lower in agreement than V1, does still gather high degrees of agreement in comparison with other replies. We interpret this as subjects craving intellectually stimulating forms of entertainment, though this is bound to mean very different things to each subject. In respect to formal elements of games related to value, the absence of any reply with significant agreement or disagreement goes against expectations. Neither questions referring to more artistic aspects of the videogame – V9, V11, V13 – or the other technological product terms extracted in the review seem to be perceived as general measures of a game quality. Given how media and marketing focus on these aspects as arguments of value, their negligible agreement on part of subjects is puzzling. Either the effect is group specific and not generalizable to the whole population, or subjects consciously do not agree with videogames being

judged by these structural aspects.

### Conclusions

The survey confirmed that the videogame community agrees with part of the expected normative assertions. On a whole, they believe that videogames are games first and foremost, but also narratives and a form of digital art. That interaction, rules and challenges are fundamental qualities of the medium and that videogames should be entertaining and fun and that a fun videogame or one that makes them think is better than one that is not. This is how we perceive videogames.

It must be stressed that, just because a large part of the sample agrees with certain axioms, does not mean all people do, and widely divergent responses were collected in this survey. The global pattern however, is there, and it is the pattern that can help explain why game design tends to be such a conservative discipline, in opposition, we would write, with artistic disciplines in general. More extensive data collection must be carried out – with a more balanced sample – and by trying to experimentally verify a causal nexus between beliefs in these norms and creative output. For now, we think these results are clear in one thing: videogames' nature as creative medium has not been carefully assessed, studied and communicated in the past. For videogames to grow creatively, their traits must be cautiously framed, and there must be a greater effort from scholars, creators and the media to conscientize the community that videogames are an expressive medium, and that, like all media before it, that means that there are no absolute rules. To a proper artist, everything is permitted. So, videogames *can* be games, stories, art, *can* have rules and challenges, express enjoyment and entertainment, and *can* be judged for being fun and making you think. They *can*. But, like all

art before them, they *can* be so much more.

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