

# For a Normative-Expressive Baseline Model in Videogame Design

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## Abstract

This paper outlines the need for prescriptive action in the field of videogame design to overcome recurring conditions of lack of expressive productivity and uncertainty in carrying out the communicational goals of videogame development projects. This paper furthermore proposes a strategy for prescriptive action in the form of Applied Research in Normative Studies in videogames, meant to produce a Normative Videogame Design Model to equip game designers in the studio with an Expressive Baseline on which to base design tradeoffs and design decisions on matters of conveyance of message, tone and theme in a videogame. The paper deals with the implications of the concept of expressive productivity both in terms of the application of development resources and the nature of the videogame artifact itself, establishes the desire for theoretical design instruments such as the normative-expressive model among videogame developers, defines the sectors in videogame development where the normative-expressive model is likely to be more beneficial, justifies the choice of an Arteological perspective for defining the prescriptive action and notes the differences between Videogames and Cultural Industries other than videogames in production of theoretical design knowledge as implied by the call for theoretical design instruments by game developers.

**Keywords:** Aesthetics, Art, Business Models, Communication, Development Productivity, Expressive Games, Game Design Manuals, Game Design Methodology, Narrative, Serious Games,

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## 1. Introduction

Industry practitioners tend to view iterative design and physical prototyping and testing as the sole design instruments for videogames. For videogame development projects at any scale in production this means that whatever time and budget can be allocated to the prototyping stages need to cover most valences and outcomes of the videogame as a digital interactive artifact and cultural commodity. Even very large-scale development projects (80-120 or more full-time developers), which can afford to commit hundreds of

thousands of developer man-hours to prototyping, iterating and testing, can often only incompletely address such a fundamental issue as the product-message to be imparted by the shipped-title. This creates a condition of pervasive lack of expressive productivity in videogames, and often makes for aberrant decoding or self-eradicating textual efforts.

There is a growing call among veterans of large-scale productions [Finley 2008, Prout 2010] for prescriptive action able to yield a more complete set of design instruments for videogames and to ensure greater expressive productivity in design and development. The call for design instruments has made for comparisons between videogames and cultural industries other than videogames as it relates to the production of theoretical design knowledge as well as the associated production of up-to-date design instruments [Prout 2010].

Through the application of an arteological [Routio 2005] perspective to the issue of expressive productivity in videogames, it becomes apparent what processes in design knowledge do cultural industries other than videogames rely upon, for informing practice, that the videogames industry only draws on incompletely. Expressive productivity for specific videogame titles could therefore be ensured to a greater degree by a normative-expressive model for videogame design akin to that found in other cultural industries.

This normative-expressive model would be made up of communication-oriented design patterns which would need to deliver a set of directly applicable and useful design tradeoffs onto the ongoing videogame development process in the studio. The patterns would work by setting up a baseline in minimum-required prototyping effort and communicational labor along a simulation-interpretation axis. The simulation-interpretation axis would serve to help videogame designers negotiate the gap between narrative closure and the native “wideness” of engagement with virtual environments as proposed by Zagalo et al. [2003] and resolve the conflict between preset narrative structures and freedom for the end-user [Louchart 2003, quoted in Zagalo 2009]. Results from the application of the normative-expressive model to development might prove invaluable in ensuring expressive viability for mid-scale commercial projects and non-profit institutional projects.

## 2. Mid-scale development and prototyping the message

Expressive productivity is not just a matter of how development resources translate into power and precision of communicational outcomes for the shipped title as it is engaged by the end-user; within the realm of the finished videogame itself, the combined textual output of the active units of meaning able to develop expressive force need to drive communicational outcomes more compelling and directed than the mere sum of production values and visibility for each unit. The product-message brought about in the shipped title as it engaged by the end-user results from the coordinated output of virtually every kind of professional discipline which goes into videogame design and development. The intricacy of the hypertextual combinations of the output of these different disciplinary fields is infinite; the amount of development resources which can be allocated to prototyping, on the other hand, is finite.

### 2.1 Compared to large-scale

A mid-scale (13 up to 25 full-time developers) commercial videogame development project is likely to have more riding on the nature of its product-message than a larger-scale, AAA project. A given AAA title will have more commodity-value as a cultural commodity ascribed to it. This implies greater external communication bandwidth (marketing, promotion and Intellectual Property brand recognition) to set the ground and raise interest and awareness in preparation of the internal communication to be effected by the shipped title as it is engaged by the end-user. Production values and other valences can offset the need for power and precision for the product-message.

Mid-scale titles, however, cannot afford to waste power and precision of communication, as the product-message will have to, on its own, contribute to adequate psychological flow of user-experience in a very tight window for audience-awareness. Mid-scale projects have to get by on premise and approachability in storytelling and stand to lose a lot more from aberrant decoding and self-eradicating textual processes.

While large-scale development, with its higher budgets and team-sizes, can weather the pressure of closing the product-message in the prototyping stages (and can often count on extensions of the development cycle), mid-scale commercial projects will suffer a lot more from having to squeeze expressive finality in the prototyping stages along with the many other game-valences to be iterated and improved.

### 2.2 Compared to small-scale

Similarly, one-man, artisanal videogame development often needs not commit to either the communicational goals from the project's onset or to finite development cycles. The late stage at which stakeholders other than the (solitary) developer become relevant to the title's lifecycle allows for exploratory design. Closing the product message through iteration is a much more viable option, as even a fully-realized, full-size prototype will carry a comparatively tiny development-resource footprint, averting the risk of underachievement of product-message found in mid-scale projects.

### 2.3 Increased risk for non-profit projects

Non-profit, institutional projects have the most to lose from defining their product-message in the prototyping stages of development. A videogame development project which has educational, artistic or scientific research goals will add a syllabus, curriculum or other non-videogame native content to the extensive list of textual valences to be designed through iteration. Moreover, these valences carry requirements of precision of communication: an educational project has to very directly address likely preconceptions of the audience in order to impart a curriculum.

A commercial project needs only ensure that the product-message resonates internally with textual systems such as gameplay. Large-scale, commercial mainstream projects can make do with any product message, as long as it resonates with gameplay and brings about value for the end-user.

For a non-profit project only one very specific product-message will equate with success. Non-profit projects often need to reconcile the internal communicational goals with external ones, and these will often exist to the detriment of one another. If the internal conflicts in expression already put too much pressure on iterative design and prototyping – at the risk of aberrant decoding and self-eradicating textual effort – then having to accommodate external valences such as an educational curriculum will often force designers to choose between using the prototyping resources to realize the videogame or using them to realize the educational goals of the project.

If industry veterans see the need for less pressure on prototyping for large-scale development projects [Prout 2010], and recognize significant threats to the product-message in that pressure, then the issue will be even more serious for mid-scale development. An expressive-productivity threat which causes difficulty to projects with larger budgets and team-sizes may compromise the message altogether for a mid-size project. In being the case, this would make a normative expressive-model a legitimate addition to the design instrument arsenal of videogame studios, and a valid

avenue for transformative action in videogame design methodology.

### 3. Case Study I: Pressure on iteration jeopardizes the Message

2K Boston / 2K Australia's 2007 *Bioshock* remains a compelling case-study from the arteological perspective for normative-expressive models. As a project, *Bioshock* was top of the ladder AAA: from a market and production values perspective, development for the title would only equate with success if the sales profile and attendant videogame culture representational effects spelled out the role of blockbuster and superlative hit.

Uniquely for a development project with such high-stakes upon shipping, *Bioshock* had full-intent and reasonable expectation to achieve condition-blockbuster by leveraging the full-spectrum of videogame expression throughout, and not by merely bringing specific set valences (Wow!-factor) to the forefront. It set out to be a hit out of the reach and expressive completeness of message alone.

Development for *Bioshock* was entirely predicated on delivery of a specific product-message along an exacting syntagmatics. It would seem counterproductive then that the product message of *Bioshock* did not even come up as a well-defined issue to be addressed by the production team until the first playable one-room demo, as attested by *Bioshock*'s project lead [Finley 2008]. Finley [2008] candidly admits that:

“The E3 demo forced us to focus the whole team on what the user experience should be. We defined a message for the demo- player choice -and built a narrative around that message (...) we were making a game that wasn't taking the initial user experience into account, and we weren't thinking enough about how to make it accessible ...”

Finley goes on to recount how *Bioshock*, as an initiative in design and development, had initially relied on adherence to genre tropes to try and ensure that its themes of player choice resounded in the conveyance of message through the act of being played. While it is not unheard of for videogame designs to shed some proposed genre tropes in favor of a cleaner and more consistent sense of genre representation in the shipped title, *Bioshock* went further than this. *Bioshock* had its experiential payload riding on genre (Role-Playing Game) only to switch genre (to First-Person Shooter) and seek to fulfill its thematic intent through original-designed narrative rather than the default, prefabricated tropes of genre.

“*Bioshock* was a relatively unknown IP outside the game development community, the public's impression of it would be critical to building the buzz we needed to make it a commercial success. As a result, every

time we took the game out in public, we put great thought into the message we wanted the demo to deliver [Finley 2008].”

When the message delivered by the demo met only with aberrant decoding, suddenly development for *Bioshock* became an effort in managing successive cycles in producing matter for playtesting and focus-testing and handling the treatment of feedback, as opposed to trying to design a message in videogame form. The project had initially chosen to not avail itself of theoretical design instruments and instead iterate and test successive hypotheses for the message, but now suddenly development resources had to be put towards intensive prototyping under vast pressure. “just after the first beta, the entire design team plus a contingent of 2K producers headed off to see how a group that knew nothing about our company or *Bioshock* would react to the first level. It was brutal [Finley 2008].”

The *Bioshock* development team only started thinking clearly in terms of message in time for the demo. By thinking of what is the message of the demo rather than what is the message of *Bioshock* as an initiative in design as it presents itself to the end-user, there was no real sense of expressive productivity. More than lack of productivity in the course of development, there was lack of productivity in the realm of the shipped title's expressive complex, in that the communicational outcomes of the artifact's semiotic disposition and arrangement were sub-optimal. Or rather could have very-well been.

*Bioshock* was successful in its development choice and initiative to not leave the fulfillment of thematic effects to default genre tropes. By electing to achieve theme at a level more fundamental than genre outlines, new and empowering avenues in expression were made available, and this increased margin to maneuver in expression may have very well created the possibility of communicational success for the title.

Nevertheless, the fact that resonant communicational intent was achieved for *Bioshock* at all can be partly explained by the attendant conditions of development. Production was neatly divided between two separate studios united under one publisher banner. Team sizes were comparatively smaller than other AAA development projects at the same industry upper-limit and, crucially, team makeup was flexible and free use of contractors was made. A degree of flexibility was also present for the development cycle itself, with a lengthy development period of three years, plus the benefit of extensions. For the vast majority of videogame projects, particularly those at the mid-scale of development, attendant conditions for design and iteration are less forgiving and more difficult to manage. Mid-scale development might not have allowed for what Alyssa Finley classifies as “course corrections”. The lack of normative-expressive models makes for wasteful

communicational labor, to the point of there being a generalized state of communicational ineffectuality for videogames. The way to decisiveness and forcefulness of communication out of a productive, efficient, non-wasteful arrangement of expressive elements on the shipped title can only come from a degree of freedom from prototyping and autonomy of design (autonomy for virtualized designs and less reliance on actualized and iterated design).

#### 4. Case-Study II: developers call for prescriptive action

Before outlining the need for prescriptive action and better design instruments for videogames, Prout [2010] is careful to establish that his professional profile and concerns are likely to be representative of those of seasoned developers in the industry with project management experience. With over twice the time in the industry than the average burnout rate for developers, Prout provides a good indicator that the industry truly wants and needs models and metamodels for videogame development with the sense of prescriptive mission and knowledge architecture of arteological normative-expressive models.

In looking at the delicate human issue of crunchtime in the videogames industry from the standpoint of the shipped title fulfilling the minimum-required expressive outcomes for a videogame, and from that standpoint alone, Prout calls for a sense of perspective and of prescriptive intent that could be classified as wholly arteological in nature. Prout sees it as not only necessary but also inevitable for industry-wide understanding of the project-cycle to become top-down, in the long-run and availing itself to the whole of nomothetic and normative knowledge for the medium.

Prout is concerned primarily with premature production, the need for rightsizing the staff for pre-production and securing the specific nature of the high-level engagement payoff for the end-user on the finished artifact as priority one and singular *raison d'être* for any and all development effort. Put another way, this consists of backtracking the exact contribution of the artifact to the user's existence -- "People don't buy games. People buy fun" [Prout 2010] -- all the way to soundness of industry practice and labor relations which amount to a specific industry-wide desire among developers. This specific desire is to be able to answer lack of productivity in expression and unfocused communicational effort with whatever Cultural Industries other than videogames have been answering it with.

Prout even goes as far as to compare videogames with other Cultural Industries explicitly, and point out that videogames come off showing a warped sense of project initiative:

"In film and television, if an early treatment was suddenly plunged into full production, it would be considered a catastrophic failure of the development process. In the game industry, when a fledgling creative vision is suddenly staffed with talent, it's considered ensuring success. This is a fundamental fallacy in our thinking." [Prout 2010].

#### 5. Design Knowledge and Videogames

The extensive list of valences to be iteratively designed through prototyping puts a lot of pressure on production in the studio. Senior direct stakeholders of development on large-scale titles link threats to the product-message to pressure on prototyping [Finley 2008]. These larger-scale titles boast budgets and team-sizes which allow for as much scale and complexity in prototyping as can be found in the industry. Other senior stakeholders have called for more relevant and up-to-date design instruments for videogames and in doing so have raised comparisons between videogames and other cultural industries in production of design knowledge and theoretical design instruments [Prout 2010].

An arteological appraisal of the videogame and its design and production yields some avenues for developing the kind of design instruments being called for by developers. Crucially, by focusing on how to configure design knowledge production to yield practice-relevant theoretical design instruments, the arteological perspective circumvents to the two most salient shortcomings of existing design instruments in videogames. One is the over reliance on physical prototyping in iterative design. The other is the related lack of expressive productivity brought about by finite resources for testing. The finite resources for focus-testing and iteration allow the message of the videogame to fall to the wayside on the extensive list of design tasks to be achieved through iteration. Ultimately, the arteological perspective opens up the possibility of establishing an empiria-theory continuum for the production of normative-expressive knowledge, and then utilizing this knowledge to tether the organization and productivity of development to a neatly-defined expressive move, as a contribution to the end-user's existence, as a message.

Mikolaj Dymek [2008] establishes videogames as a Cultural Industry in their own right. Dymek deems the organizing theory of other cultural industries as being ill-suited for appropriation by videogames, while attesting to the inability of theoretical perspectives internal and exclusive to videogames to adequately support and sustain development praxis. Dymek briefly reviews extant fields of videogame research and theory only to conclude that the volume of research which can directly and effectively translate into new avenues for design and practice as being "limited" [Dymek 2008], and that the remainder of the research reviewed occurs chiefly in an informative capacity, observing extant

videogame phenomena rather than actively shaping the immediate future of videogame phenomena. This matches Dave Prout’s contrast between the way film and videogames envisage the productive process, respectively [Prout 2010].

What’s missing is therefore for videogame practice and videogame theory to resolve themselves into a continuum of knowledge production and knowledge application, in which a two-way flow of arteological (artifact-oriented) study allows for enduring normative models for preemptively assessing (for each aspect of the finished videogame-artifact which plays into the conveyance of message and meaning) what is the minimum required pressure of language (implementation effort invested) needed to achieve communicational effect. This would require first for the boundaries of videogames’ native expressive territory to be precisely defined in a useful, relatively enduring fashion. Once this is achieved, the scheme of flow of theoretical knowledge to practice in an arteological perspective, which can be observed in Cultural Industries as disparate as the design and production of furniture, architecture or utilitarian software design [Routio, 2005], can be realized for videogames.

Routio [2005] explains that Cultural Industries need to continually heighten finality of purpose in order to stay relevant. Normative work translates more efficiently into finality of purpose in design and that is why most Cultural Industries tend to produce a disproportionate range of normative studies versus informative studies.

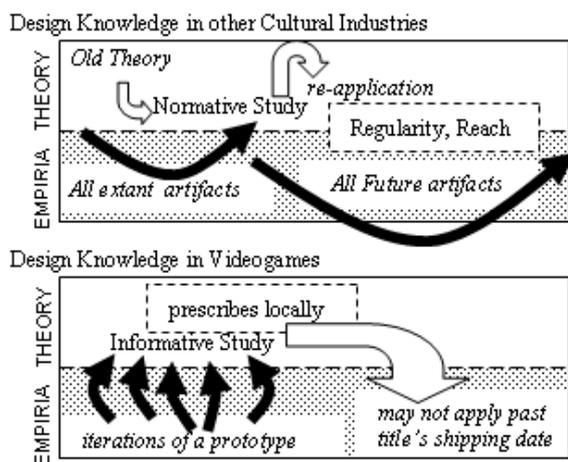


Figure 1: Comparison of Flow of Design Knowledge for Videogames and for Other Cultural Industries

A normative model for videogames would always be in a position to prescribe from a product-specific but industry-wide paradigm to the day-to-day of the studio (nomothetic knowledge). Presently videogame knowledge tends to consist of industry best practices or otherwise locally-prescribed knowledge (idiographic knowledge): diachronically local as well as typologically local. Locally-prescribed models will

lack the perspective to clearly define a target for transformative action in design and development practice and *mores*.

Moreover, this notion of what is the minimum required set of desirable conditions for the artifact will forever be a moving target if it derives from locally-prescribed, idiographic mental instruments of design. As a moving target, it cannot be pushed against, for leverage, by artistic videogame projects which mean to comment on videogames; artistic intent cannot effect a departure from the norm (the product paradigm) if there is no broadly-applicable normative model to codify and present that norm in an enduring fashion – that which is being commented on or being echoed (theory of empathy) is such a volatile quantity (locally-prescribed norm) that it saps the expressive power of artistic finality for videogames.

Similarly, in the context of a mid-scale commercial videogame design and development project, or in the context of conveying a precise set of educational contents, not having clear boundaries for the native expressive territory of videogames saps the shipped title’s ability to communicate. A scheme for how the product paradigm for a cultural industry draws differently from nomothetic knowledge and from idiographic knowledge has already been provided by Pentti Routio in Arteology [2005]. The product paradigm must be representative of the whole of the medium’s design knowledge, and harness that knowledge in the fullest for industry praxis to remain consequent, and so cannot do without either nomothetic knowledge or idiographic knowledge.

## 6. Related Work

Nomothetic knowledge is made up of such design instruments as design manuals which were intended as such from the get go [Routio 2005] (in abstract and not merely an individual practitioner retelling his experiences), regulations and standards [Routio 2005] (which in videogames only for HCI do standards seem to go beyond rules of thumb) and best-practices and guidelines put forth by industry oversight institutions or stakeholder associations [Routio 2005]. Design manuals, which in other Cultural Industries tend to benefit from a large pool of nomothetic knowledge, have in videogames been largely based on idiographic material.

Videogame Design manuals such as “Game Design: Theory and Practice” [Rouse 2001] or “Rules of Play: Game Design Fundamentals” [Salen and Zimmerman 2003] tend to largely deconstruct exemplary specimens of Industry output from the medium-historic standpoint of the time of the book’s writing, and gather what design procedures, initiatives and tropes in these exemplary specimens it is desirable to replicate or develop in the immediate future of production for the medium. Complete reliance on

exemplary specimens is the hallmark of idiographic knowledge [Routio 2005].

Normative knowledge-gathering resources such as Falstein and Barwood's "The 400 Project" [2001], settle for a broader-scope study with greater granularity, in which videogame design rules of thumb are amassed over an extended time period. These disparate rules of thumb are far too granular to effect real normative power. According to Routio [2005], nomothetic knowledge will generate design instruments which define themselves first and foremost in how they can be applied to the industry: with perfect evenness and regularity, and transversally to the medium, their intent being staying power.

Mechanics, Dynamics, Aesthetics (MDA) [Hunicke et al. 2004] seeks to reign in all aspects of design in its proprietary typological breakdown of the videogame artifact. MDA requires that the entirety of conceptualization and design efforts utilize it as their normative framework. MDA cannot be parceled out; it can only be utilized in full and throughout.

Heuristic Evaluation of Playability (HEP), as developed by [Desurvire et al. 2004], is a notational instrument of design (verification) which is meant to mitigate the reliance on iterative design (playtesting and prototyping) of videogame development. Despite the relevance of HEP in decreasing the weight of playtesting, Desurvire et al. conclude after field-testing that the HEP algorithm is admittedly "best suited for evaluating general issues in the early development phases with a prototype or mock-up" [2004]. With its scope lying with such specific moments in design and development, HEP cannot be construed into normative oversight of design. HEP is fundamentally built to check conditions of gameplay as it relates to HCI, not as it relates to expressiveness and power and precision in communication. HEP, addresses a high-level attendant phenomenon of the videogame artifact (gameplay), and therefore is just too specific to prescribe from a true nomothetic standpoint.

## 7. Conclusion: the Model at work

After extended field-work has gone into the development and refinement of the normative-expressive model (general normative applied research and normative case-studies) the expressive baseline would become useable in real-life videogame design situations. Methods for the development of normative design models in other cultural industries would be applied to videogames: the researcher would become embedded in videogame design studios throughout project life-cycles and in a variety of project types with different expressive needs, and would formulate a plan for transformative action based on observations made and even the application of unfinished patterns and models to ongoing design challenges.

The end-result would be a series of design patterns, built for transversal, regular application throughout the industry. Given the nature of challenges to expressive productivity in iterative design, mid-scale commercial development and non-profit institutional development would be the principal targets of the patterns' prescriptive action.

### 7.1 Advantages in Development Resources

With the boundaries of the native expressive territory of videogames defined by the normative-expressive model, the patterns would be ready for use in the studio. The expressive-baseline model would subdivide to address as many issues of allocation of resources towards the production of expressive effect that may arise, be they thematic issues or issues of trope. Each issue would cause the model to express a pattern, or rather each pattern would correspond to a "question" the designer asks of the narrative as it nears implementation. Each of these "questions" or patterns, would be expressed as an Interpretation-Simulation Axis, which corresponds to the conflict between narrative closure and the interactive "wideness" [Zagalo et al. 2003] and the conflict between preset narrative structures and freedom for the end-user [Louchart 2003 quoted by Zagalo 2009].

Assuming an ongoing design process with a mid-scale team, budget, and mid-scale relationships with the industry and with audience expectations, the model would allow the designer to think in terms of "how much closure/presetting can I get away with for this given idea to get across?" The model would help the designer find the absolute minimum amount of authorial control to give up in conveying meaning for a given theme or trope. The more authorial control is given up, the more (and more complex) game-like valences there are to test and iterate. If the theme or trope to be conveyed as a part of the message is particularly complex, then the prototype to be used in testing and iteration will need to be particularly close to the level of fidelity and emotional engagement of the finished product in order to usefully account for expressive elements in testing. It is useful for the designer to be able to set a baseline at which meaning is nevertheless conveyed in full, but the very minimum of "wideness" and freedom (for its own sake) is given to the user.

The baseline is therefore useful when there are critical units of meaning to be imparted and errors in decoding may disrupt user-experience and finality. The baseline has more uses than just managing the allocation of development resources given expressive goals or to just preempt having to define the message in prototype iteration and focus-testing

### 7.2 Added Control in Design Outcomes

While an implementation of a trope or theme as simulation favors wideness, its implementation as

interpretation makes it easier to re-package the trope or theme within the context of the videogame itself. This is the difference between expressive productivity stretching back in time from the end-user engaging with the shipped title towards development and production, and expressive productivity as it occurs within the videogame itself. A trope or theme re-packaged as interpretation can be more easily replicated at higher or lower levels of engagement, and can therefore resonate, as meaning and expression, at multiple levels of the end-user's rapport with the videogame-artifact. The processes which link an expression of a trope or theme across multiple levels of engagement are delicate enough and intricate that the amount of playtesting needed to finalize design for multiple levels increases exponentially with the "wideness" allowed on each level. So wide simulations are more likely to be iterate horizontally, throughout a given level of engagement, while closure-enabled interpretations are more likely to be resonate vertically, having limited applicability in each level but scaling up and down levels of engagement and thus creating their own kind of value for the end-user.

One of the design issues which might require the expressive baseline model is working out how the end-user is meant to relate to the metaphorical representation of his agency in the videogame (the avatar). Too often this crucial aspect of the expressive outcome of the videogame is left to resolve itself in the default of genre convention and playtested HCI valences, and too often does it result in wastefulness and lack of expressive productivity. Another ideal target for the prescriptive action of the expressive baseline model would be player agency itself, from a narrative trope and theme perspective, and expressed as seven distinct plateaus along an interpretation-simulation axis.

### 7.3 Example of Application

As an example design-decision relative to trope or theme, there could be a narrative thread in the larger user-progression arc which would mandate for a tree to fall down and foil the player character's antagonist. The seven successive plateaus along the interpretation-simulation axis would run from 1st through 7th, from interpretation and narrative closure and maximization of preset narrative structure, to simulation and wideness and freedom in user agency. In the case of the expressive baseline design pattern for player agency, the axis would furthermore run from Vertical Agency to Horizontal Agency and Granularity of Agency.

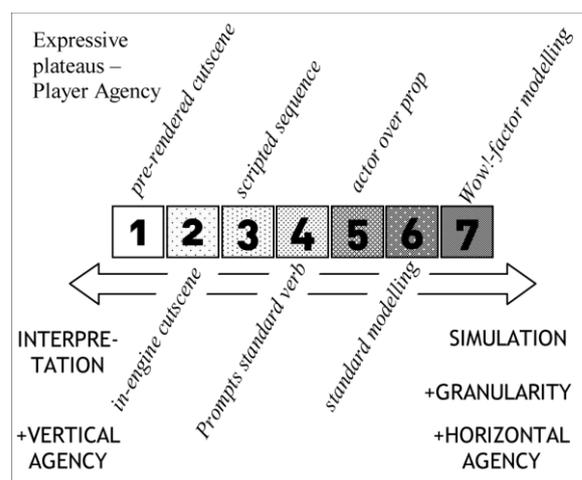


Figure 2: Interpretation-Simulation Axis applied to Player Agency

First plateau would be a pre-rendered cutscene of the tree falling on the antagonist and foiling him.

Second Plateau would be an in-engine cutscene or alternatively a proximity-triggered scripted-event in which the player's movement controls are frozen and the camera controls are restricted.

Third plateau would be a scripted event in which the player is free to carry out customary gameplay verbs even as the event takes place, but the flow of gameplay and of progression is interrupted for the duration of the event.

Fourth plateau would not suspend gameplay, but the HCI apparatus of the game would gather to prompt the player to perform a standard verb on the specific tree.

Fifth plateau would see any tree serve for the application of the standard gameplay verb as long as it is contextually relevant to the antagonist (tree is a generalized actor rather than a specific prop).

Sixth plateau would imply that both the tree and the antagonist are fully damage-modeled and collision modeled, and there is extensive granularity to player agency.

For the seventh plateau the level of simulation is suited to delivering Wow!-factor, and the tree has advanced physics modeling, even going as far as to have the exact physical properties of the particular types of bark and wood and roots simulated (molecular physics).

The expressive-baseline model would therefore be available to the game designer as a theoretical design instrument which would help determine the minimum level of iteration needed to ensure the successful conveyance of the theme and trope of the antagonist being foiled by the falling tree. First plateau would reduce player agency to the minimum in favor of

narrative closure and authorial control, and would require very little prototyping and testing, if at all. Seventh plateau would mandate highly-developed, labor- and technology-intensive prototyping, as well as intricate and involved testing and focus-testing. The lowest plateau for achieving the required conveyance of theme and trope, while not disrupting the remainder of the expressive labor of the videogame as it is engaged, would be the plateau which contributes the most to expressive productivity. This is the general designer-empowering effect of the model's use in the studio. The specific pattern within the model – that of player agency – carries its own benefits for game design.

## 7.2 User Experience after the Example

Plateaus two through four, for instance, would be fairly self-contained as theme and trope, and could be easily extrapolated to higher levels of engagement.

This would mean that the designer is setting up a resonance of theme and trope to be observed and engaged with by the player. Player agency and player choice at a low level would shape agency at higher levels, and this vertical, narrative-closure enabled agency would be highly rewarding and highly compelling, expressively, to the player. Plateau seven, while raising the high-tech commodity value for shipped title, would be extremely challenging to integrate into the flow of narrative and gameplay at the level the tree falling on the antagonist takes place. The wideness and simulation could be made to occur throughout, on a given horizontal plane of engagement, but it would require tremendous playtesting and iteration effort. Moreover, how could the molecular physics of the tree be extrapolated to the socioeconomics makeup of the in-game fictional universe, and still be made intelligible to the player, able to be interacted with and meaningful in the course of narrative and agency? Granularity in player agency might create dividends for the horizontal overall scheme of agency for the game, but it would likely achieve this to the detriment of the vertical overall scheme of agency.

The costs of simulation and wideness lie not only with achieving a given sense of expressiveness through a game feature, but also in achieving communicational coherence and resonance, and designing “around” a specific communicational move. With the interpretation-simulation axis and the baseline-expressive model as instruments of design, the developers would be empowered to track expressive productivity not only from the shipped title back to the studio's resources, but they would also succeed in being productive in the realm of expressive potential for the title itself as it stands before the player.

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