

Iterative Manifestation Analysis & Post-study Report

Personal growth and technical, conceptual skills gained:

This iterative manifestation of Proto-Glod represents a significant learning experience for me across several development domains. Most noticeably in improving my comfort levels when using Unreal Engine in the following areas:

- Designing gradient shaders in the material editor, the use of local (object) coordinates and global (world) coordinates within material functions.
- Level design blocking, making use of static mesh modeling tools.
- Blueprint communication and gameplay programming using visual scripting; accessing Actor components and properties, creating dynamic Actor Blueprints and, making use of Interfaces to mediate variables and custom interaction events across shader decals, UI elements, and in-world objects using raycast overlap checks.

Conceptually and artistically I was able to experiment with free-form visual and narrative development approaches that yielded surprising and generative results. My creative writing practice evolved into a combination of stream-of-consciousness style and an automatic writing technique. I developed a systematic way of tracking my technical investigations and feature implementation into a ‘knowledge base’, and I continued to use loose sketching leading up to technical drawings in my character design process in preparation for 3D sculpting (started).

Tangible products of this sprint can be found in the following places, and the images below:

- [Object swap core mechanic demo video.](#)
- [Proto-Glod: Darklit \(Lite\) page on Itch.io.](#)
- [Proto-Glod: Awakening \(3D\) - In Progress Build 1 on itch.io.](#)
- [Proto-Glod dialogue stream script on GitHub.](#)

Importance to program of study:

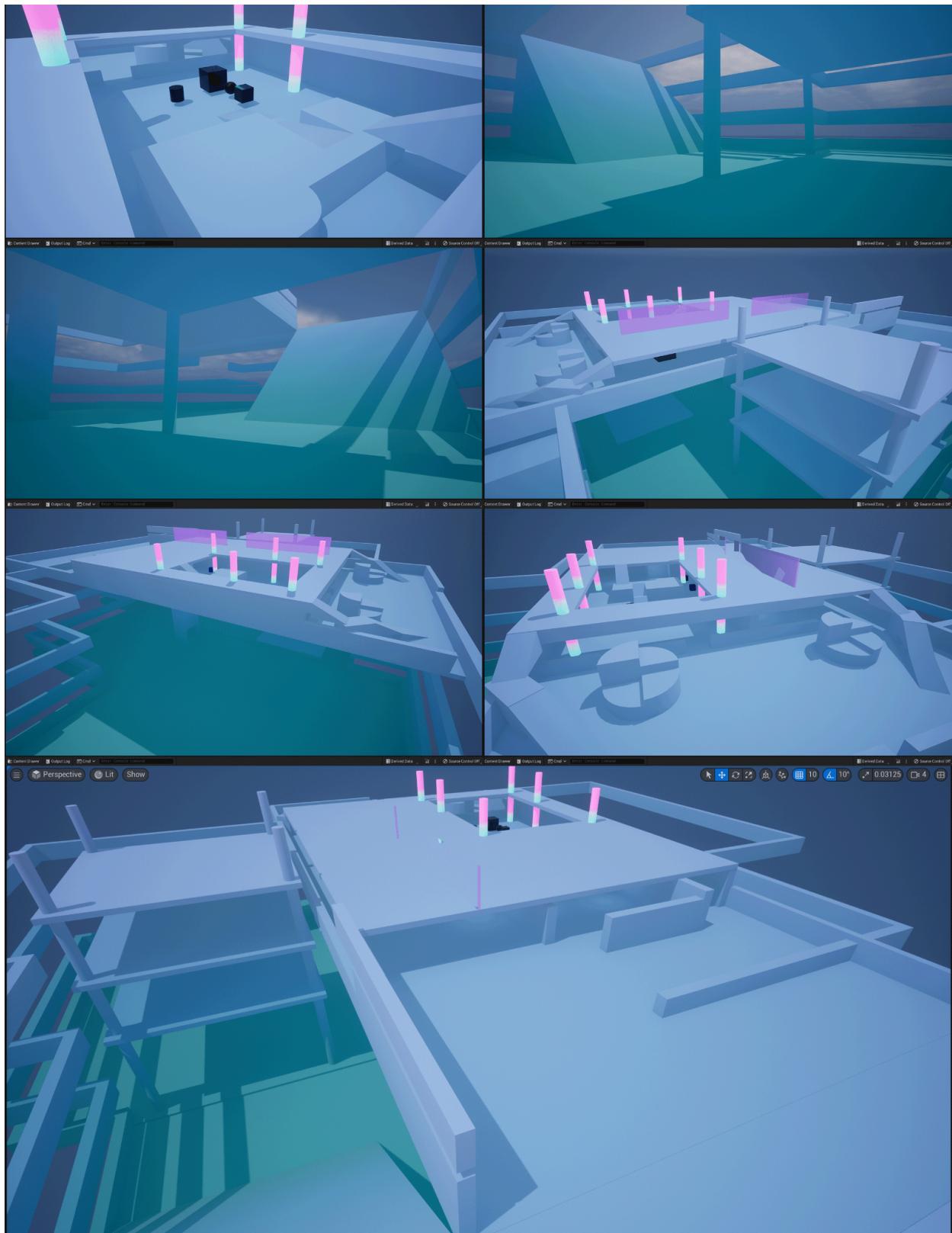
As a student of Computation Arts this study gave me the opportunity to bring to bear all my skills into an applied game development challenge. The areas of Gameplay Programming, Level Design, narrative design, Visual Development and even the conceptualization of speculative hardware features are all relevant to my interest as a technician, a designer and an artist.

Practical deviations:

The realization of several features, technical investigations, and the exploration of workflows and techniques remain to be rescheduled into future development. And the introduction of a 2D version of the game, and a possible hardware component needs to be factored into the planning.

The focus of the Summer sprint ended up being on the core ‘object swap’ mechanics, Narrative Design (writing and world building), as well as Visual Development for the design of the main character (obsidian). NPC, Dialogue systems, level transitions, metahuman character integration workflows are areas yet unexplored. And establishing DCC integration with Blender for environment art has been deprioritized in favor of in-engine modeling and geometry scripting tools, based on my technical investigations.

Proto Glod GitHub repository: <https://github.com/lmrv/proto-glod>





Proto Glod GitHub repository: <https://github.com/lmorv/proto-glod>



Commit history Summary:

- [ProtoGlod: Technical investigations, game mechanics and knowledge bases.](#) - May 17
 - - I implemented an aim UI to the HUD of the character that changes states if it is hovering over an interactable object.
 - - I also documented the process from a technical standpoint by taking screenshots of the tutorial where I learned the technique.
 - - I've gone on a rabbit hole of tech investigations, and I have now incorporated Obsidian, a text editor, to build a 'knowledge base' of everything (or most things) I learn by watching tutorials and adapting the contents to my needs.
 - - Some re-shuffling of priorities is occurring as I come into contact with the 'tasks' that I planned for in my schedule. I talk more about this in my process journal, and it's an ongoing conversation with myself.
- [ProtoGlod: Knowledge base entries and story writing.](#) -
 - - I think I have concluded my tech investigation black hole for now. I have a ton of material related to blueprint communication and interaction implementation to refer back to as I proceed.
 - - I wrote the start of a script for the narrative. I went for a stream of consciousness style where every character's dialogue is mashed together into obsidian's inner dialogue. I'm thinking of this as a way to represent the role of perspective in narrative and the way we process our experiences of the world. Everything filtered through the interface of our own minds. So far I've incorporated only two voices --obsidian's and tezcatlipoca's-- I am curious to see how it turns out when I add more characters into the mix.
- [NarrativeDesign: GB Studio starter pack.](#) - May 22
 - - Created a GB Studio project for a low-fi narrative design prototype, I am trying to focus on the writing and event progression without the complexity of UE5 to hopefully loosen up the creative energy.
 - - I am going to experiment with a simple quest-type unlock flow (which is what the GB studio top down template give you by default) and see where that takes me. I'll have a chance to try the dialogue from the script that I wrote, and develop it further in parallel.
 - - I also set up my photoshop art documents in accordance to the specifications of the GB documentation. I had 'templates' laying around from my last GB Studio game; Sunna. I used these as a starting point for both sprites and backgrounds.
- [NarrativeDesign: Editing the script.](#) - May 23
 - - I continued editing the dialogue stream. I am struggling to find a concise narrative arc that is not toooo long. I feel like this story could go on for a very long time and become a very big game project. And I think that would be a very cool thing to make, but I also want to find a vision of the story that fits in a small experience of like 20 minutes max.

- - Anyway, next steps are to implement some object swapping interactions in UE5, and to plug in the dialogue I've written into the GB Studio project.
- [Gameplay: Implementing swappable meshes on test interactable object. - May 25](#)
 - - I am experimenting with a combination of two methods of interacting with objects, using two of the tutorials that I recorded in my knowledge base: 'Selecting Actors By Looking At Them' & 'Cycle between static meshes in a BP'. And my main goal is to discover where exactly to intervene in the actors' blueprints, where does the behavior belong and how exactly do the instructions flow between the character blueprint, the HUD UI (IE the raycast from the camera), and the interactable object.
- [Gameplay: Implemented cycling mesh behavior on click event. - May 27](#)
 - - Made a version of the 'object swapping' interaction by cycling over a pre-defined set of static meshes within an interactable actor blueprint on a mouse click event.
 - - One quirk of it is that it just listens to a global click event regardless of whether the interact indicator (and the camera) is pointing at it or not. It's also not as flexible for my needs, the mesh can only switch between a set of meshes in a fixed order because everything is contained within the interactable actor itself. There's no communication between the player character and the object in the form of events and variables through the implemented 'Interface' asset that the UI element is using to do its thing. I gotta put in some more work to define those events and variables, and think about how the Interactable/ swappable actor is configured in terms of inheritance and static mesh data.
 - - Encountering my gameplay tasks brings me face to face with my technical limitations, everything is less straight-forward than I thought. I think it's a combination of the overwhelming amount of techniques available to me and my blind-spots about the specifics of how things work in Unreal. But in reality I think the feeling may be telling of a more general pattern. In the attempt to turn ideas and concepts into tangible programmatic behavior I always find myself coming up short of what I envisioned, or I realize that what I imagine is not as well defined as I assumed. My solution is a combination of 1) deploying my problem-solving and learning/spongy skills to try to bridge the gap between imagination and results, and 2) designing narrative around my limitations as I experiment --asking myself questions of along the lines of 'What kind of narrative moments can I extract out of the behavior that I got?' and 'How can I tell my story with the gameplay features that I can actually build?'.
- [Character Design, Narrative Design: A wave of character sketches & dialogue stream edits. - May 28](#)
 - - Did a whole bunch of sketches of obsidian, some I had in the back of my pocket (of my back pocket) from a couple weeks ago, made a couple others more presentable, and I tried to develop the idea of having a mask on them. Only one

of the attempts at a masked obsidian was truly successful I think. But I'm still adding them cause it's all part of the process.

- - This idea came from me trying to think about the rigging workflow of the 3D model, and about how I don't want to rig the face. My fear is that they will look dead and really creepy without even a blinking animation, so I decided to cover the face or at least just the eyes with a cool mask. I think it would be pretty cool and unique and a chance to get more mesoamerican aesthetics into the visual mix.
- - I've also been shamelessly gravitating towards a design that looks kinda like me (or an idealized kid version of me). I also really like the sketches where they look more female, people often thought I was a girl when I was a kid and had long hair, and I thought that was cool for multiple reasons. I would reaaaally love to make obsidian completely customizable haha! sliders for proportions, hair styles, options of clothing, different masks and all that jazz. But for now, realistically speaking I would be happy with an obsidian of ambiguous gender, and no face animation, with a cool mask, or sun glasses. Or a simple solution to blinking (now that I think about it that doesn't seem so hard to achieve with vertex blend shapes and no rigging).
- - On the narrative-fabulation front; I did a 'refine' pass on the script I wrote for the beginning of the game. I didn't find the concise narrative arc that I was looking for, maybe I will later. But I think that ending on a cliffhanger could also work for a 'demo' type experience, and allow me to endlessly write the story in the ever-escalating event progression format that it seems to be headed. I sort of set myself up for that kind of story and now I don't know how to get out of it. I don't know if I really want to.
- - I also made this itch.io page for a speculative 2D gameboy version of the game called 'proto-glod: darklit (lite)': <https://lm-vega.itch.io/proto-glod-darklit-lite> . I'll talk about that on a journal entry or a why reflection.

- [Database Maintenance: Upkeep of information concordance](#). - May 30

- - Updated the README.md file to reflect changes and additions made to the narrative concept and art statement made elsewhere and as a result of me thinking about it a whole bunch (writing the script, thinking about possible features, and re-framing my approach to the game's development to fit various goals of the type; 'what is this project supposed to be?' and 'how do I continue with narrative design iteration given technical dependencies?').

- [Gameplay: Object selection, blueprint comms trouble](#). - Jun 1

- - Set up test object blueprints with distinct static meshes, and created another interface to implement a 'selectable' type behavior -- a way to highlight the object with a decal (in addition to the HUD UI interaction indicator), and affect its components and properties. I've been stuck on trying to make this work since I started on it yesterday.

- - Majorly confused about the communication streams between the character and my selectable actors (that's what Unreal calls basically every object). I am gonna need to spend some more time debugging and analyzing my event graphs, and my interface. I am probably missing some key piece of info, a checkbox, somewhere, or I used the wrong type of node on some part...
- [Level Design: Expanding on blockout, more shaders!](#) - Jun 3
 - - Expanded on the level blockout; adding barriers and suggestions of walls on borders of the map, some new structural features based on my concept art (the tower 'stacks', and the big gateway in the lower floor) and adjusted dimensions and spatial relationships of elements.
 - - Starting to think of unlock flows to gain access to different parts of the environment, and trying to think of some narrative justification for that type of mechanic. I'm thinking the level would unfold from the center out, basically expanding the play area with every new unlock. Some of them may be just interacts to open doors more than puzzle driven unlocks.
 - - I also created a world space gradient material! And I added the source tutorial for the technique and screenshots from the in-game implementation to my knowledge base.
- [Process: journaling & asking why?](#) - Jun 9
 - - Wrote a journal entry about the directions my narrative design is taking, and a 'Why' entry on the perils of being inside my head and doing things.
- [CharacterDesign, DevBuild: published development build, created technical character drawings](#) - Jun 15
 - - Published an in-progress build to itch.io:
<https://lm-vega.itch.io/proto-glod-awakening-3d-in-progress-build-1>
 - - Had some fun trying to figure out how to make the packaged build start in windowed mode at a 1920*1080 resolution. Which turned out to be more complicated than I expected, even tho I had already done it in the past for the Stack Bot bug build. I might have deleted my implementation on the stack bot game mode cause I thought it was a 'hacky' solution. I also think the current one is sorta hacky, but I am proud of how I figured it out from the limited info online, and this time I documented the process on my knowledge base. It is definitely not the same solution I used before, I had to learn about the 'user settings' nodes, and I don't know what about my current setup made the previous method unusable (or if it's just the fact that I don't quite remember what it was exactly).
 - - I also made a turnabout technical drawing sheet and started modeling Obsidian! I had a lot of fun coloring the 3/4 view and I even drew some props; the gemboid, a backpack, and a jaguar mask that I really like. I have now started to block-out the character in 3D, using the Void Being model as a base mesh. I'm sculpting on Nomad Sculpt on the Ipad.

- [Gameplay: Success! Via the power of friendship. - Jun 19](#)
 - - I have been really struggling with the implementation of the core object swapping mechanic. Getting around the communication tangle through interfaces and actors (objects), and blueprint components, and unknown gaps in my knowledge. I just could not get it to work. Not only did I not know a bunch of things; I didn't know that I did not know a whole other bunch of things.
 - - This weekend I finally consulted my friend David. He basically unblocked me and intervened in my blueprints in key ways that I would have not figured out on my own. I was tangled up in a number of stacked effects that worked against me. 1) The 'cyclic' implementation of the object swapping interaction was absorbing the mouse click event input --not allowing it to be used by my new blueprint code. We turned off 'absorb input' on the test actor in the level, then got rid of it entirely after it caused more shenanigans (might re-introduce later just for fun). 2) Trying to store component data from my selectable objects using the events and variables in the 'selectable object interface' proved to be an unnecessary complication (I'm still using the interface to change the visibility of the highlight decal, via its events, and to display the interaction indicator UI). Instead we used variables on the character blueprint to store ('get') and 'set' the static mesh components. 3) We had to create 2 'levels' of variables ('mesh' and 'mesh mesh') for the objects in the interaction (targeted, and target objects); one of the variables refers to the static mesh 'component' in the actor blueprint, and the other to the actual static mesh 'asset' in use within that component. 4) Finally and most fundamentally, I had been thinking of the interaction as happening all within the same input (Left Mouse Button); where clicking on an object would store its mesh in a variable, then clicking on another object would swap that object's mesh with the one stored in the variable. Instead we opted to have a separate input (Right Mouse Button) be in charge of the swap, which made it much more simple to conceive of the getting and setting of the static mesh components/ assets in practice, and it makes for a more interesting and clear gameplay experience (at least to me and David at this moment).
 - - So the current behavior goes like this: 1) pressing either left or right mouse button will select the targeted object, highlighting it with an emissive decal and storing its static mesh (using 2 'levels' of variables). 2) Pressing the same input again on the same object will have no effect. 2) Pressing the same input on a different object will 'select' that new object and 'deselect' the old one. 3) The Player must press the opposite mouse button while targeting the second object in order to swap its mesh with the selected object's mesh (if selection was made with the Left Mouse button, the swap must be made with the Right Mouse Button, and vice-versa).
 - - Next up for this feature is extending its functionality to work with Left and Right trigger buttons on a gamepad. And to color-code the selected object's highlight decal depending on whether it was selected with the Left or Right input. Hopefully that will help communicate the mechanic better, and help players remember what button should be pressed next to enact the swap during play.

- - I have documented this implementation with screenshots in my knowledge base for future reference.

Journal Entries:

[Proto Glod - Development Journal](#)

May 12, 2023 - Coming back from a break

I am a turtle that never learnt to fly. I am also coming back from a short break in this project. That's not entirely true since I constantly think about it. A lot has happened in my mind that has gone undocumented, so here I will attempt to put myself up to speed on what those things are exactly. Maybe in a series of journals even.

In terms of schedule I am on Week 4 of my Spring Sprint; "Targeting system technical investigation, Ray-casting, object detection". I found some really great references on how to do this and I thoroughly documented the process; taking screenshots of the Blueprint graphs in the tutorial, adding comments and instructions and implementing them in my game. I used a note taking app called Obsidian that I really like as a text editing tool, and I think I might create a whole 'Obsidian Vault' for the project and track my tech investigations in this way from now on. It is a very time consuming process tho, but maybe not significantly more time consuming than following a video tutorial on its own.

I take screenshots as I watch tutorials, trying to catch significant actions in the process, then crop the images to highlight those actions in the UI, then drop them into a text document, then follow the steps in my Unreal project as I write instructions and comments in the document.

One cool thing about Obsidian is that it uses MarkDown to format the text documents, so I could upload a Vault to a github repo and have all the documentation files show up on the browser looking really spiffy and nicely laid out. Obsidian also has a feature to link documents to each other with tags, and can be visualized in a graph view that looks really cool.

May 16, 2023 - Building a knowledge base

I am building a knowledge base as a means to materialize my technical investigations, using Obsidian (the note taking software, not my character). I feel like I am diving into a whole other wormhole, like in all things. I am finding so many interesting materials online, not always connected to my goals directly, and I could go on studying in this way forever. I figure I'm gonna keep going until something happens in my mind; I get distracted or fed up. I will keep in mind that I still want to get to executing some design goals within a reasonable time frame, and that there are specific threads of inquiry that I want to follow up on (NPCs, and dialogue systems).

I have also been having a lot of fun narrowing down the design of my main character; obsidian --sketching them over and over on the Ipad-- and I am really excited to get started in the 3d model in the near future. That and the narrative design are becoming my priorities in my mind just because they seem the most fun to me. Level design is a close second, especially since I've been finding a ton of cool modeling and texturing techniques during my tech investigations. So might use that to distract myself from time to time.

I've been thinking that maybe a good approach to fleshing out my story, and to get around the technical dependencies of development in UE, might be to try to tell the story in a GB Studio game for the Game Boy. It would be a purely narrative, linear game; limited to the platform's mechanics. And that might give me a chance to see how the story plays out in that format.

May 22, 2023 - Writing writing writing

Wrote a dialogue stream for the beginning of the game in a sort-of script format. I am really liking this idea of jamming every character's dialogue into one stream-of-thought-type text and displaying it all in the same text box. I see it as a way of getting at the theme of polymorphism between things that I am playing around in the mechanics --As in the differentiation between all the characters is blurred, and there is a chance that everything is happening inside obsidian's imagination. I think the tone is fitting for a chaos-magic game.

I am having trouble however imagining how to progress the narrative past this into 'sequence', and also picturing how I'll manage more than two characters talking in a conversation. I've been using bold text to signify Tezcatlipoca's dialogue, and normal text for obsidian. Maybe I'll use different text styles and sizes for other characters, even different fonts once in game.

I am gonna try to write some more and get to the event-meat of the story, and then prototype in GB Studio for a bit. I want to get into some object swapping interaction experimentation as well, in UE5. And I thought of a title for the GB Studio story prototype: Proto-Glod: Darklit (Lite).

June 7, 2023 - Auto writing, complexity of context

The harrowing truth that all us humans live in fear, the plain anthology of season subsumed by fire and a darkly lit sky, saucetastic management guys, my impending pedanticness escapes no reason, no foray into the woodsack, the sack of wood, sac o' wooden beams. The antipathic piece of writing before your very eyes (reprise).

I think I'm gonna try out an automatic writing technique on my script, see what comes out. Hopefully it doesn't reveal something too deep about my subconscious; some fatal character flaw. I think it's fitting, and I am stuck otherwise, I am really dreading any methodical approach. I have a sort of outline in my mind but I feel like as soon as I put it down on paper it's going to feel done to me. And the work that follows is going to be a drag. I rather try to surprise myself.

I had a talk/ creative approach/ story review session with Alexi (Alexandre Franchi) last week after the GaR meeting. I had him read my script and the narrative concept overview from my README.md file. We talked a whole bunch, he said a lot of things, I'll transcribe my notes below. What I am mostly taking out of it is that there is so much that I could do to approach the conceptualization of the story from a cinematic and experiential standpoint. I could storyboard, film prototype footage of key moments, make a 'mood-edit' with existing pieces of footage from other games, write out a formulaic 'pixar type' story outline, make an experience map laying out the moment-to-moment event progression and user interactions of the piece (that was easy to

do in Dead Space Remake, I speculate, because there was a built experience to map in the first place). I could do so many things.

I am mostly grateful for the opportunity to talk to another human being about my convoluted process and know their interests, and methods, and hear about their projects, and convoluted processes. The scale of some productions and art forms is hard to imagine sometimes, how many people and disciplines have to be mobilized behind a unified idea, and how much work and care needs to go into every minute aspect of the final product. This shit is complex, I am not sure if knowing that helps.

On another complexity-related note; I feel like the complexity of my life is increasing lately. I hope I don't burn out. Switching contexts between classes, and work stuff, and this (which is also work stuff, but I am trying not to care as much despite that) is HARD, hard on my brain. I might have reached a dangerous level of existing stuff in my life. I am also moving at the end of the month, and creating a whole separate art project with friends. Yaaay!

These are my notes from the session with Alexi:

- Exposition > A process of discovery of who is the entity that is talking to Obsidian.
- Why is the kid in the library?
- What if we didn't know it was tezcatlipoca?
- Tezcatlipoca prompts player to try game mechanics. Tutorialized. (I'm doing this already in a subtle way).
- Using the gemboid as a conduit.
- Feeling of activating something beyond your control.
- Starting with the possibility of picking up the book instead of diving straight into dialogue.
- Why does the story begin now instead of last weekend?
- Letting go of the world as you knew it (mom, school, sibling). Point of no return.
 - Option to leave the library. At some point that option becomes unavailable.
- Is there some sort of cosmic event bringing all these phenomena into this library nexus?
- Is there an exhibition at the library? Artifacts, books.
 - Research project? Lunar/solar eclipse?
- Variety of cultural artifacts.
 - Only one (tezcatlipoca's mask), sets game event's in motion?
- Tezcatlipoca is also the god of memory.
- Maybe tezcatlipoca is not aware he is tezcatlipoca.
- What if the library is a museum? (nope).
- Quest system.
- What if the kid becomes tezcatlipoca? (He doesn't need to, he is already an aspect of them).
- Pixar story formula.
- Story beats in cue cards.
- Fleabag > Clusters of situational events, characters, bits of dialogue.
- 3rd person VS first person - is first person more adapted to stream of consciousness type narrative? (not necessarily).
- Playing around with the format of the game. Playing with conventions - 'Baba is You'.
- The game could transition from 3rd to 1st person.
- Automatic VS enacted/ intentional change.

- Storyboard story beats - experience mapping.
 - Cinematics: Types of shots, composition, lighting.
- Color key progression.
- Fake posters, promotional material.
- Mood trailer/ edit. - Gameplay footage of other games - in-game footage / cinematics.
- Fragmented story - piecing it together.
- Puzzle experience in narrative.

'Why' entry:

['Why' process document on GitHub.](#)

03 - Why 'Darklit (Lite)'? & why is my brain like this?

I made this page on itch.io while thinking about narrative design on the gameboy:
[Protoglod: Darklit (Lite)]

My thoughts about ways of materializing the story of the game in a low-fi format coincided and were co-created by the occurrence of the second installment of the solar gameboy game jam run by some colleagues at TAG. I wanted to participate and made a tenuous attempt at thinking within their framing of retro gaming and solar game design. This is what I wrote there:

"Proto-Glod: Darklit (Lite) is the 2D, top-down, pixel art version of --game in development-- Proto-Glod: Awakening (3D). This variant built for gameboy and web platforms is mainly a way to explore the purely narrative components of exploration and quest-driven gameplay, and as a way to introduce possible solar media features into the Proto-Glod game concept. Some of those features are more speculative than others, and Proto-Glod: Darklit (Lite) is meant as an extension, and a compact variant, of the 3D game in ongoing materialization using Unreal Engine 5. The story beats may differ in the 2D and 3D games, as well as the gameplay and delivery of the narrative experience."

Since then I've spoken to Michael about the hardware possibilities of the features I speculate about. It turns out that getting information about battery levels in the gameboy could be tricky, but perhaps doable. There are cartridges that have an integrated timer for example. Perhaps a hardware solution could be built between the solar battery circuit and the game process, that keeps a cycle that 'coincides' with measured depletion rates of energy. I also put forth the possibility of building a bootleg 'gemboid' using a raspberry pi and a gameboy emulator.

And anyway I think that brings me to the second question in the title. To which the answer is of course is; 'I do not know'. I'm gonna keep pushing forward (or in some direction) despite the clear drawbacks of its existence, and its cursed state.

Original Independent study proposal:

Proto Glod is a game about discovering hidden powers and messing with reality. The principal goal of this independent study is to use the intentional direction of Proto Glod's ongoing creative production to continue learning about the Unreal development framework on a practical level, and to document the process under the Games As Research MDM methodology using GitHub.

Artist Statement & Narrative concept:

Proto-Glod is a third-person narrative-fabulative action playground game. The player steps into the shoes of a 5 to 7 year old child in a library, who can change any one object into any other by storing an imprint of the object in a magical book, then targeting another object in the environment. It's all fun and games until you use your powers on a human. Reality-based hijinks ensue, and mystic-cosmic shenanigans emerge out of the chaos. The kid learns that they are a demigod of indeterminacy; offspring of Primordial Chaos, god of non-deterministic fate; Tezcatlipoca.

Divine forces of Order and Chaos, as well as the human police, are alerted to your existence. And step forth to oppose and aid you in your quest of self discovery and rampant reality-exploitative fun. As it turns out, changing the physical world by merely thinking about it --transforming matter and energy-- comes up against detrimental phenomena mediated by laws of conservation. And it really grits the metaphorical teeth of certain entities; auditors of reality, as they are known in Terry Pratchet's Discworld --embodied forces of order and pragmatism.

Our demi-god anti hero can act in small playful ways at first. But, as their power progressively increases; the very fabric and structure of existence is put at risk. Which is maybe not entirely a bad thing. Tezcatlipoca encourages ever-increasing abstraction, human imagination is the limit.

The tone of the game is meant to be comical. Absurd, silly, and whimsical even when dealing with existential themes and potentially disturbing elements of magical violence. It is not meant to be graphic nor explicit, but it does intend to take horror and dread seriously from a storytelling and action-based performance perspective. All the elements of the design, from visual aesthetics, to writing, to interaction mechanics, should be in service of a welcoming and playful atmosphere that invites players to view the conditions of our mortal existence as a source of amusement and dynamic transformation, rather than fear and nihilism.

Core Mechanics:

- Third person CCC (Character, Camera, Controls).
- Dialogue Interactions, and story progression.
- Unlock-flows and environmental puzzles.
- Ability to copy objects of the environment into a magic book and change other objects in the environment into the copied object by targeting them with the book.
- Non-lethal magical combat using object swapping mechanics.

Development Objectives:

The following are tasks ranging in scope and priority, categorized by design disciplines. They are representative of the current Conceptualization and Prototyping stage of production. For a more granular view of the immediate design actions, and to get a better idea of the intended time-bound cadence of development see the Production Schedule.

Level Design:

- Block out prototype level based on library layout.

Visual Development:

- Conceptualize character design.

Gameplay Programming / Narrative Design:

- Implement prototype NPC.
- Implement the dialogue system.
- Implement the targeting system (object detection).
- Implement the mesh swapping system.

Character Art / Asset Creation:

- Model, texture, and rig the main character.

Documentation / Analysis:

- Upkeep of MDM tracking through journal entries, targeted reflexions, bug reporting, and GitHub commit messages contextualizing my design process.

Proto Glod GitHub repository: <https://github.com/lmrv/proto-glod>

Production Schedule:

Spring Sprint:

Discipline / Week	W1 March 12-19	W2 March 20-26	W3 March/April 26-2	W4 April 3-9	W5 April 10-16	W6 April 17-23	W7 April 24-30
Level Design	-----	level block-out iteration - In-engine layout	-----	-----	-----	-----	-----
Visual Development	-----	-----	Main character design - rough concepting	-----	-----	-----	Main character design - final key art, turnabout technical drawings
Gameplay Programming / Narrative Design	-----	-----	-----	Targeting system technical investigation - Ray-casting, object detection	NPC technical investigation - extend player class, idle animation	Dialogue technical investigation - proximity + player orientation trigger, UI text box	-----
Character Art / Asset Creation	-----	-----	-----	-----	-----	Bug Fixing Void Being feet floating	Experiment with Metahuman character asset creation based on concept art
Documentation / Analysis	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking
Planning	Spring and Summer task planning	-----	-----	-----	-----	-----	-----

Note: Classes end April 17

Summer Sprint:

Discipline / Week	W1 May 10-14	W2 May 25-21	W3 May 22-28	W4 May/June 28-4	W5 June 5-11	W6 June 12-18	W7 June 19-25	W8 June/July 26-2
Level Design	-----	-----	Block-out iteration, 'Dungeon' layout ideation - Expand on prototype level thinking about environmental puzzle and exploration mechanics (sketches, grey-boxing)	Establish DCC integration workflow - Start environment exploration in Blender based on concept art and integrate to engine	-----	-----	-----	-----
Visual Development	-----	-----	Interior environment concepting - Create initial concept art trying to build a sense of place.	-----	-----	-----	-----	-----
Gameplay Programming / Narrative Design	Targeting system iteration, mesh swapping experimentation - Continue implementation of targeting system - Build mesh swapping controls on targeting system*	NPC/ Dialogue - Continue implementation and iteration of NPC dialogue	Experiment with level transition and trigger volumes	-----	Writing/story/fabulative design - Story progression brainstorm/outline - World building	-----	-----	-----
Character Art / Asset Creation	-----	-----	-----	Experiment with Metahuman character integration	Character Modeling - Blockout	Character Modeling - Refine	Character Texturing - Texture paint and surface maps	Character Rigging and integration
Documentation / Analysis	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking	Ongoing MDM tracking - Independent study retrospective

Note: Concordia Academic Dates Summer 2023: Term 1: May 10 - July 2. Term 2: July 3 - August 10

* Create Static Mesh Getting and Setting system on button press event for targeted objects

References and inspiration:

- [https://steven-universe.fandom.com/wiki/Rose%27s_Room_\(location\)](https://steven-universe.fandom.com/wiki/Rose%27s_Room_(location)) | Rose's room from Steven Universe can manifest the occupants desires within a computational limit. Prominently featured in S1 E19 of the series. The time travel episode in the same season (Steven and the Stevens) is also representative of the tone I'm aiming for.
- <https://en.wikipedia.org/wiki/Tezcatlipoca> | Drawing a lot of inspiration from Mesomamerican mythology. I am adapting and re-interpreting as I come across different interpretations of the significance of Tezcatlipoca, and process them through my bra
- https://zelda.fandom.com/wiki/The_Legend_of_Zelda:_Link%27s_Awakening | TLOZ: Link's Awakening (1993 and 2019 remake) is about an illusory world dreamed up by the Wind Fish. Waking up the dreamer would end the world, yet that is Link's quest.
- [https://en.wikipedia.org/wiki/Control_\(video_game\)](https://en.wikipedia.org/wiki/Control_(video_game)) | Control (2019), snappy gameplay featuring supernatural abilities and a really interesting narrative concept.
- <https://youtu.be/Fw2XeEvhUA4> | In The Under Presents, your mask allows you to 'craft' potions and magical VFX by combining objects from the environment, snapping your fingers and manipulating time.
- https://everythingeverywhere.fandom.com/wiki/Jobu_Tupaki | Jobu Tupaki from Everything Everywhere All at Once can bend reality to her will.
- <https://hades.fandom.com/wiki/Chaos> | Chaos in Hades offers powerful boons for unforgiving tradeoffs.
- https://discworld.fandom.com/wiki/Auditors_of_Reality | The Auditors Of Reality are recurring antagonists in Terry Pratchett's Discworld universe.
- https://en.wikipedia.org/wiki/The_Library_of_Babel | Jorge Luis Borges is always an inspiration when it comes to anything related to infinity. In this short story he explores the idea of an infinite library.