# Wild at Heart with systemic story

This is part of the series about my design for a Systemic story game.

A systemic story game must be able to adapt the story based on player choices. There may be prepared **scenarios**, similar to how table-top RPGs have modules with locations, characters and events. But the player may take the scenario in a completely original direction that will require the game to generate new and updated locations, events and restructure the story.

The implementation can start out very limited and in later iterations be built out with more and deeper systems. The end goal would be a completely systemic game version of an adventure series with lots of characters with secrets, goals and personal relationships, solving mysteries and exploring the world together, grounded in meaningful reflections on the human condition. In my rough roadmap, Level 1 is the minimal implementation for an interactive story outline. Level 2 includes each scene with the main choice and result of each encounter. Level 3 includes each beat that is the individual actions and their result, including dialogue in abstract summary form. Level 4 includes emotions and group psychology close to the level of details of hand-written dialogue. Level 5 includes connection to a spatial sandbox world with object interaction and physics simulation in some form.

In order to give an idea of what a systemic story is, I will take an example from Witcher 3 with a level 7 side quest in Velen named *Wild at Heart*. This will of course thoroughly **spoil** that quest. You may see a video walkthrough here <a href="https://youtu.be/hDDeZ0KslJk">https://youtu.be/hDDeZ0KslJk</a> that covers the main 3 endings of the quest.

This example will discuss what may be done to turn this quest systemic. The things discussed constitute a rather advanced (level 4) implementation. There would probably be at least 3 games done before that, focusing on less ambitious systems. There are also a lot of things here that have been previously done in games like Watch Dogs: Legion, Hitman, The Sims, Dwarf Fortress and more, but none of them has connected those systems to the game's main story, in a way that makes the main quest fully systemic.

This article will touch on several components needed for a systemic story including modeling of groups, subgroups, individuals. Their perception and partial memories. Their goals and plans. How they fill in the blanks for formulating theories of past events and other groups or individuals goals and plans. How templates are constructed for common story types like missing person investigation and crimes of passion. How events are modified based on story structure. How we can mix authored scenarios with generated content. How secrets influence dialogue and behavior. How theme, tone, personalities and story templates are used for constructing dialogue. And more.

■ The Witcher 3: Wild Hunt - Wild at Heart (All endings/Death March)

### **Theme**

This quest is about a crime of passion. That means that we can cover a rather large portion of stories just by identifying and implementing the systemes needed. Later addition of other systems can enable more and richer variations of the theme.

The quest will be introduced when fitting with the current story theme. Love triangle. To what length would you go to steal someone's husband. What crimes of passion are forgivable? Probably more elements that can fit other types of themes.

# The Story

#### The Notice

I am not advocating for using the traditional system of concrete quests and side quests. But there can still be something similar to a quest log for those who want that. My preference would be that things are added to the log only when you actually take the initiative to add it to the list of things to do. Everything is meant to connect, so there is no real difference of side- and main quests. All events you engage with are here termed **threads** and will be tied to the main story when it fitts.

In Witcher 3, this quest is picked up as a notice from a notice board:

Good people, take pity and hear my plea.

My wife, Hanna, she's missing. A few days ago she went into the woods and hasn't yet returned. I'm near out of my wits with worry and will pay any price to the man who brings her back to me, or at least tells me where to look for her.

Niellen, hunter from Blackbough

This article will focus on how to make this quest systemic, rather than how to dynamically generate the quest. But I will still comment on other aspects.

Since this is an **authored scenario**, you could make use of hand-written text. But I would much prefer to not use **hand-written** texts, even with authored scenarios (quests).

This quest falls into the category of "missing person", that is a very common type of quest. The systems created for this can then be used for unlimited variations of stories of the missing person type. So let's deconstruct the notice so that it can be used for other similar quests:

 A plea, for someone desperate for help, in an emotional negative state, and a lower social status. Instead of adding several variations of text for this introduction, each variant should be deconstructed and grounded in what circumstances would lead to those differences. Everything should be as generic as possible. Just keep adding variables to the point that you don't experience it as generic anymore.

- 2. Relationship, name and situation. This is very close to how to say the same thing in an abstracted way. "Hanna is missing. Hanna is my wife". A bit of language modeling can be used to reformulate the wordings, modified by the emotional state, situation and social status.
- 3. Restating of the events. "A few days ago" could be an actual date for a game that isn't intentionally fuzzy on time.
- 4. Wording for the reward, along with description of emotional state. Use the abstract form or build up the text from rules and patterns that match. In this case its from a person who opted to show a desperate urgency.
- 5. Ending with contact information. This should be enough to actually find the person. I would much prefer a game that didn't automatically mark the person on the map. It may be that the player doesn't know where Blackbough is located and would have to ask around for that in order to find the village.

The pointes here about not using quest checklists and map markers is just a question of preference. A systemic game can easily add directions for those who want it. But this type of game can also make the game much less frustrating since you would be able to ask anyone you meet for directions, and not just specific hand-written NPCs. This can even include NPCs pointing at locations on your map.

Lots of games streamline things that could become boring after a while, and this includes marking points of interest on maps and updating the quest log. I'm in agreement with this, but would solve the underlying problem by making the quests less boring and formulaic. See my article about Everything wrong with hand-written narrative. There should be less, but longer interconnected quests, with much more freedom that makes them more interesting. Getting lost can be used by the systemic story rather than just being wasted time.

## Arriving at Blackbough

Instead of having the person and map marked, you would have to ask around for Niellen. He may be sleeping, eating or out hunting.

By deconstructing the quest, we may have found some plot holes. Niellen has recently been afflicted by lycanthropy. In the witcher universe, those who are cursed are usually turning involuntarily during a full moon. And we know that Hanna died when he was in werewolf form, and that was a couple of days ago. The moon should have waned by now. We would have to adjust the story or change how lycanthropy works. So lets say that his grief and the fact that the condition is new is making him continue to turn each night.

The Witcher quest is set up so that Niellen will be found together with Margrit. This is important, since Margrit will follow Geralt into the woods. Since the scenario is hand-crafted, it can be set up that Margrit wants to stay close to Niellen in order to be able to intervene with anyone answering the notice to investigate. She also wants to stay close since she is in love with him.

Each actor is modeled with knowledge, emotions, goals, capabilities and habits. This can be done with the flyweight pattern, where a lot of the data is stored in prototypes for Human, Hunter, in Velen, in Blackbough, and finally Cursed by Lycanthropy.

In this case, Niellen is using the Isolated Shack as a hunting lodge. His condition will make him go to the woods hunting during nights, and then coming back to town in the afternoon, giving the animals caught to the butcher and his wife Glenna. He may have preferred to eat alone at the isolated shack. This would be modeled by the generic habits for Hunter and modified by the increased preference for isolation coming from Cursed by Lycanthropy. In this case, he also has the goal of finding Hanna and the goal of meeting anyone taking up the contract from the notice board. The latter is directly related to the player.

Rather than simulating the exact position of Niellen, the position would be determined only when necessary. This is part of the **top-down constraint satisfaction system**. The constraint in this case is that Niellen will not be in Blackbough at night when the moon is visible. During the day, he will be either in Blackbough or in the woods or at the Isolated Shack.

Since this is connected to a thread (quest) with the theme of love triangle, we would prefer to meet him together with Margit. That means that if the player would go directly to the isolated shack, he would not be there. But if we waited at the shack, he would appear eventually. So even if we want to nudge the order of events to fit the story, we should never prevent the player from finding their own way. They should be able to find Niellen by himself if they really worked for it.

In Blackbough, Niellen would be occupied with one of the appropriate activities and Margrit would be close by.

#### Talking to Niellen and Margrit

This type of investigation uses the same systems that are also used in many other types of stories. I have identified these components of a detective story as the best way to build up the foundation of a systemic story game. The core concepts here are:

- People have goals, some of which goes against other people or groups
- Knowledge includes memories of events
- People will make assumptions matching descriptions with specific individuals and intents
- People lie to hide their secrets

While talking to an NPC they can ask about anything. In this case they would select to ask about the event mentioned in the notice, that is the missing person. For a player wanting a partly guided or streamlined experience, the game would sort possible things to say and make the question about when he last saw the wife among the top alternatives. Otherwise, it could be selected through sub-menus by event or person.

You – Looking for a hunter named Niellen.

Niellen – Found him. What do you want?

You – Here about your notice. I'm a witcher. When'd you last see your wife?

Niellen – Five days past, 'fore dawn. Were on my way out to hunt, she were asleep. I come back, found no sign of her...

This dialogue does not have to be written out. It could be given in an abstract way based on the things we know the NPC has knowledge about that they want to convey. A level 2 implementation can do it like this:

He tells you that Hanna was last seen 5 days ago, before he went out hunting.

A level 4 implementation can be constructed by combining the information with personality, emotional state, relationship and social standing, and by including more details from memory and the culture prototype. This could also be enhanced with machine learning, just to find a wording matching a specific speech pattern. As in this case with "for dawn..."

You – Notice anything strange? Maybe her behavior?

Niellen – No, she were her happy, smilin' self. Nothin' different of late... She's not run off, if that's what you're askin'.

Notice how the face shows a moment of anger while Niellen states that Hanna didn't run off. That's part of the Witcher 3 animation library and is partially systemic, but to large parts tweaked by humans. With systemic dialogue, these emotions can also be done systematically.

The questions here are very standard for missing person cases. The answers could be harder to cover. But in this case, it's also pretty generic. The answer did not give indication of it being a case of domestic violence. The systems constructed for missing person cases would build up different possible answers based on the events and situation.

A level 3 implementation should construct the response in third person form, retelling what happens:

You: Ask if they noticed anything unusual

Niellen: He says he didn't notice anything unusual, and seems to be telling the truth.

For a level 4 implementation we can try to model the dialogue for generating something similar. It doesn't have to be exactly the same.

#### You – Did you notice anything unusual?

Geralt's question here is something you always would ask in a missing person case. You could basically use the same line every time without it coming out as unnaturally repeated. The witcher version would also work with just a change of gender.

Domestic abuse is one of the most common causes. It's also a key theme for detective stories and part of lots of other stories, so there should definitely be more ways to find out more about any type of relationships. I don't see the need to have a user interface for bundling both questions, even if they in this case are almost the same. There should be a way to ask about their relationship to get an idea of if she ran away voluntarily or not.

It would also be a normal dialogue pattern to answer questions about anything unusual with a summary of what constitutes normality. And this can be based on his or her personality, their relationship and her work, hobbies and habits. Just describing what happened during the day. The text can be assembled from the data about the NPC daily routine, along with a summary of her personality or emotional state. You could use a language model for it, but this type of text generation is not that hard. You just have to build functions that filter out the most important thing from the daily schedule, or the thing that separates them from their prototype. The part that differs from the prototype schedule of villagers.

So in this case, if she didn't have anything specific differing from other villager wifes. We could just pick something from her personality or mood.

Niellen – No, she were happy as usual.

Rather than being fancy with the language, I think we could fulfill the same goal by just describing the NPC emotional state and micro-expressions. That is something that can be presented from internal variables and psychological systems, and could be used for all NPCs. Just describe if he seems stressed, nervous, anxious, worried, and if it's a reaction to your question. My idea here is to be very transparent by default, unless the game and player has specifically made it a perception skill that you don't have.

The player can now follow up with a question about their relationship, filling a role similar to the Witcher dialogue.

You – What is your relationship with Hanna?

Or, more specific for missing person cases:

You – Could she have left you voluntarily?

Since this is part of normal detective questions, and it is more common than not that the person asked would be annoyed about assumptions of relationship troubles, there wouldn't even be a need for a generic handling of it. The type of answer would more be a function of the personality and if it hits any actual secrets.

Continuing with the Witcher version:

You – Maybe she went to the neighboring village, forgot to tell you?

Margrit – No, my sister were never gone this long before.

You – Tried looking for her?

Margrit – Asked round the village, none saw'er go. She must've left when they were still sleepin'... Told her time and again not to wander off on her own. She never listened.

Niellen – I mustard some men folk to scour the woods. Nothin'

A level 2 implementation would replace this whole conversation with just a summary of the information you gathered by talking to them, which in this case, this far, was basically nothing.

A level 3 implementation would also implement systems for the things they did. Assuming she is telling the truth, she asked the villagers about if any of them saw her. This would be one or several events and stored in memory of all those she asked. That means that you can check her story by asking people in the village about Margrit asking them about Hanna. And since this is systemic, you would be able to ask anyone in the village. Their personality and backstory would be generated on demand.

This is a dialogue with 3 people involved. A systemic dialogue system (level 4) should include ways to assign who should talk or interrupt based on personality, subject, how long each person has been silent, and so on.

Here is a rough representation of Margrit and the related event:

- Margrit is sister to Hanna
- Margrit asked villagers about the Hanna missing person event
- Margrit got the answer that no one saw her leave
- Margrit has knowledge of Hanna that she don't wander off for long

We know that Margrit knows what happened to Hanna, so this is a lie or at least an omission of the truth.

She has several secrets. She is in love with Niellen. She knows about his lycanthropy curse. She convinced Hanna to follow her to the Isolated Shack to see Niellens secret. That was her plan to make her leave him so that he could choose her instead. In this case, this is part of an authored scenario. But this story could als be generated, since this type of plan follows some sort of pattern of what a person would do in order to steal a husband. That is, you could implement the story-pattern based on jealousy, either broadly or more specifically as one of several variants of that kind of story.

Either way, she knows about Hanna but keeps it as a secret, and thus answers as one would with no knowledge.

Niellen on the other hand, does not know the fate of Hanna, but has his own secret. Don't know if he told the truth about scouring the woods with some men. There are a large flock of wolves in the woods, but it could probably make sense that a larger group could scare away the wolves and allow for better searching of the wood. Either way, this would likewise be an event that would be in the memory of the other people of the village, that you could ask about.

You – I'll look in the woods, you might've missed something. Ask around, too. She have any friends?

Margrit – Hanna kept – keeps – to herself mostly. Watches the blacksmith's young'uns atimes. And in the village, Glenna, the butcher's wife – she likes her best.

You – Thanks. I'll try to find her... but no promises.

Here, Margrit accidentally used past tense. The mistake can be taken as a clue, or just an indication that she doesn't think she is still alive. A systemic story game should include ways to spot lies and hidden emotions. With graphics and animation it could be done by facial expressions and body language. Without systemic dialogue, it should be presented in other ways. Possibly based on the player's perception skills. It can be presented as "Margrit may hide something." Or "Margrit seems to think that Hanna is no longer alive, but tries to hide it." It could also be possible to read something about how Margrit thinks or feels about Hanna, as standing in her way. Or depending on her personality, being scared of the truth being uncovered.

Since this is an authored scenario, her friends were set up. If this was a generated quest, the friends would be generated based on the established constraints. Having contact with the butcher's wife would not be far fetched for a hunter's wife. This would be part of the systems set up for missing person cases. There should be a list of people that could know more about her.

### Talking to Glenna

You - Greetings. You Glenna?

Glenna – Aye. But gristle and marrow's all I'm willin' to sell, and you'll have to wait til I'm done carvin' it.

This is an example of miscommunication based on assumptions. It should be part of the simulation by using the actors' world knowledge. In this case the assumption of an unknown person that they would assume is a passing traveler. It's the same type of classification system for how all identifications work. For example if a person is seen running through the village, they will classify who it is based on the perception. If the person would have the outfit similar to nearby bandits, they would assume it's a thief. The world knowledge is hierarchical. In this case there are probably no overrides, so it could use the top templates for the social classification of people based on their appearance. If it would be a person from the village, that would be overridden on the village level, with a direct identification. If they didn't get a close enough look, they might assume it's somebody they know if it matches them in build, clothes and constraint

for where they usually are and what they do. Misidentifications are a core part of many stories. Especially in mysteries.

You – You the butcher's wife?

Glenna – Butcher? Please... Might've called him a butcher when we lived in the shade of Novigrad's walls. Now he delas in carrion, fallen animals, their bones still fit for soup. So, buyin' somethin'?

In Witcher 3, Velen is supposed to be destitute with famine and sickness. But there are also lots and lots of wolves around, and at least until recently at least one competent hunter, so there shouldn't be that big of a meat shortage.

A sandbox game with a simulated economy could create direct feedback with the actual state of food availability. If Geralt would run around and slay all the wolves, it would be reasonable that the nearby village could run out of meat. Similarly, clearing out monsters from the area could restore access to crop fields or other resources.

This type of (level 4) response, remarking on words, could be built with a system for correcting (from their perspective) faulty descriptions. So this is a question of differing character description. In this case, regarding themselves. So this must be connected to a system of not living up to the definition of the description. This also uses the NPC backstory that could be generated on demand.

A level 3 implementation could be something like:

Glenna disapproves of being called a butcher's wife.

And that could have used a template like:

{person} disapproves of being called {description}

This can be followed by a template that gives the context for the disapproval. The level 4 implementation would then expand these templates with something that also has variations based on personality, emotional state and more.

You – Wanted to talk to you about Hanna. Hear you were friendly.

Glenna – She'd come by atimes, we'd talk.

You – She seem strange lately? Any idea where she might've gone?

Glenna – Hmm... Strange? No, a cheerful soul, always. If I'm to judge, it's the wolves got her. Been howlin' the nights through, lately. Even the baron's men're afeared to come by. Hanna must've gone to the wood, to gather mushrooms, maybe... Strayed too deep, and the howlers got her.

You - Thanks. Farewell.

Common questions for lost person cases. The answer here is a short description of her personality (cheerful).

Then she volunteered a theory of what happened to her. Use the NPC knowledge of the world, person and event and match it against causes of missing person. Common causes can be that the person runs away, hides, gets kidnapped, killed, or experienced an accident. Each person will make assumptions based on their own values and knowledge. This deduction can use functions specifically for compiling threats in the region or for a specific person or group. That is the type of system that can be used for most quests since it's a foundation for handling conflicts and dangers.

The recent increase of howlings is probably caused by the werewolf activity and would be covered by the systems created for the lycanthropy stories. The knowledge of the wolves' threat is common for the village.

### Talking to the blacksmith and children

Boy – Wow! My dad used to make swords like yours. Can I touch it?

You – It's sharp, better not. Need to talk to your father.

Smith – I forged swords once. Now it's scythes and hoes. For good arms, you'll need to go to Novigrad.

You – Wanted to ask you about Hanna. Heard she looked after your children.

Girl – Aunt Hanna? Do you know where she is?

You – No, that's why I'm here. She maybe tell you where she was going? Or anything else?

Girl – Hmm... She said turnips are healthy and we ought to eat 'em.

It can seem like an awful lot to implement if we want to make all these dialogues systemic with the capability to generate the same words. But we don't need that. And it's not a necessity for the characters to come alive or make us care about them. For a level 3 implementation, all this can just be deleted. For a level 4 implementation, we could implement some of the things involved here that would be used in many other situations.

- 1. The girl is missing a person that is brought up, so she asks about the person.
- 2. The boy comments on your outfit. This would be a very good thing to implement. Make people comment on if you are bloody, naked, dirty, and so on. Also if you are dressed like a guard or anything else that matches a specific group or type of person.
- The girl misinterprets the question in a childish way. Having systems for language
  misunderstandings could be very valuable for other situations where the person you talk
  to has another native language or is confused or similar.

Boy – I saw her go to the forest! With another lady! It was dawn almost – I'd gone out so I wouldn't wet the pallet.

In this scenario, the quest is authored with the boy being the witness. This also fits the constraint of a person that Hanna could have missed to ask.

But with systemic story generation, we would follow the missing person story templates, and would assign a person being the witness from the ones being interviewed. If for any reason, the boy wouldn't be present, another person would be assigned. And for story reason, we would favor it to be the third person you ask, unless that person didn't fit the constraints for being a witness. An alternative story template would be that the witness has a reason to not tell what they saw.

Smith – The forest? She's done for.

You - Why?

Smith – A huge pack roams the area. None from the village dares go in the forest. Niellen's only one not afeared, but then he's a hunter...

You – Did you get a good look at the other woman? Know who it was?

Boy – No, she walked in front of Aunt Hanna. I couldn't see.

You - Thanks. Farewell.

The Boy has a personal knowledge store, inheriting from prototypes for Blackbough children, and so on. In that knowledge store, there is a record of the witness event. This event contains the persons seen and what they did. This is another example of how memories of events are recorded with a list of observed properties rather than the factual identity of the persons. This is very important since misidentification is a very common theme. One of the story templates can be that the culprit is misidentified, and for that the memory would be a person that has certain characteristics that match more than one person. For example the color of the clothes, style of hair, specific tool at the belt and so on. In this case, the only characteristic was that it was a woman. It would clearly be better if the boy would mention another detail, such as the hat, providing that there are more womens in the village with hats.

In the Witcher 3 quest, this is all the persons you can interview. But a systemic story game would allow you to continue to ask people, and that could possibly lead you to uncover the love triangle. Or you could ask more people about Niellen and find out how he changed his behavior before Hanna disappeared. The game would continually add details as long as you continue to ask around and uncover all the village secrets.

This could be a good place to say something about the passage of time. If you dally around, the person you are trying to save could have died before you found them. That is not to say that you should speedrun the quest. I really don't like time constraints. So the type of time consideration is not about actual minutes or hours passed, but rather a consequence for what you chose to do. If a person has been kidnapped and awaits your rescue, and you decide to start and finish

three other quests instead of going for the rescue, there should be the possibility of consequences. So it should never punish you from walking slowly and talking to everyone. But if you get distracted and start a whole new questline, you may regret it later.

#### The Woods

In the middle of the woods you encounter a pack of wolves. The Witcher 3 quest has made this a scripted part of the quest, since they guard the next clue. Margrit appears after you kill all the wolves. She wanted to talk to you but not in the vicinity of anybody in the village. She probably waited until it was safe to approach.

Margrit has a lot of secrets. All secrets should have a connection to a goal they conflict with. These connections would be modeled as part of the systems for love triangle stories.

- Margrit loves Niellen
- Here love is secret towards Niellen since she know it's not reciprocated
- Here love is secret towards the village since it's tabu
- Her knowledge of Niellens curse is secret since she wants to protect him from the village
- The event where she took the sister to see him is secret to all since, it's connected with the other secrets and she felt responsible for her death.

The reasons for keeping secrets don't have to be all logical. It can often be connected to shame of some sort. After that, the lies will spread since she doesn't want to admit to previously lying.

Margrits main goal is to make Niellen love her and protect him. Secondary goal is to keep her secrets since their exposure could harm her chances with him.

Now, with a bit of hierarchical planning based on the goals, we will arrive at a number of possible plans. This is similar to what is called hierarchical task network (HTN) or goal-oriented action planning (GOAP). Suitable plans can then be scored using Utility AI.

Among the alternatives of convince, kill, trick, extort, plead or bribe, Margrit decided to bribe and convince. But doing it in the village would expose her secret. So the planning would resolve to catch up with him away from the village. And since staying alive is another goal, she would opt to wait until the dangerous wolves were gone. She also had to reach Geralt before he found the body. This would be something similar to A\* search, for finding a working plan in the graph of possible plans that fulfills the goals.

Since this is done with systems, she could do it in other ways if the circumstances were different. She might have catched up with Geralt earlier or later. Also, it would be very possible that Geralt would have noticed her sneaking behind him. He might have killed her by mistake.

Margrit – Witcher?

You – What're you doing here? Shouldn't be in the forest alone.

Margrit – I came to tell you... You needn't look for Hanna. She'd'ave returned long past where she alive. I'll pay you twice Niellen's pledge – just tell the man his Hanna's dead.

You – Don't wanna know what happened to her?

Margrit – I've no illusions, witcher. In Velen, you're gone as long as she's been, you don't come back. Hanna's dead for certain. Niellen ought to accept his loss, move on with his life.

You – Strange... People'd usually prefer to know the fate of their loved ones, whatever the cost.

Margrit – What good will it do? I'll not get my sister back, and Niellen's all I got left. I can't lose him, too. And, well, he'll not rest till he avenges his Hanna, even if it eats up his life. The man deserves better.

This whole convincing part is totally illogical. And a bit dense with details. It would take a fair bit of work to model it. But it's connected to rationalization. This is the reasoning she had for why Niellen should stop looking for Hanna. But it's not a reason for why you should not at least try to see if you could find her.

If we wanted NPCs to make these types of arguments, it would be the description of their plans of how she would make him love her, but without saying anything that would expose any of her secrets. And it's focusing on how it would be good for Niellen and good for Geralt, rather than good for her. So that is deflection and rationalization for convincing Geralt to go along with her existing plan.

You – Sorry. Not in the habit of leaving jobs undone.

Margrit – Folk speak true about you witchers – you're heartless beasts.

Not sure what Margrit would do here. Probably observe from a distance, and possibly be mauled by a bear. Maybe she turned back, and then waited a bit before continuing observing Geralt. Wouldn't it be better just to tell the truth? She probably just waited til the last possible moment hoping Geralt would give up or be defeated.

Now comes a bit of Witcher 3 detective mechanics. The systemic version of finding clues and following trails of steps, blood or odor falls outside of this article. But it sure could be a lot better than the hand-placed trails seen with the witcher sense.

I am also not sure why Hannas body wasn't found by Niellen and his search party. It seems to at least have some identifying clothes, even though most of the body was missing.

#### **Isolated Shack**

Witcher 3 and many other games use notes, books and recordings as a way the tell a story within the limitations of traditional hand-written story. Much of this can be replaced with actual dialogue in a systemic story game, since the story in a much larger extent will develop from the players choices. Instead of a mysterious note in the shack, the same content could be getten from talking to people. It's not very believable that personal notes are spread about everywhere. In this guest, Geralt finds a note in the hunters shack:

I am who I am. I can't change that. Shirts woven of parsley and potions made of virgin's tears might work in old wives' tales, but not for me. It is time to come to terms with it. With Hanna's love and iron discipline I have found a way to manage. But I must remember to hide in the woods before the full moon rises. To go somewhere far from others. Far from Hanna.

The attack comes and then passes. I wake up with wounds on my hands and the taste of blood in my mouth. Perhaps it is for the best that I don't remember. Killing prey with bow and arrow is one thing – to tear it apart with fang and claw... At least here, deep in the woods, I won't hurt any people. Merciful Melitele, watch over any who stray too close...

For an authored scenario, this could have been hand-written and placed in the house. But I would rather have it be systematically generated so that also generated stories can have similar content.

A level 2 implementation would skip the note. A level 3 implementation would just describe the content as "a note about being cursed by lycanthropy and isolating themself as to not kill any people". For a level 4 implementation, there would have to be systems for creating these descriptions. Some of it could be done from the lycanthropy story templates. Mentioning the people closest they want to avoid hurting. Describing the place there they isolate themself.

There is a cave under the shack. The scripted story tells you to wait for the werewolf in the cave. And this is a typical construct for a boss battle with a combat arena specifically designed for the battle.

Of course, in a systemic game, you should be able to wait up in the shack, or at the entrance or in a tree or anywhere else you want. You might even decide to just observe and then follow in order to find out who the werewolf is, if you haven't already figured it out from the note in the shack. You could talk to Niellen in his human form.

As previously stated, Niellens will isolate himself in the cave when the moon is visible. Before and or after, he will use the shack as a resting place. He will also hunt in the woods right next to the shack. And he will go to the village in the afternoon. We have the opportunity to follow him.

This is also one of the main reasons for why I so desire story games to be systemic. I hated the options in this quest. I don't want to kill him. And I certainly didn't have to. This quest provided a false choice. We could have tried to find a cure, or just captured him and taken him to the village

and let them judge him. Or at least waited until we had a chance to discuss the situation with Niellen in his human form, when he was in his right mind. He tried to behave responsibly, and would probably gain even more control with time.

As the story was scripted in Witcher 3, Margrit was probably waiting at the entrance, hoping for Geralt to die. When she heard that Niellen lost, she came running in to save him.

The planner would probably weigh the options to kill Geralt, threaten him, distract him or confess.

Margrit – Nooo! Stop! Don't harm him!

You – You insane?! Stand back! He's dangerous!

Margrit – Not to me, he's not. It's Niellen!

You – Lycanthropy can afflict anyone. But it is a curse, so sorry, but I have to-

Magrit – You don't understand! I love him! He was near to bein' mine, till you came along! Go away, leave us be!

You - What is this nonsense?

Margrit – I love him, always have. Even after I'd learned his secret.

So this is the part where the big bad evil guy confesses all their secret plans. It's the typical story twist. You thought the story was about the secret of lycanthropy, but that was not the whole story.

Lots of stories have this type of two layers of mysteries. And there should always be a simpler explanation that almost fits the second layer. In this case it's the mystery of why Hanna went to the woods. The game should generate a partial plausible explanation if the player would dig for an answer. In this quest, there was no explanation of who the second woman was, until the revelation at this point.

It would be a lot of work to create systems that could generate something near this wording. But we can still create systems where the secrets are confessed, goals and motivations are described, the plans and events are described. A level 3 presentation would just present it in the form of "Margrit confesses that…"

Niellen – You... you knew? Did you know I shut meself in here to wait out me change?

Margrit – I knew and I didn't mind. But you chose Hanna. I wanted her to see you. I wanted her to fear you. She'd not have stayed. And we could be together...

Niellen – You brought her here... that night. 'Twas the reason I had the taste of blood in me mouth come morn.

Margrit – I did it for us! She was to see you turn, naught more! I didn't want her death, you've got to believe me!

Niellen – I don't. And I'll kill you willingly. First time for that, in fact.

And here comes the moral dilemma. Save Margrit or let Niellen kill her.

Well. I would just have captured him until he changed back. But that was no option since it would create too many branches and continue the story past this highpoint.

This also follows one of the story templates for a love triangle where the plan to sabotage a relationship backfires. The emotional reaction should be pretty strong in order to match the story structure. Especially since this is the moment for taking everything to its highest point. The constraint satisfaction algorithm will search for the responses that maximize drama and emotions. And that's also logical since a werewolf wouldn't have the greatest constraint. But it's a bit strange that he isn't furious.

# Return to Blackbough

If you choose to let Niellen kill Margrit, he will catch up with you and ask you to kill him, still in werewolf form. And that is still another stupid limitation of traditional story games. They had to control the consequences of the story regardless of your choice. More people from the village would probably have come to search for Margrit. More reasons for wanting the systemic story game. It would be an adventure to meet the group of villagers coming to the shack with torches, demanding for Niellen to give himself up. And the player could try to negotiate, plead for his humanity, or anything else.

The quest has 3 main endings, each of which has a fallout that you can learn about when coming back to the village a week later. But this fallout is just in the form of some people talking about what happened. That is another thing Witcher 3 did to limit the branching, since regardless of your choices, Margrit and Niellen will be gone.

# Level 4 outline

## Level 2 outline

A level 2 outline of the story would implement the systems with just the main choices, where the result of each choice is generated by the systems.

- 1. Niellen is missing his wife Hanna
- 2. Hanna was seen going to the woods

- 3. Margrit asks you to stop the search
- 4. Hanna was killed by a werewolf
- 5. Margrit confess to loving Niellen and causing the death of Hanna
- 6. Save Niellen or Margrit

A level 1 outline would just be the modeling of the love triangle, enough for just doing point 6.

All this is my rough preliminary thinking about implementation and roadmap.

The next step would be to continue to define the simplest set of story systems for creating an interesting variety of stories, but in a format that can be expanded upon.

# Theme

# The Story

## The Notice

## Arriving at Blackbough

## Talking to Niellen and Margrit

## Talking to Glenna

## Talking to the blacksmith and children

## The Woods

## Isolated Shack

## Return to Blackbough

# Level 4 outline

# Level 2 outline