
PATTERN LANGUAGE FOR

LARP DESIGN

PERMANENCE

PLAY SPACE TRANSFORMATION

SPATIAL LAYOUT

LIGHT & SOUND

TEMPERATURE

VISUAL MANAGEMENT

RESPONSIVENESS & STABILITY

DYADS & TRIADS

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TIME AS CURRENCY

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SOCIAL BUBBLE SIZE

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INTRODUCTION

Welcome to Pattern Language for Larp Design

A “pattern language” is a set of interconnected design elements that can be reliably used to generate effective experiences. The idea of design patterns was inspired by Christopher Alexander et al’s A Pattern Language, which breaks the related fields of interior design, architecture and urban planning into functional patterns that interrelate across scales. For example, one such pattern is that people don’t use balconies narrower than about 6 feet.

This document is our first attempt to lay out some of the most common and useful patterns we have found in our years of larp design. We hope that it will form the basis of a wider collaboration and conversation. Many more patterns than this exist. We welcome all designers to add to future editions.

The process of understanding patterns in larp begins with understanding the behaviors and limits of real-time human interaction as a medium. The first part of this handbook is a discussion of these various resources. Please read it before diving into the patterns.

RESOURCES FOR THE HUMAN MEDIUM:

Please read these resources first.

For a starting pattern, see **TIME AS CURRENCY**

TIME

Time is a limited resource because the game is bounded in time. The amount of time available can take on different shapes and tenors, which in turn affects how content fits into that time. For example, time usage in the game can be continuous or disjoint, unitary or multi-track, rapid or slow.

What time does each game element take up? How does it make use of its time?

RESOURCES FOR THE HUMAN MEDIUM:

Please read these resources first.

For a starting pattern, see [PLAY SPACE TRANSFORMATION](#).

SPACE

Space is one of the most precious and powerful resources in larp, because it is the single most nuanced source of content shared by all players. As humans, a huge portion of our cognition involves subconscious response to space. As a result, space design is a very high-leverage tool for guiding player behavior.

A simple way to understand space usage is to think about how your own behavior might differ in a small, cozy room, as opposed to in a giant, stark hall. Movements might be faster or slow, voices louder or quieter, feelings stronger or dimmer... social and attention dynamics all change.

RESOURCES FOR THE HUMAN MEDIUM:

Please read these resources first.

For a starting pattern, see **PLAYER ENERGY MANAGEMENT**

ENERGY

There are many different types of player energy, including but not limited to Physical, Social, Emotional, Improvisational, Performative, and Strategic. (See Player Energy Management for details on these.)

Player energy represents the rate at which players are able to introduce content into the game. The energy type represents the form of content introduced. Since the vast majority of content in a larp is generated by players, player energy is a huge influence on aspects ranging from total available content to pacing, high-level plot progress to detail interaction effectiveness.

RESOURCES FOR THE HUMAN MEDIUM:

Please read these resources first.

For a starting pattern, see IN-GAME COMPLEXITY

MEMORY

Since the majority of the fictional world is represented inside players' minds, literal brain processing, cognition, and memory of players are the fundamental operating system on which the game runs.

A typical person can only keep track of 5-6 unrelated things at a time, with concentration. Without concentration, that number is closer to 3-4. When trying to keep track of a set of potentially complex dynamics, a typical person will get lost if the set has more than 4 elements.

Mental actions like remembering facts, inserting in or filtering out sensory information, making many small unimportant choices, being responsive to surprises from others', and generally concentrating on play, all tax player cognitive resources. Most importantly, all such actions draw from the *same* cognition pool for a given player, leading to trade-offs.

How cognitively expensive is each component? How much memorization is necessary? Is it possible to achieve a similar outcome while reducing the load?

RESOURCES FOR THE HUMAN MEDIUM: CRITICALITY

Please read these resources first.

For a starting pattern, see [RESPONSIVENESS & STABILITY](#)

In chaos theory, the *criticality* of a system describes the system's overall sensitivity to being completely disrupted by a given input. For example, a pile of cards on a table is *subcritical*, or very unlikely to be changed in any meaningful way by just shifting a card around. A house of cards, by contrast, is *supercritical*, or extremely likely to be categorically transformed by shifting a card around (because it's likely to collapse). When a *supercritical* system transform, it often collapses to being *subcritical* (in this case, the house of cards turns into a pile).

In larping terms, a *subcritical* game situation might be one in which plot is low and boring, and nothing is likely to change. A *supercritical* situation might be one in which characters are likely to explode on each other and quickly transform the game outside of playable range as most plots get resolved to the point of non-playability.

A system that is *critical*, however, is one in which many actions are likely to have a substantive impact *without* destroying the larger system as a whole. In a game, this looks like a situation in which characters can have a meaningful impact without breaking the game.

A system has a *higher degree* of criticality when more actions are meaningful-yet-non-destructive, the impact of each action is higher, and/or the system sustainably supports a larger number of such actions over time.

Thus, a game with more criticality allows more nuance of character actions to be more meaningful for longer. Because feeling like their characters' actions are meaningful is often a vital aspect of positive player experience, higher criticality games lead to better player satisfaction.

Although this last resource can seem abstract, it is very much possible to design a game to optimize for maintaining criticality. How can we give players more agency while maintaining the coherence of the game? At each given point, does each character have a sufficiently nuanced and dynamic range of possible actions?

A satisfying climax will often often the process of bubbling a critical situation into a supercritical explosion, in order to reach a new stable state.

PATTERNS AROUND

SETUP

PERMANENCE

PLAY SPACE TRANSFORMATION

SPATIAL LAYOUT

LIGHT & SOUND

TEMPERATURE

VISUAL MANAGEMENT

PERMANENCE

For some reason, people rarely move furniture around.

This relates to **PLAY SPACE TRANSFORMATION**, **SPATIAL LAYOUT**, and **NARRATIVE GAPS**.

Problem: People naturally want to normalize and equalize communication and interaction.

Solution: Players are conditioned to respect physical boundaries and the arrangement of space. So use their sense of propriety against them.

Instruction: If you leave a single chair somewhere, people will have awkward, unequal conversations rather than move a second chair to it. The same applies for couches and other furniture. Use this human quirk to enforce either physical parameters or a specific state of mind.

Example: In *The Tribunal*, leaving fewer chairs than there are players, then telling them no one is allowed to sit, reinforces a totalitarian atmosphere and general malaise. It also allows character expression as players choose to relate to this information and spatial restriction.

PLAY SPACE TRANSFORMATION

The play space is multidimensional.

This relates to **PERMANENCE, SPATIAL LAYOUT, LIGHT& SOUND, VISUAL MANAGEMENT and TEMPERATURE.**

Problem: Many games are played in sterile conference rooms or other uninviting spaces.

Solution: Make the space more dynamic by changing it. Pay attention to background sensory experiences. Use asymmetry to create varied interactions.

Instruction: Alter the physical space to map to an ideal game space. In an empty convention room, create couches by setting up chairs next to each other and cover with a table cloth. Create vertical variation with platforms, chairs, and tables. Open seating denotes welcome. Think about all the senses. Sound and light can be used to establish a tone for play, to influence the ability to communicate, to pace play, etc.

Example: In a convention run of *Fires of Emsi*, a very intimate game, a combination of pipe-and-drape and folding tables set standing with tablecloths on top created two separate indoor rooms and the illusion of two asymmetric outdoor areas inside a single average-sized conference room. Uneven chairs-together-with-tablecloths-on-top served as limited benches. Very dim light created a nighttime atmosphere.

SPATIAL LAYOUT

The placement and orientation of furniture affects the course of events in game.

This relates to CONVERSATION SIZE, PERMANENCE, and PLAY SPACE TRANSFORMATION.

Problem: When furniture is either ignored or arranged “logically”, it does nothing to facilitate good play and may actively detract from it.

Solution: Arrange furniture thoughtfully and tactically into clusters.

Instruction: Draw movement flow diagrams of your room. Figure out where people are likely to intersect each other. Make sure you have multiple intersection nodes. Are there multiple routes through the space to enable physical divergence? Are there enough ways to interact when people are standing? What about sitting? Are there opportunities for privacy? For serendipity?

Example: In Stanford’s *Epic Larp IV*, the heroes had essentially guessed who the secret traitors were, but their kingdom was destroyed anyway because they couldn’t get a private conversation. All the furniture was arranged in big circles of couches, so whenever there was a discussion of plans, a mix of neutrals and bad guys could always join them and derail the conversation. Since the heroes were not completely positive about the villains’ identities, they were too polite to leave anyone out for fear of excluding important neutrals. The final strategy for the kingdom that that the big group agreed on was something that sounded like a good consensus, but was driven by motives of malicious characters.

LIGHT AND SOUND

Light and sound have significant effects on experience.

This relates to **PLAY SPACE TRANSFORMATION**, **SOCIAL BUBBLE SIZE** and **PLAYER ENERGY MANAGEMENT**.

Problem: Ambient light affects both atmosphere and player energy. Audio bleed affects mood. Background sound affects both atmosphere and concentration.

Solution: Pay attention to use of lighting. People will also speak more quietly when lights are dimmer. Use ambient background sound as a deliberate mood-setting tool. Control for audio bleed. People talk within their social bubbles, so manage **SOCIAL BUBBLE SIZE** for sound quality.

Instruction: In general, brighter lights cause a higher overall energy level, and dimmer lights cause a lower overall energy level. That said, too much stark brightness will cause energy to be used up faster, and may be difficult to sustain for longer games. When dimming down lights for atmosphere, check to see if the dimness hits a point that includes eyestrain (usually the candlelit dinner party level). Playing in eyestrain-level lighting can be unusually expensive to Improvisational or Strategic energy, and less expensive for Social energy (see **PLAYER ENERGY MANAGEMENT**).

Consider what sound is in the background. When setting up and/or separating out the space, pay attention to how sound travels— areas that appear visually separate can still be auditorily tangled. Is there a place in the room where sound echoes? If so, use it as a more central location. Fabric is a good tool for dampening sound. Place furniture at a distance that optimizes for the types of conversations you want— farther apart for loud and bold, closer together for quiet and personal. For truly intimate conversation, don't be afraid to place chairs extremely close together, almost touching, so that sound can carry at a whisper.

Examples: In *Sarcophagus*, the ability to control the lighting of the play space is crucial. The design calls for the lights to fail temporarily a third of the way and permanently two thirds of the way through the larp.

The Climb has an ambient soundtrack that plays howling wind in the background. Players spend their time in tiny tents that are isolated from each other by location and/or fabric, preventing them from hearing what transpires in other tents.

TEMPERATURE

Temperature has a significant effect on social interaction.

This relates to **PLAY SPACE TRANSFORMATION**, **SOCIAL BUBBLE SIZE**, and **PLAYER ENERGY MANAGEMENT**

Problem: Games that are highly sensitive to social nuance are affected by ambient temperature.

Solution: Being hot generally makes players more prone to experience impatience, frustration, inability to focus, activity, and tendency toward pettiness. Being cold generally makes players more prone to experience unease, social distance, narrowed focus, reluctance to act, and fear. People are most sensitive and responsive to others at a comfortable temperature. **SOCIAL BUBBLE SIZE** is naturally larger in warmer spaces and smaller in cooler spaces. However, bubble shape is more dynamic in larger spaces, and more natural to sustain in cooler spaces, though doing so still consumes social energy (**PLAYER ENERGY MANAGEMENT**). Being cold is also a tax on physical energy.

Instruction: If setting temperature is an option, do so with social dynamics goals in mind, not realism.

Example: *Snow White* is a winter-themed game with a theme of feeling alone in company. Players are encouraged to set the thermostat as low as possible. Going around at the edge of goosebumps adds an additional literal chill to the game, and helps keep players from feeling physically comfortable or relaxed with one another.

VISUAL MANAGEMENT

The visual environment has a significant effect on immersion.

This relates to **PLAY SPACE TRANSFORMATION** and **IN-GAME COMPLEXITY**.

Problem: Visual cues are often a strong part of how people process the environment, and also a strong influencer on memory. The presence of visually striking objects on the environment that the players need to continue ignoring creates an ongoing tax on attention and working memory. Pretending a wall or large object exists where it doesn't also creates a similar tax.

Solution: Pay attention to the visual experience of the space. How can you arrange it to minimize the memory tax? Clutter that doesn't require much mental transformation (such as a pile of boxes) can be used as a deliberate tool to create disorientation. Clutter that does (such as a pile of electronics in a low-technology setting) acts as a focus leak, which should be avoided.

Instruction: Do a quick visual scan of the space. Does anything non-game-relevant pop out at you? Are there places that your eyes want to linger a moment longer in order to parse what's going on (such as a table covered in paraphernalia)? If desired, toss a sheet or tablecloth over areas that can't be easily cleaned. Use chest-high or higher segments. When segmenting space, players are more able to ignore things that are technically in line of sight if there is a partial visual barrier in place.

Example: *The First of December* is a stark game about subtlety and alienation. In one run, the game took place in a large hotel conference room with a very visually striking and busy carpet, and miscellaneous unused furniture around. The constant visual clutter kept players from feeling isolated and settled, and limited the depth of the game.

PATTERNS AROUND

PLOT

RESPONSIVENESS & STABILITY

DYADS & TRIADS

IN-GAME COMPLEXITY

NARRATIVE GAPS

PLAYER ENERGY MANAGEMENT

TIME AS CURRENCY

RESPONSIVENESS & STABILITY

People need to feel like their actions are significant, without being so significant that they break the game.

This relates to IN-GAME COMPLEXITY, TIME AS CURRENCY, and CONVERSATION SIZE.

Problem: People will naturally gravitate toward doing the things where they feel like they have the most agency, impact, and significance. Feeling consequential is one of the most nearly-universal psychological rewards of participating in larp. In an improvisation-driven game, the significance of player contribution is straightforward because the game would clearly not exist without it. In a more simulated game, making all players' actions matter becomes a much more complicated problem.

Solution: Build a plot structure where the types of actions that you want players to be taken will have meaningful consequences upon other players. People feel like they have the most meaningful impact on a situation when the structure of the situation is responsive—their actions have immediate consequences on other players, whose responses then also have consequences. However, a situation also needs to be stable—if it's too responsive, cascading consequences will explode and quickly arrive at an even more stable situation with nothing else to do. We use the chaos-theoretic term *critical* to describe a situation that is able to maintain a high level of responsiveness without destabilizing. The stronger this balance, the more criticality it contains. (Too stable is also known as *subcritical*, and too responsive is *supercritical*.)

Instructions: Going player by player, start by picturing the most common actions you want a given player to take. Think about what is likely to happen in the game—not what you want to happen, but what is likely to actually happen if you don't change anything else—immediately afterwards. And then what happens? Does it:

- A) Not have much impact and quickly die down into stability again? (Subcritical)
- B) Have a meaningful impact on other characters, who then go and do things that are likely to have an impact on other characters, and probably reach stability 2-4 steps down? (Critical—this is ideal)
- C) Have such an important impact on other characters that it hijacks what they're doing, everybody switches to responding to the initiating action, things may come to a head very quickly or other plotlines get torn apart as a result? (Supercritical)
- D) Not be so extreme, but start a cascading chain of events where you really couldn't say how

Continued

RESPONSIVENESS & STABILITY continued

things will go, when stability will happen, or what it would look like? (Either supercritical or critical, depending on whether you can predict the approximate parameters of the stability, even if you can't determine its exact character. This could be good or bad, so keep an eye on it.)

At the climax of the game, the smaller bubbling chains of consequences reach a boiling point, and the situation destabilizes, transforms, and then falls into a new more stable state.

Example: The most common reason for typical “boring” large group games to be dissatisfying is that they are subcritical—the situation is laid out to be too stable, forces cancel each other out, players must push very hard to have an impact, and often risk a lot of hard work coming to naught. By contrast, in *Glitch Iteration*, each character's external actions affect one another's inner worlds, which in turn affect external actions, and so on. This mechanic creates a loop of increasing responsiveness until characters are internally forced into their key personal decision.

DYADS & TRIADS

Overlapping social groups of two or three are the best.

This relates to IN-GAME COMPLEXITY and CONVERSATION SIZE.

Problem: Social groups tend to naturally expand to include everyone standing in a circle.

Solution: Break characters into small, discrete, overlapping clusters of two and three by background, motivation, agenda or inclination. Engineer reasons into characters that allow them to differentiate and find affinity.

Instruction: Create character dyads/triads (two dyads makes a quadrangle, two triads + three overlapping dyads makes a six person set of relationships). A two person group is intimate; a three person group is unstable, and you generally want one or the other.

Example: *Terps* has two facilitator/GMs (a dyad) and optimally four players (two thematic dyads who frequently form two overlapping triads based on mutual interest built into characters). Most scenes use one facilitator and two players, or two facilitators and one player (triads)

IN-GAME COMPLEXITY

People can only keep track of 4-6 things in working memory.

This relates to NARRATIVE GAPS, DYADS & TRIADS, RESPONSIVENESS & STABILITY, and VISUAL MANAGEMENT.

Problem: Short term /working memory is a limiting factor in how much content a given player can transact. There is a huge line between a 4 character interaction and a 5 character interaction because 4 people have 6 potential relationships between them, and 5 people have 10 potential relationships. Everything that players have to keep track of taxes the same pool of mental resources.

Solution: Players need their working memory to fictionalize, so keep important character points few.

Instruction: Structure plot so that each person only has 4-5 things to keep track of. When you want an experience of emergent complexity, use 5+ elements. When you want simple order, use 4- elements. The size of working memory is imprecise— people can keep track of more things when they are grouped into natural clusters or along existing associations. (To understand this, have someone read off 10 1-digit numbers to you, and see if you can recite them back. Now then have them read them like a phone number, and see if you have an easier time.) Use VISUAL MANAGEMENT to clear the physical space of non-simulated clutter.

Example: Many classic stories have 5 key characters. Most Shifting Forest Parlor Larps included 4-8 characters, and the ones with more successful 4 player versions consistently had an active 5th NPC or other driving force in order to add plot complexity.

NARRATIVE GAPS

Sometimes we give players more than they need.

This relates to **RESPONSIVENESS & STABILITY** and **IN GAME COMPLEXITY**.

Problem: It is possible to provide too much information about a character or situation to a player.

Solution: Empty space can be employed with the expectation and trust that players, as pattern-matching and story-telling creatures, will in-fill and provide meaning.

Instruction: Deliberately leave gaps where a player can easily fill them on their own. If you imply antagonism rather than make it implicit, players will find and amplify it organically. If you provide no antagonism at all, even by implication, they will still find it. A concrete inspiration (“You betrayed the group - how and why?”) is more useful here than a general constraint (“Think about the terrible evil that you have done”).

Example: In the larp Limbo, your character consists of a random note telling you how you died, coupled with an exercise designed to differentiate character from player.

ENERGY MANAGEMENT

Player energy is also a resource, one that ebbs and flows.

This relates to **TIME AS CURRENCY**, **SOCIAL BUBBLE SIZE**, **LIGHT MANAGEMENT**, and **TEMPERATURE**.

Problem: The energy level of players will ebb and flow through the course of the game. Different types of interactions take place more naturally at different energy levels. Natural defaults, starting energy, the pacing and flow of their plot, environmental factors like lighting, and the energy level of others around them are all factors that affect the availability and distribution of energy.

Solution: Make sure that players have something enjoyable and productive to the progress of the game that they can be doing at a variety of energy levels. For example, don't bet the game on sustaining high-energy activities for more than 10 minutes or so. Be aware that some players have vastly more energy than others in different areas, and that play energy can also vary heavily by day. Contact with another higher-energy player will tend to increase a given player's energy level, but also cause them to burn out of that particular type of energy faster. Think about the energy requirements and optimal distributions for each character. Check with players about their overall energy levels / social energy levels before casting.

Instruction: Trying using the following energy type / availability guide.

Types of player energy include:

- Emotional - being focused and vested in character emotions
- Physical - literal overall physical energy and ability to move around
- Social - ability to interact with, inspire, and respond to others
- Improvisational - generating new material (filling in NARRATIVE GAPS)
- Performative - acting stylistically as a character
- Strategic - acting competitively, planning, and making strategic decisions

Continued

ENERGY MANAGEMENT continued

The following are averages, obviously they vary a lot by player.

Fast Burn Activities: Can be sustained for 5-15 minutes on average before naturally dropping into Slow Burn versions, average players can do this 2-4 times per play session.

- Emotional: High plot / drama
- Improvisational: Generating creative new material
- Performative: Being highly expressive or telegraphic
- Physical: Running, chasing, lifting, fighting
- Social: Being the center of attention, trying to change a lot of people's minds, intensive engagement
- Strategic: Plotting, being quickly responsive, aggressively pushing an agenda

Slow Burn Activities: Can be sustained for 15-25 minutes on average; players can usually keep it up for about the first 90-120 minutes with only short breaks, but then have trouble holding for more than 50% of the time afterward.

- Emotional: Intense engagement with a feeling
- Improvisational: Generating supplementary material that builds on what already exists, enhancing others
- Performative: Keeping up with background stylistic mannerisms
- Physical: Walking, standing, everyday movement
- Social: Everyday conversation, following up on a self-propelling chain of relevant interactions
- Strategic: Following up on existing plans without active pushing

Recovery Activities: Can for 5-25 minutes before players get antsy, but they recover energy for the other two. In the latter half of a longer game, players may want to sustain these for up to 45 minutes.

- Emotional: Introspection / Reflection.
- Improvisational: Not generating new material
- Performative: Acting naturally, not significantly performing
- Physical: Sitting or resting, hiding
- Social: Being alone or having quiet interaction with one other person
- Strategic: Having things go well. Being responsive and collaborative.

Example: *The Upgrade* is an improv-heavy game in which players share extreme theatrical, creativity-intense short scenes together. However, because only a few players are in a scene at any given time, players are able to rest, recharge, and watch other players during their own downtime, allow for 2 straight hours of lively action.

TIME AS CURRENCY

Time is a resource like physical space or participants.

This relates to CRITICALITY and PLAY SPACE TRANSFORMATION.

Problem: Time is always limited but rarely commodified.

Solution: Use the passage of time as a design element in parity with physical space.

Instruction: Allow the game to be paced by internal or external factors that become part of the environment or part of an unfolding narrative, or both.

Example: In *Out of Dodge*, the game is intended to be played during a short road trip, in real time. Players can gauge the game's progress by their proximity to the actual destination.

PATTERNS AROUND

INTERACTION

CONVERSATION SIZE

SOCIAL BUBBLE SIZE

CONVERSATION SIZE

The size of your average in-game conversation has a huge impact on the game.

This relates to SPATIAL LAYOUT, DYADS & TRIADS, IN-GAME COMPLEXITY, and RESPONSIVENESS & STABILITY.

Problem: Whatever means you want to use, average conversation size has a huge impact experienced intensity, flow of events, and behavior of ideas in the game.

Solution: Craft average conversation size to your desired outcome. This can be done with explicit rules, SPATIAL LAYOUT, plot dynamics, or a combination. Because larp requires getting people on the same page quickly, the smaller the conversation size, the more interactions that are unique, nuanced, and/or subtle will register and be responded to.

Instruction: Trying following this guide for conversation sizes.

- 2 people: *Personal*. No interaction is accountable to any other interaction, so a lot of truly new directions get born in this cluster size.
- 3 people: *Intense*. Work gets done, few external imperatives create distraction. Use this cluster size for a focused, intense, progress-advancing game with a sense of accountability but still plenty of room for conflict. This is a favorite because it makes for really interesting interactions and has high criticality (see **RESPONSIVENESS & STABILITY**) at any cast size under 22-ish.
- 4 people: *Affable*. Inclusion/accountability beats progress, but relationships are strong. Backstabbing within an interaction is possible. So this is good for high-political tight-knit games. Allows factionalism and parity, which can be good or bad.
- 5+: *Chill*. At this point, you're really just all just hanging out together in character. For IN-GAME COMPLEXITY reasons, a cluster size of 5 will tend to be too loose for games of under 30 people. However, it's great for tight faction / plot binding in larger games, especially because it keeps regular interactions at a size in which plenty of sophisticated action can still happen with a cluster. At this size people will literally be gathering in circles.

Example: *Mermaid* is an intensely emotionally dark, romantic game with a rules-mandated conversation size of only 2. This dynamics allow players who all feel caught in their own words to struggle to find rare moments of connection. The tight conversation size creates an experience of helplessness and alienation in the face of challenges that would actively be relatively simple to resolve on a purely strategic level.

SOCIAL BUBBLE SIZE

The shape of and interactions between social bubbles affect gameplay.

This relates to CONVERSATION SIZE, PLAY SPACE TRANSFORMATION, SOUND MANAGEMENT, TEMPERATURE, and PLAYER ENERGY MANAGEMENT.

Problem: A social bubble is the space around a person that they are socially occupying. Differing social bubble sizes lend themselves more naturally to different types of interaction. Natural bubble sizes vary by person— extending a bubble can cost social energy (PLAYER ENERGY MGMT), and thus a player that is exhausted in social energy may choose to disengage to recharge rather than large their bubbles to stay involved.

Solution: People are generally more comfortable having intimate, close interactions at small bubble size. Pronouncements and grandiose declarations are more natural at large bubble size. When multiple people are interacting, the range of possible interactions is determined by the shape of their intersecting bubbles. In order to engage with others, a player must increase their social bubble size— depending on their natural bubble size, this can potential cost social energy to keep up.

Instruction: Social bubble size is affected by many things, chiefly a combination of player social energy (PLAYER ENERGY MANAGEMENT) and physical environment (PLAY SPACE TRANSFORMATION, etc.). Think about the types of social interactions you want in your game, and make sure there are spaces that correlate with the appropriate bubble sizes. The more your layout optimizes for the smallest required sizes for interactions, the longer players' total social energy will last.

Example: *Death in Valhalla* included a component in which the characters, Norse gods, could compete with one another in highly performative on-stage contests before a significant-sized audience in order to get valuable plot information. This mechanic made for a highly entertaining dynamic for both contestants and audience members. However, because the competitors were essentially showing off for an entire double boardroom, participation required giant social bubbles. The presence of the stage made creating these bubbles natural. However, the mechanic quickly privileged those players who could repeatedly sustain the large social bubbles, causing most of the room to eschew competitions by the latter half of the game.