

A General Theory of Dramatic Structure for Interactive 3D Environments

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Traditional narrative theory

“You need characters in order to have drama.”

- Create drama by building tensions between characters.
- Audience engagement comes through identification with characters
- Assumes traditional medium (book, theater, film) with *passive* audience.

But:

- There is drama in climbing a mountain, watching a sunset, wandering through a city.
- The audience – YOU – are interacting with the environment
- The drama takes place between YOU and the environment.
- You have agency -> emotional responsibility for your actions and outcomes

Two forms of “first person viewpoint”:

- Traditional narrative media:

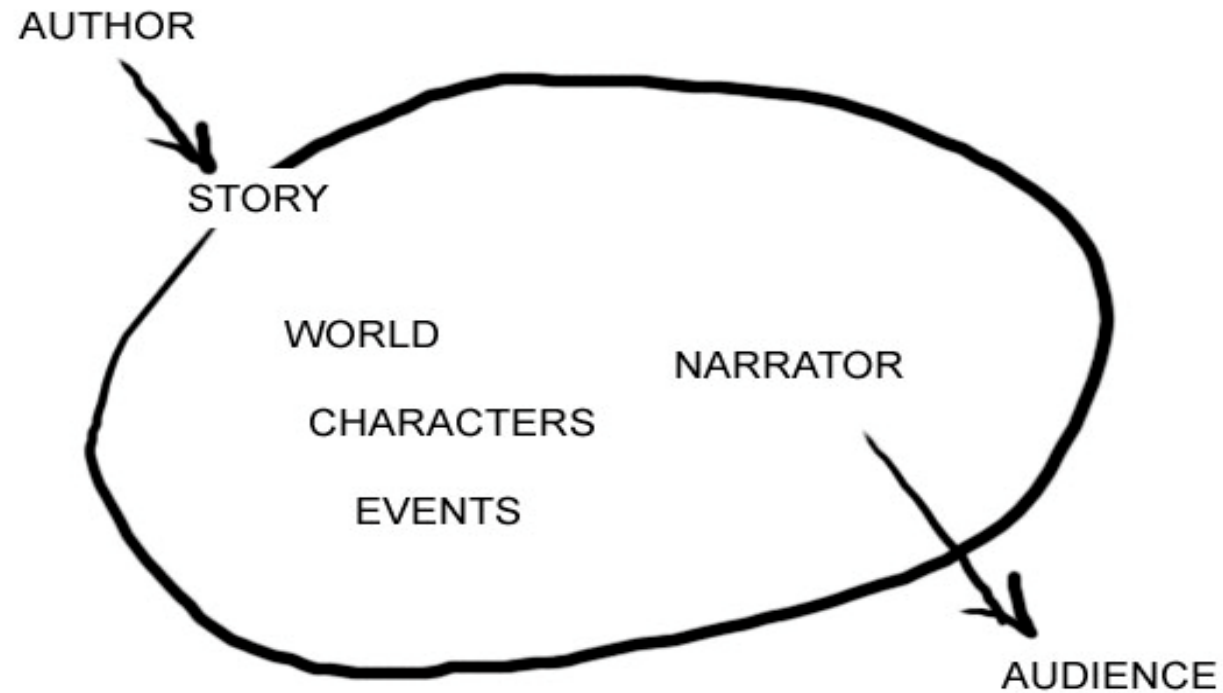
First person *narrative* viewpoint

- Interactive media:

First person *experiential* viewpoint

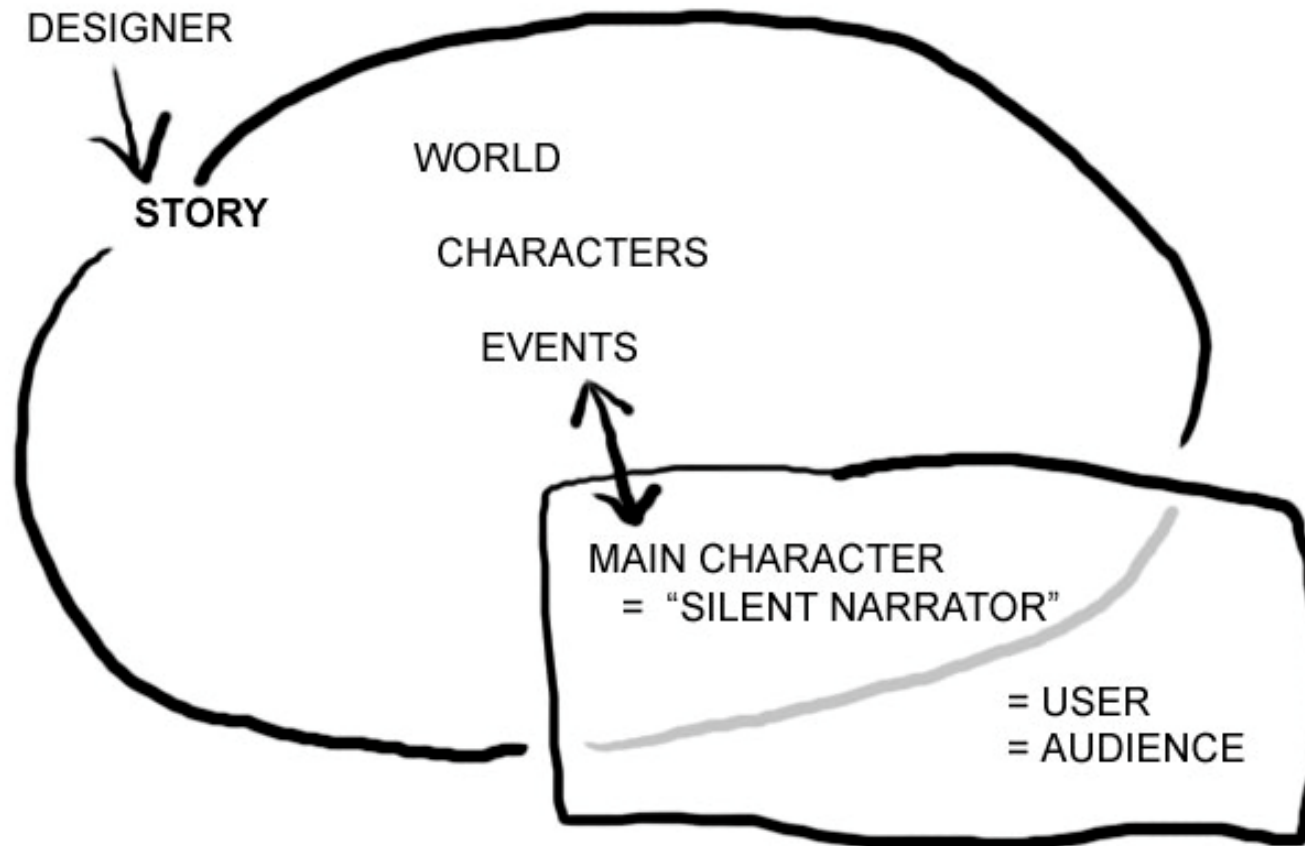
First person *narrative* viewpoint

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First person *experiential* viewpoint

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First person *experiential* viewpoint

- Designer creates framework of experiences for the user.
- User = Audience
= Main Character = Silent Narrator
- “I am experiencing something myself “
- User has *agency* – story doesn’t happen without her engagement.

First person *experiential* viewpoint

Focus on the user:

- “Character development” should happen *in user*.
- i.e. designer choreographs emotional journey the user should go through while experiencing the piece.

First person *experiential* viewpoint

Real life examples:

- Non-competitive performative (e.g. music, sport)
- Rituals/ceremonies (e.g. weddings)
- Guided tours (e.g. citywalks, castles)

Third person experiential viewpoint

3rd person POV is special case of 1st p. POV

- i.e. “the world” includes my avatar
- Experience of avatar NOT important
- Experience of user while manipulating avatar IS important (e.g. Laura Croft)

Dramatic interest in games:

Interactive by definition

- Audience = User
- User follows rules to achieve goal
- User investment of time, effort creates engagement

Who is left out if interactivity == games?

Non-gamers who:

- hate to lose or hate competition
- don't value investing time into learning rules, solving puzzles

But also:

- Situations with limited time
(gallery, museum, public space, websurfer)

Who is left out if interactivity == games?

- We need to develop interactive structures with fewer rules to reach a wider audience.
- Focus more on process / experience rather than learning rules/achieving goals

What I was looking for:

- General theory of dramatic structure applicable to all media
 - “Abstracted” to understand how emotion is provoked in humans as response to aesthetic experience
- > independent of medium

Emotion and Meaning in Music (Meyer, 1952)

Psychological theory of emotional affect:

- Emotion is aroused when a tendency to respond to a stimulus is arrested/inhibited
- e.g. smoker reaches for cigarettes, but pack is empty.
- Conscious or unconscious tendency to respond creates “expectation.”
- Arresting that tendency creates emotion

Emotion and Meaning in Music (Meyer, 1952)

In music (or any time-based art form)

- Music works within defined tradition or structure: e.g. medieval Western, classical Western, Jazz, Rai, US Rock, etc
- Within a given structure rules & conventions define (for example):
 - what is perceived as “happy,” “sad,” etc.
 - “allowable/expected” transitions
 - (e.g. „Sukiyaki“ – „Ue o muite aruko“)

Emotion and Meaning in Music (Meyer, 1952)

Within a given structure

composers provoke emotional responses by:

- setting up listeners expectations, then
- playing with their expectations: surprising, frustrating, rewarding, etc.

Emotion and Meaning in Music (Meyer, 1952)

Examples:

- Repetition creates expectation (and desire) for change and completion
 - Doubtful / ambiguous stimulus (significance, function, outcome unclear) creates desire for clarity
- > we believe in purposefulness and integrity of the artist.

Emotion and Meaning in Music (Meyer, 1952)

But manner of clarification not predictable:

- Expectation creates state of suspense
 - Suspense is ignorance of future course of events,
 - ... which creates doubt and uncertainty,
 - ... which is perceived as a lack of control,
 - ... which creates apprehension and “fear”
- > even if there is no specific object causing this fear.

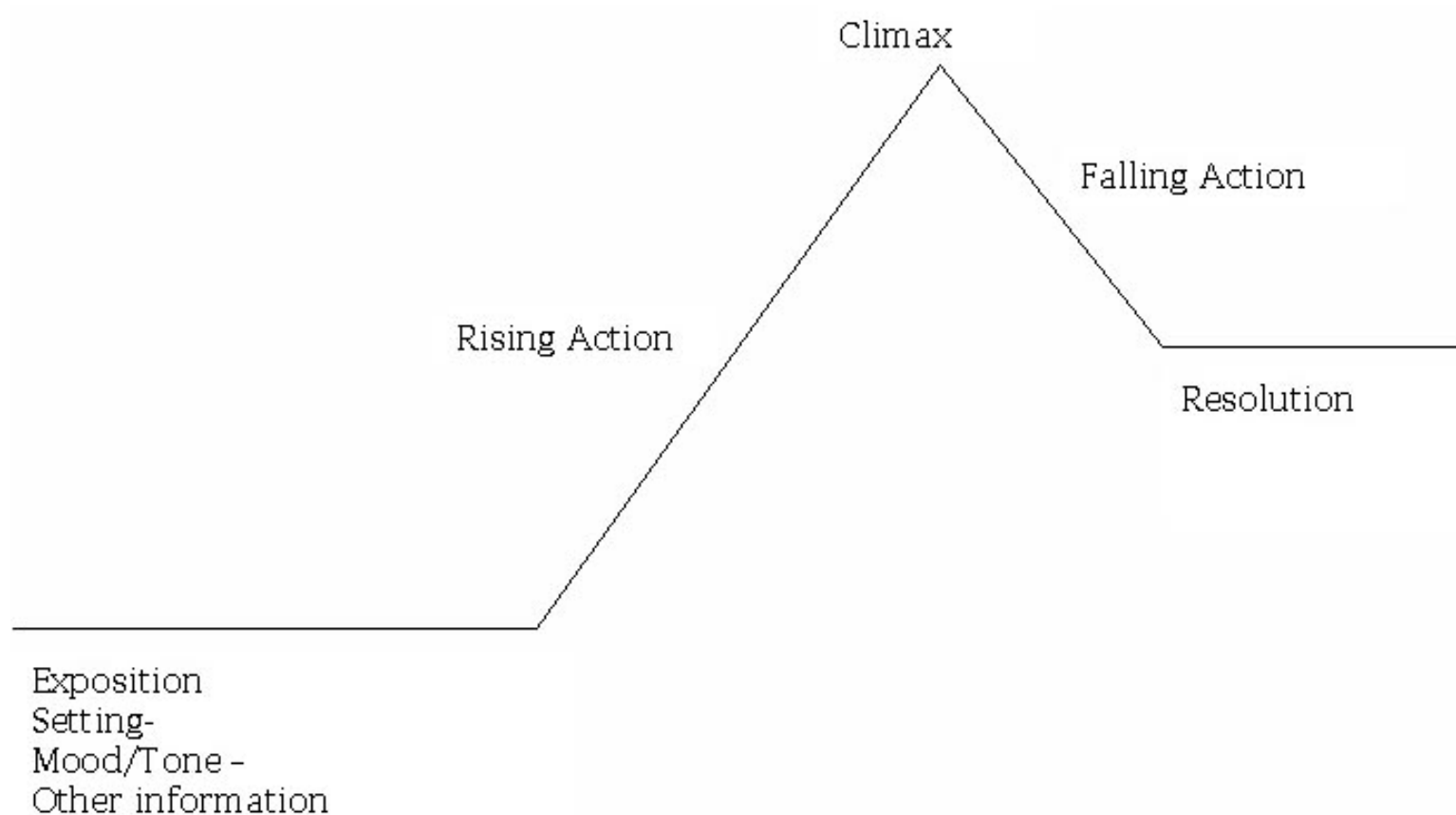
Emotion and Meaning in Music (Meyer, 1952)

Any stimulus must be progressively intensified over time

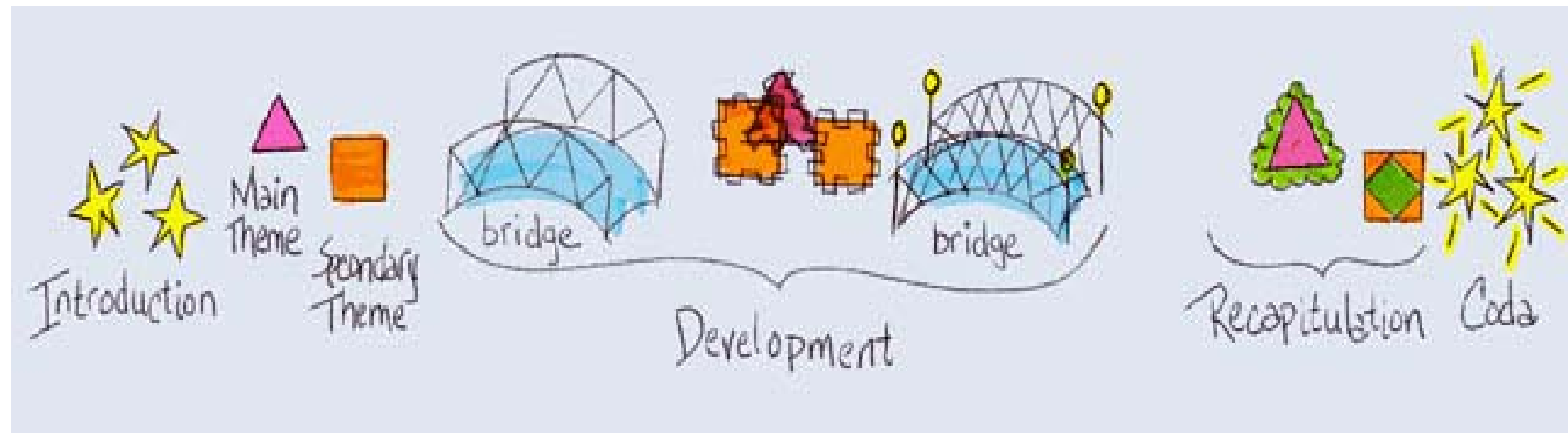
- Effectiveness diminishes as we become used to the stimulus.
- Without change in stimulus, expectation of relief (or some sort of change) diminishes
-> i.e. we lose interest and disengage

Does drama theory relate to music?

Freytag Diagram (Laurel, “Computers as Theatre”)



Sonata-allegro form (stolen off the web):



Musical form vis a vis narrative form

Conversation with Betsy Marvit, composer

- Introduction / opening sets general mood (i.e. expectations)
- Introducing main theme is like introducing 'main character'

Musical form vis a vis narrative form

- Secondary theme = new and different character
 - What is their relationship?
 - How do they cause each other to develop?
i.e. creates *anticipation*
- Resolution of dissonance/conflict between themes is like resolution of story

Consequences for interactive media

Designer composes choreography for story

- Leads user through sequence of dramatic moods, experiences
 - > like composer composing a symphony
 - > hyperlinked structure: will be episodic rather than one grand climax
- Allow user to have agency -> emotional responsibility for their actions and outcomes

Consequences for interactive media

Focus on *internal emotional states* of user

- What should user feel at each stage?
- Curiosity, trepidation, delight, fear, surprise, frustration, relief, exaltation
- Create balance of positive and negative

Consequences for interactive visual media

Ideally using life-sized image:

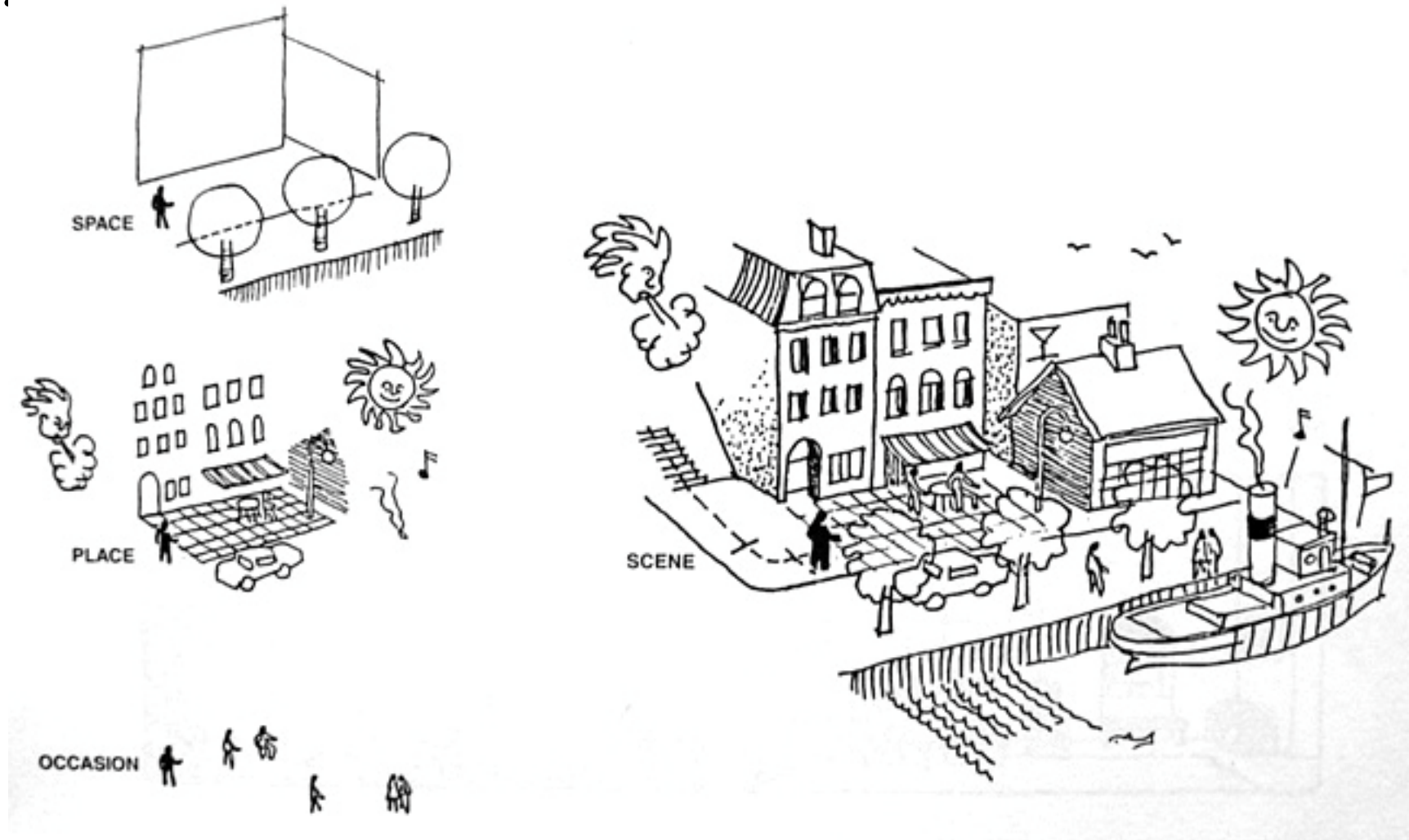
- Engage kinesthetic sense, sense of scale
- Body's perceptual mechanisms respond as if images, events are real

Philip Thiel, “People, Paths, and Purposes”

Emotional effect of

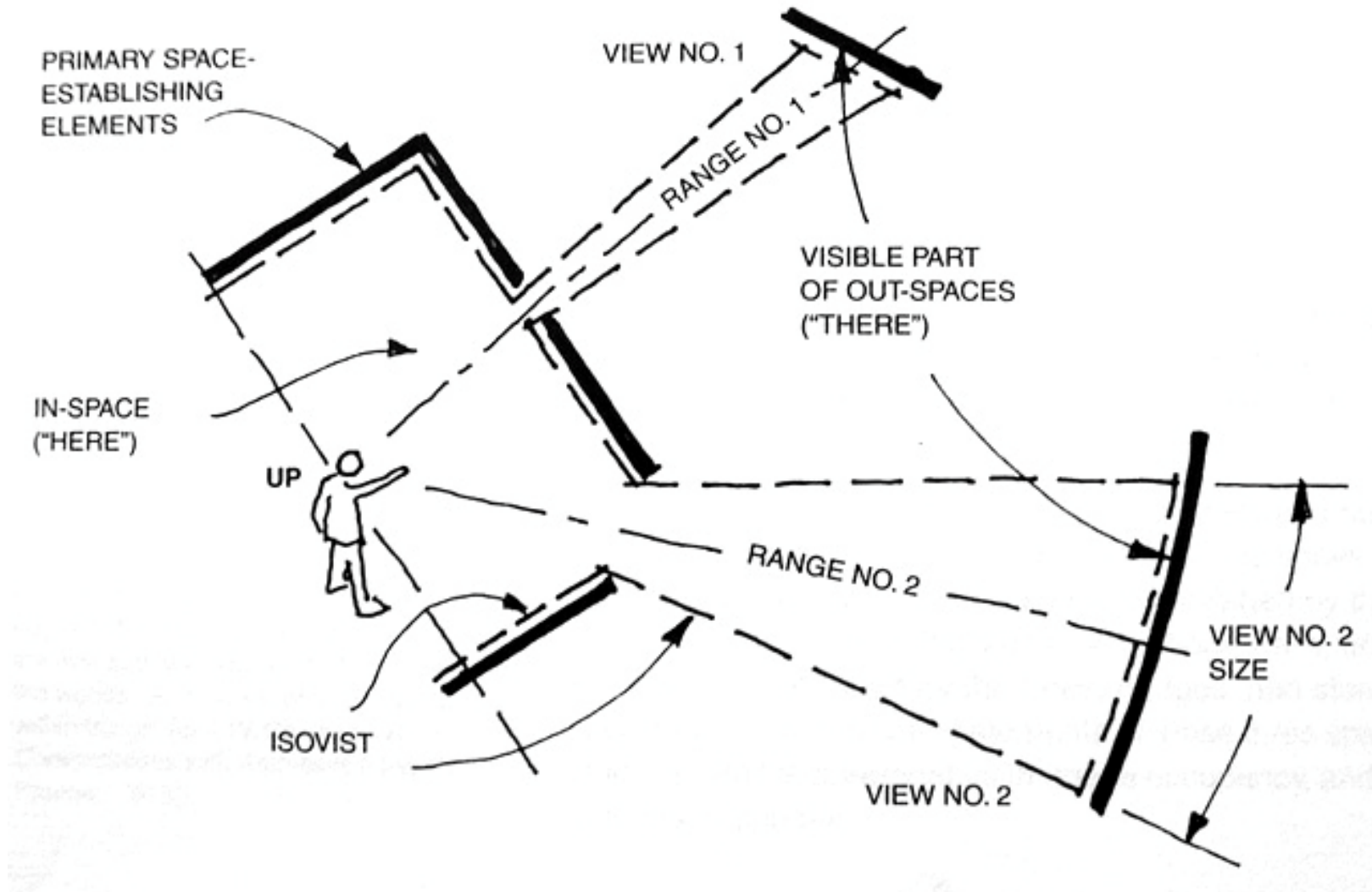
- space
- sequences of spaces on the user
 - > from first person *experiential* perspective

Anatomy of space



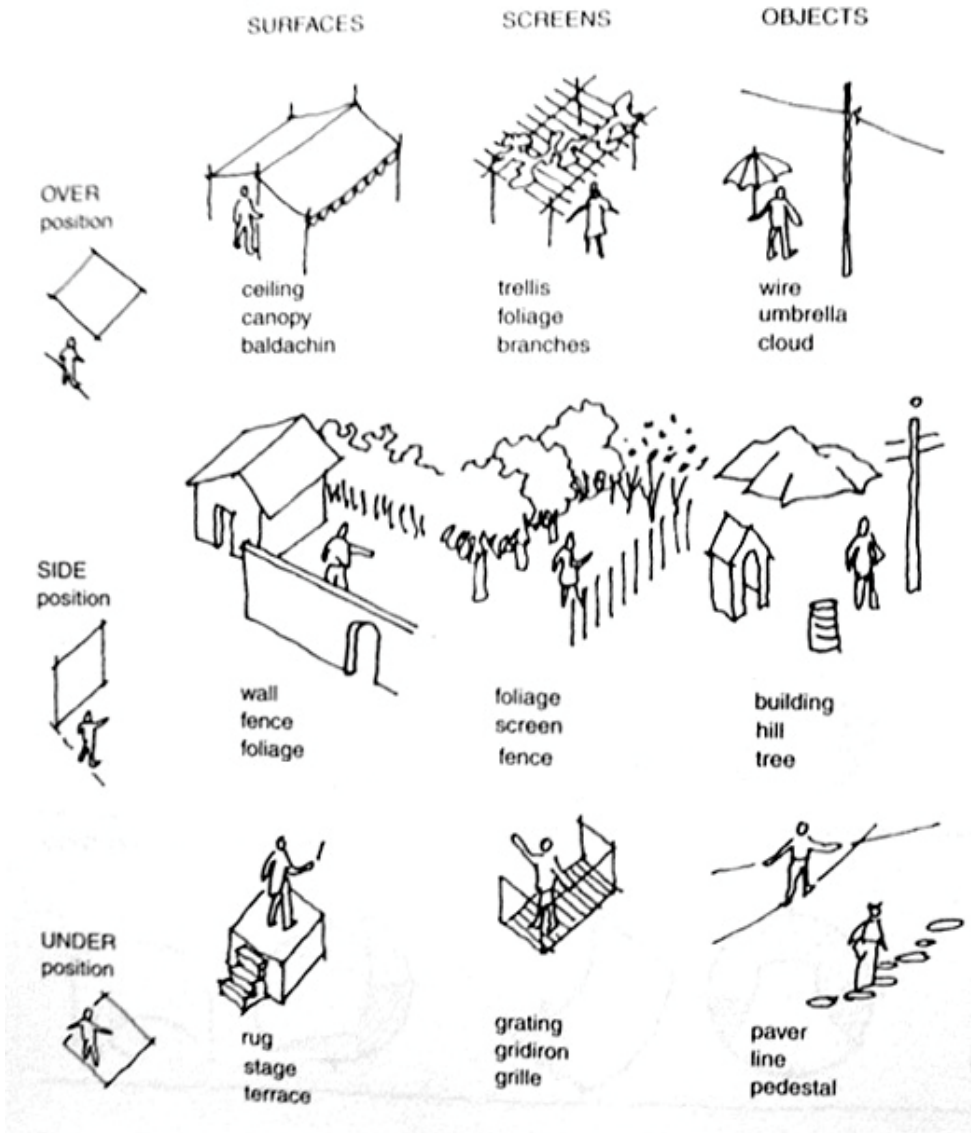
Kinesthetic experience of space

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Space Establishing Elements (SEEs)

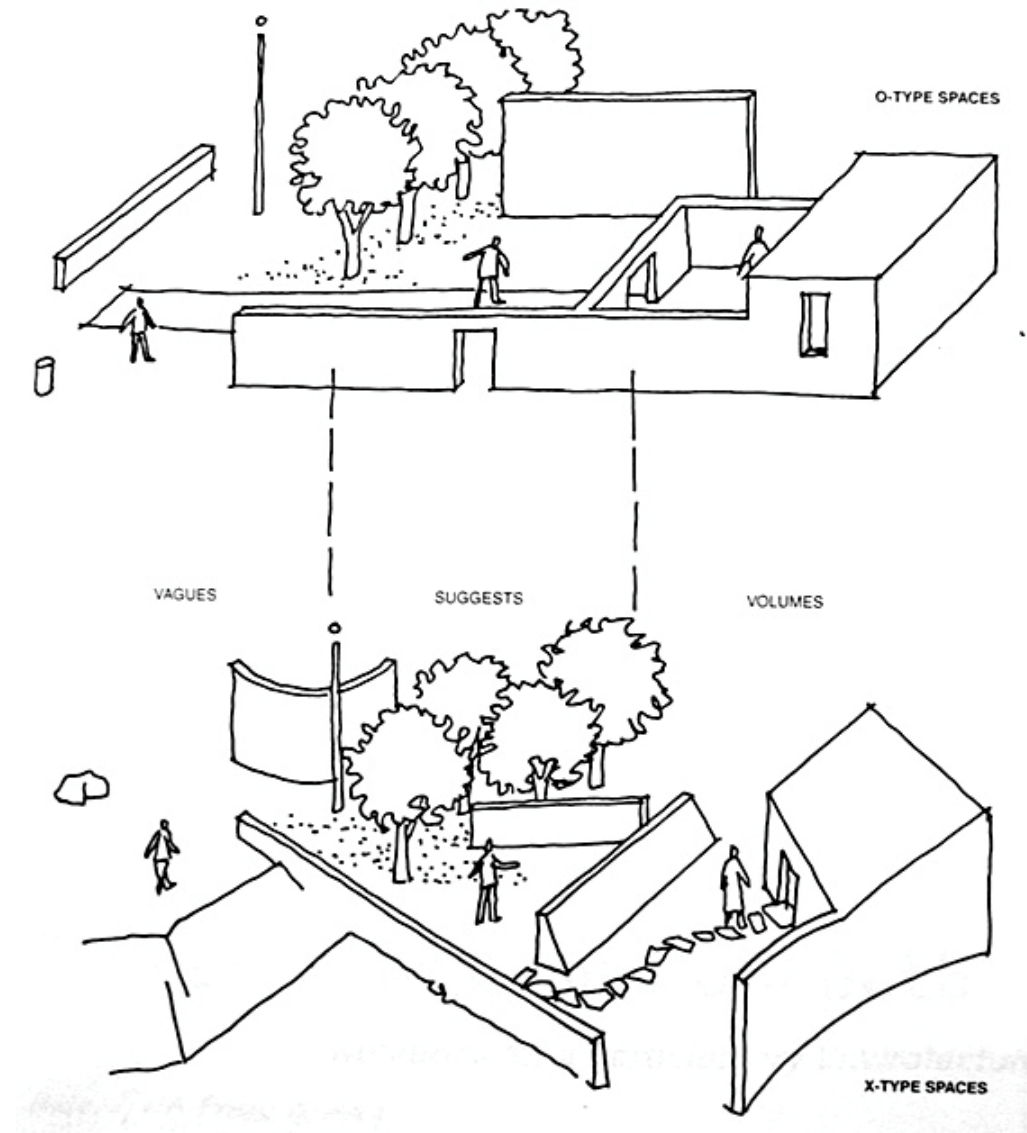
Common SEEs of all types in all positions



Order, explicitness of space

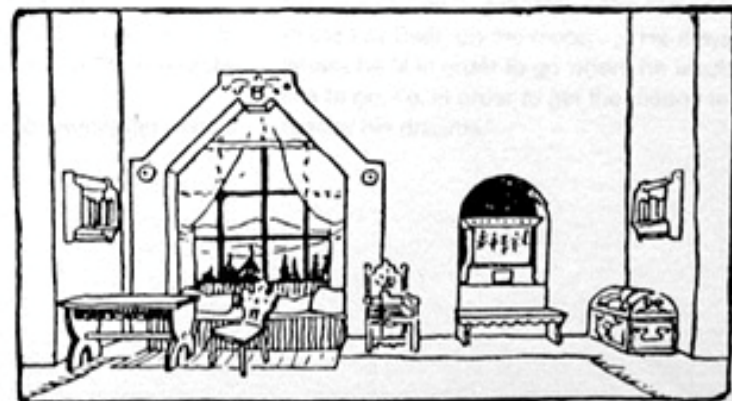
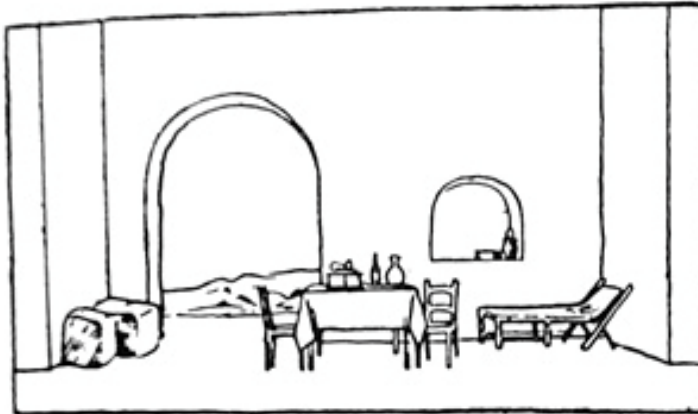
Emotional affect depends on situation:

- comforting or claustrophobic
- freedom or loneliness
- exhilaration or vertigo



Emotions reinforced / determined by:

Music, light, denotation of environment
(prison, garden), etc.



Vietnam Veterans Memorial (WaDC, Maya Lin)

Exposition (opening scene / overview)



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Vietnam Veterans Memorial (WaDC, Maya Lin)

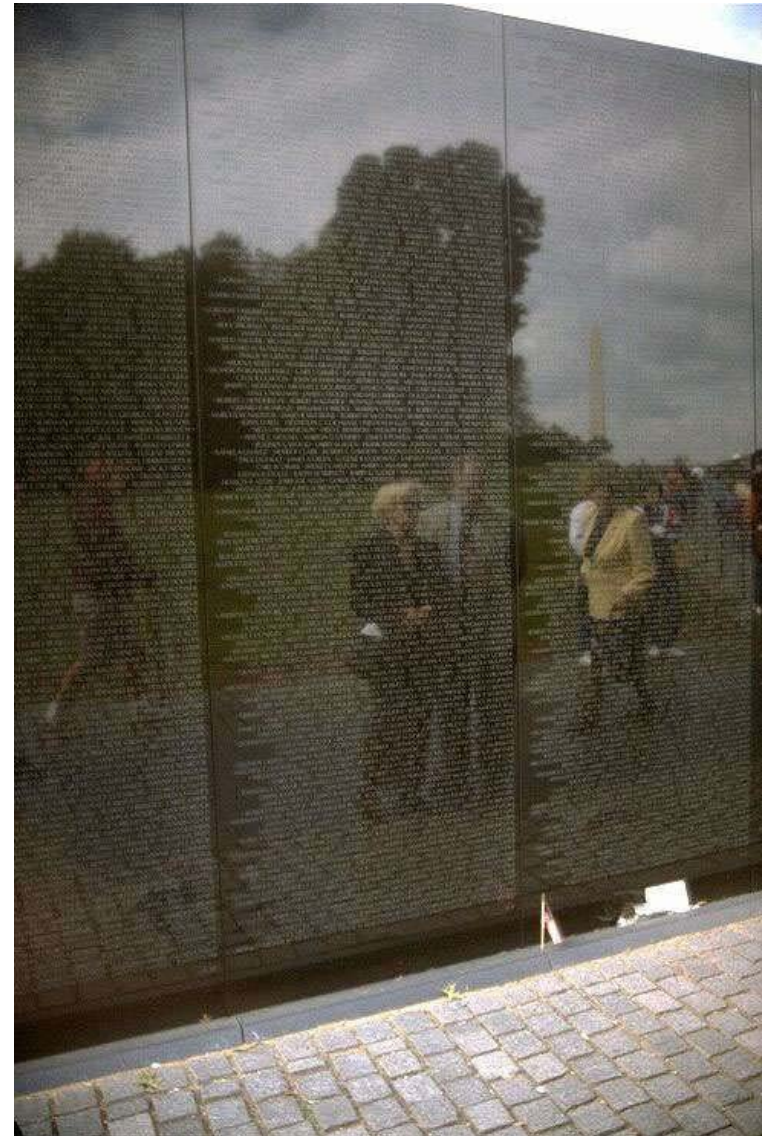
Rising action

(development):

- Descend into V
- Names, height of wall increases, enclose you

Climax:

- Apex - height of our involvement in Vietnam
- Names, wall 10' high.



Vietnam Veterans Memorial (WaDC, Maya Lin)

Falling action (denouement):

- Deaths, height of wall reduces



Vietnam Veterans Memorial (WaDC, Maya Lin)

Resolution:

- Re-emerge into daily life



How does our theory fit in here?

- Spatial, metaphorical experience
- Not character-based i.e.
NOT interaction between two soldiers.
- First person experiential viewpoint:
focuses on effect of space on your emotions.

How does it engage us?

Yes, there are characters: other visitors add to emotionality of the environment, searching for names, leaving offerings

But main effect is on user:

- Interactive - visitors must physically engage with the piece and descend into the 'V'
- Addresses our sense of scale, enclosure

Summary

- First person *experiential* viewpoint
- Drama takes place between *user and environment* (which can include characters)
- User has *agency* -> *emotional responsibility* for actions and outcomes
- “Character development” happens *in user*.
- Designer choreographs *emotional journey* for user.

Summary

Within a known structure provoke emotional responses by:

- setting up expectations, then
- playing with the expectations: surprising, frustrating, rewarding, etc.
- Create balance of positive and negative to avoid boredom, stimulation overload

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