

Signature

Creating a distinctive and memorable association with a sound

May relate to: Identification

May use many, including: Aesthetics, Sound Effects, Character Soundprint, Footsteps, Grunts, Music



Aesthetics

Defining artistic characteristics common to all sounds

Acoustic Ecology



Acoustic Ecology

Designing sound in a holistic way, as influenced by the discipline of Acoustic Ecology

Aesthtetics, Ambiance, Foley, Sound Effects, Music, Dialogue, Foley Music, Diegetic Music, Chitchat, Character Soundprint, Identification



Sound Design in Games

A deck-based approach to a Pattern Language for Sound Design in Games, strongly influenced by Acoustic Ecology and subject to the principle that Sound Design in Games benefits from being embedded in the overall Game Design



Variety

Triggering alternate sounds not to compromise the experience

Contexts: Foley, Sound Effects, Ambiance, Music, Dialogue, Identification



Entrainment

Changing the player's internal rhythms through acoustic stimulation, eventually inducing emotions and behaviour

Emotional Script, Trance, R-A-E-D Iterations, Relaxation, Anticipation, Engagement, Decay, Window of Opportunity, Hurry Up!

May use: Heartbeat, Breath, Footsteps, Music, Rhythm Gameplay, Foley, Ambiance



Rhythm Gameplay

Acting in sync with a rhythm

Consequent Sound, Entrainment

May call for: Sound Visualization, Sound Input, In-game Feedback, Levelled Performance



Pitch Gameplay

Exploring the tonal accuracy of the player's voiced input

Makes use of: Sound Input

Often uses: In-game Feedback, Sound Visualization, Levelled Performance







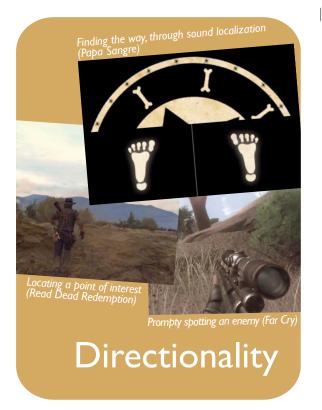












Sound Input

The way sound enters the gameworld

Contexts include: Consequent Sound, Pitch Gameplay, Rhythm Gameplay, Make Sound not War, Address Others, Sing to Act

May relate to: Sound Visualization



Menus

Sounds in game menus

Peers: Title Screens, Cutscenes

Often uses:

Music, Contextual Music, Sound Effects

May use: Foley



Cutscenes

Sound of cinematic pieces

Contexts: Narrative, Emotional Script

Peers: Title Screens, Menus



Title Screens

Signature, Emotional Script

Peers: Menus, Cutscenes

Often uses: Music, Sound Effects



Directionality

Exploring the identification of the direction of a sound source

Awareness

May relate to: Beacon Locator, Shout and Yell, Unaware NPC, Suspicious NPC



Sound Visualization

Graphical perception of the occurrence of sound

May relate to: Sound Input, Rhythm Gameplay, Pitch Gameplay

May use: Subtitles and Captions



Levelled **Performance**

The progressive sophistication of sound related performative actions

Contexts:
Sound Input, Rhythm Gameplay,
Pitch Gameplay, Narrative

Relates to: In-game Feedback



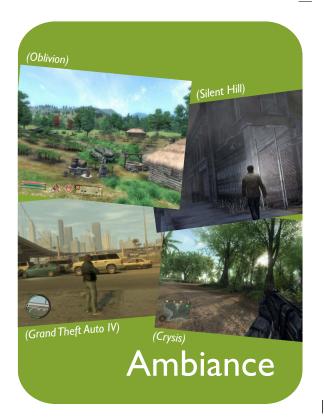
In-game Feedback

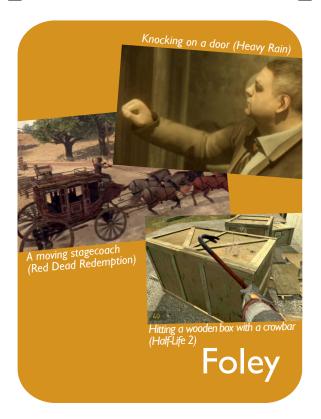
Providing indicators on the player's acoustic performance

Contexts: Sound Input, Rhythm Gameplay, Pitch Gameplay, Awareness, Emotional Script

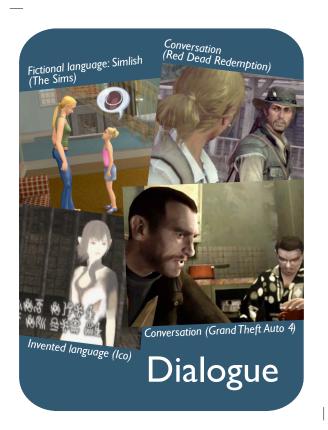
Relates to: Levelled Performance

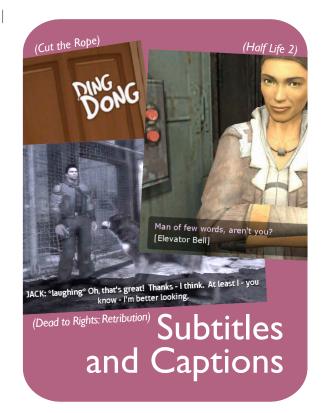




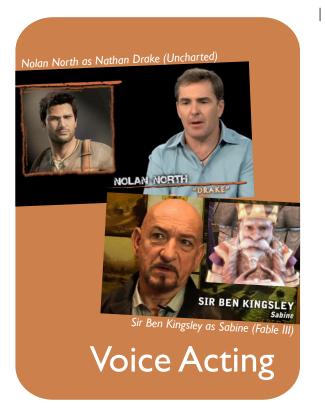


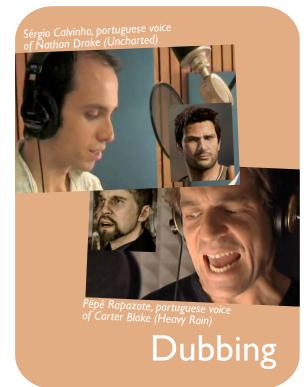












Dialogue All kinds of conversation

Many contexts, including: Narrative, Emotional Script, Character Soundprint, Narrator, Thoughts, Helper Voice, Recordings, Chitchat, Seeking for PC, ...

Relates to: Acoustic Ecology

Calls for: Variety

May call for: Subtitles and Captions

Sound Effects

Sounds that make abstract or imaginary objects concrete

Many contexts, including: Engagement, Achievement, Failure, Beacon Locator, Window of Opportunity, Menus, Signature, ...

Close to: Foley

Relates to: Acoustic Ecology

Calls for: Variety

May call for:
Subtitles and Captions

Foley

Sounds of ongoing actions

Many contexts, including: Engagement, Character Soundprint, Footsteps, Grunts, Sound Decoys, ...

Close to: Sound Effects

Relates to: Acoustic Ecology

Calls for: Variety

May call for: Subtitles and Captions

Ambiance

Sounds of the environment

Contexts: Relaxation, Emotional Script, Narrative, Entrainment

Relates to:
Acoustic Ecology

Calls for: Variety



Dubbing

Replacing original voices, to adapt to other language

Context:
Dialogue, Voice Acting, Narrative,
Character Soundprint

May call for: Subtitles and Captions



Voice Acting

Performing and recording voices for characters and/or narrators

Context: Dialogue, Narrative, Character Soundprint

May call for: Subtitles and Captions, Dubbing



Say that Again

Allowing the PC/player to request to hear again

Context:
Dialogue

May call for: Address Others, Variety

Makes use of: Dialogue



Subtitles and Captions

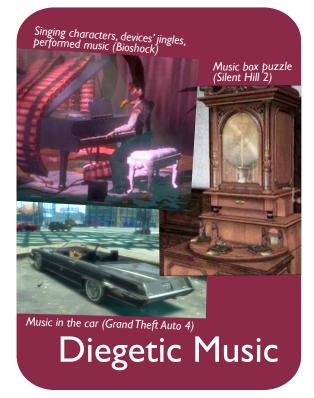
Text that represents occurring sound

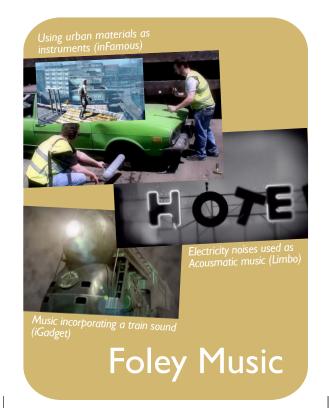
Context: Sound Visualization, Narrative, Dialogue, Foley, Sound Effects, Voice Acting

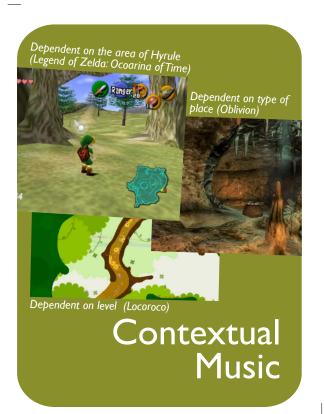
Relates to: Dubbing

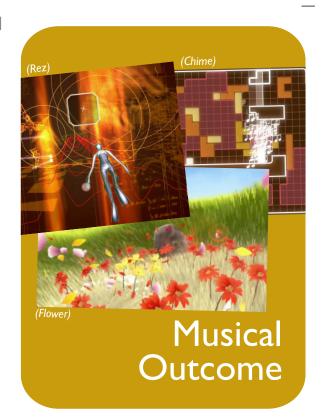




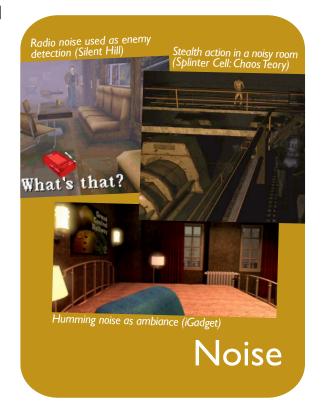


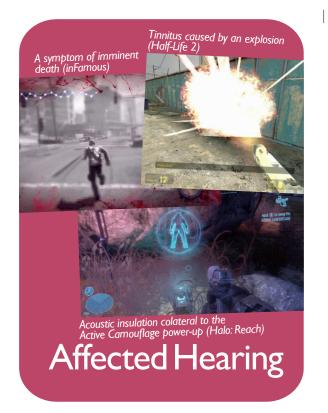












Contextual Music

Music specific to particular contexts or levels

Narrative, Emotional Script

May relate to:
Diegetic Music

Makes use of: Music



Foley Music

Music exploring sounds of objects or actions

Music

Makes use of: Foley, Acoustic Ecology



Diegetic Music

Music happening in the game world

Narrative, Emotional Script

May relate to:
Contextual Music, Musical Outcome

May use: Radio

Makes use of: Music, Acoustic Ecology



Music

All kinds of music heard during the game

Many contexts, including:
Entrainment, Relaxation,
Anticipation, Engagement, Decay,
Emotional Script, Trance, Narrative,
Window of Opportunity, Diegetic
Music, Contextual Music, Musical
Outcome, Signature, ...

Relates to:
Acoustic Ecology

Calls for: Variety



Affected Hearing

Simulating hearing impairment

Awareness, Emotional Script, Imminent Death

May relate to: Ouch!



Noise

The purposeful use of noise

Contexts:
Aesthetics, Acoustic Ecology,
Emotional Script, Awareness

Often Uses: Ambiance, Foley



Silence

Contexts:
Aesthetics, Acoustic Ecology,
Emotional Script, Awareness, Anticipation

Makes use of: Ambiance



Musical Outcome

Music generated as a by-product of in-game actions

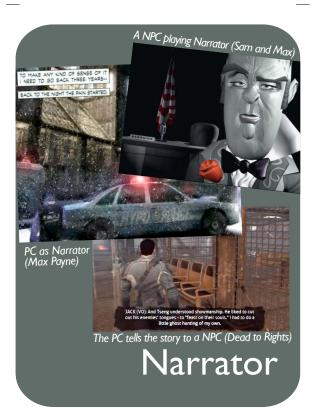
Context: Emotional Script

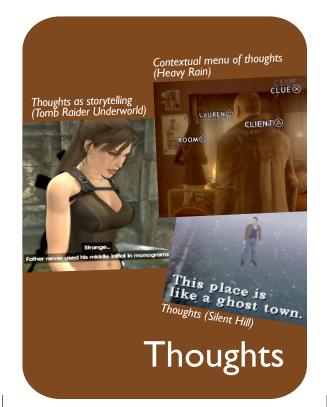
May relate to:
Contextual Music, Diegetic Music

Makes use of: Music



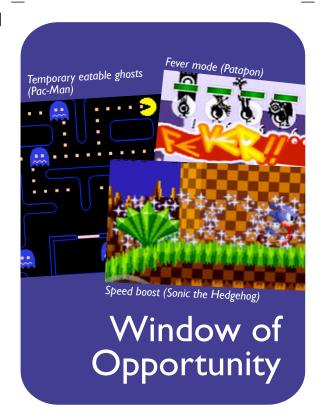


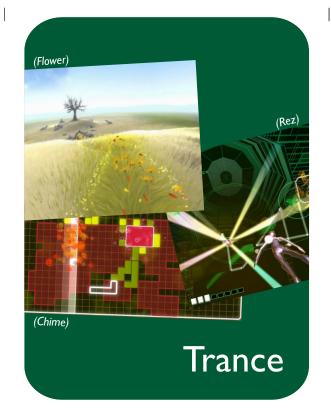


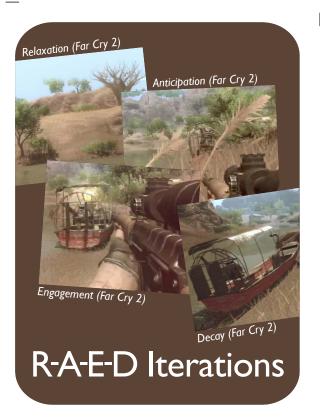












Recordings

Recorded dialogue, frequently scattered through the gameworld

Context: Narrative

Possibly with:
Beacon Locator

May relate to: Helper Voice, Radio

Makes use of: Dialogue



Thoughts

Revealing what a character is thinking of

Contexts: Narrative, Emotional Script

May relate to: Narrator, Helper Voice

Often uses: Dialogue



Narrator

Resorting to an actual narrator to convey the narrative

Context: Narrative

Differs from: Helper Voice

Makes use of: Dialogue



Narrative

The contributions of sound to unfold the game's story

Relates to: Emotional Script

May use many, including:
Dialogue, Cutscenes, Narrator,
Thoughts, Recordings, Radio,
Eavesdropping, Contextual Music,
Levelled Performance



R-A-E-D Iterations

Iterations of the sequence:
Relaxation
Anticipation
Engagement
Decay

Context: Emotional Script

Parts: Relaxation, Anticipation, Engagement, Decay

Makes use of: Entrainment



Trance

Sound contributing to experiencing flow or deep immersion

Context: Emotional Script

Often uses: Music, Entrainment



Window of Opportunity

Enhancing the perception of a temporary possibility or favourable state

Awareness, Emotional Script

Includes: Hurry Up!, Imminent Death

Often uses: Sound Effects, Entrainment

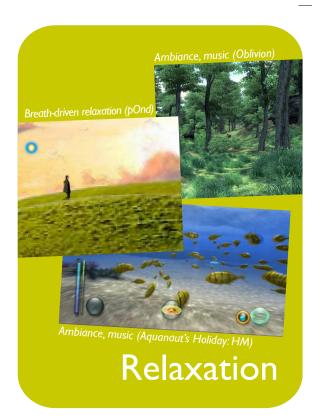


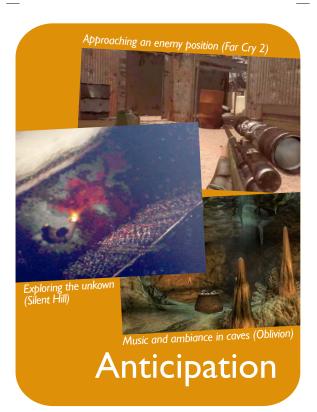
Emotional Script

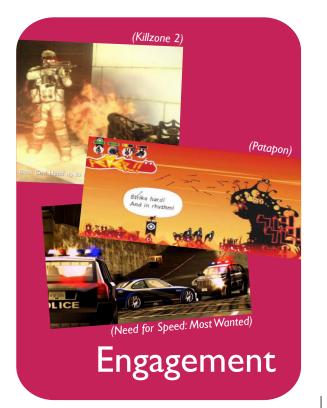
Sound designed to elicit emotions along the experience

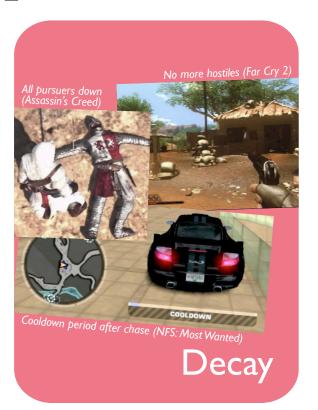
Relates to: Narrative

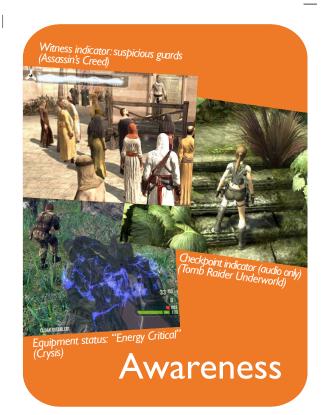
May use many, including:
R-A-E-D Iterations, Cutscenes,
Window of Opportunity,
Music, Contextual Music,
Achievement, Failure, Grunts,
Ouch!, Imminent
Death, Trance,
Entrainment, ...

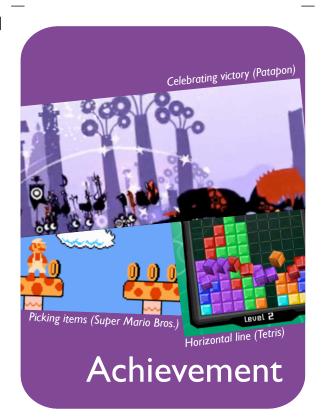


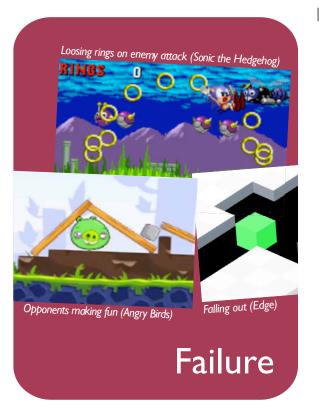


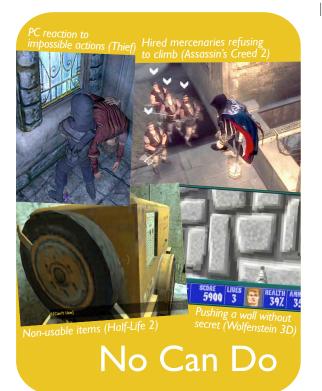












Decay

A phase of gameplay of reestablishment after an engagement

Contexts: Emotional Script, R-A-E-D Iterations

Relaxation, Anticipation, Engagement

May use:
Music, Dialogue,
Entrainment



Engagement

A phase of gameplay of explicit conflict

Contexts: Emotional Script, R-A-E-D Iterations

Peers: Relaxation, Anticipation, Decay

May use many, including:
Foley, Sound Effects, Music,
Dialogue, Entrainment, Seeking
for PC, Shout and
Yell, Sonic Weapon

Anticipation

A phase of gameplay anticipating an engagement

Contexts: Emotional Script, R-A-E-D Iterations

Relaxation, Engagement, Decay

May call for: Stealth

May use: Music, Entrainment, Heartbeat



Relaxation

A phase of gameplay promoting a restful state of mind

Contexts: Emotional Script, R-A-E-D Iterations

Anticipation, Engagement, Decay

Often uses: Ambiance, Music, Entrainment



No Can Do

Signalling something impossible

Context: Awareness

Close to: Failure

Makes use of: Sound Effects, Foley, Dialogue



Failure

Signalling something negative

Context: Awareness, Emotional Script

Includes the parts:
Ouch!, Imminent Death, Death

Contrasts with:
Achievement



Achievement

Signalling something positive

Context: Awareness, Emotional Script

Contrasts with: Failure

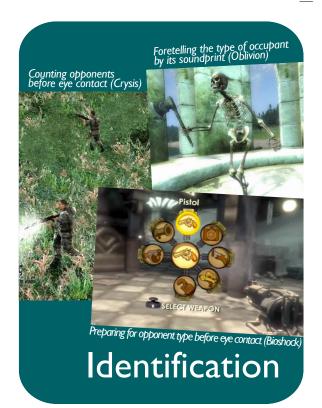


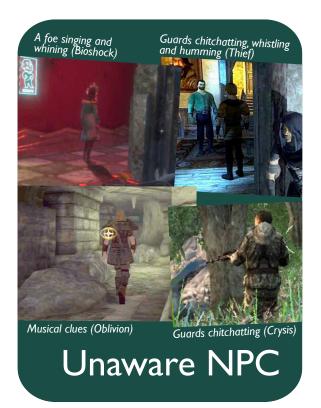
Awareness

Sound signalling some relevant aspect of gameplay

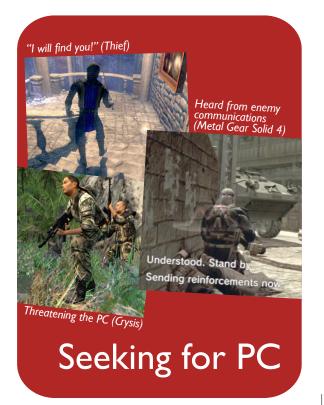
Relates to: Emotional Script, Narrative

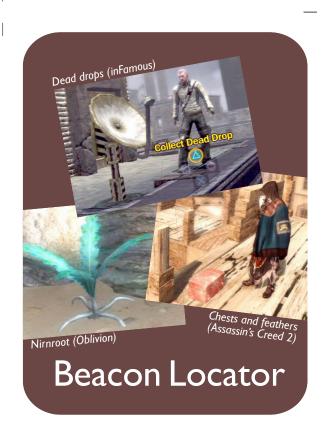
May use many, including:
Character Soundprint, Failure,
Achievement, No Can Do,
Window of Opportunity,
Hurry Up!, Beacon Locator,
Identification, Ouch!,
Imminent Death,
Seeking for PC,
Suspicious NPC,
Unaware NPC, ...

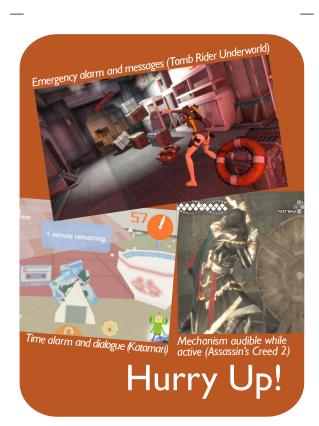


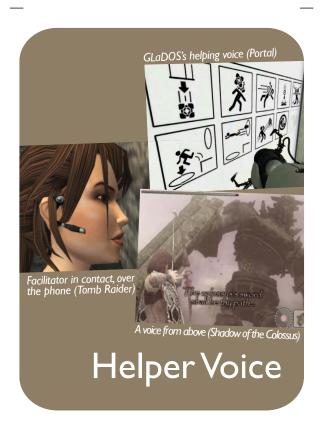














Seeking for PC

NPC's manifestations of active chasing of the PC

Awareness, Engagement, Anticipation

Dialogue, Shout and Yell, Grunts

May relate to: Stealth, Character Soundprint, Sound Decoys

Contrasts with: Unaware NPC, Suspicious NPC

Suspicious NPC



Unaware NPC

NPC's behaviours evidencing that the PC remains unnoticed

Context:

Awareness, Anticipation

May use: Chitchat, Grunts

Relates to: Stealth, Character Soundprint, Sound Suppressing, Sound Decoys

Contrasts with: Suspicious NPC, Seeking for PC

Identification

Promoting the recognition of entities through their distinctive soundprints

Context:

Awareness

May call for: Signature, Character Soundprint, Beacon Locator, Variety, Acoustic Ecology

Should not compromise: **Variety**



Radio

Actual radio receivers with relevant

Contexts:

Narrative, Helper Voice, Awareness, Diegetic Music

May relate to: Sound Suppressing, Stealth

Relates to: Recordings



Helper Voice

Conveying guidance through the voice of disembodied or remote entities

Context:

Awareness

Narrative, Recordings, Radio

Differs from: Narrator

Makes use of: Dialogue



Hurry Up!

Contributing for the sense of urge in completing something

Emotional Script, Awareness, Window of Opportunity

May relate to: Imminent Death

Often uses: Sound Effects, Music, Entrainment



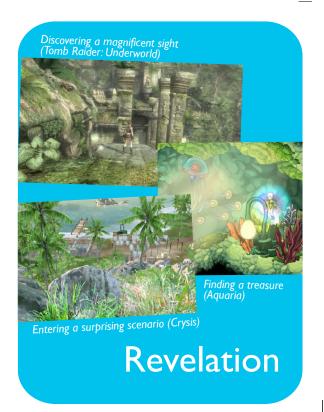
Beacon Locator

Items that emit sound to ease their

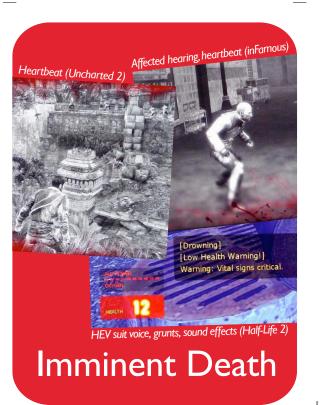
Awareness, Identification

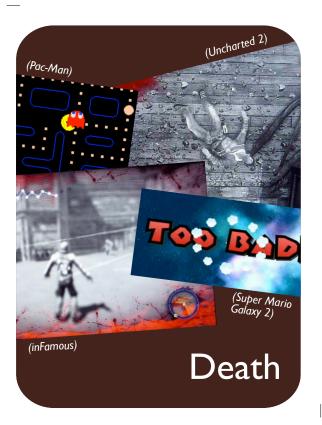
Often uses: Sound Effects, Directionality

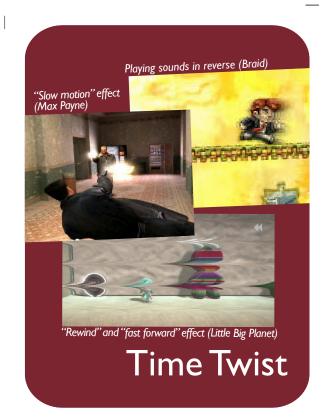


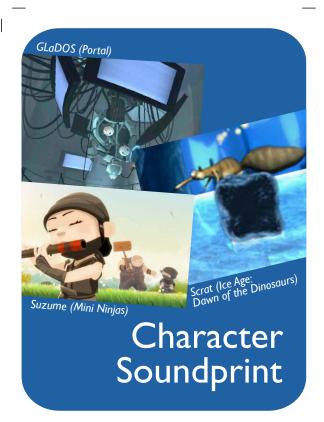


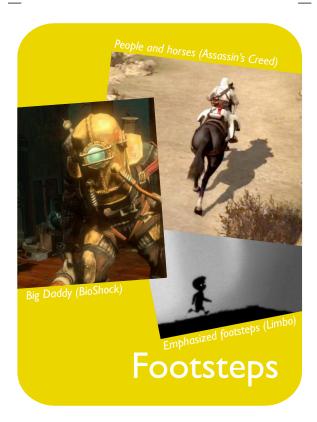


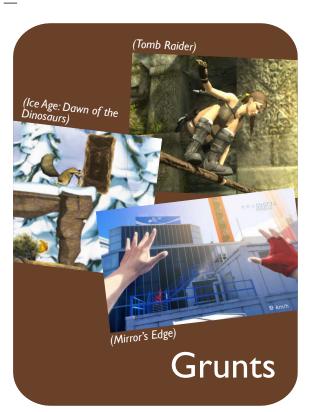












Death

Portraying death

Failure, Emotional Script, Awareness

Imminent Death, Ouch!

May use: Grunts, Foley, Sound Effects, Dialogue



Imminent Death

Urging a change of behaviour to avoid death

Context:

Failure, Awareness, Emotional Script, Window of Opportunity

Peers:

Death, Ouch!

May relate to: Húrry Up!

May use:

Heartbeat, Grunts, Affected Hearing Foley, Sound Effects Dialogue

Ouch!

Signalling a painful or damaging interaction

Contexts: Failure, Awareness, **Emotional Script**

Imminent Death, Death

May use: Grunts



Revelation

Expressing an encounter with something special

Emotional Script, Awareness

Differs from: Achievement



Grunts

Utterances associated to physical actions or conditions

Many contexts, including: Character Soundprint, Awareness, Ouch!, Shout and Yell, Emotional Script, Signature, ...

May Relate to: Breath, Footsteps

Compromises with: Stealth

Makes use of: Foley, Dialogue



Footsteps

May Relate to: Breath, Grunts



Character Soundprint

The set of sounds of a PC or NPC

Context:

Awareness, Identification, Signature, Émotional Script

May Use:

Footsteps, Grunts, Breath,
Heartbeat, Chitchat, Dialogue,
Foley, Sound Effects,
Acoustic Ecology

May Relate: NPC, Seeking for PC



Time Twist

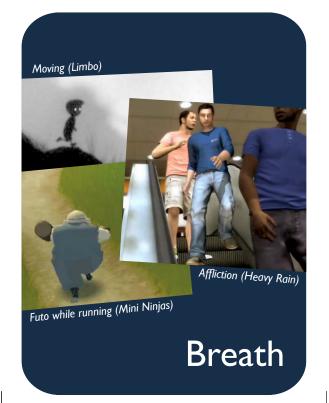
Using sound to enhance the perception of time manipulations

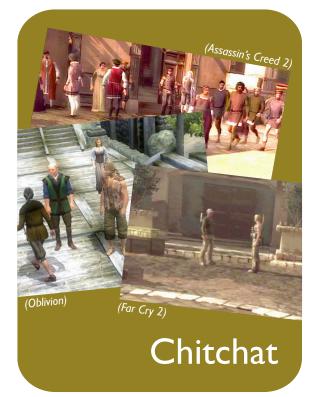
Context: Awareness

May relate to: Emotional Script

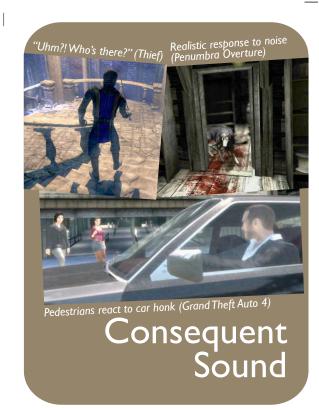


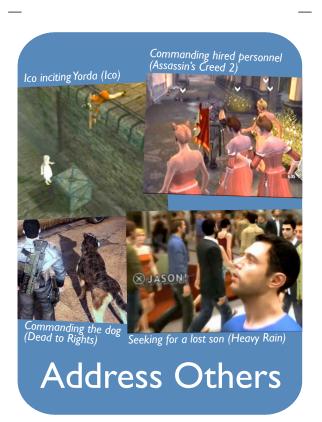


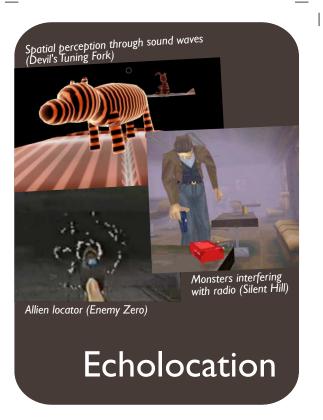


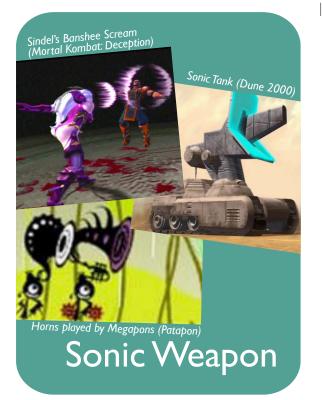












Shout and Yell

Loud manifestations of hostility

Contexts:

Awareness, Engagement, Emotional Script, Character Soundprint, Seeking for PC

Makes use of: Dialogue, Grunts



Chitchat

Dialogue that is not central to the course of action

Contexts:
Character Soundprint,
Emotional Script, Unaware NPC

Possibly with: Grunts

Makes use of: Dialogue, Acoustic Ecology



Breath

Perceptible sound of breathing

Character Soundprint, Awareness, Emotional Script, Entrainment

Relates to: Grunts

Makes use of: Foley



Heartbeat

Perceptible sound of heartbeating

Contexts:
Character Soundprint, Awareness,
Emotional Script, Entrainment,
Anticipation, Imminent Death, Engagement

Makes use of: Foley



Sonic Weapon

Using sound to inflict damage

Consequent Sound, Engagement

Contrasts with: Make Sound not War

Relates to: Sound Decoys, Sound Suppressing



Echolocation

Using sound to perceive the environment

Consequent Sound, Awareness, Emotional Script

May imply: Sound Input



Address Others

Enabling the PC to use sound to address NPCs

Context: Consequent Sound

May imply: Sound Input

Often uses: Dialogue, Foley



Consequent

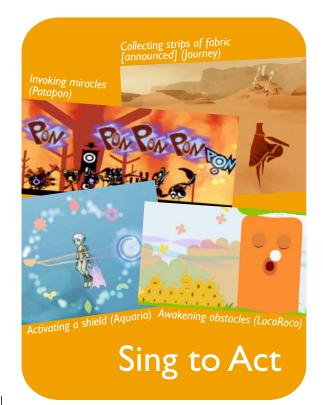
Designing the gameworld so that is sensitive to sound

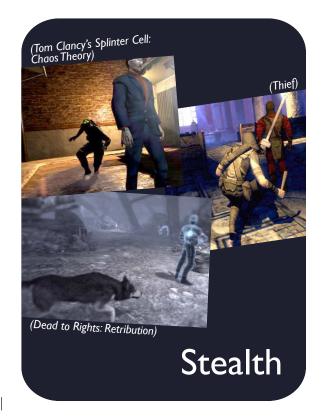
May use many, including:
Make Sound not VVar, Sing to Act,
Rhythm Gameplay, Echolocation,
Address Others, Stealth,
Sound Decoys, Sound Suppressing,
Sonic Weapon, Eavesdropping, ...

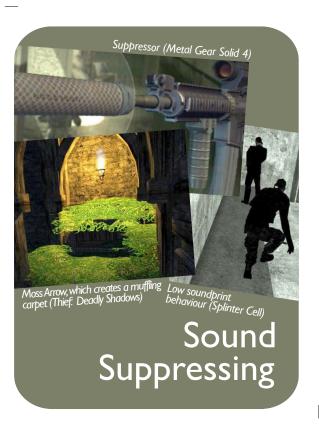
May imply: Sound Input



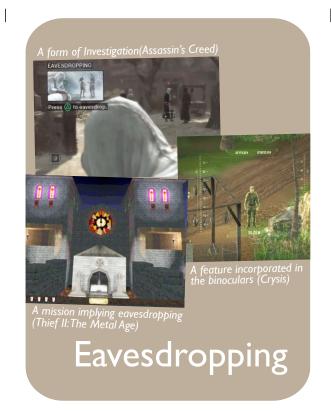












Sound Suppressing Enabling the reduction of PC generated sounds

Context: Stealth, Consequent Sound

Relates to: Unaware NPC, Sonic Weapon

Makes use of: Foley



Stealth

Low profile behaviours that include adopting a small soundprint

Context: Consequent Sound, Anticipation, Emotional Script

Includes: Sound Suppressing, Sound Decoys, Eavesdropping

Relates to:
Footsteps, Character Soundprint,
Unaware NPC,
Suspicious NPC,
Seeking for PC

Sing to Act

Performing songs to achieve a purpose

Context:
Consequent Sound,
Make Sound not War

May imply: Sound Input



Make Sound not War

Exploring sound to create alternatives to conflict

Context: Consequent Sound, Emotional Script

Relates to: Engagement

Includes: Sing to Act, Sound Decoys

Contrasts with: Sonic Weapon

May imply: Sound Input



Eavesdropping

Adopting behaviours with intention of gaining knowledge by listening to others' conversations

Context: Stealth, Narrative, Emotional Script

Relates to:
Unaware NPC

Makes use of: Dialogue



Sound Decoys Using sound to fool the opponents

Context: Stealth, Consequent Sound, Make Sound not War, **Emotional Script**

Relates to: Unaware NPC, Suspicious NPC, Seeking for PC, Sonic Weapon

