

TINY JUNGLE: PSYCHEDELIC TECHNIQUES IN AUDIO-VISUAL COMPOSITION

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ABSTRACT

Tiny Jungle (duration 7:10) [1] is a psychedelic audio-visual montage, with a soundtrack based upon electroacoustic music and late 1990s drum and bass. This work forms part of my research regarding ‘Altered states of consciousness (ASCs) as an adaptive principle for composing electroacoustic music’. According to Heinrich Klüver [2] and Timothy Leary [3], ASCs such as those induced by mescaline may commonly result in the perception of visual patterns of hallucination, cryptic symbols, perception of cellular or atomic forms, and strange journeys or narratives. *Tiny Jungle* uses these ASC features as a basis for the composition of sound and video. Visual material for this piece was created through a montage of animated hand-drawn artwork, 3D graphics and material created using a specially designed Max/MSP/Jitter tool that produces stroboscopic visual material in real-time. The combination of music and moving images is intended to construct a narrative that conveys psychedelic experiences. In this paper I will discuss the development of *Tiny Jungle* from concept to realisation, with emphasis on the development of visual material and a brief overview of the soundtrack. It is hoped to thereby stimulate thought for audio-visual practitioners on compositional techniques based upon ASCs and audio-visual montage techniques involving hand-produced artwork and real-time methods.

1. INTRODUCTION

Throughout history, many different cultures have sought to undergo visionary journeys using hallucinogenic plants and drugs. These experiences have often informed the creation of art and music. There are many examples (too many to catalogue in detail here) ranging from the traditional artworks of shamanic societies, to modern examples in Western society such as psychedelic rock or psy-trance. These works, and accounts of altered states of consciousness (ASCs) form a contextual background to my research.

The term ‘altered states of consciousness’ refers to states of dream, hallucination, delirium or meditation, which fall outside of a commonly accepted normal consciousness. In *Music and Altered States* Jörg Fachner cites Fischer’s ‘varieties of conscious states’, which provides a scale from ‘ergotropic’ to ‘trophotropic’¹, through which to consider these

different perceptual states [4]. My research focuses mainly upon ergotropic states of hallucination, such as those produced by LSD or the Peyote cactus. Through reference to Fischer’s work and studies such as those by Timothy Leary [3] and Heinrich Klüver [2], it is possible to identify ‘ASC features’ that commonly occur during hallucinations of this kind. These include distortions to time-perception, visual pattern effects, perception of cellular imagery, atomic forms and strange hallucinatory journeys or narratives.

Tiny Jungle uses these ASC features as a basis for compositional design. This can be achieved through the production of mimetic visual and sonic material. ‘Mimetic’ here refers to Simon Emmerson’s discussion of ‘mimetic discourse’ [5], which refers to the signifying properties that can be achieved through imitative use of sound. I apply this principle by taking aspects of the ASC experience, and using them as a basis for composing the artwork. For example, a painting can imitate the funnel dot patterns perceived in a psychedelic experience. In sound, it is possible to achieve similar effects; for example, time-stretching a sound may convey the ASC feature of distorted time-perception. By making appropriate use of mimetic processes such as these, the composition can convey ASC experiences.

Usually the way this process is applied in my compositions can be described as ‘adaptive’. This is because the compositional process is also informed by the typical techniques of an art form: in this case, electroacoustic music and audio-visual compositions. To clarify this process of adaptation, consider a watercolour painting depicting a representational scene of a hallway. We could paint this in a typical fashion, which does not reflect ASC experiences. However, we could paint it in such a way as would reflect perceptual distortions of an ASC experience: perhaps the perspective would be warped, the colour contrast accentuated, or visual patterns of hallucination could be added to the surfaces. At its core the artwork would still be a watercolour, however we have adapted it in accordance with the principles of an ASC experience.

Much like our hypothetical psychedelic watercolour painting, *Tiny Jungle* is an adaptation. It is based on electronic dance music, and adapts this form in accordance with ASCs. I also use techniques employed by Harry Smith [6] and the rave music video *Stakker Humanoid* [7]. These are used because they are

¹ ‘Ergotropic’ refers to excited states of consciousness that promote energy expenditure (e.g. ecstasy, hallucination), while ‘trophotropic’

refers to states that promote energy conservation (e.g. meditation, relaxation).

appropriate techniques to achieve the effects that I am aiming for. *Tiny Jungle* does not induce a hallucinatory psychological state. Instead, sound and vision take the listener on a musical journey that is based upon those experiences.

2. AUDIO COMPOSITION

ASC experiences can be considered as being governed by complex natural processes. When a drug or hallucinogenic plant is consumed, it is absorbed into the body gradually and causes perceptual changes. Effects will increase in intensity over time. However these changes are not linear, they are subject to complex natural variations. As visual hallucinations occur, they are also produced in a natural, unpredictable stream. As such, *Tiny Jungle* is designed to use forms which are mimetic of nature as a predominant compositional principle. By this I refer to the creation of sounds where the forms and dynamics are predictable, but subject to complex unpredictable variations.

Musically *Tiny Jungle* draws from a variety of influences, including the drum & bass released by record labels such as Metalheadz and Reinforced during the 1990s. This can be heard in the long introduction section, which is common in drum & bass of this era (0:10-1:30). The syncopated rhythmic patterns that follow (1:33-2:05) and pitch bent bass sounds (2:26) are all typical of this genre of music. The composition is adapted in accordance with the principle described above, in order to emphasise natural sounds and complex variations. These were incorporated as follows:

Percussive wood sounds are heard from 1:33-2:05. A range of these sounds were used to achieve greater variation than would be achieved by using identical snare drums from a drum machine. Sounds which resemble birdcalls can be heard at 0:02-0:10 and 1:21-1:31. These sounds are the result of various pitch transformations, which were intended to produce natural variations on the sound. The similarity with birds is coincidental but triggered my imagination to provide the theme and title for the work: a visionary flight to a mystical jungle.

Tiny Jungle incorporates shifting filter effects, which are used to reflect perceptual transitions (2:00-2:20). Here the rhythmic sounds disappear into a wave of scattered rhythmic sounds and granular effects. These scattered rhythmic sounds were produced in order to mimetically reflect visual patterns of hallucination, where in a hallucination one might become engulfed in a wall of dot patterns. Heinrich Klüver refers to these patterns as 'entoptic phenomena' [2]. Rhythmic sounds that punctuate the composition are considered as a suitable means to mimetically convey the dot patterns of entoptic phenomena. This concept is explored in greater depth in other compositions I have worked on such as *Entoptic Phenomena* (performed at the ICMC 2010), however these sounds occur briefly in *Tiny Jungle* from 4:45-5:00. Entoptic phenomena is also featured

substantially in the visual material of this work, discussed later in this article.

Droning sounds are emphasised, to reflect distorted time perception. These can be heard from 0:10-1:30 (and at various other points). These drones are created using granular time stretching. This process reflects the perceptual effects of ASCs where a single moment in time may seem to last much longer than usual, since the tangible duration of a sound is extended. A real-time approach was used to design the sounds, as this provides a possible means to achieve the complex natural dynamics I was aiming for.

The first half of *Tiny Jungle* (1:33-3:47) uses fast syncopated rhythms to convey an ecstatic sensory state, while the second half (3:48-6:10) slows the tempo of the music to a throbbing bass groove, to suggest a deeper trance state. Faster rhythmic sounds mimetically reflect the idea of hallucinations as an ergotropic state, since ergotropic states are defined as perceptual states that cause energy expenditure. Meditative states can be suitably described using slower rhythmic material, since this reflects the idea of trophotropic states: states that promote energy conservation. In this way the audio composition helps create a narrative structure for the piece by guiding the mood through different states of altered consciousness.

3. VISUAL COMPOSITION

Images help to create a narrative journey for the composition, and can reflect visual aspects of the ASC experience. *Tiny Jungle* uses suitable techniques found in existing audio-visual works: Harry Smith's *Early Abstractions Pt 1* [6] and *Stakker Humanoid* [7]. I will begin by discussing these.

3.1. Existing ASC Audio-Visual Compositions

3.1.1. *Harry Smith*

In order to acquire a suitable visual language to describe ASC experiences I utilised approaches which are explored in the animated films of Harry Everett Smith, particularly *Early Abstractions Pt 1* [6]. Smith's work contains a complex range of themes and influences including the occult, psychedelic and religious images, and can be viewed as 'visual music'. He spent time living among Native Americans, conducting ethnographic research and was familiar with peyote rituals. While making these films he was known to use drugs and sleep deprivation as a means to induce visual imagery, which he would then attempt to incorporate into the animation. My discussion here will focus upon the aspects of his work that I sought to develop in *Tiny Jungle*:

Early Abstractions Pt 1 [6] uses hand-produced animation, which gives it a natural spontaneity with complex variations in its visual appearance. Although abstract, the forms are suggestive of micro cellular and plant-like forms, and orbiting planets or suns. I find this

accomplishes a mysterious effect through the ambiguous symbolism.

Tiny Jungle uses some approaches that are similar to *Early Abstractions Pt I* [6]. Although I was not able to use the time-consuming method of hand-producing each frame of *Tiny Jungle*, I use some hand-drawn methods and ink materials to produce complex natural variations. I also use some similar abstract forms that suggest possible symbolic connotations, in order to reflect the cryptic or mysterious qualities that are described in ASC experiences.

3.1.2. *Stakker Humanoid*

Tiny Jungle also uses an approach demonstrated in the rave music video *Stakker Humanoid* [7]. This has a combination of stroboscopic effects and brightly coloured patterns, which elicit a hypnotic sense of disorientation for the viewer. Incorporating a similar process in *Tiny Jungle* was considered as a way to reflect the disorientation that is common in ASC experiences. The speed of the flashing images also conveys an energetic affect, which is suitable for describing ergotropic states of excited perception. To achieve these effects I produced a Max/MSP/Jitter patch, the *Atomizer Visual*, discussed later in this paper.

3.2. Psychedelic Techniques in Video

3.2.1. *Natural forms*

Tiny Jungle begins with a digitally manipulated clip of ink drops falling and dispersing in water (0:01-1:00). This was achieved by filming ink dripping into water with a digital camera. The section that follows (1:00-1:30) features moving textures produced from scanned still ink images. These clips were produced by scrolling various ink images in different directions and combining them using layer blending effects. Incorporating these techniques and other hand-produced material suitably reflects the notion of ASC experiences as subject to complex natural variations. The ink forms are predictable, to an extent, but are subject to complex natural variations, which result from the expansion of the liquid on paper.

3.2.2. *Entoptic phenomena*

The visual patterns of hallucination that I discussed previously are achieved in *Tiny Jungle* using several methods. Firstly, I produced hand-drawn images of circle and dot patterns to achieve the natural variations mentioned above, which can be seen at 1:00-1:30. These were animated using the *Atomizer Visual* software, and 3D layers in After Effects. During this passage we can also see this source material wrapped into a funnel shape, with the animated dot patterns coloured green.

Kaleidoscope transformation processes were used to produce the visual patterns of hallucination first

seen at 0:15. This effect is produced in After Effects using the 'CC Kaleida' and 'CC Flo Motion' filters. These filters fold the source material into a grid, and then into a funnel, replicating the patterns of entoptic phenomena.

At 2:37-2:50 entopic phenomena is also described using 3D graphics produced in Maya. In this sequence a camera flies through a tunnel of 3D spheres to create another kind of entopic effect.

3.2.3. *Mysterious forms*

At 0:25 we see several orbiting spheres move across our vision. These are inspired by Harry Smith's *Early Abstractions Pt I* [6], and are an example of mysterious forms. These images were created in 3D using Maya.

A moving head can be seen at 1:35 – 1:55. This clip is a simple animation created from a photograph and a moving background drawn with a Wacom graphic tablet. The head can be seen as a hallucinated entity, such as those described in ASC experiences.

At 2:00 – 2:13 we see three 'weird sticks' and lizard-type creatures that move across the screen. These ambiguous cellular forms were also inspired by Smith's work, and created using flash animation.

3.2.4. *Hypnotic strobe effects*

I created a software patch using Max/MSP/Jitter called the *Atomizer Visual* in order to animate stroboscopic material for the film. The aim of this material was to achieve disorientating visual rhythms. The software enables different still images or movie clips to flash up. Images are triggered according to a timed metronome. Once an image appears, it will fade out according to a specified decay time in milliseconds. The software allows up to four simultaneous visual channels to be combined. Blending of these channels occurs via selectable mathematical expressions (add, subtract, multiply etc.). A simple usage would be to add the four channels so that four different images or movie clips flash on screen at different times, creating a hypnotic effect of different strobing images. Material produced in this way can be seen in the background throughout most of 2:27-3:47 (and through other sections of the video).

The *Atomizer Visual* software runs at a resolution of 320x240 pixels, which enables the production of visual material to take place in real-time on my average spec laptop. The user drags image and video clips into the *Atomizer Visual*, records and recombines them in real-time. This is considered advantageous as a means to incorporate natural spontaneity in the composition process.

3.2.5. *Visionary narrative*

The imagery used in *Tiny Jungle* helps to construct a narrative. This sense of narrative is mainly achieved

through the use of 3D animation produced in Maya, which describes hallucinatory objects and scenes.

At 0:32 – 0:56 the camera flies above a barren desert landscape. Such flying experiences often occur in reports of hallucinations. The birdcall motif in the audio composition led me to imagine a visual scenario involving flight and trees.

We see a brief glimpse of mysterious forms that occur later in the video at 1:32.

A gyrating molecular model is revealed at 2:26. This describes Timothy Leary's concept of 'atomic electronic level consciousness'² [3]. The section at 2:37 – 2:50 sends the viewer flying through a tunnel of spheres, perhaps representative of particles, entoptic phenomena or both. Subsequently a mass of the molecules appears at 2:51.

The 'tiny jungle' described by the title of this work is discovered at 3:08 – 3:30; the viewer is rushed through a disorientating mass of tree branches.

The pace of the music changes at 3:37, as the music progresses through a bridge section toward the meditative final part. During these final sequences we are shown mysterious 3D objects that spin or pulse rhythmically. These are inspired by some of the hallucinated objects participants describe in DMT experiments [8].

The ending section at 6:11 takes the viewer back across the familiar desert landscape of reddish rock, while patterns of lights dance across the sky and an organism twitches above.

4. SUMMARY

Tiny Jungle is reasonably successful as an exploratory work that uses a collage of different techniques to express in sound and vision many of the ASC features I have identified through my research. The collage approach lacks continuity in some ways, although from a certain point of view this also creates some interesting juxtapositions. I am satisfied with the results but would probably focus future works of this kind on either developing hand-drawn techniques further or using exclusively digital 3D. The main achievement of *Tiny Jungle* is demonstrating a possible creative approach for creating an audio-visual work based upon ASCs, perhaps more so than the actual realisation, which could be technically improved.

The *Atomizer Visual* software is an integral part of this project, enabling real-time production of stroboscopic visual material. This material assists in giving *Tiny Jungle* an energetic hypnotic and disorientating quality. There are many ways in which this software could be developed. Direct MIDI sync (instead of metronomes) would enable the visual pulses to directly match the rhythms of different parts of the music. A facility for live sketching with a graphic tablet

could be implemented, where frames can be drawn by hand and then added into the film furthering the potential for real-time hand-drawn animation.

Tiny Jungle shows how an audio-visual work might describe an ASC experience. The next logical step could be to explore interactive 3D simulations that enable the participant to actively explore hallucinogenic environments. *Tiny Jungle* gives a glimpse of how these interactive games might look, and how combinations of hand-drawn and digital graphical approaches might be employed.

5. REFERENCES

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² In *The Politics of Ecstasy*, Timothy Leary describes 'atomic electronic level consciousness'; a type of visionary experience caused by drugs such as LSD and DMT, which causes hallucinations of atomic particles.