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*Presentation/ Artwork*

**TITLE “Palimpsest: Articulating the Interstitial”**



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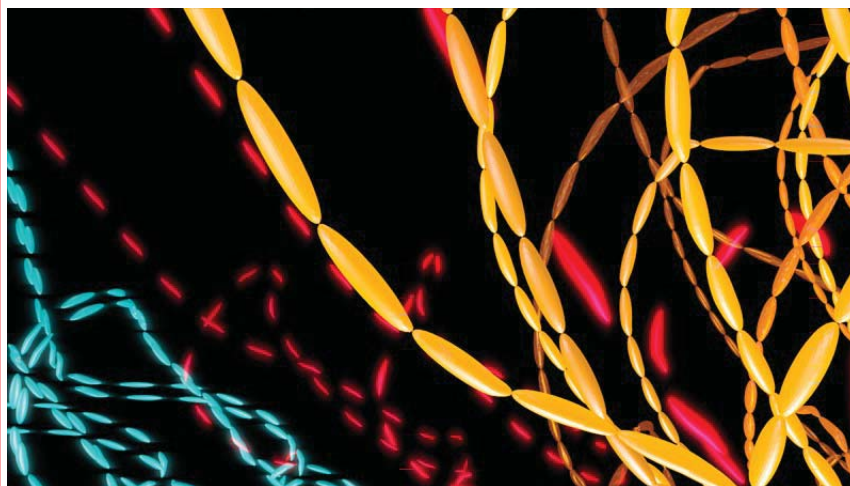
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“*Palimpsest*” is an audiovisual artwork exploring the space between sound and image through collaboration. Two distinct narratives, audio (Truslove) and visual (Clifford), are brought together through algorithmic means to find alternative paths and perspectives around a virtual light sculpture. The piece reinterprets one of a series of photographic light paintings [1] taken during a drive at night. The photographs were experiments: improvisations with long exposures, motion and gesture. As images in themselves however, the artists found them to be engaging both visually and conceptually.

Visually they bring to mind the poetic: the camera has captured ethereal light trails drawn by the motions of passing traffic in mid-air, giving them an almost sculptural quality. They suggest contours, energies, volumes and spaces that are open to further exploration and interpretation. Conceptually, their contradictory nature seems to suggest ideas of the interstitial - the space or place in-between things - or what Duchamp termed the “infrathin or infra-slim” [2]. The light-forms captured in the image, exist in-between the real and the virtual, brought together in a moment by the camera. They occupy the gaps and breaks between events, and find form in the moment between the shutter opening and closing.

It is in the idea of the interstitial that the collaboration is based. How might these forms be reinterpreted and rewritten for another context? And how might a generative algorithm be used to structure our visual experience of them? “*Palimpsest*” responds to these questions, extending and re-imagining the source image, in an attempt to articulate the interstitial.



Still from “*Palimpsest*” (2011)

More info at: <http://www.duck-egg.co.uk/palimpsest>

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## Interstitial Articulations: Reflections on Audiovisual Collaborative Practice

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### **Abstract**

*“Interstitial Articulations”* is an audiovisual collaboration between visual artist Alison Clifford and composer Graeme Truslove. Artworks created within the series bring together ideas from Clifford’s doctoral study that explores notions of the interstitial through new media art practice, with Truslove’s acousmatic composition, which focuses on temporality and intuitive performance in electronic music. The series explores the space between sound and image, questioning whether collaborative practice could also be seen as “interstitial” practice.

The aim of this paper is to explore conceptual motivations and creative processes involved in the production of two works in the series, *“Substratum”* (2010) [1] and *“Palimpsest”* (2011) [2]. It firstly defines the background and conceptual framework informing the collaboration, followed by a discussion of the generative methods used in creating audio and visual content, finally it concludes by critically reflecting on each work.

### **Background and Conceptual Framework**

This section outlines the background and conceptual framework informing the collaboration. It explains shared motivations in the work of each artist’s practice that have led to the collaboration.

### **Visual Conceptual Framework – the interstitial**

For the series *“Interstitial Articulations”*, photographic light paintings taken during a drive at night (fig. 1 and fig 2.) are reinterpreted and re-imagined in different contexts to create new audiovisual abstract narratives that embody ideas of the “in-between”. The conceptual background informing the visual approach is based around Clifford’s interpretive readings of the source photographs (the photographic light-paintings) and her subsequent translation of these ideas into new contexts. The photographs are considered as “texts” for interpretation, and the search to find meanings within them has much in common with the practice of close reading found in literary studies. In her readings of the photographs, she argues that these images could be seen as photographic representations of the interstitial or what Duchamp referred to as the *inframince/ infraslim* [3]. The images document how the camera captures or “sees” the motions of headlights of passing traffic, together with recording

any motion made by the photographer into a single, still image. The passage of time over which the moving objects are recorded – defined by the moment in-between the shutter opening and closing - and the final resulting photographic representation of it in a still (single frame) is, she suggests an example of an “interstitial moment”.

To clarify, these photographic events are recordings of durations of discrete, moving objects, combined and compressed by the camera into a single, and contradictory, fixed moment in time – found in the still image. The still image presents us with moving subjects as actual static phenomena existing as unique occurrences within the timeframe of the photograph. Extended exposures allow the camera to record such motion into a single image (frame) that is otherwise invisible to the human eye. The resulting light-forms captured were, in terms of human perception, never actually there and have been “drawn” by the motion of passing traffic and the gestures of the photographer combined. The moment in-between the shutter opening and closing is the moment that light passes to the lens, and any motion made by the photographer (or subject) affects how light is drawn onto the final photograph. Ultimately then, the camera becomes an instrument that allows the photographer to directly intervene in the representation of the scene depicted. (Perhaps most famously demonstrated in photographer Gjon Mili’s (1949) portrait of Picasso in which Picasso uses a flashlight to draw a centaur in the air. [4]) It enables him/her to draw forms with light that aren’t and were never actually there – interstitial forms - that are a hybrid between the actual (the motions of passing traffic) and the virtual (the light-forms captured do not actually exist) in a similarly hybrid space. What is recorded is the trace of motion and duration, and it is this trace that embodies the interstitial. The series “*Interstitial Articulations*” is a response to these intriguing light-forms, considering the details within them as a source for imaginative departure leading to new and unexpected ground. As Bachelard states:

“Thus the miniscule, a narrow gate, opens up an entire world. The details of a thing can be the sign of a new world which, like all worlds, contains the attributes of greatness.” [5]

### **Audio: Background**

Graeme Truslove is a composer of acousmatic and live electronic music. His practice is largely concerned with creating, shaping and organising sounds that have as few mimetic references as possible – allowing listeners to find their own meanings in his work. Truslove often synthesises sound from granular principles, forming timbres from extremely brief micro-sonic elements, or grains. A key part of his approach involves the creation of electronic instruments that he performs himself, either during live performance or in the studio, where he incorporates the recordings into acousmatic montages.

What unites Clifford and Truslove’s individual practices is a desire to work with non-referential materials, in order to create new worlds from abstract audio-visual forms. Through their respective attention to “the details of a thing” (or the grain) divorced from its original visual or sonic context, they

construct and imagine new audiovisual “worlds”.

### **Generative Methods and Critical Reflections**

This section outlines generative methods employed in the creation of both audio and visual content, exploring interrelationships between them. It concludes with a critical reflection on each of the works discussed.



[fig. 1]

### **“Substratum” (2010): Visual Generative Methods**

*...make something which lives in time and makes the 'spectator' experience time...*

*...make something indeterminate, which always looks different, the shape of which cannot be predicted precisely...*

(Hans Haacke 1965 statement)

The first artwork resulting from the collaboration “*Substratum*” (2010) is based on and responds to the forms in the above photograph (fig. 1). The dense, organic textures in this image could be considered to suggest breathing, and the trace left behind objects in transit. These observations informed how the light forms would be redefined in a new context, together with ideas expressed in Hans Haacke’s 1965 statement (above), which were used as prompts for practice-based exploration. “*Substratum*” therefore aimed to create a work which “*lives in time*” making the spectator “*experience time*”. The organic quality of the light-forms – seen in the source image as “noisy” or wavy groups of lines – was something Clifford wished to explore and which also reflected Haacke’s statement to “... *make something indeterminate, which always looks different, the shape of which cannot be predicted*”



*precisely...*”

To create the line-groups, algorithms were designed and programmed in Processing [6] to generate short visual sequences based on specific line groups (texture, colour, etc). These were then edited together using video editing software (Final Cut) to interpret the dense textures of Truslove’s audio. The line-group sequences were generated by re-plotting the individual x and y coordinates of each point placed consecutively across the width of the screen that, when joined together with the previous point, created a continuous line. To capture the sensation of breathing, trigonometric functions (sine and cosine) were used to determine each new x and y coordinate for each frame. When the resulting still image outputs from Processing were combined together in animated sequences, a “breathing” line was created (constructed in Final Cut). To convey the organic, imprecise nature of the lines in the photograph, Perlin noise was also added to the position of each x and y coordinate. In addition to this, rather than solely creating lines with Processing’s line function (– i.e. `line(x1, y1, x2, y2)`,) various pixels were sampled from the original source image and reprinted across the screen at these points, leading to subtler visual effects as seen in the photograph.

#### **“Substratum”: Creation of the Audio Material**

Similarly, generative methods were used to create the audio. The audio in “*Substratum*” was created from samples of bowed notes performed on a double bass, multiplied and arranged into rich, deeply layered textures by computer algorithms and digital montage processes. The audio for “*Substratum*” was created using one of Truslove’s self-devised computer interfaces – the *grain folder interface*. [12]

The grain folder interface has a simple functionality: to play back the contents of a folder, filled with monophonic (single channel) wave files, in a random order. Each wave file is played once until all files have been played. The files are then re-ordered and played again, a cycle that continues indefinitely. Between the playback of each wavefile is a short period of silence, and the duration of this period is randomised, in an attempt to avoid exact repetitions. On playback, each wavefile is processed by a set of DSP algorithms that randomly locate the monophonic sound within a two-dimensional sound field (i.e. somewhere within a Left-Right/Front-Back matrix).

In “*Substratum*”, multiple instances of this interface are used, increasing the layering and complexity of the source materials. The source materials were a set of long samples of bowed notes performed on a Double Bass. In all samples, the bassist bows the same note (D Natural). Despite the fact that all samples can be described as being the same thing, every sample is unique - for every articulation there is a minute variation in bow pressure and bow position, making each articulation unique, albeit infinitesimally.

Randomising and layering this set of long notes creates a dense, amorphous harmonic texture. The onset of each note is never synchronous with any other, meaning that *the grain folder interface*, keeps propagating new material without repetition. The phase relationships between simultaneous notes are rarely repeated, creating harmonic interest through iteration.

What unites the work of both artists in “*Substratum*” is the individual processes they use, which are concerned with constructing works from the level of the grain, albeit sonic or visual (light-grains). Both rely on the capabilities of the computer (through programming) to participate in the creation of the audio and visual material used to construct the final piece. Clifford incorporates Perlin noise into her algorithms to add a level of unpredictability to the visual form; Truslove incorporates randomness into the playback of audio form to avoid repetition, consequently creating continuous harmonic interest.

### **Critical Reflections on the work:**

Whilst the work does capture the density and heavy layering of textures in the photograph through both sound and image, the limitations of the processor intensive image generation algorithms meant that there was no opportunity for real-time interaction between sound and image. In terms of the visual aesthetic, the most appropriate means to create the final work was employing montage techniques using an external video editor. This approach also enabled individual manipulation of each visual segment in terms of colour, speed and direction of play (i.e. forward or reverse). Although this ensured that the work satisfied the artists in terms of its visual aesthetic, the final format of the work – fixed medium [video] - somehow removed the possibility of indeterminacy, a trait that both collaborators wished to incorporate.

“*Substratum*” interprets one of the source photographs, which is largely textural, however there are a number of other photos in the series that are gestural in nature (that demonstrate the movements of the photographer combined with the headlights of passing traffic.) The work that followed, “*Palimpsest*”, aimed to explore such gesture.

### **“Palimpsest” (2011): Visual Methods**

*...make something which cannot 'perform' without the assistance of its environment... (Haacke)*

The interpretation of space in “*Substratum*” was very much concerned with the claustrophobic nature of the multi-layered “world” found in the photograph (suggested by the title of the work: *Substratum* - “6. *the nonliving material or base on which an organism lives or grows.*” [7]) In “*Substratum*” the work locks the viewer in the same frontal location, revealing a singular perspective view of the gradually undulating forms, conveying the feeling of being locked inside this closed “sub”-space. However for the next piece, as stated above, the artists wanted to create a work that was more gestural in nature, informing the choice of the next photograph selected for interpretation.



[fig.2]

The forms in photograph (fig.2.) have an almost sculptural quality to them; the momentary improvised gesture of the photographer is recorded in the final image as seemingly physical, synthetic objects – tubes, wires and beads of light – that suggest contours, energies and spaces. These qualities were ones that Clifford wished to translate visually into this next “articulation”. Where the light-forms in the first photograph are organic in nature, those in the second (fig.2) are much more synthetic. Matt Pearson (2011), artist and coder, cites English philosopher Alan Watts (1958) who distinguishes between the organic and the mechanical:

“.. natural forms are not made but grown, and there is a radical difference between the organic and the mechanical.

Things which are made, such as houses, furniture, and machines, are an assemblage of parts put together, or shaped, like sculpture, from the outside inwards.

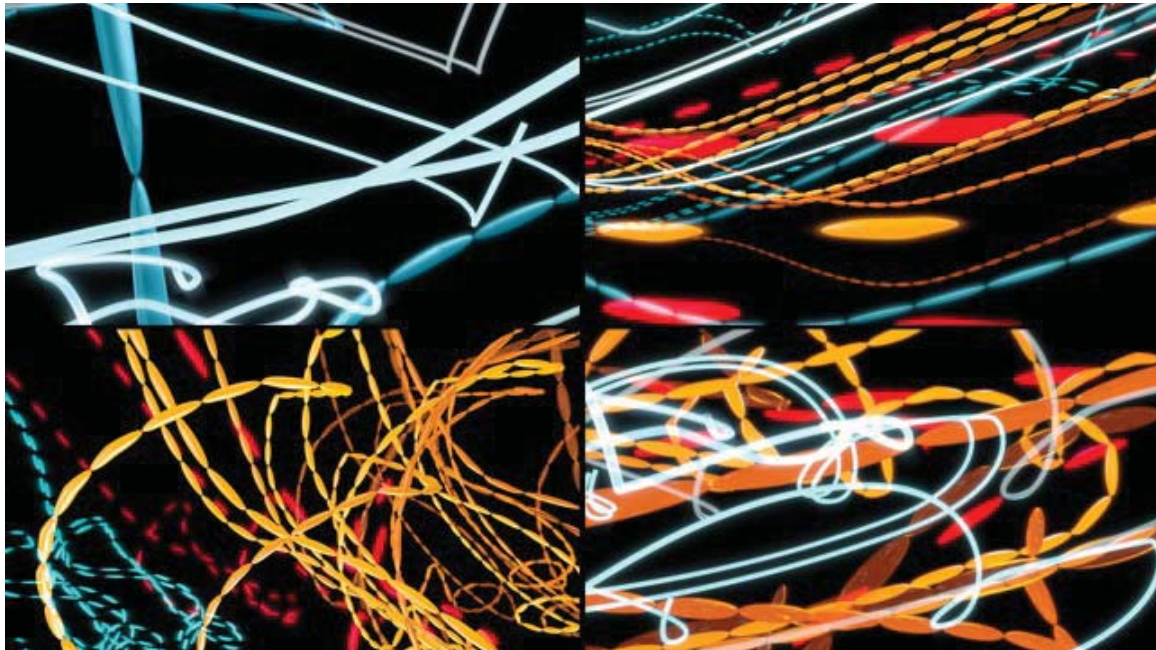
But things which grow shape themselves from within outwards - they are not assemblages of originally distinct parts; they partition themselves, elaborating their own structure from the whole to the parts, from the simple to the complex.”[8]

To investigate their physical and synthetic nature, Clifford felt the most appropriate method would be to model them using 3D software (Blender [9]). In this sense then, the visual interpretation of *“Palimpsest”* is mechanical (contrasting with the visual material in *“Substratum”*, which is constructed using more organic techniques). Individual forms were modelled and placed together as a group to create a virtual light sculpture in 3D space. With reference to the above quote from Watts, the light sculpture is made from



“parts put together ... shaped like sculpture” with the role of the computer becoming more of a **producer** than a **collaborator** (as was the case for *Substratum*.) [10]

With this translation to a 3D environment, Clifford did not aim to produce a “realistic” simulation; rather the aim was to produce an artistic simulation influenced by her interpretation of the light-forms, as a “foundation for something beyond.” [11] In this work, what was of interest visually, was a more comprehensive treatment of the light-forms. To this end, a series of short clips of journeys around the sculpture were created, documenting multiple perspectives of it as an object in space - i.e. travelling underneath it looking upwards, travelling through it, along it, around it, etc. (see image below). These perspectives were then edited together to create a 6-minute video loop providing the visual material for the collaboration.



[Different views of 3D light-sculpture]

Returning to Haacke’s 1965 statement, the prompt for further exploration of this virtual light sculpture, together with the desire to create a work from more gestural materials, came from the instruction “...*make something which cannot 'perform' without the assistance of its environment.*” In “*Substratum*”, the work resulted from interpretation and manipulation of the visual material in terms of the audio, it was a deliberate, conscious process that resulted in a fixed, non-changing work. With “*Palimpsest*” however, in order to make “... *the light sculpture perform without the assistance of its environment*”, the artists began to consider how sound might structure the visual experience of the journeys around the light sculpture.

#### **“Palimpsest”: Audio Methods**

Truslove’s role in creating “*Palimpsest*”, was to compose a fixed-medium audio piece, and design a software interface linking the audio to the set of



visual materials (mentioned above), created independently by Clifford. The challenge was to somehow unite the audio and visual elements into one coherent audio-visual experience, by forging causal relationships between sound and image.

The audio component of the work consisted of a fixed-medium montage of improvised performances (performed by Truslove) on a self-devised interactive software instrument, using a technique he calls *Live Micromontage*. [12] The software interface (created with Max/MSP [13]) was designed to remix the visual materials (the series of journeys around the light sculpture) created by Clifford, to synchronise them to significant events within the audio (what was 'significant' was defined by the composer). It functions by matching cues from the audio with different sections in the video, so that events in the audio will appear to 'cause' visual changes of scene.

Clifford and Truslove worked closely together to define which parts of Clifford's visual materials 'matched' certain sections of Truslove's audio. In many cases, Clifford had a number of visual responses to Truslove's audio, not one single interpretation. With this in mind, the interface was programmed to randomly *choose* which visual materials accompanied the audio track, from a predefined set of 'suitable' visual materials. "*Palimpsest*" is therefore an open-formed audio-visual piece, which is never identical from one playback to another.

The version presented here [2] is a recording of two successive playbacks of the audio file, with two different visual interpretations. It alludes to the process of rewriting, referred to in the title of the work, *Palimpsest*, as defined by American poet H.D: "*Palimpsest, i.e. a parchment from which one writing has been erased to make room for another.*"

### **Critical Reflections on the work**

The aim of "*Palimpsest*" was to investigate the gestural nature of the source photograph; a further aim was to make the sculpture "*perform without the assistance of its environment*" (Haacke). Both of these aims have been achieved through the Max/MSP patch that enables the viewer to experience different "remixes" of the visual material at different speeds depending on the gestural activity in the audio. However, whilst the collaborators are interested in the possibilities of this open form, Clifford was not fully satisfied with the visual response. For her, the level of interest in the forms themselves was somewhat limited as opposed to the forms in "*Substratum*"; in "*Substratum*" different forms move independently creating moving micro-textures and micro-worlds, each form appearing to have a life of its own. With "*Palimpsest*" however the forms move as one solid, frozen mass; we [the viewer] move around the sculpture, the sculpture does not move in itself. It doesn't live or breathe.

In addition to this, although satisfied with the synthetic quality that 3D modelling lends to the work, she felt that many of the "interstitial" qualities of the photograph remain unexpressed. Namely, the subtle cloud-like mist of shadows and echoes surrounding the light-forms that exist in between the

bright light forms and the black of night. The next articulation in the series addresses this directly, attempting to bring together these two different visual approaches – the organic (“*Substratum*”) with the synthetic (“*Palimpsest*”).

### **Conclusion: Reflections on the Collaboration**

In conclusion, the collaborative series “*Interstitial Articulations*” brings together the individual artistic practice of two artists – a visual artist and a composer – to create, new audiovisual narratives exploring the space between sound and image. The first articulation in the series “*Substratum*”, focused on sculpting and interpreting the deep, textures of the audio to structure the final work; the visual component of the work was therefore created in response to the audio. The second articulation “*Palimpsest*”, relied on programming an indeterminate visual playback system to synchronise with significant events in the audio: the visual experience was therefore determined by events in the audio. Essentially then, the interdependence of audio and visual, and the conversation between them was what provided the creative force behind these works. Both “speak” from the interstitial space between two “separate” disciplines (visual art and music), questioning how one can shape our experience of the other. It is in this sense that this particular collaborative practice could indeed be described as interstitial practice.

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