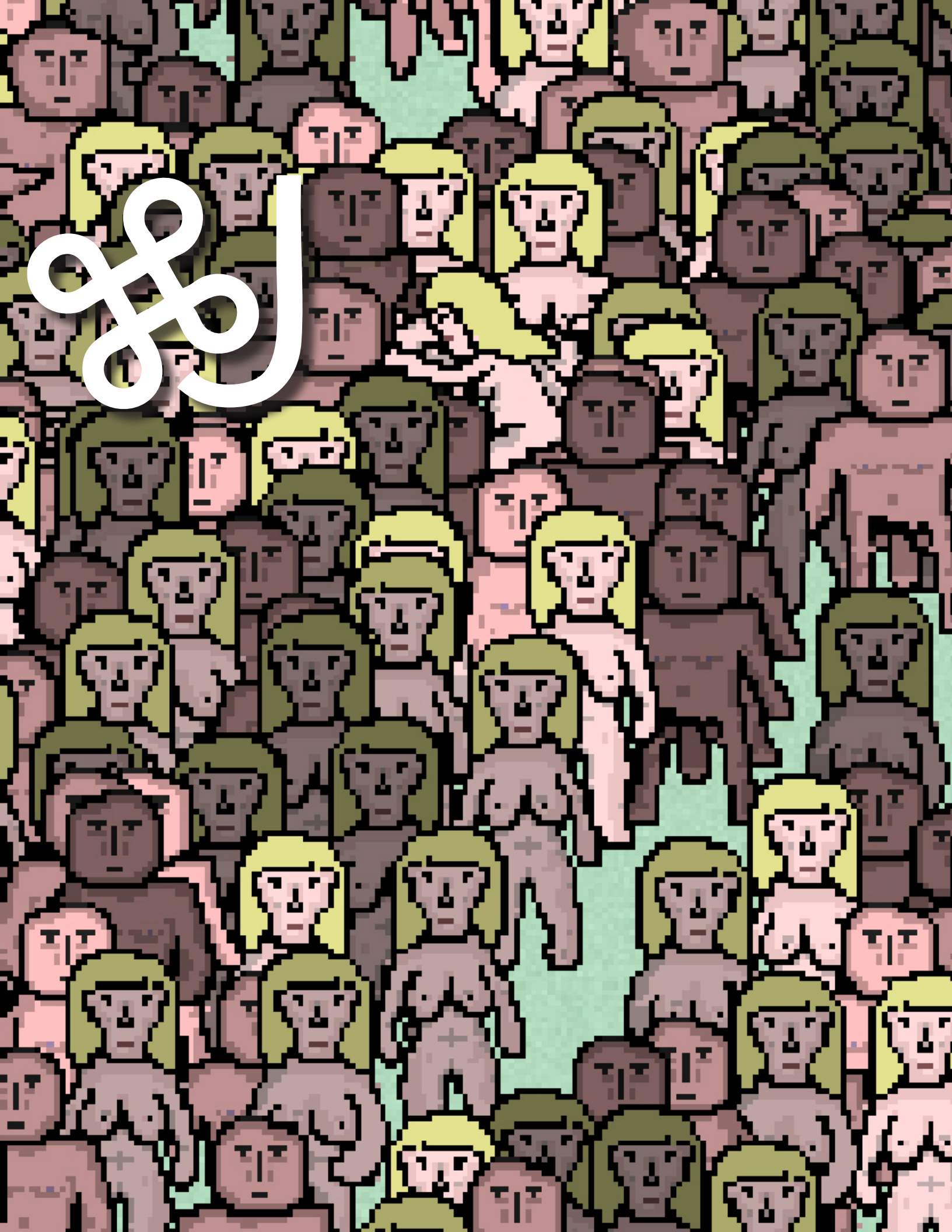

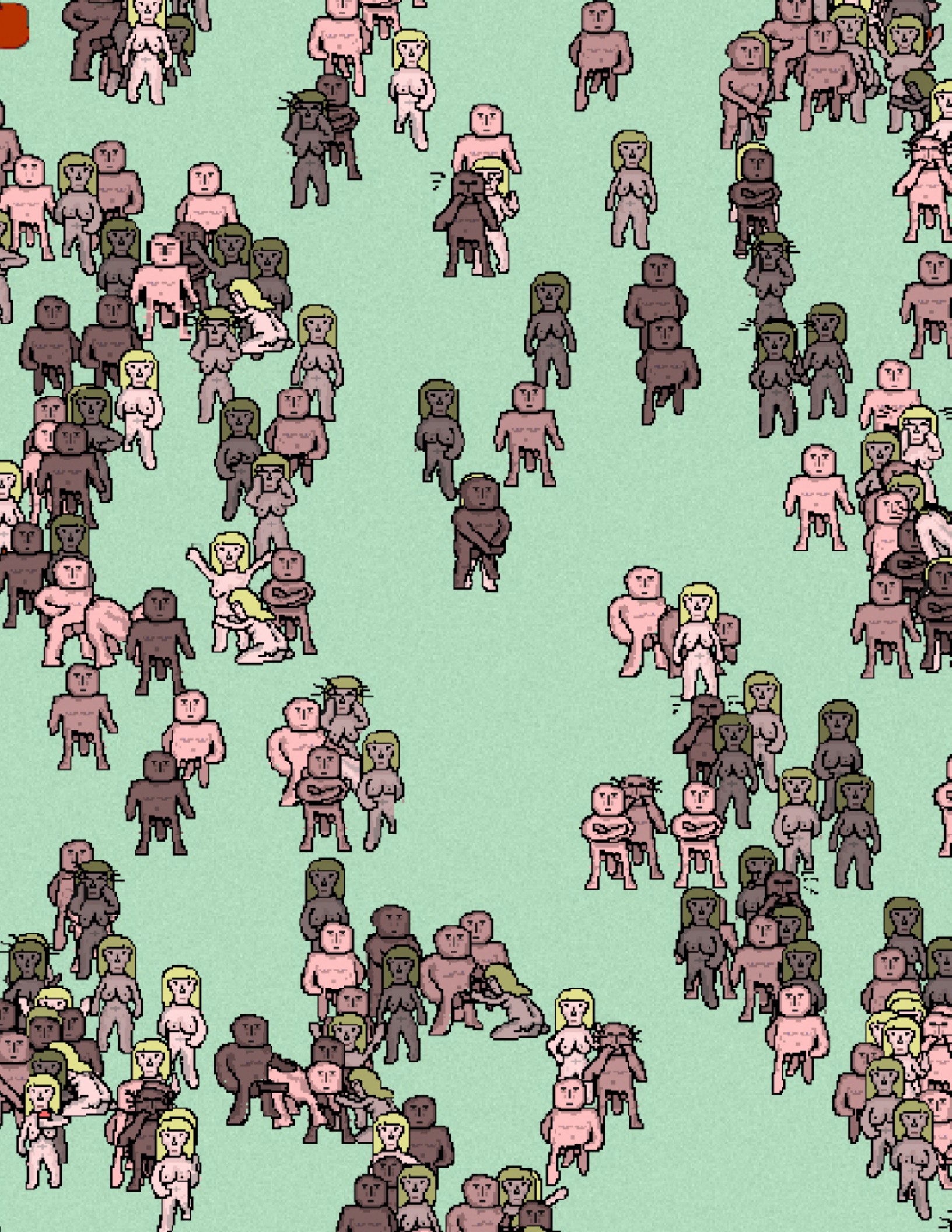

About CMDJ

Editors | Designers

Marjan Eggermont

Laurel Johannesson

Contributing Editor

Sam Simi

Kurtis Lesick

Offices

Amsterdam

Calgary

LA

Contact

marjan@cmdjournal.com

laurel@cmdjournal.com

Submissions

submissions@cmdjournal.com

Cover

Love, Lust, Rejection, and Heartbreak: Exploring the World of Sexual Simulations (also pp. 2-3 and 126-127) | Mathew Lindenberg | 2012

Letter from the editors

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C'mon sucker lick my battery..."

What better way to start than some *Flight of the Concords* lyrics after flipping through our first few pages of 'pixel rumpy pumpy'.

Welcome to issue five of CMDJ with yet another exciting line-up of up-and-coming code fanatics. We have started a collaboration with freeartbureau or FAB - a non-profit organization dedicated to artists & designers working with code and open source tools. Some initial articles can be found on pages 10 and 128 and we hope we can expand and report on their many initiatives.

We have two extensive submissions from this issue's contributing editors Sam Simi and Kurtis Lesick. Sam gathered travel stories of the real to be shared via our virtual highway. Kurtis reports on the efforts of the Alberta College of Art and Design to create and innovate in electronic culture. The quality of student work (pp. 30 - 69) attests to these efforts.

Also in this issue, two contributions from Gerald Hushlak: *Who made this?* with Jennifer Eiserman, and a portfolio of images. Gerry has been making digital work since before computers. Always an innovator and a tireless experimentor, we are very happy we were finally able to corner him to get a beautiful set of new work.

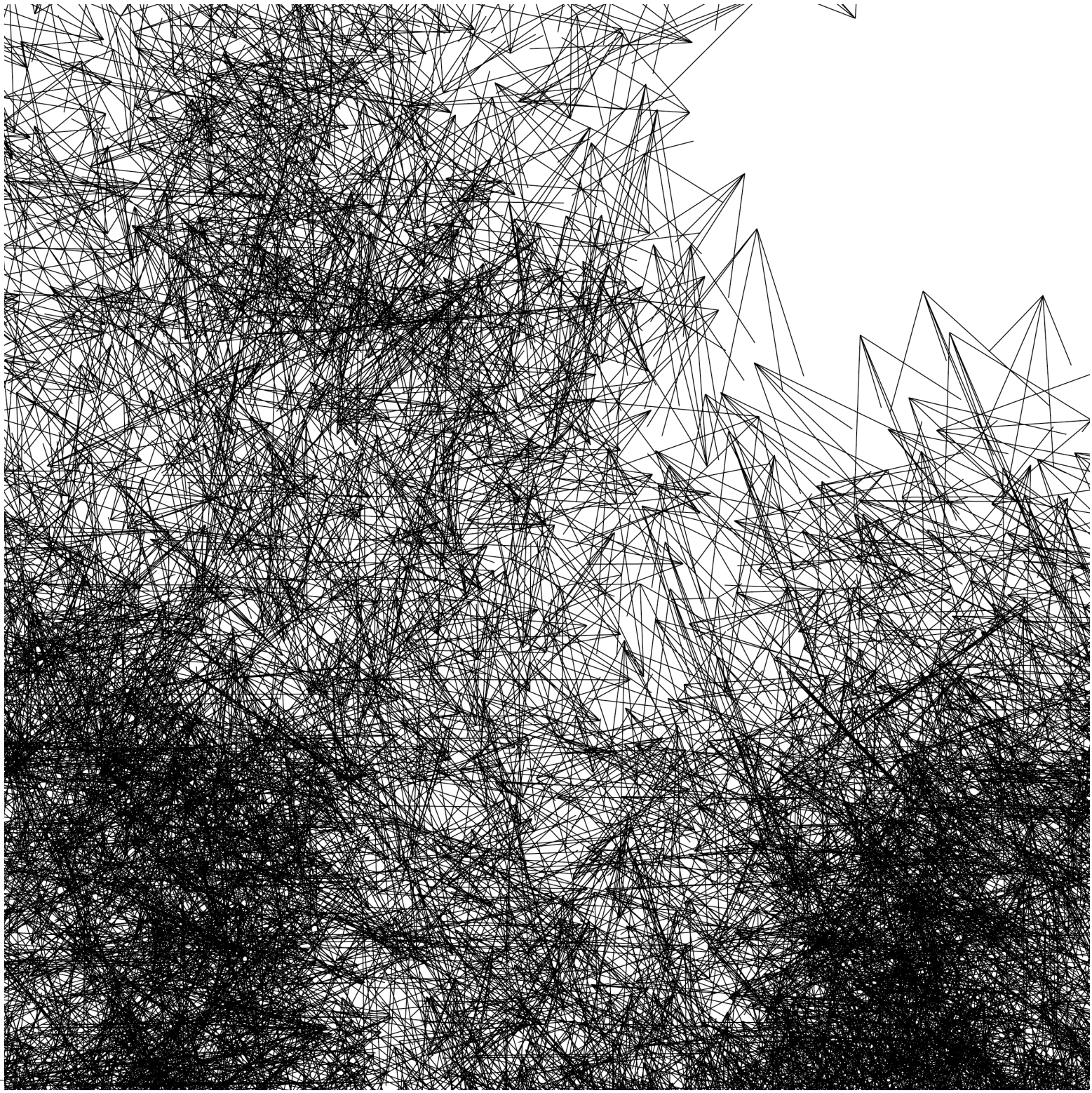
"...It is the distant future, the year 2000..."

Happy holidays and enjoy!

Laurel & Marjan

recursive 02

sansumbrella, 2008 | Flickr cc



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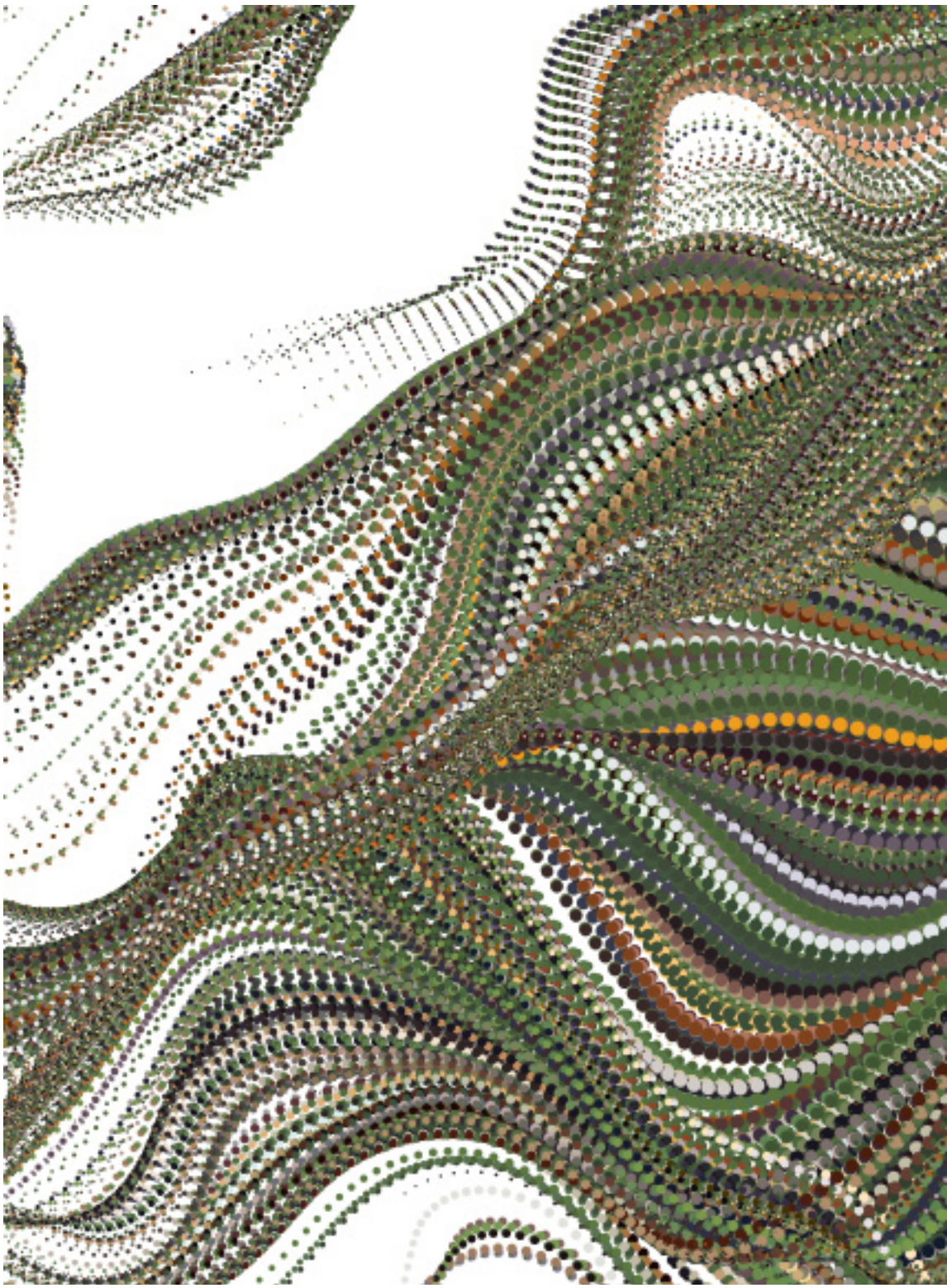

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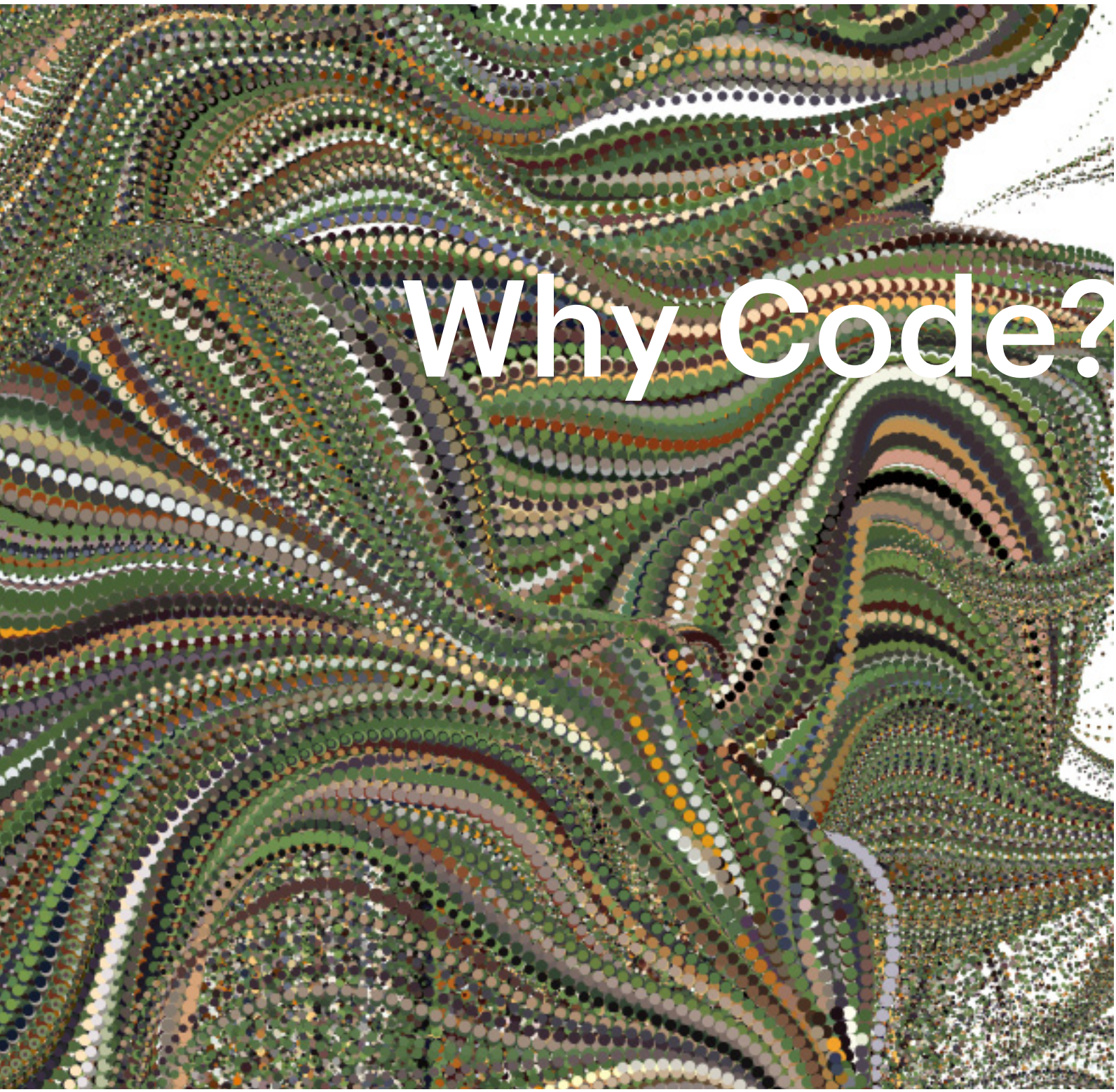
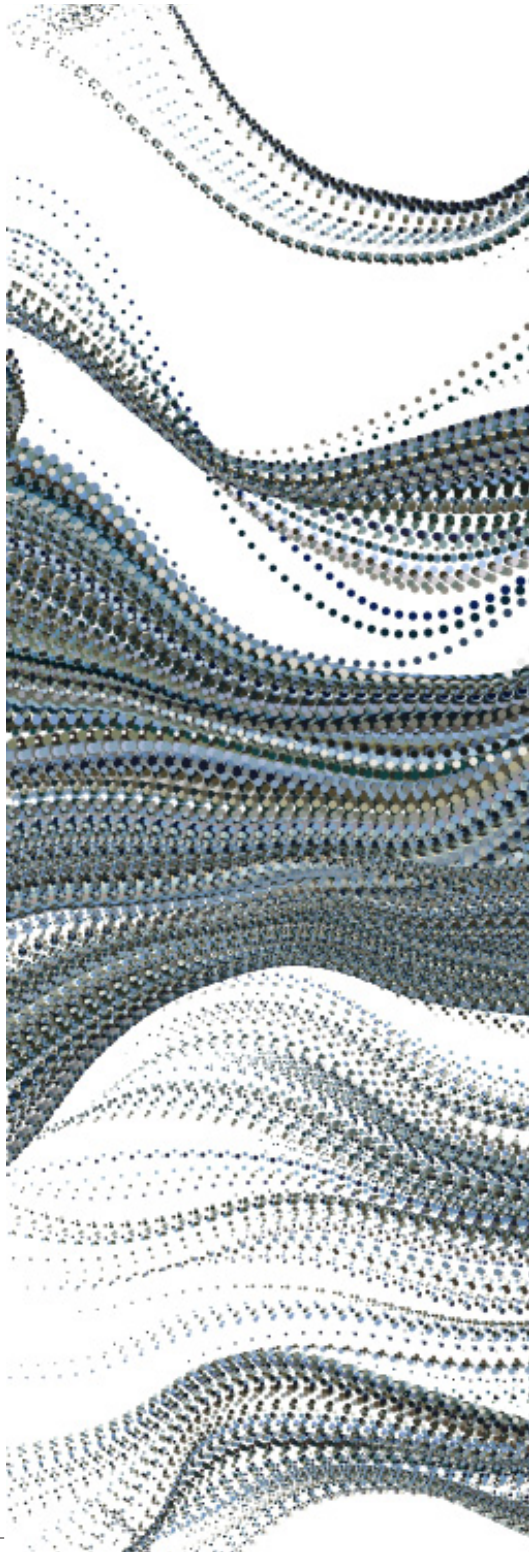

Why Code?

Why Code?

I was asked recently at a festival, why I was so adamant on getting graphic designers to learn programming. My answer was simple. I have a background in graphic design as a journalist and have met many designers working increasingly with code as a creative tool and medium. Her response to this was, "Why limit yourself to graphic designers though, code surely has a lot more to offer? " To which I have to admit she had a fair point and one that is pertinent because even if I do have a slight penchant towards graphic designers, I'm also fully aware of the greater implications of learning code and open source technologies for our future. This brief exchange sparked an old idea I've been meaning to get down on paper for a good while now. The result therefore is this first article which brings together some ideas, thoughts and resources on the very crux of the matter in hand here: Why code?

On a personal level and one that echoes the answer I give above, code is something that I encountered through interviewing people like John Maeda, Joshua Davis, Aaron Koblin or Karsten Schmidt. These are creative people who have integrated code as their medium and principle form of expression.

Moreover it is the code that guides a very specific approach to creation and one that I feel has a lot in common with how a designer needs to develop his/her skills. That approach is being able to conceptualize and develop work in a systematic and iterative way. It is using a logical means to create systems which guide the creator in making. This particular skill is a very important one to learn for students of design and architecture but it isn't an easy skill for a teacher to transmit and put in to practice. Code and programming I believe can introduce as well as reinforce this skill and help students develop a more pragmatic and coherent approach to designing. And designers need to be pragmatic and coherent. So, to take these ideas a little further afield and develop on the bigger picture beyond just graphic design, here are a few initial references and ideas which I feel are of importance. Most of these refer to education. What are the implications of introducing programming and creative coding into our education systems and on all levels? One particular person who is currently very active in the area of media



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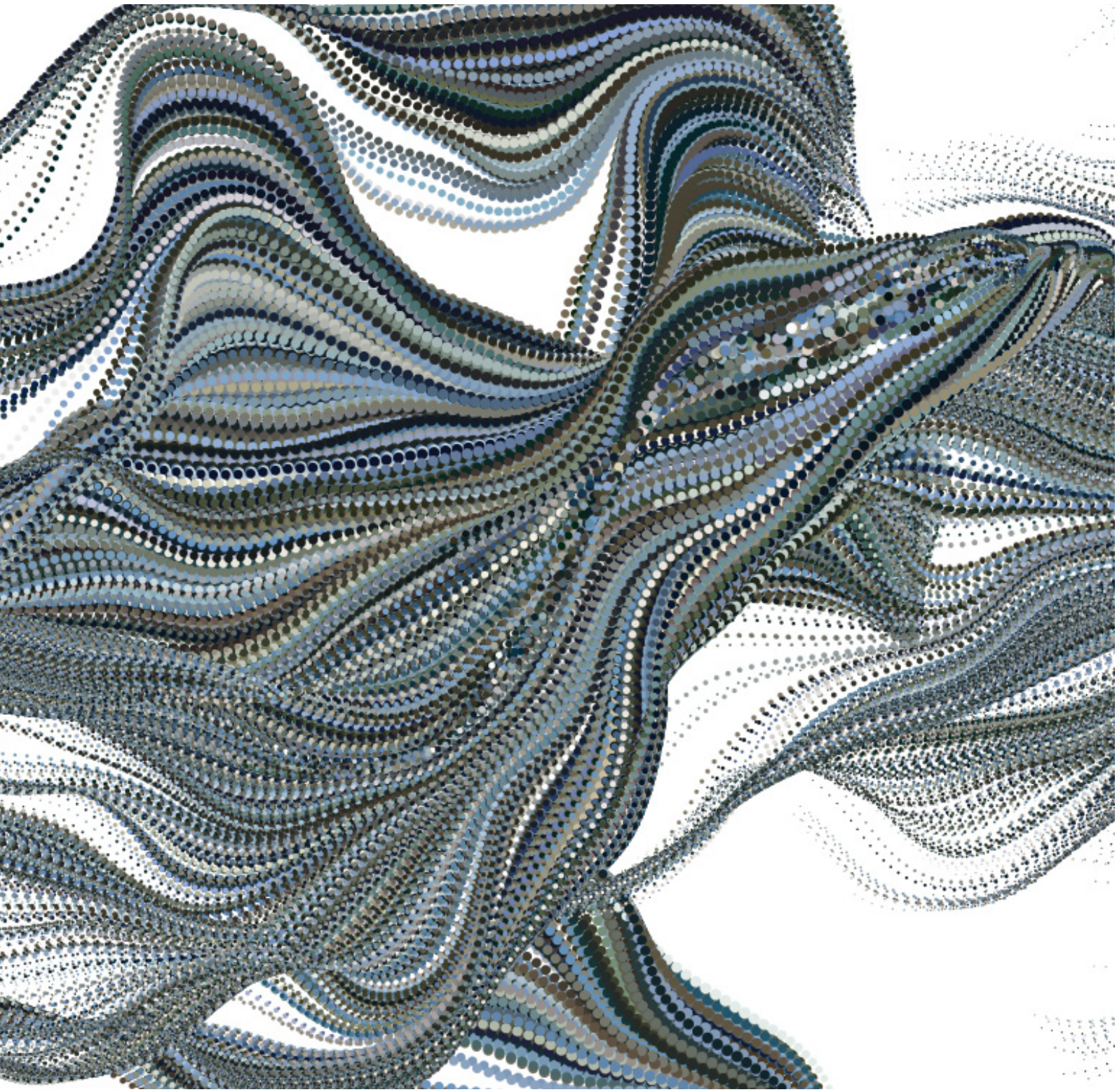
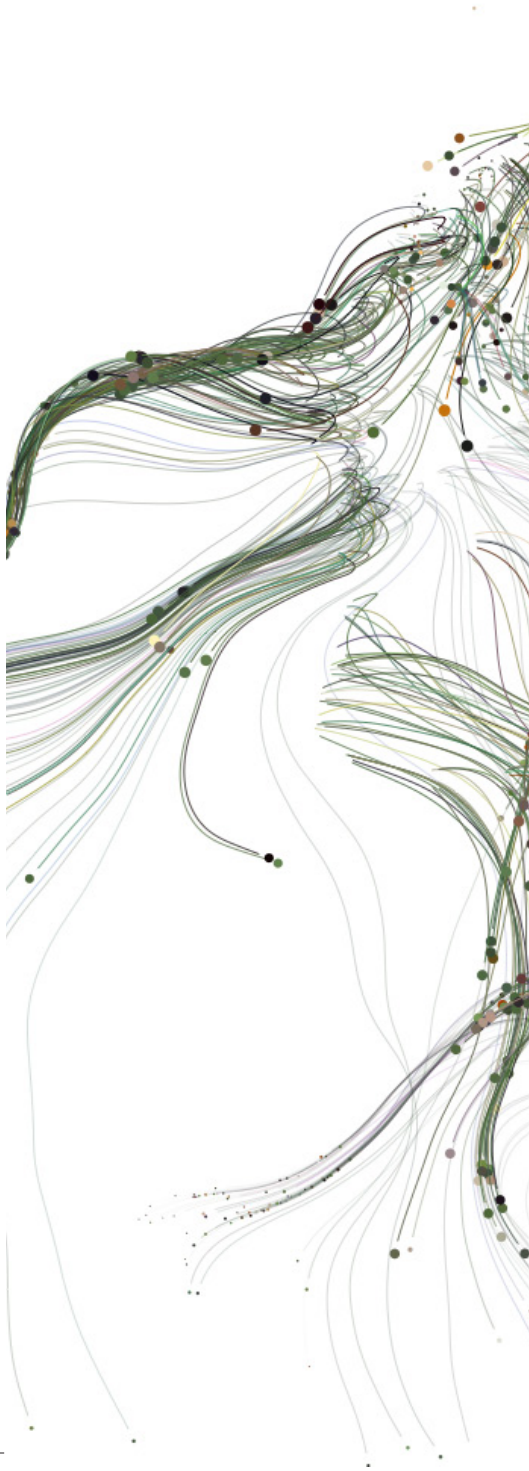


studies, is the author, teacher and documentarian, Douglas Rushcoff. Rushcoff is an energetic believer and preacher of programming. In his latest book, *Program or be Programmed* he puts together a sort of working manifesto that "picks up where Marshall McLuhan left off, helping readers come to recognize programming as the new literacy of the digital age––and as a template through which to see beyond social conventions and power structures that have vexed us for centuries." True literacy therefore is advocated and literacy means not only learning how to read the net and use software but also how to write too. This is important in the digital world because we find that there is a generation dependent on 'social' media tools and propriety software that clearly undermines our freedom. As Mr. Rushcoff says, if we don't take hold we will simply succumb to others. Learning, or at least becoming aware of programming is one of the ways we can begin to change that. Code then has a critical role to play and this is reiterated in a recent article I came across entitled, Why we should teach our kids to code? What is interesting is the article was written as a response to the poor outcome of a recent petition set up by the British government to instigate learning code in schools. Why would the government be interested in doing that? Have they understood something about the role code may have to play in our future societies? It seems so and probably for a number of good reasons too.

There is room in schools for a whole new approach to teaching and incorporating some of the less sexy subjects like math and physics. Nowadays, most kids at school have a computer class but what are they learning in these? From what I can gather nothing more than how to write with Word. My mum learnt Word in the eighties as a secretary, it was useful for her job and she picked it up quickly too. Why teach ? retweet it to kids though? Most of them can pick up the gist of the application within seconds and will probably have sussed the majority of functionalities needed to write something within half an hour or less. Surely we can teach them something far more worthwhile. Skills that can reinforce conceptualization, logic, computation and act as a link to other academic subjects. This may even transpire to creating new jobs too.

The British government recently set up another initiative to bring programming in to the national curriculumn at school and from an early age. This has become part of a major nationwide program to get Britain back on the road as a leader in the creative industries in gaming and VFX – Read the following



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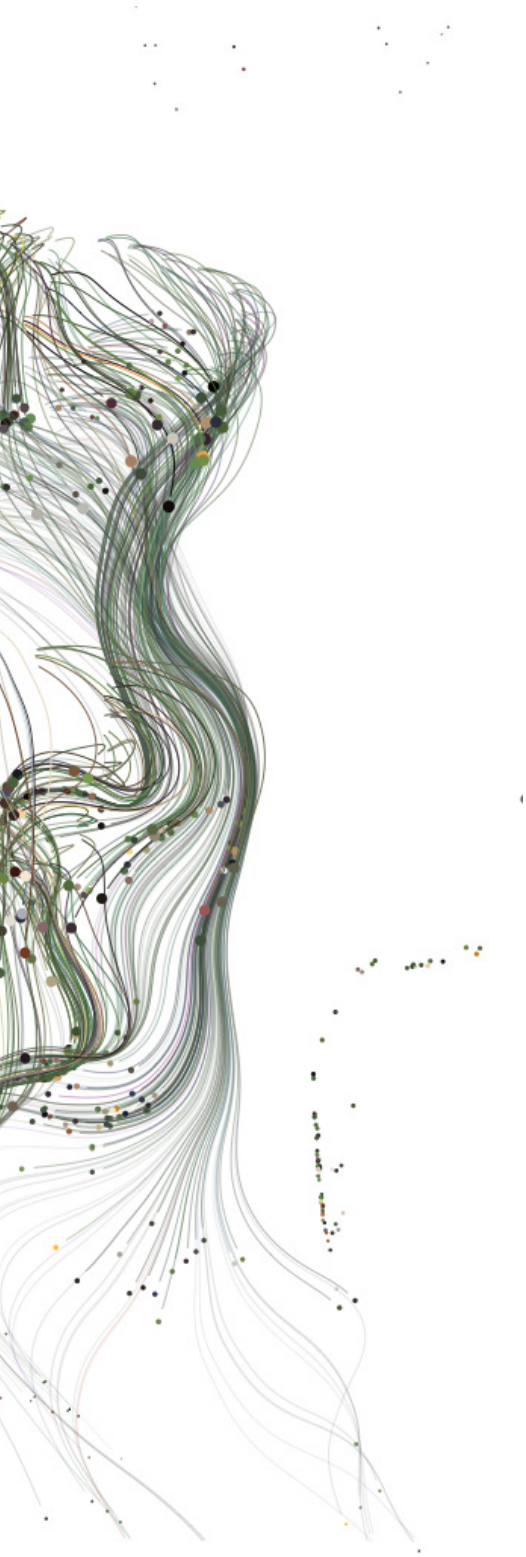

study on this. It assesses the skills needed for our children to secure their professional futures in these industries. What came to the forefront was a necessity to teach kids computing and not just word processing, actual programming skills. "The industries suffer from an education system that doesn't understand their needs. This is reinforced by a school curriculum that focuses in ICT on office skills rather than the more rigorous computer science and programming skills which high-tech industries like video games and visual effects need." In Britain, it seems they have started to understand the importance of code. Hell, they even have a funky new TV series called, wait for it... The Code. I managed to watch one of the episodes whilst over there in summer and found it to be an entertaining as well as informative introduction to math. What made it watchable was it's approach to math from a practical and humanistic look at natural phenomena and everyday creations from the construction of churches to the Giant's Causeway in Ireland, the growth of ancient shell fish that reveal the Fibonnaci sequence to bees' perfect hexagonal honey combs. Is the Beeb instigating the future development of a society of geeks, ready to be snapped up by the gaming industry? Or, is this just a happy coincidence? Programming has a lot to offer then and it seems one country is even banking on it for part of it's

economic development. This does not mean we should all become programmers. We should however all have some basic background knowledge in the field and be aware of it's implications beyond just a tool for making software. It will become increasingly important as a medium and tool and as Kostas Terzidis points out in the book, Algorithms for Visual Design, "At its best, programming goes beyond developing commercial applications. It becomes a way of exploring and mapping other ways of thinking."

This article appeared on September 22, 2011 on freeartbureau.org.

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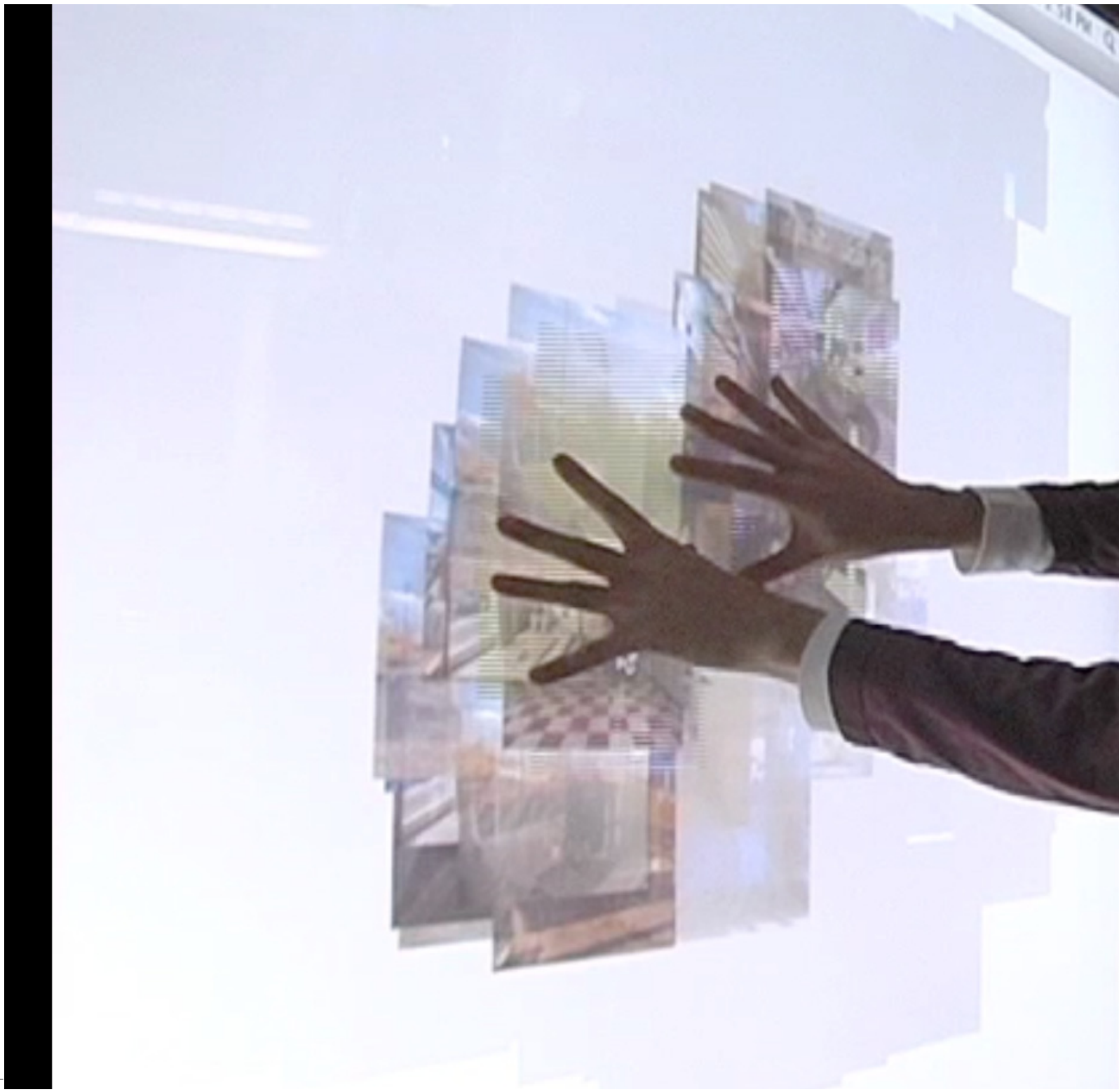
Contact:

info@freeartbureau.org

FAB Association

FAB is a non-profit organization dedicated to artists & designers working with code and open source tools in their creative process. http://www.freeartbureau.org



CIRO student project

Photo courtesy of Kurtis Lesick

Building Electronic Culture | Computing at ACAD and CE3C

Kurtis Lesick

Building Electronic Culture

The Alberta College of Art + Design has a strong history of inter-disciplinary and multi-modal practice. The epicenter of this is the Media Arts + Digital Technology (MADT) programme. MADT offers a professional BFA focused on the intersection of art, culture, technology, and media. It is home to a wide variety of students from those with interests in programming and digital games, to those pursuing more esoteric and experimental practices such as performance and sound art. While MADT revolves around media and technology, an important differentiator is that it is not necessarily a technical programme: instead the emphasis is on developing an individual artistic practice whereby students can explore ideas, theories and narratives across many possible technical frameworks. Hence, media and technology are tools for cultural expression and communication, and devices that help artists create social behaviours and relationships.

CE3C | Creative Environment for Emerging Electronic Culture

It is in this tradition that MADT conceived of the Creative Environment for Emerging Electronic Culture (CE3C) in 2009. CE3C (pronounced "seek") is a research and cultural production amplifier that functions in both research and teaching capacities allowing for cross-pollination between both pursuits. CE3C engages students and faculty directly in applied research opportunities and art-making activities with outside artists, researchers, industry and other organizations. Students have access to researchers and guest artists, faculty are able to integrate the activities in the lab into course curriculum keeping it fresh and relevant, and practitioners in the lab are able to feed off of the creativity and energy of the students. The lab is also a space where faculty, students, and alumni can incubate ideas, underwrite funding applications, and actively develop creative works.

CE3C supports a wide variety of projects and initiatives from large-scale research and production, to lectures, workshops, bootcamps

CE3C mentor session | Champagne Valentine
Photo courtesy of Kurtis Lesick

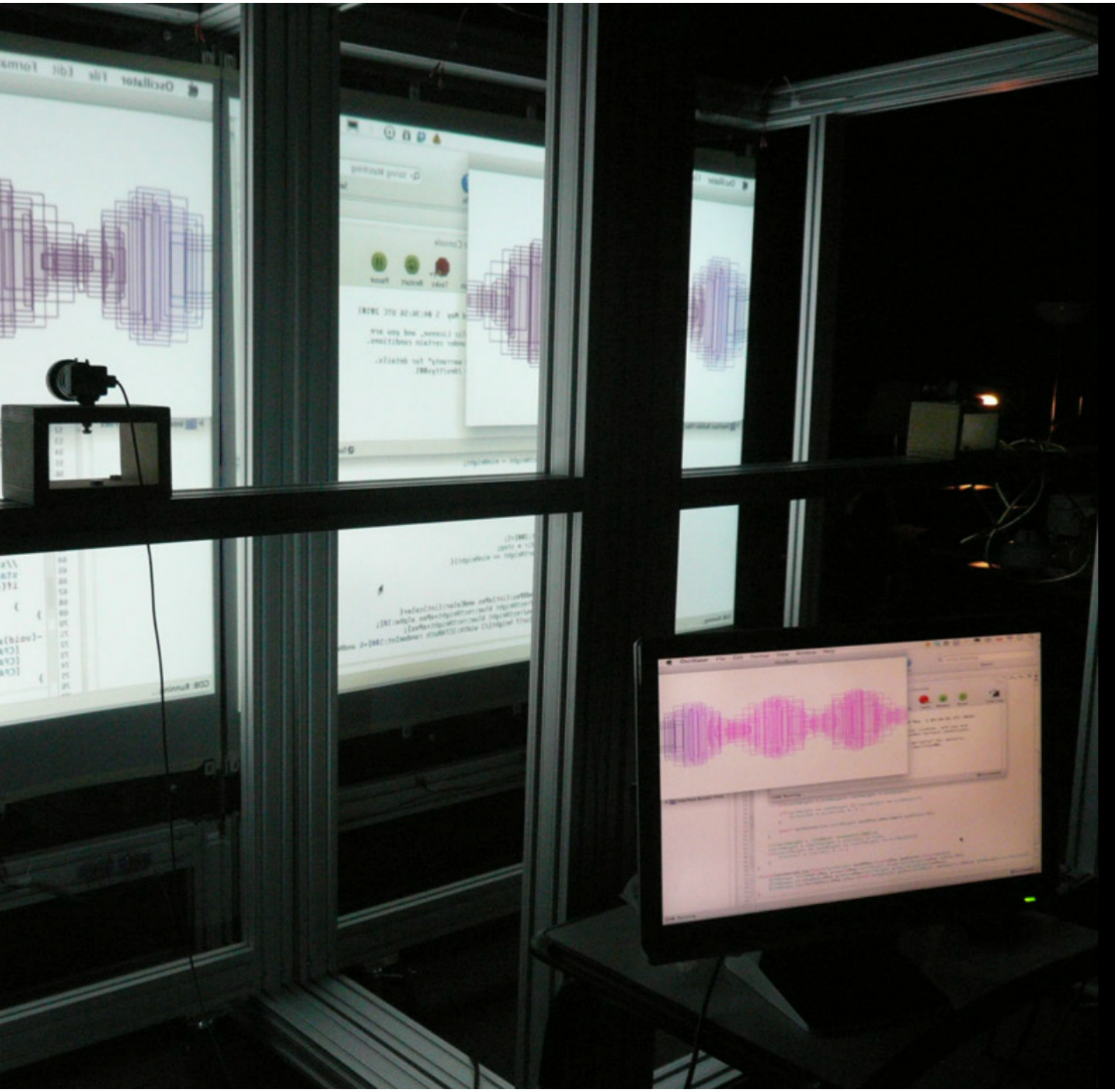
and exhibitions. The core emphasis is the relationship between technology, cultural expression, values, and social behaviour. While we celebrate technology we also work to de-fetishise it, accepting that the value in technology is not in the object itself, but in the sets of socio-cultural expression embedded in its use. As such, CE3C represents a safe environment where disciplinary boundaries evaporate, expectations are escalated, and students, faculty and guests are able to research, explore, and create in a real world context. In its three short years CE3C has produced five residencies (including Live Cinema with Mia Makela), facilitated eight industry mentorships, incubated five art projects (three of which, Swimming with Pask, the Window, and Kehai, are featured in this issue), curated three exhibitions, and conducted three large-scale research projects. The common thread with all of these projects is that they focus on the use of technology as a means for cultural expression and dialogue.

CIRO – COMPLEX INPUT | RATIONAL OUTPUT (CIRO.org)

CIRO focused on intuitive, 'natural' interfaces and computing experiences that translate complex data streams into visualisations or sonifications that are easily and instinctively apprehended by the user. Breaking away from the keyboard, the project focussed on developing large touchscreens that could provide a communal and immersive experience. Looking at trends in virtual reality, augmented reality and 3D display our screens were developed with 3D capacities and made reconfigurable for variety of performance, installation and commercial contexts. The project also produced a variety of software experiments bringing performance and visualisation into the touchscreen environment.

- GEMS | Gestural Electronic Music System (Adam Tindale and Lawrence Fyfe) - GEMS focused on the production of a variety of performance-enabling software to facilitate musical interactions. Junctionbox OS provides a simple, low-latency, multi-client, mapping environment from standard TUIO2 messages provided by FTIR table input software. Users are able to connect hardware to software applications running visual engines or audio engines and define their own interprocess communication.

CIRO screen (detail)
Photo courtesy of Kurtis Lesick



Colour Shaker uses the iPhone hardware for alternate mapping strategies; glitchseq provides a reactive audio environment built upon the RjDj software package.

- Body Language (Alan Dunning)- is an interface and visualisation strategy for bio-medical data. Research concentrated on visualisation looking to reveal salient features in the complete dataset by portraying minute changes in patterns in visually obvious ways.

C4 (http://www.c4ios.com/)

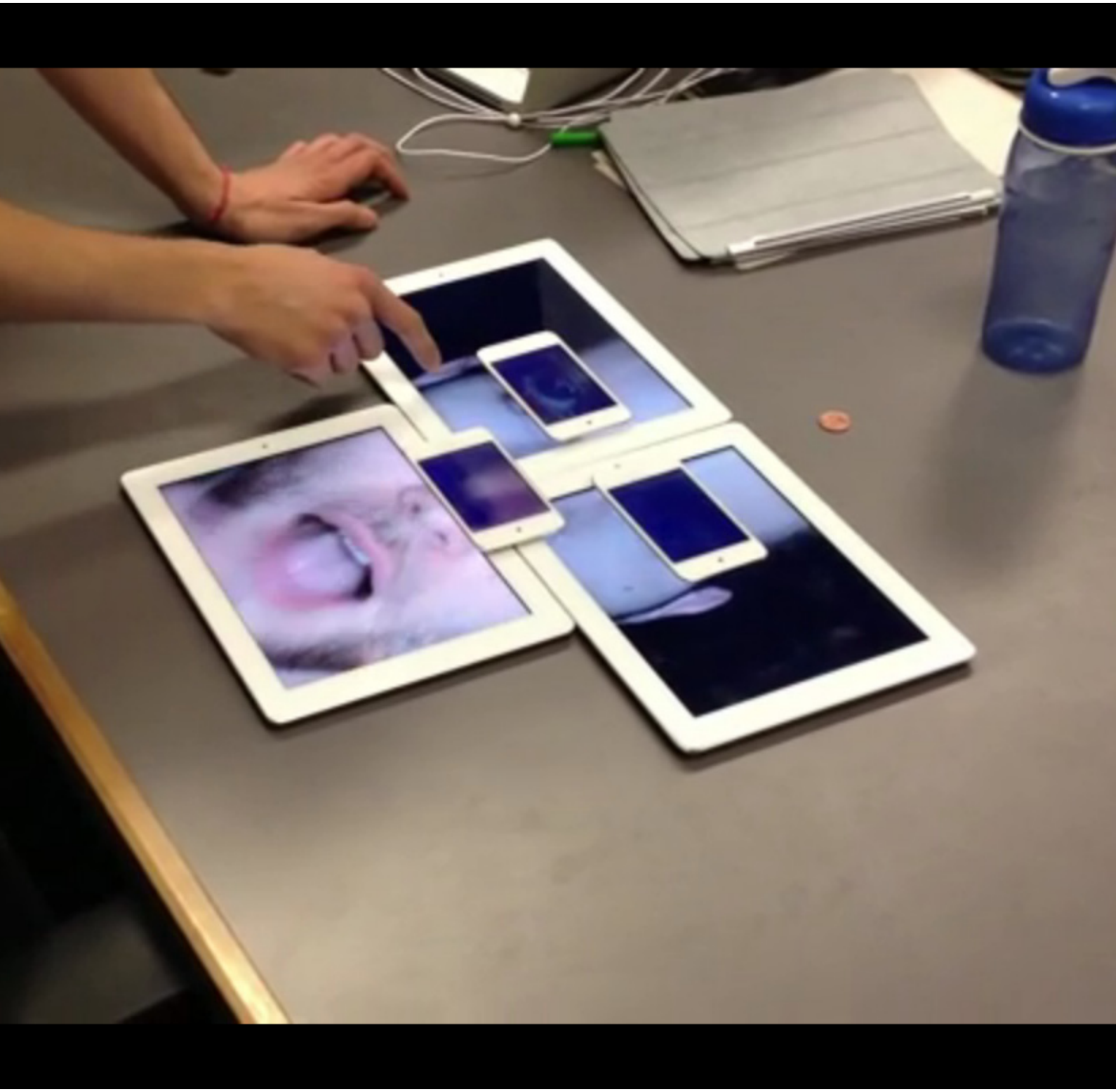
C4 is an open source coding framework for iOS (iPhone Operating System) that streamlines the coding experience for developing with Apple's touch-based hardware. C4 allows users to take advantage of Apple's robust native iOS programming environment with an emphasis on aesthetic programming for building artworks, visualisations, design interfaces and new forms of media and interaction. The framework provides simple coding shortcuts that unify the workflow for different media. Regardless whether you are working with text, shapes, or video the treatment of media objects is consistent and logical: it is as simple to ascribe behaviours to text as it is a video.

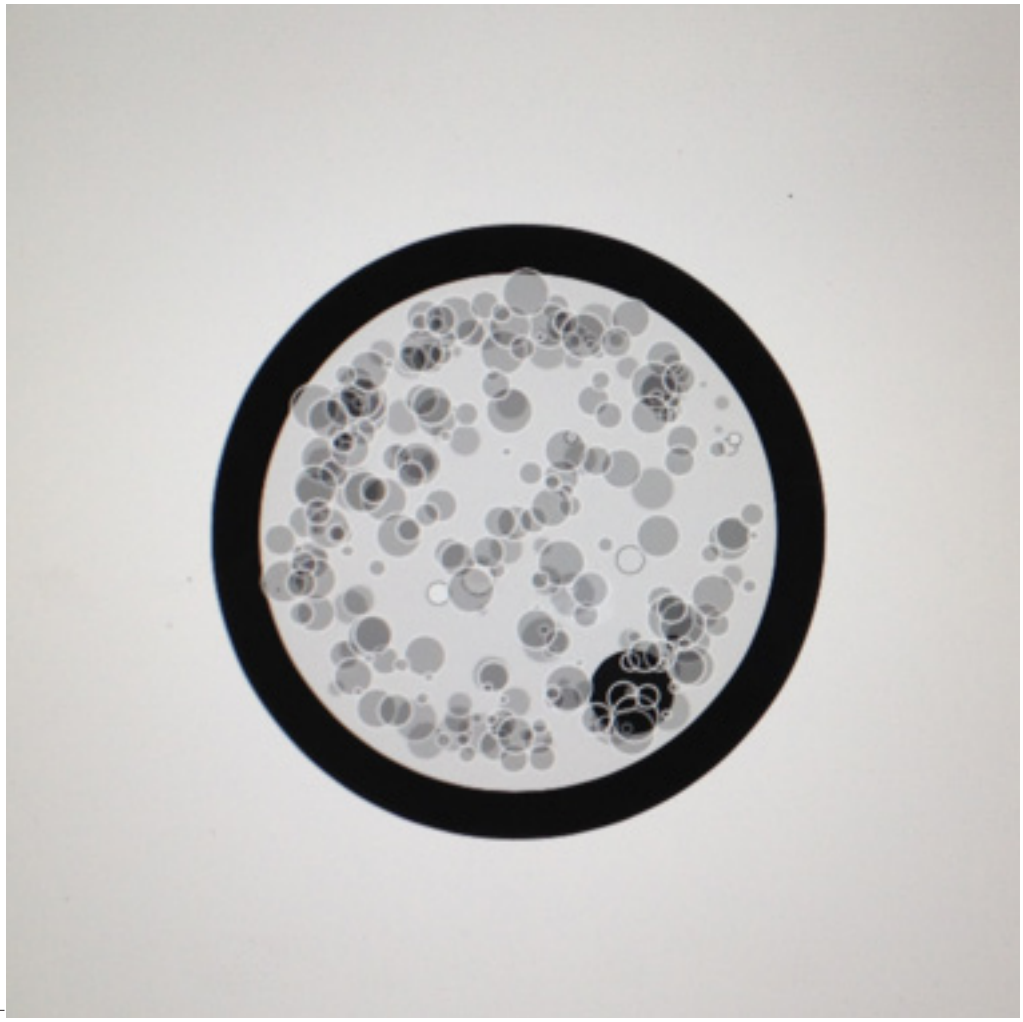
A long term project of Travis Kirton, CE3C supported the development of C4 over two years, firstly hosting a series of workshops and development bootcamps, then a development residency for Travis Kirton, and finally, the AACTI (Association of Alberta Colleges and Technical Institutes) funded PAX (Programming for Aesthetic Experience) residency. PAX laid the groundwork for the C4 web community while immersing four emerging artists in a C4 development experience over one month to create four new iPad-based artworks:

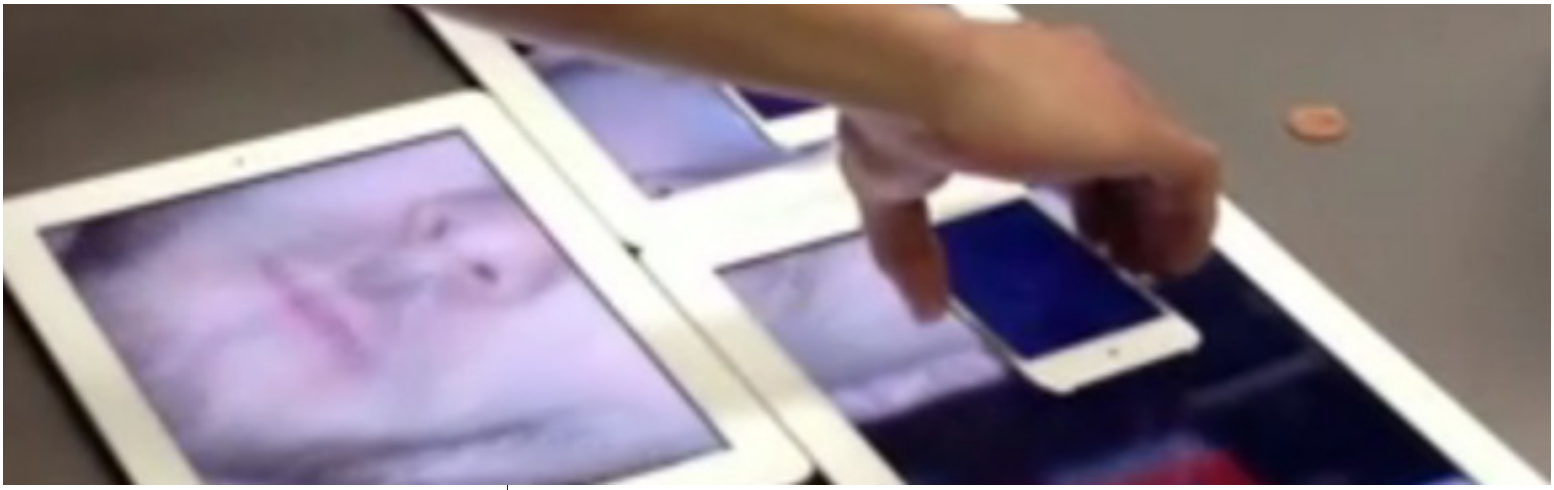
- Greg Debicki - *(Signal) Noise* is a digital performance/generative algorithm for iPad exploring the relationship between room resonances and oral traditions. A group of amoeba-like organisms record and transmit sound samples of their environment, as if passing stories through the generations. As each "story" is played and recorded the sound waves are affected by the physical properties of the room and the material of the iPad. Through the venue that these organisms are raised in, the "stories" may become cacophonous mechanical noise, a soft shuffle, or anything in between.

- Manuel Ermecheo - *Black Sheep* is an interactive installation which

C4 | Manuel Ermecheo
Photo courtesy of Kurtis Lesick



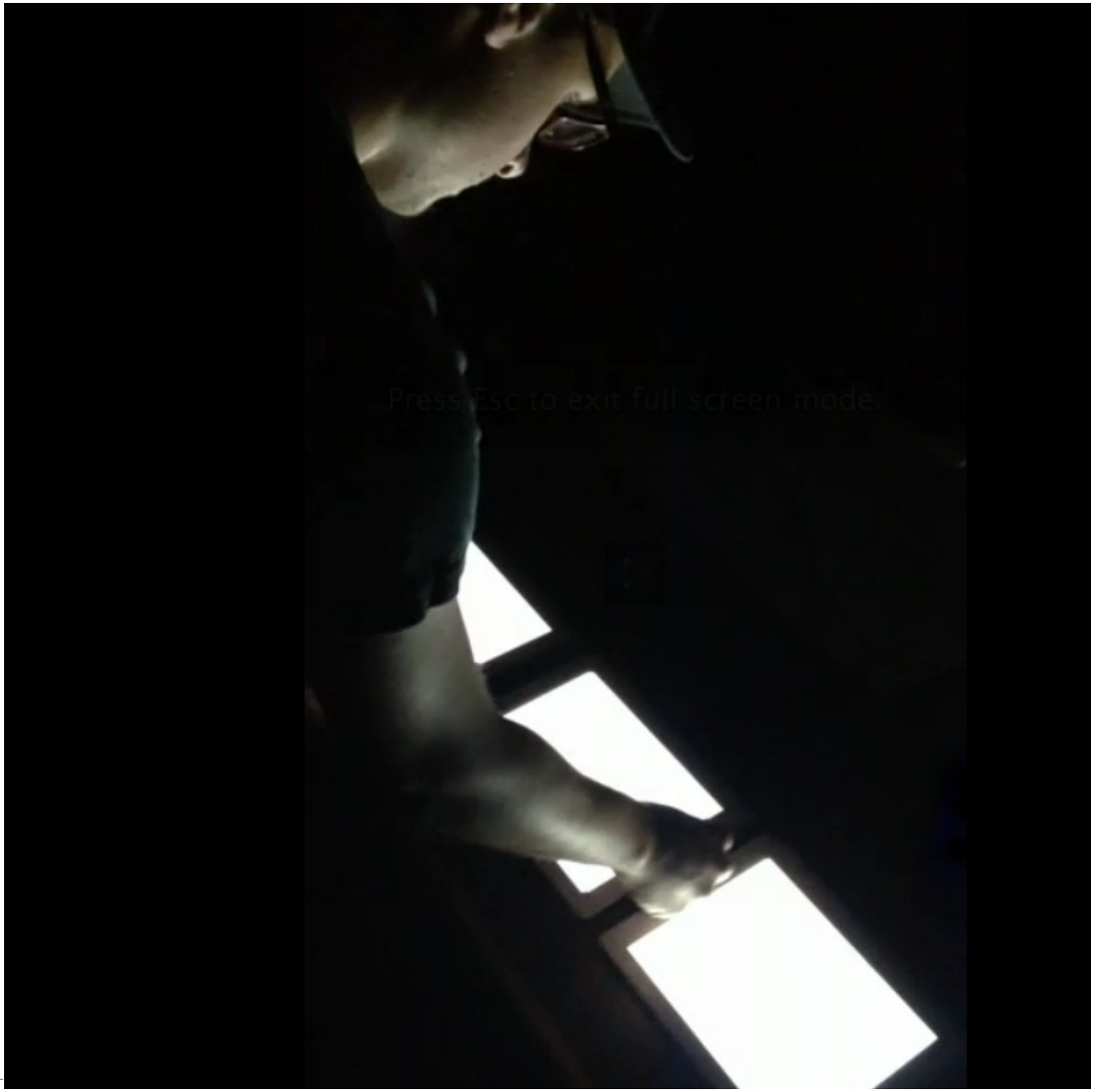




C4 | Greg Debicki
Photo courtesy of Kurtis Lesick

C4 | Manuel Ermecheo
Photo courtesy of Kurtis Lesick

C4 | Lindsay Sorrell
Photo courtesy of Kurtis Lesick



C4 | Michael Wylegly-Ersilia
Photo courtesy of Kurtis Lesick

explores the character and personality amongst different portraits. Six tablet devices are setup to representing a part of the face, where the user is able to choose from a variety of portraits of different people on each device in order to create a new persona. With the possibility of creating more that 90,000,000 portraits, this installation is intended to explore how one judges others, even though we can be the same person.

- Lindsay Sorell - *The Red C(4)* is an iPad reenactment of the biblical parting of the Red Sea. As the user parts the Red Sea with a simple LongPress and drag, their finger becomes that of God, and yet they rescue no one; they simply get the short-lived wonder of a miraculous interaction, the roar of subwoofers. Is technology a celebration of our apotheosis or the distinct reminder of our failure to attain divinity?

- Michael Wylegly-Ersilia uses the camera on an iPad to take multiple pictures of the user and by drawing various lines from various pixels between the pictures, the art piece creates a unique composition breaking down the segregation between users. These images are unique and can be changed through a variety of different ways, which display the flexibility of generative and programmable art.

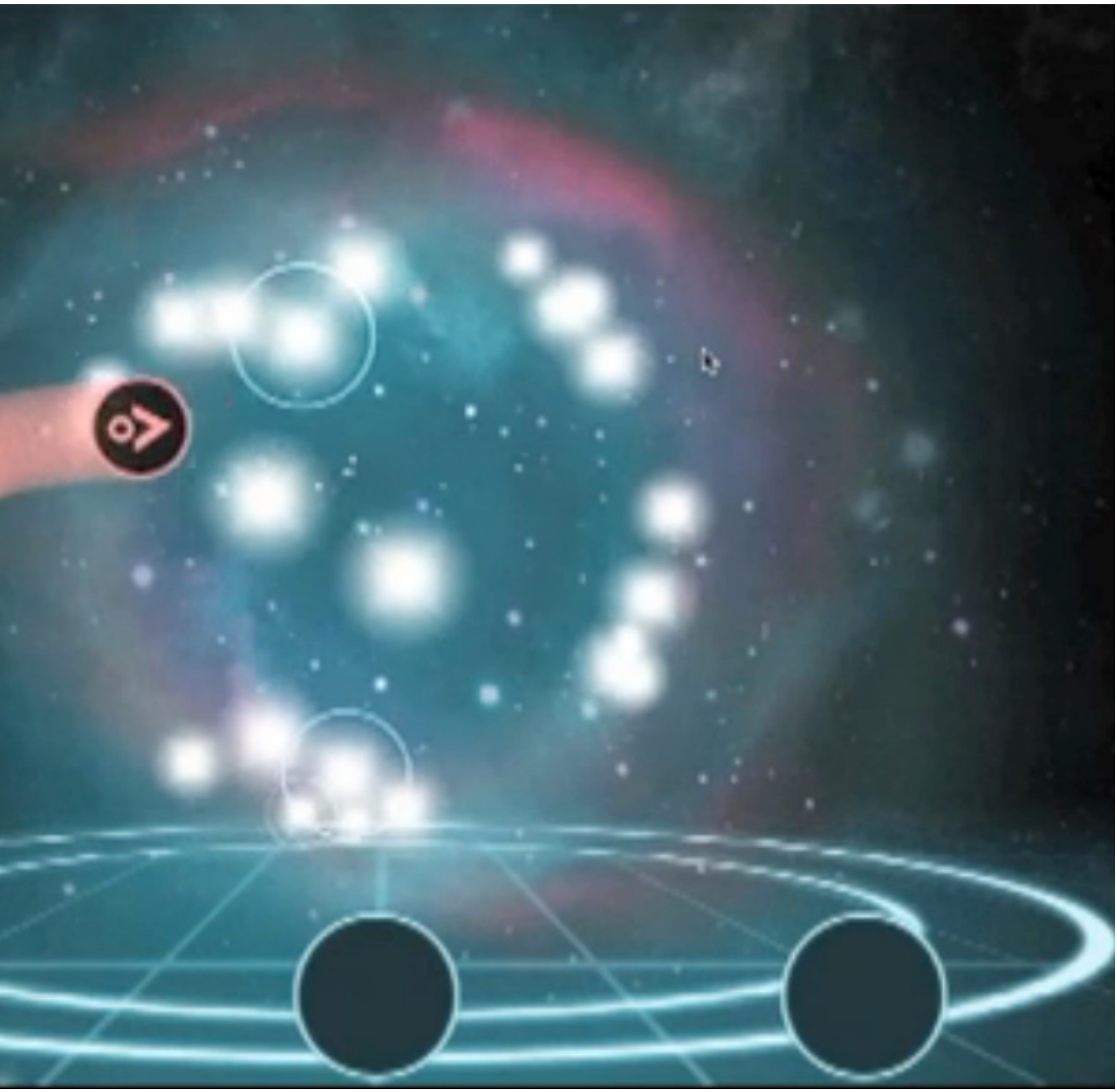
The Vulcan Knowledge Repository

The Vulcan Knowledge Repository is a multi-user, interactive environment that allows visitors to explore information about Vulcan County embedded within a futuristic, Star Trek inspired narrative. Installed in the Vulcan Trek Station in Vulcan, Alberta, the Knowledge Repository allows visitors to Vulcan to explore the history and character of the region through the fun Star Trek brand that draws tourists to the area. The piece was prototyped in Processing by Garrett Baumgartner and finished in C4 and OpenGL by Travis Kirton.

The Vulcan Knowledge Repository you are a Star Fleet Cadet chosen for an elite top-secret squad aboard the Vulcan Explorer. In training for this squad cadets engage the Vulcan Country Memory Repository to memory mine the community and learn about its history and identity. Cadets trap and compile memory orbs which open short glimpses into Vulcan's past.

Users can explore a variety of community experiences and county locations through the memories. As they leave the memory repository they collect a card directing them

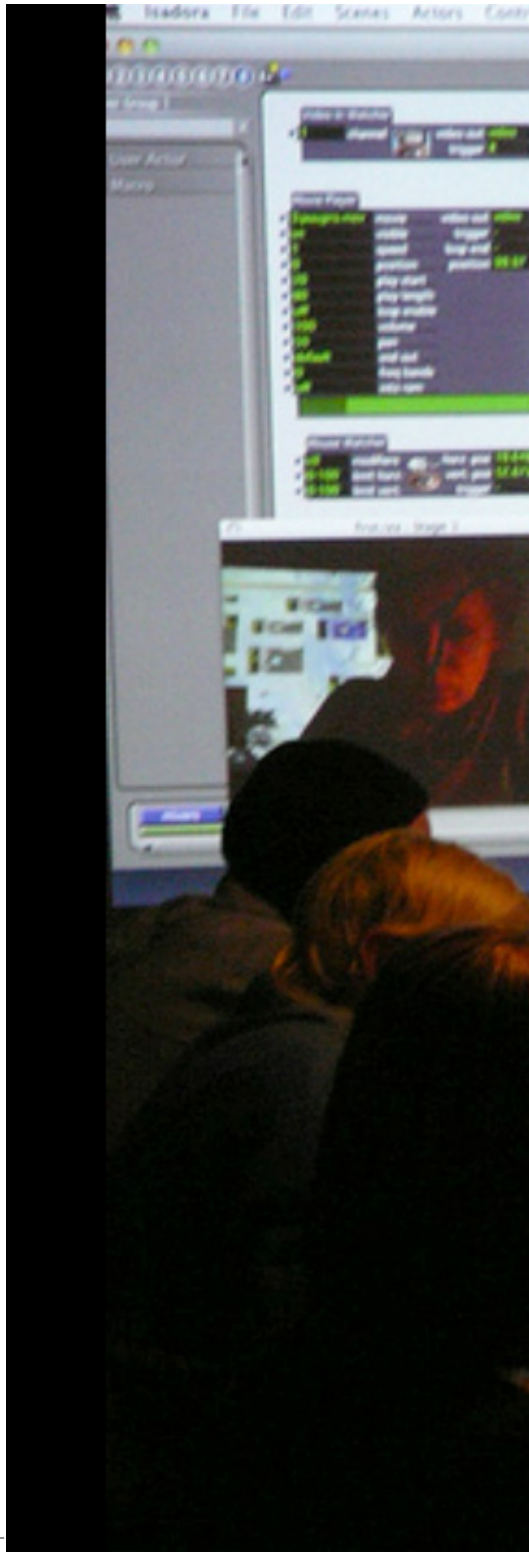
Vulcan Explorer interface (detail)
Photo courtesy of Kurtis Lesick



to http://vulcanexplorer.com with a password of vulcan_alberta. They are then encouraged to submit memories of their experiences in the county to the blog by uploading video information. The videos can then be repurposed by Vulcan Tourism as content for the interactive experience.

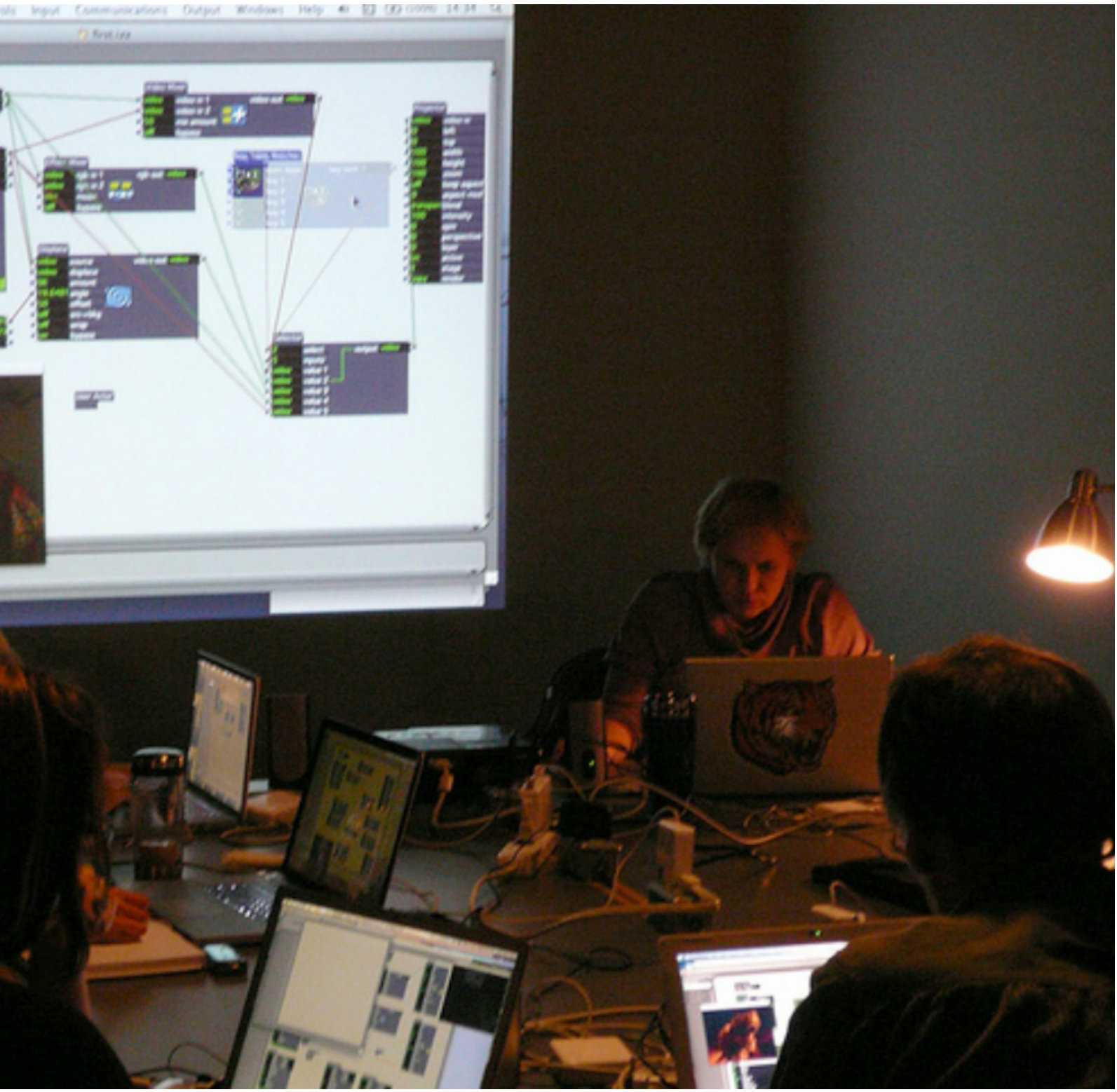
Students Computing Culture

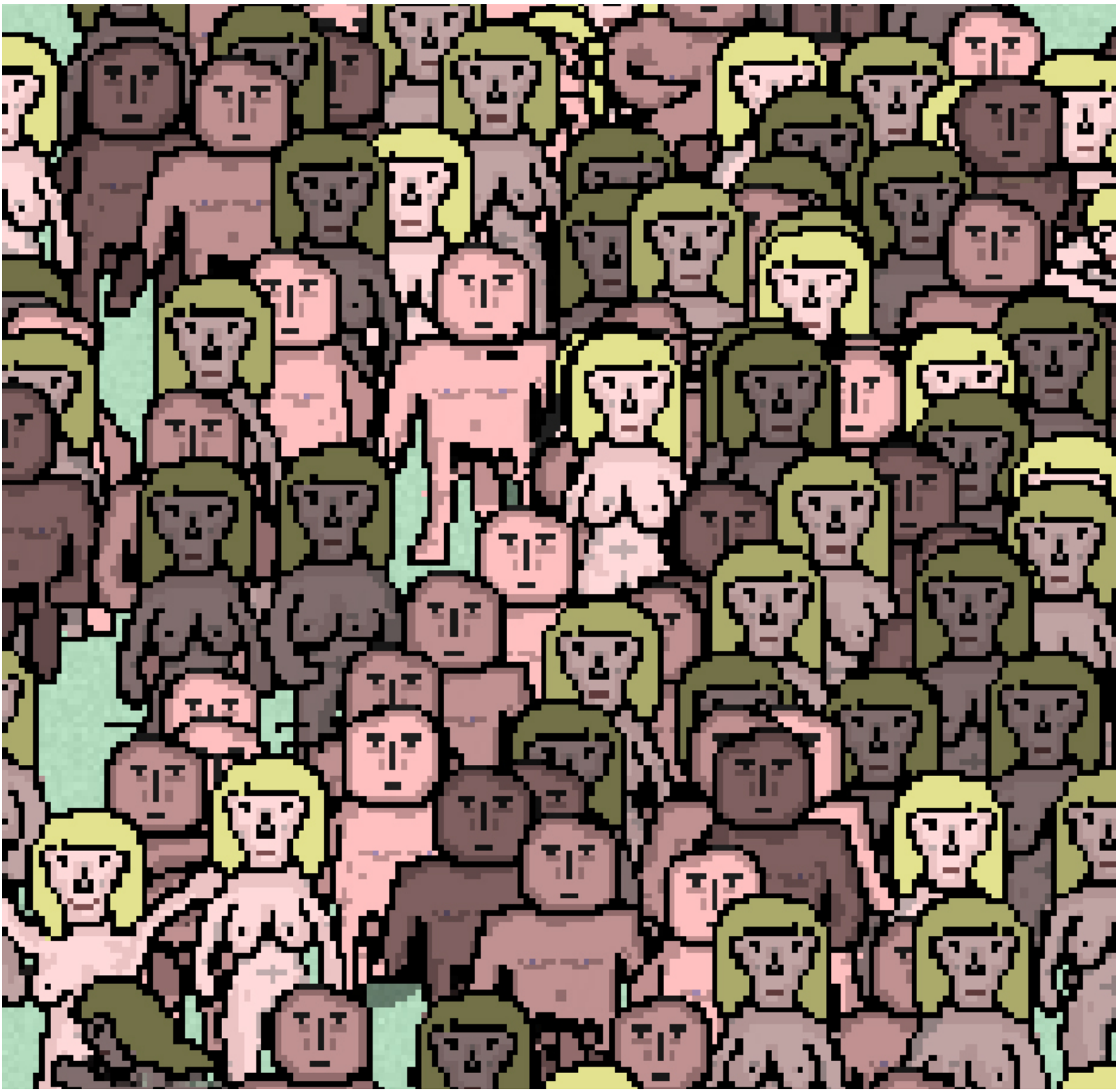
The heart of our activities at CE3C is our students. CE3C allows us to create an inquisitive,, active, and innovative environment that raises the bar on how our students think about and interact with technology. True to our focus on the creation of electronic culture, our students are producing first-rate works hinging on critical discourse, cultural expression, and social relationships. It is with pleasure that we present a few of these works now, and invite you to imagine how you can work with CE3C to push this innovative thinking even further.

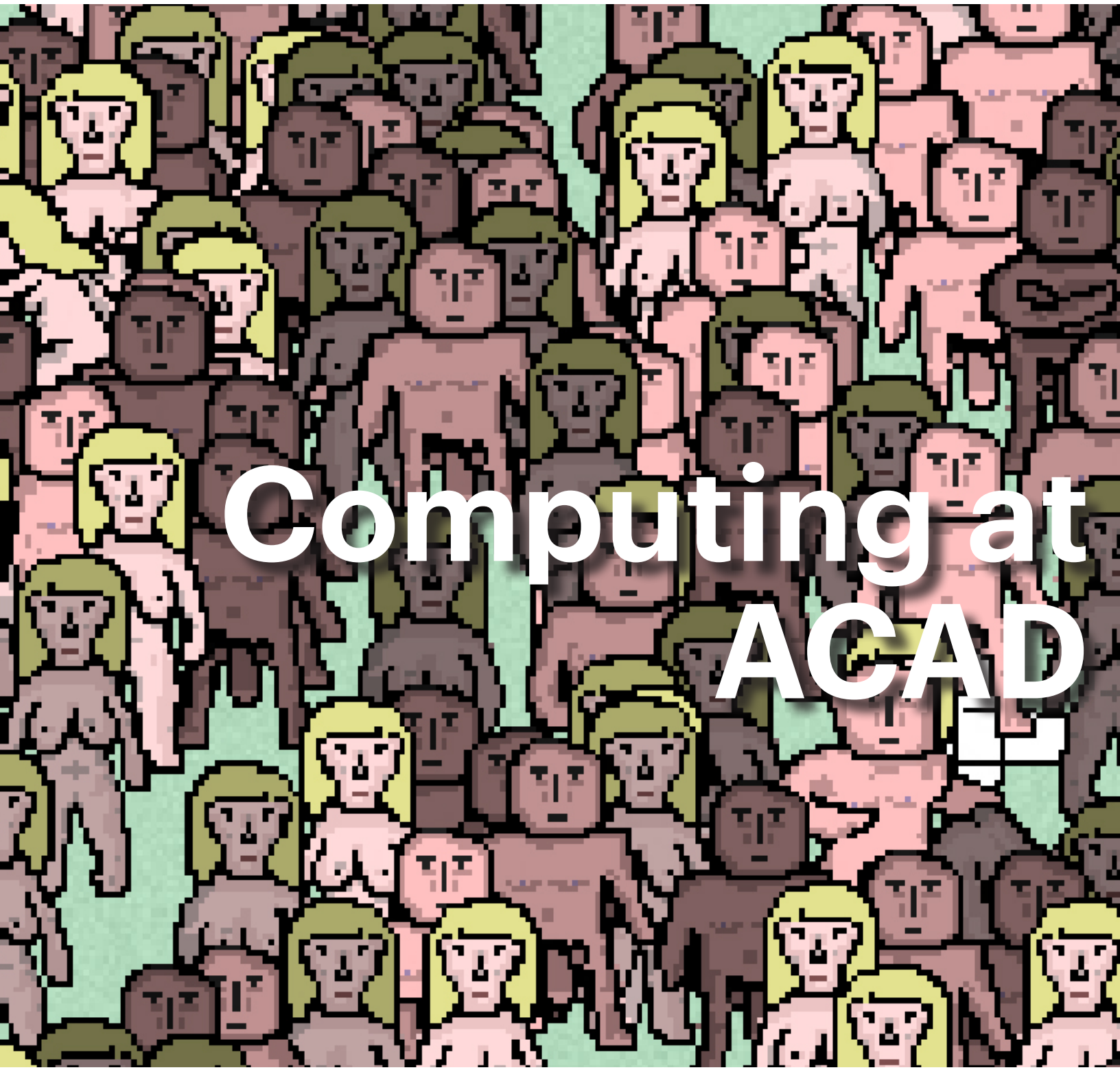


CE3C live cinema residency | Mia Makela
Photo courtesy of Kurtis Lesick

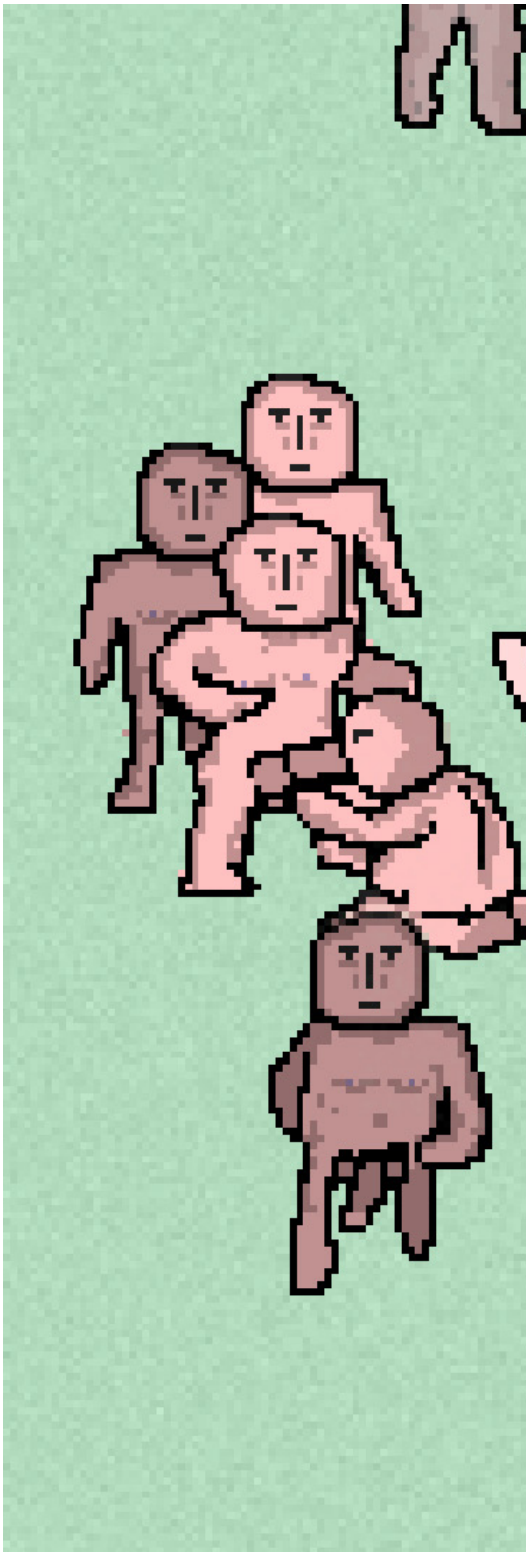
Kurtis Lesick is an artist, writer, researcher, and creative consultant whose work explores the intersection of literature, (pre)history, and cultural criticism. Lesick is faculty in Media Arts + Digital Technology at the Alberta College of Art + Design, where he also directs the Creative Environment for Emerging Electronic Culture (ce3c.com). He also teaches in the Digital Futures Initiative in the Faculty of Graduate Studies at the University of Ontario College of Art and Design in Toronto and has been visiting faculty at the Banff Centre of the Arts and the Values in Design Doctoral Workshop at the University of California at Irvine. In 2012, Lesick was awarded the inaugural Peoples Choice Award for the Most Inspiration Digital Leader at the Digital Alberta Awards.






Computing at
ACAD

Love, Lust, Rejection, and Heartbreak



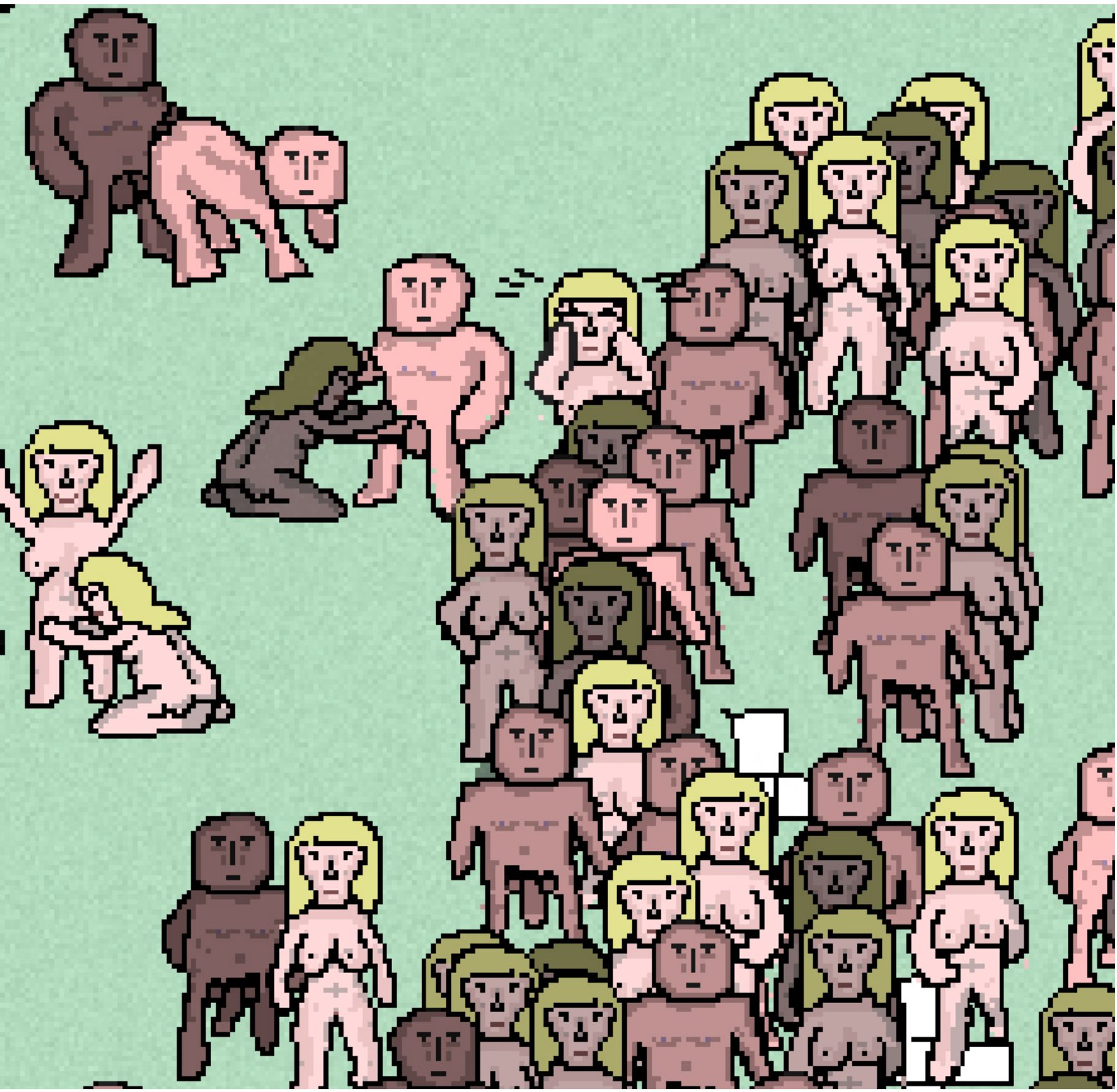
Sexsim is a simulated social experiment where digital populations act out a rough interpretation of love, lust, rejection, and heartbreak. Shown in very clinical terms, echoing the detached language of the sexual studies of Kinsey and other sex psychologists in the middle of the 20th century, Sexsim calls into question our desire to categorize, define, and pigeonhole people and their sexualities with convenient labels.

Each 'sim' is created with a set of characteristics defining things like the strength of their libido (how often they seek out sex, how receptive they when propositioned), their physical attractiveness, and the traits they desire in a sexual partner. They are also placed on a sliding scale of sexual orientation, ranging from 1 too 100, with 1 being 100% heterosexual, and 100 being 100% homosexual; those in the middle are bisexual, and those on the borders are somewhat unsure.

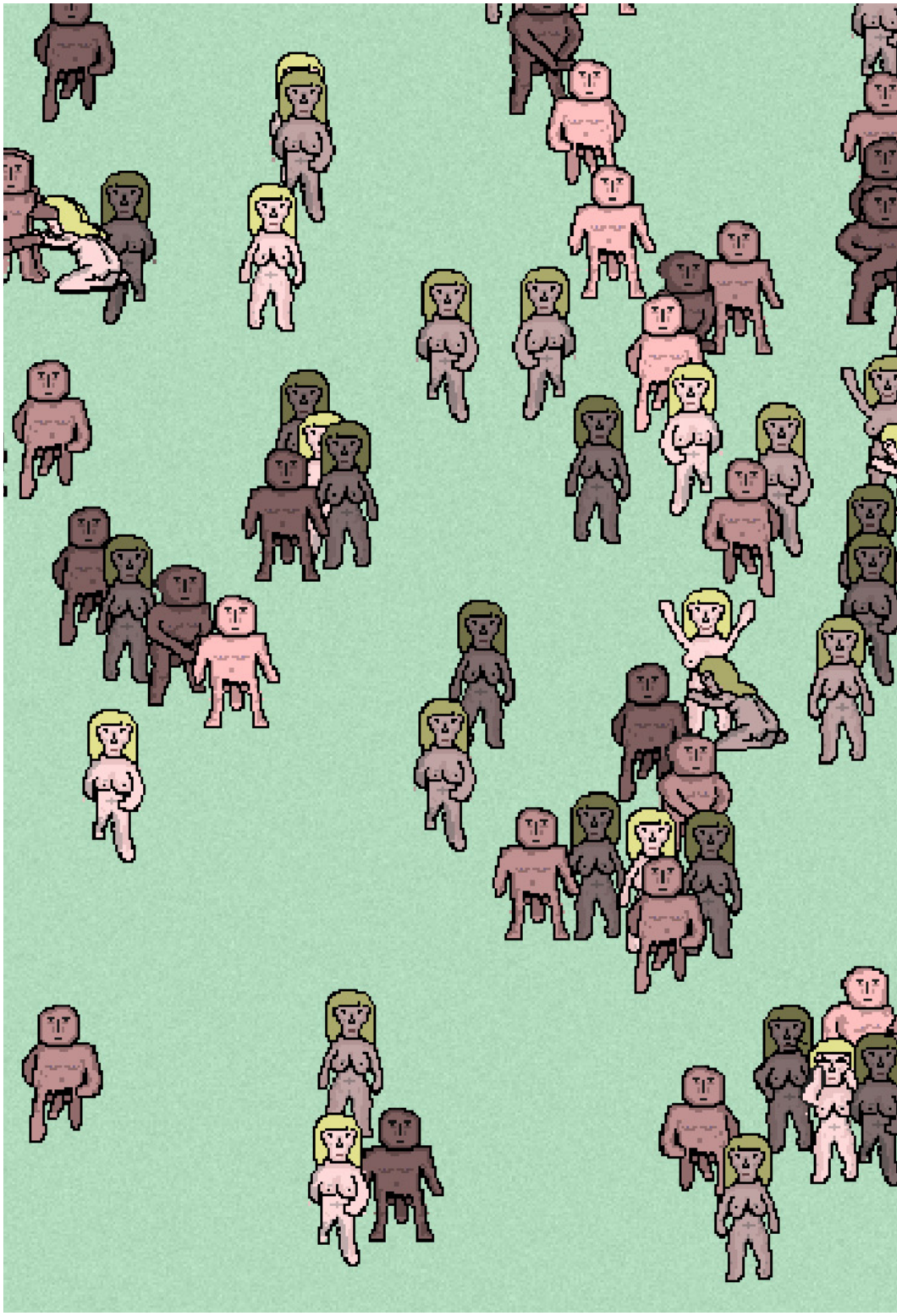
As the program runs, the population's sexual appetite increases and they seek out sexual partners. If their approach is successful, the two will engage in a sexual act. If they are rejected—perhaps for having unrealistic standards, for asking at the wrong time, for misjudging someone's preference—then they go into the corner and furiously masturbate. While this relieves them of the pressure applied by their libido, over time their overall happiness and standards drop.

The more they get rejected, the more the sims flirting the boundaries of bisexuality might be tempted to engage with it; if they enjoy or regret their experience this could drastically shift their sexual orientation. Too much heartbreak and the sims will remove themselves from the simulation, hardening into a bitter and lonely shell.

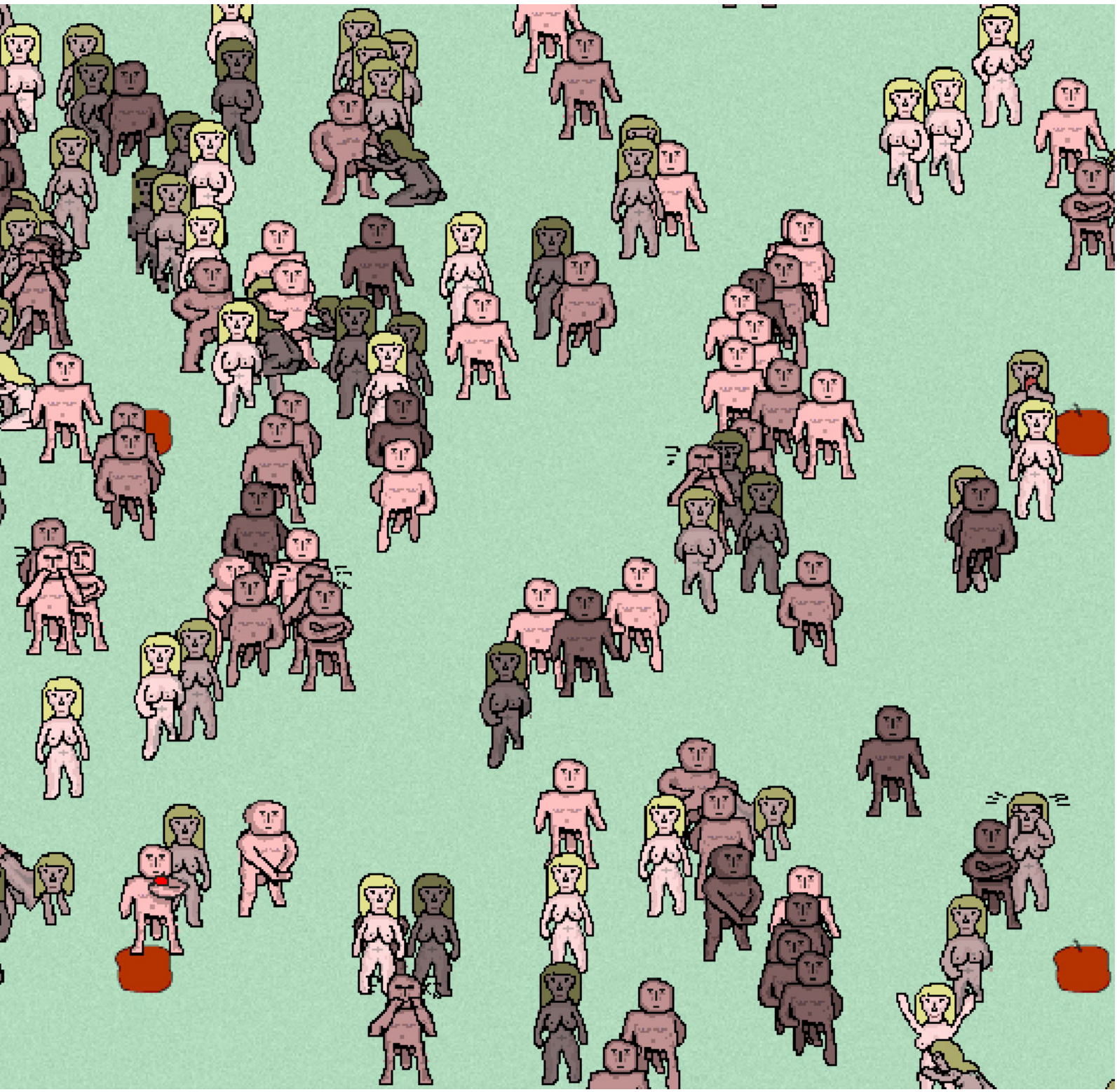
Sexsim was created for a class project at ACAD in 2011, and is somewhat based off my observations living in college dorms. Both initial prototypes and this version were created using the Game Maker Language from an old version of the Game Maker program developed by Mark Overmars. The project is



currently being redeveloped in C# (C Sharp) in order to support a much more detailed simulation with a more actors, and to facilitate the move into 3D space for future projects.



Mathew Lindenberg is a third year ACAD student interested both in the intersection of art and technology, and exploring multidisciplinary approaches that combine history, sound design, visual arts, sociology programming and 3D animation. His interest in digital simulation allows him to comment on the world by re-creating systems piece by piece and watching them interact with each other and the audience.

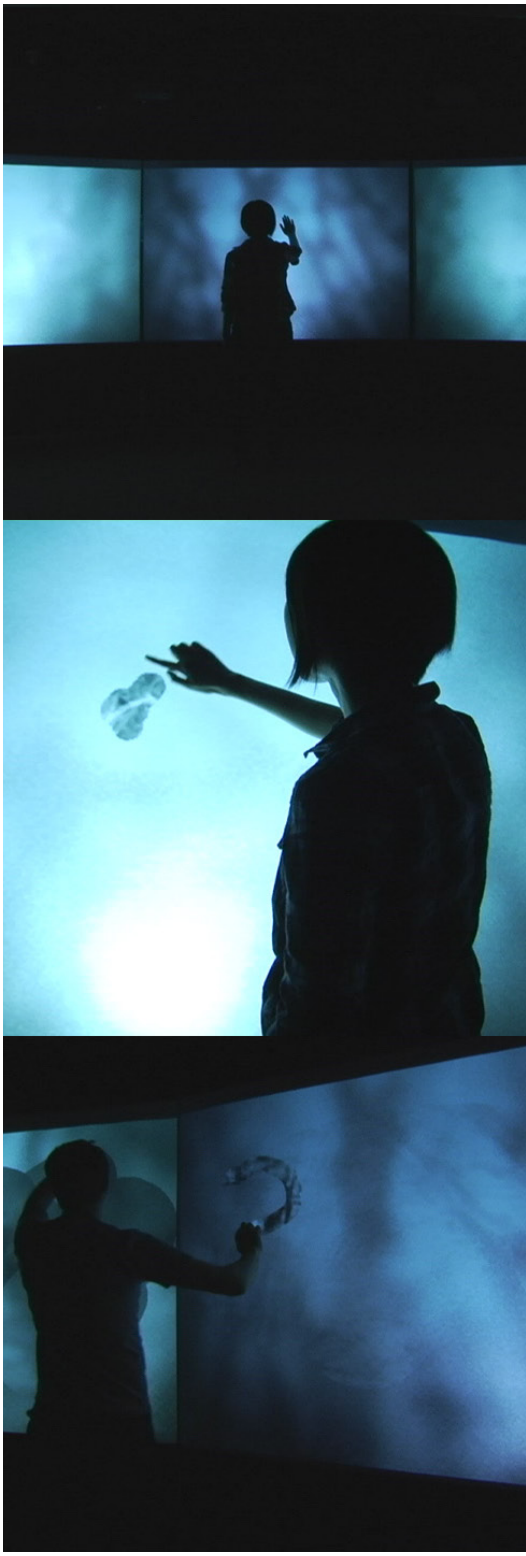


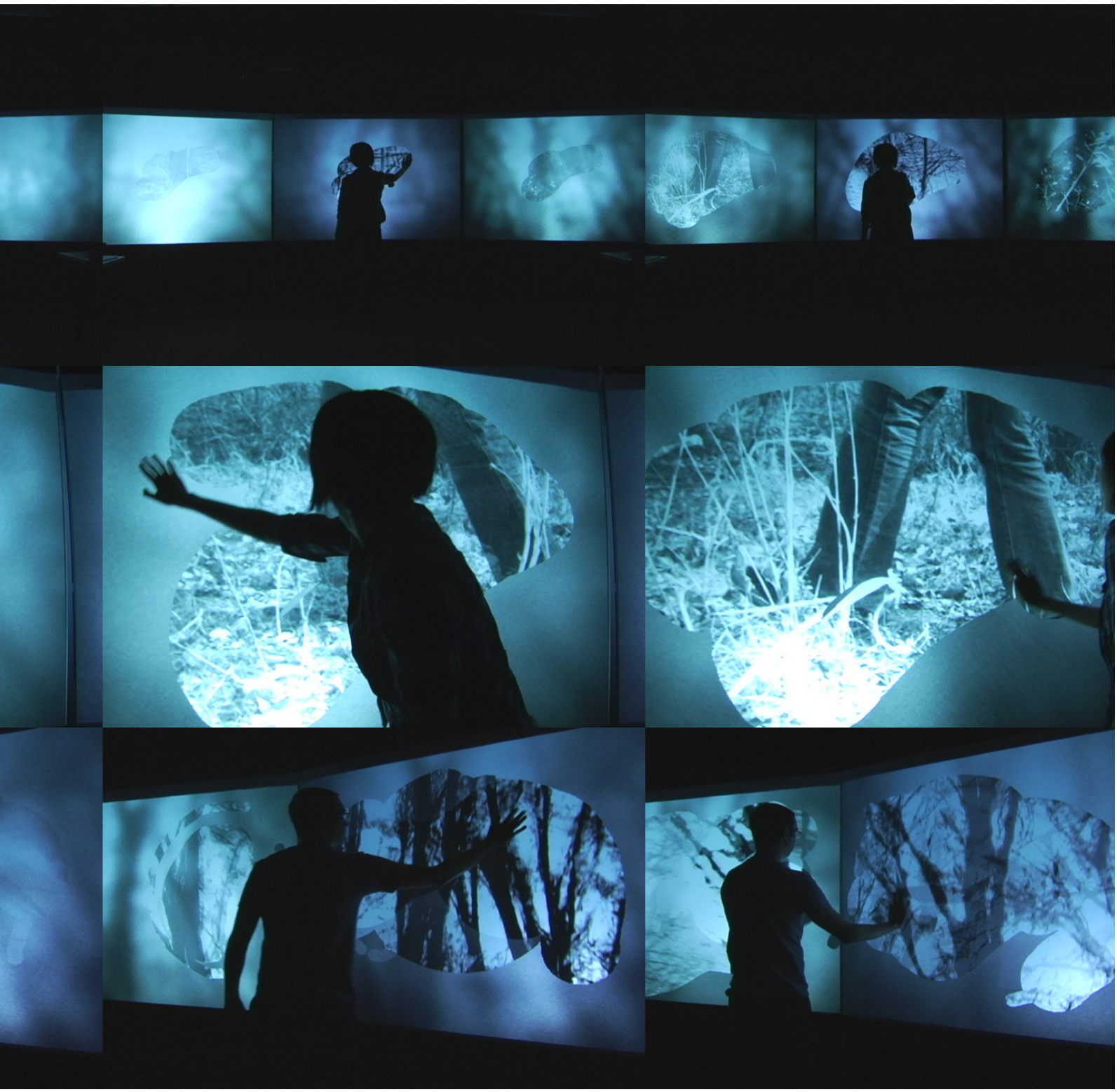
The Window

The Window is an interactive installation that utilizes large touch screens to give the audience control over the composition of a visual 'dreamscape'. Through the wiping away of virtual frost, viewers are able to reveal images from beyond the barrier of the screens while leaving traces of their own interactions. Slowly, through these actions, a story is revealed within the impressions in the frost of a woman walking alone through a dark forest. Muddled and in a constant state of flux, these images relate the anxious state of mind of someone contending with being alone in an uneasy surrounding. As viewers engage with The Window, they not only leave their physical impressions on the screens, but they may also re-experience impressions that reside in their own memory.

The installation is built on an 18ft. long projection wall comprised of three 6ft. wide rear-projection touch screens. Displayed on each screen is a blurred moving image that resembles a scene observed through a foggy window. By intuitively wiping the projection surfaces to clear the fog, an infrared light plane hovering a few millimetres above the glass is disturbed. Though this infrared disturbance is invisible to the human eye, it is easily seen by a set of cameras that are sitting behind the screens. These images are captured by the cameras, transferred to computers running the installation, and are processed to track where and how big the touch/wipe contacts are on the projection surfaces. With this tracking data, a mask is generated—much like an alpha mask in Photoshop—to uncover a randomly selected picture sequence at the area of interaction on the screens. The more the screens are engaged with, the more of the image sequence is revealed. Likewise, if the screens are not interacted with, the projections will slowly fade back to display the original foggy window.

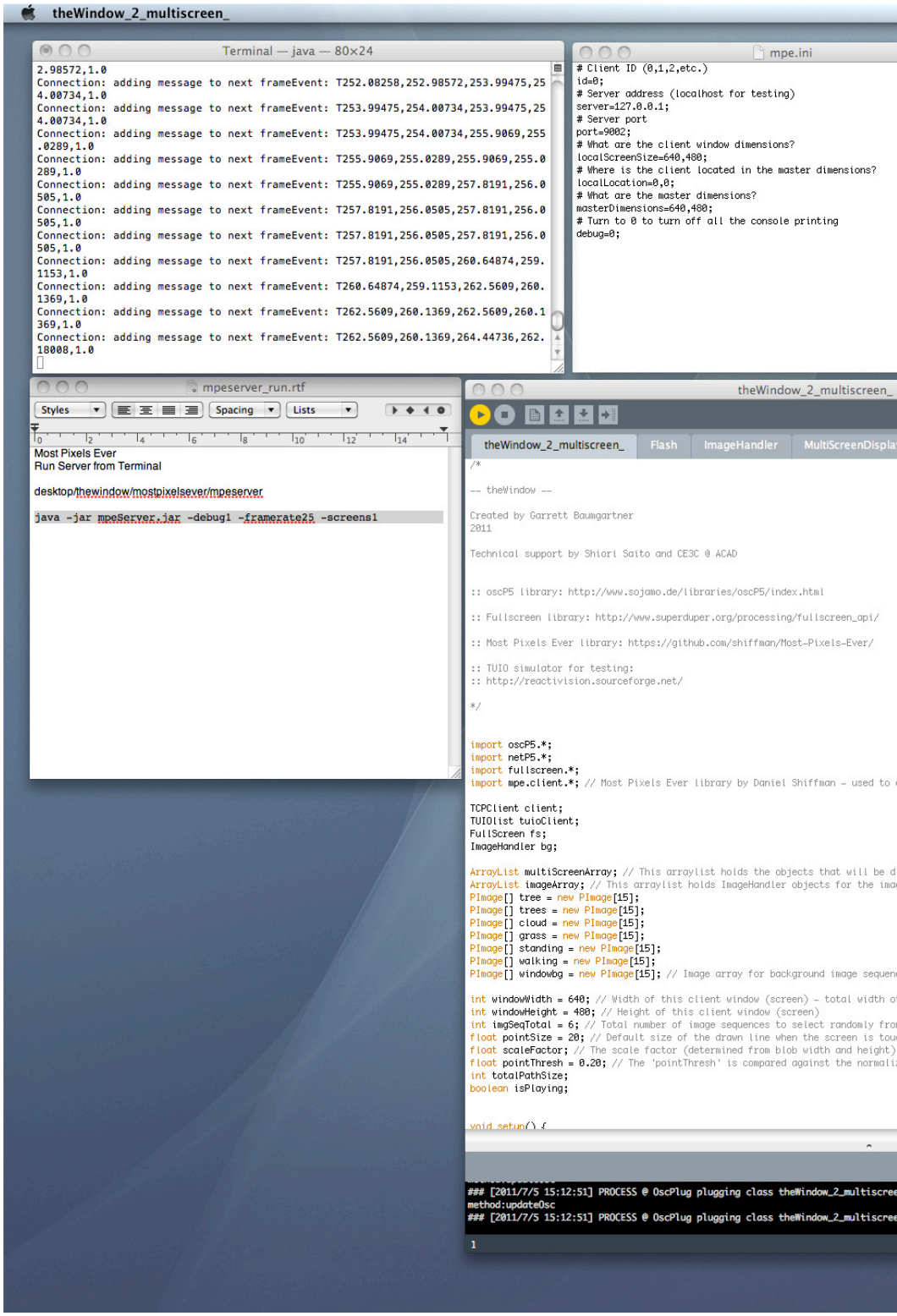
The Window was developed primarily within the open source programming environment, Processing. A key library used to extend and synchronize the interactive space across three touch screens (totaling 18ft. wide) was Most-Pixels-Ever, created by Daniel Shiffman. The NUI Group's Community Core Vision (CCV) computer vision software was employed to track the viewers' touch/wipe gestures on the touch screens. To aid in translating these



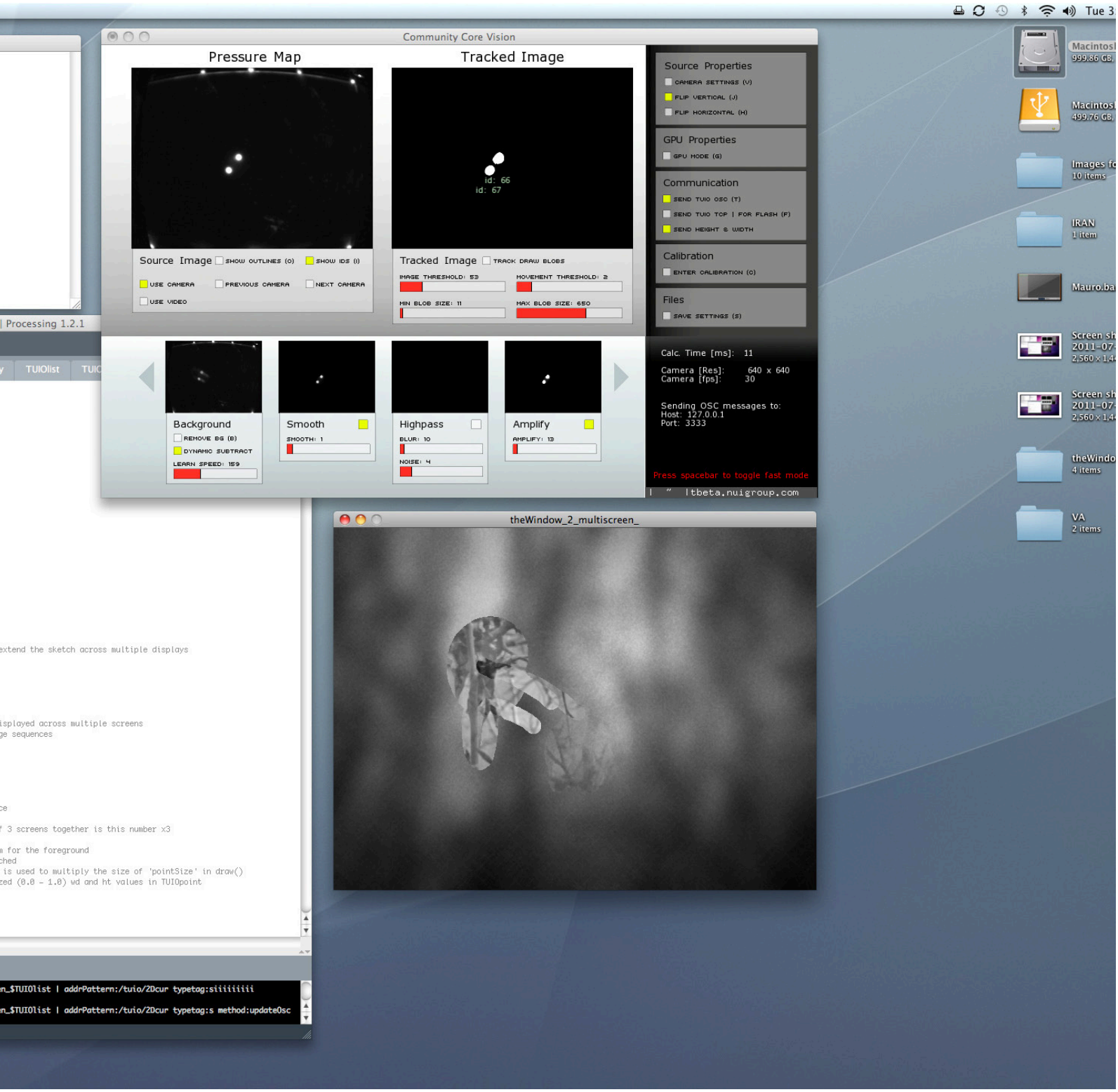


gestures captured by CCV into visual feedback, a custom Tangible User Interface Object (TUIO) handler was integrated with the Processing program.

The Window was funded by The Alberta Foundation for the Arts and incubated at CE3C. Shiori Saito assisted with research/programming, content generation, and video/photo documentation.



Garrett Baumgartner is an independent artist, and a Content Designer at ICOM Productions in Calgary, AB. Garrett graduated from the Media Arts + Digital Technologies (MADT) program at the Alberta College of Art + Design in 2009. From 2009 to 2011, he worked as a researcher and line producer at the Creative Environment for Emerging Electronic Culture at ACAD where he collaborated with artists, students, and instructors to create several projects that explored new ways of thinking with digital interfaces and digital content delivery.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Swimming with Pask

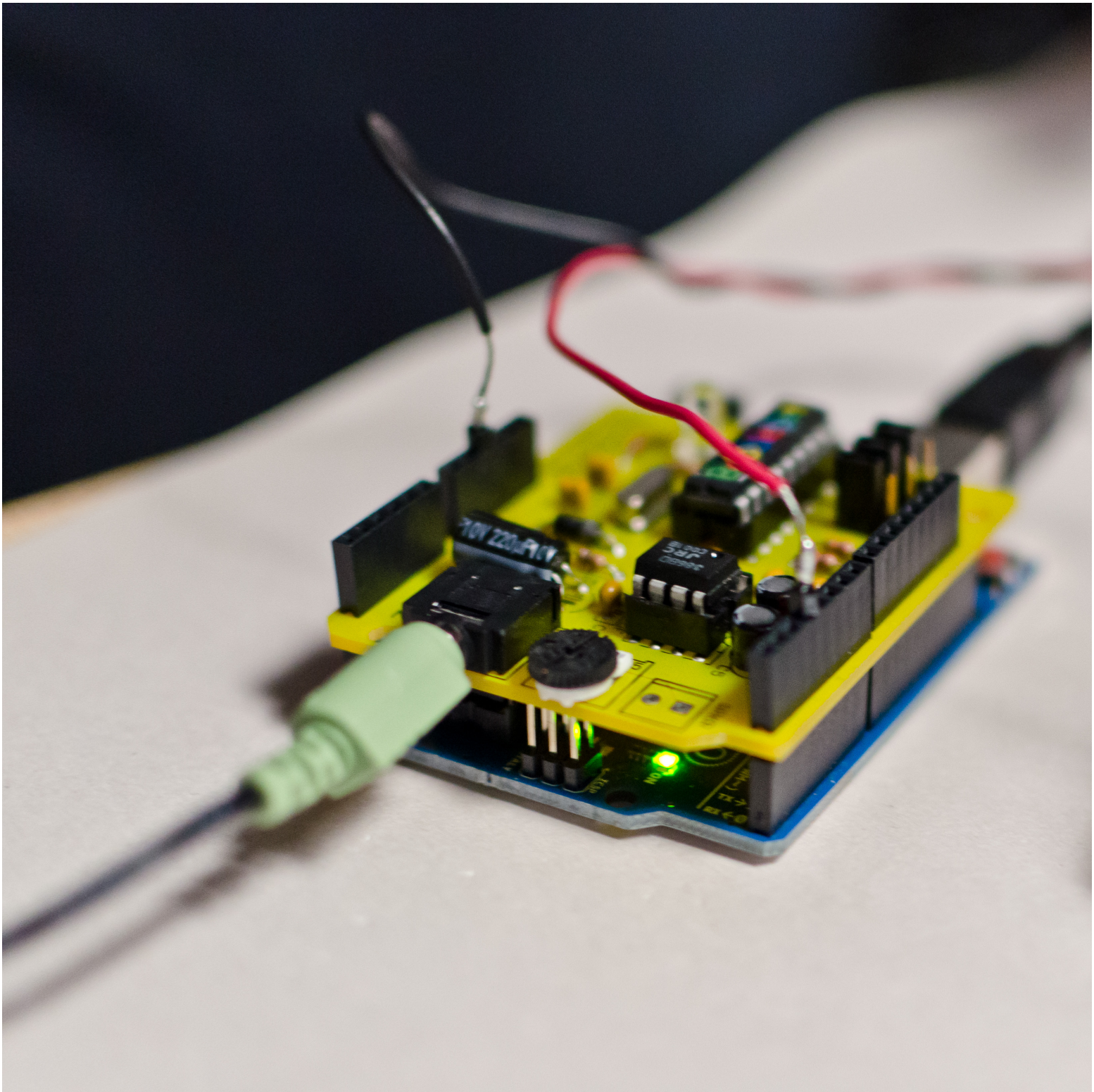
"Swimming With Pask" is a collaboration with Derek Demassi, funded by the Alberta Foundation for the Arts, and incubated at CE3C at the Alberta College of Art + Design over the summer of 2012. It is a digital media performance/installation that uses software and technology to give bioluminescent algae creative agency allowing them to perform audio/visual collaborative improvisations with their 'breath'. Several bioluminescent algae cultures are suspended in glass orbs from the ceiling with their own sensors, circuits and speakers. They communicate over a wireless network and perform as an ensemble. The quantity of CO2 emitted by the algae, along with other data, are gathered and interpreted by custom software. The data is both translated into music and an agitating motion which incites the algae to illuminate. This process causes the algae to emit different amounts of C02, which creates a closed feedback loop, much like the one humans experience when they improvise music.

Set in a dark room the installation consists of 11 glass orbs, filled with algae in salt water, suspended from the ceiling in black, translucent nylon sacks. The sacks also contain a small circuit and speaker. Each speaker emits a particular tone while the water in the orb is agitated by a spinning claw. Some claws graze the glass producing a quiet clinking sound alongside the gentle whirr of the tiny motors. The agitation stimulates the algae which give off a milky blue glow illuminating the orbs. This glows grows and fades in perfect time with the sound. The resulting audio/visual display is a live, improvised, collaborative performance between bioluminescent algae cultures communicating over a wireless network.

This system is enabled by a series of translations. First, there are sensors in the water which test it's conductivity. This data is translated into numbers onboard an arduino circuit. The numbers are sent across a wifi network connecting the different algae cultures and feed into the generative algorithm on the circuit of each independent culture. The generative algorithm then translates this data (from its own attached algae culture and the input from the other cultures on the network) into sound and control data for the claw. The claw agitates the algae which causes it to biolumin-

esce. The bioluminescence alters the conductivity of the algae, which completes the feedback loop. Because of the data which is transmitted between the nodes and influencing the outcome based on what all the other nodes are doing, the feedback loop creates a system complex enough that the output is continually varied.

**Greg Debicki is a Calgary-based composer and new media artist with a special interest in algorithmic music. He completed a Bachelor of Fine Arts at the Alberta College of Art and Design and studied music composition at the Dartington College of Arts, UK. Under the pseudonym "Woulg" he makes glitch music which is fixated on the destruction and recombination of source material, processes and tools. His sound work and been featured on the BBC (tom ravenscroft) and appears on several labels including Enigmatic (Australia). Some of his music can be found on soundcloud.com/greg-debicki.*



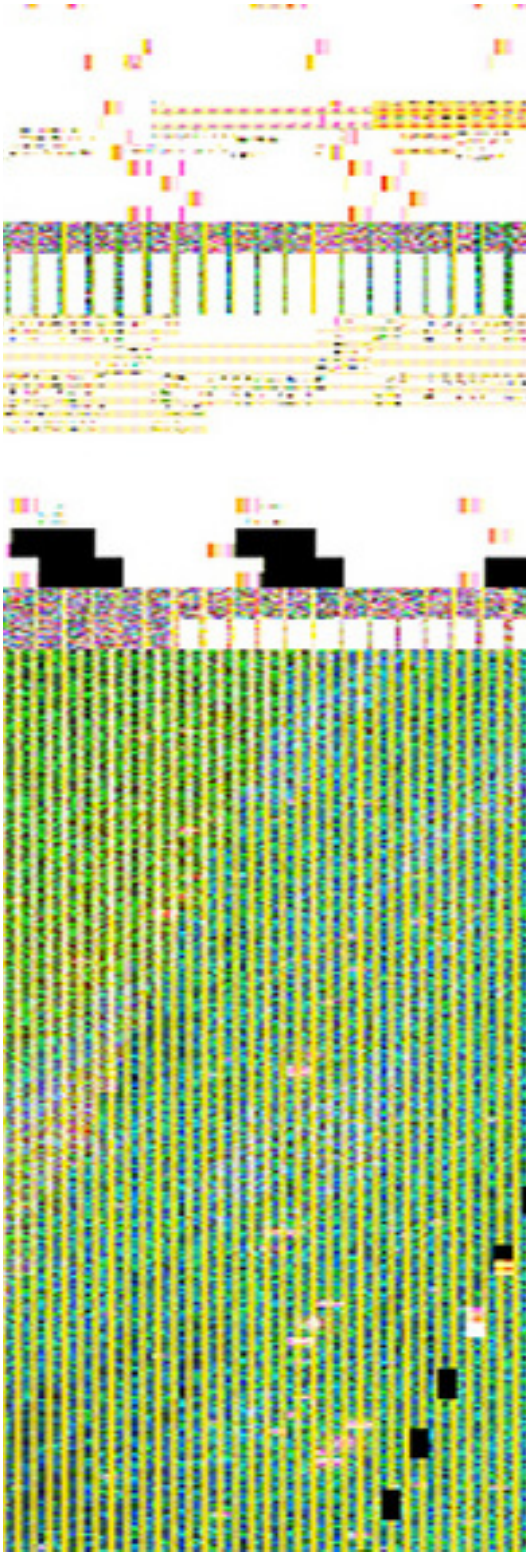
Glitch

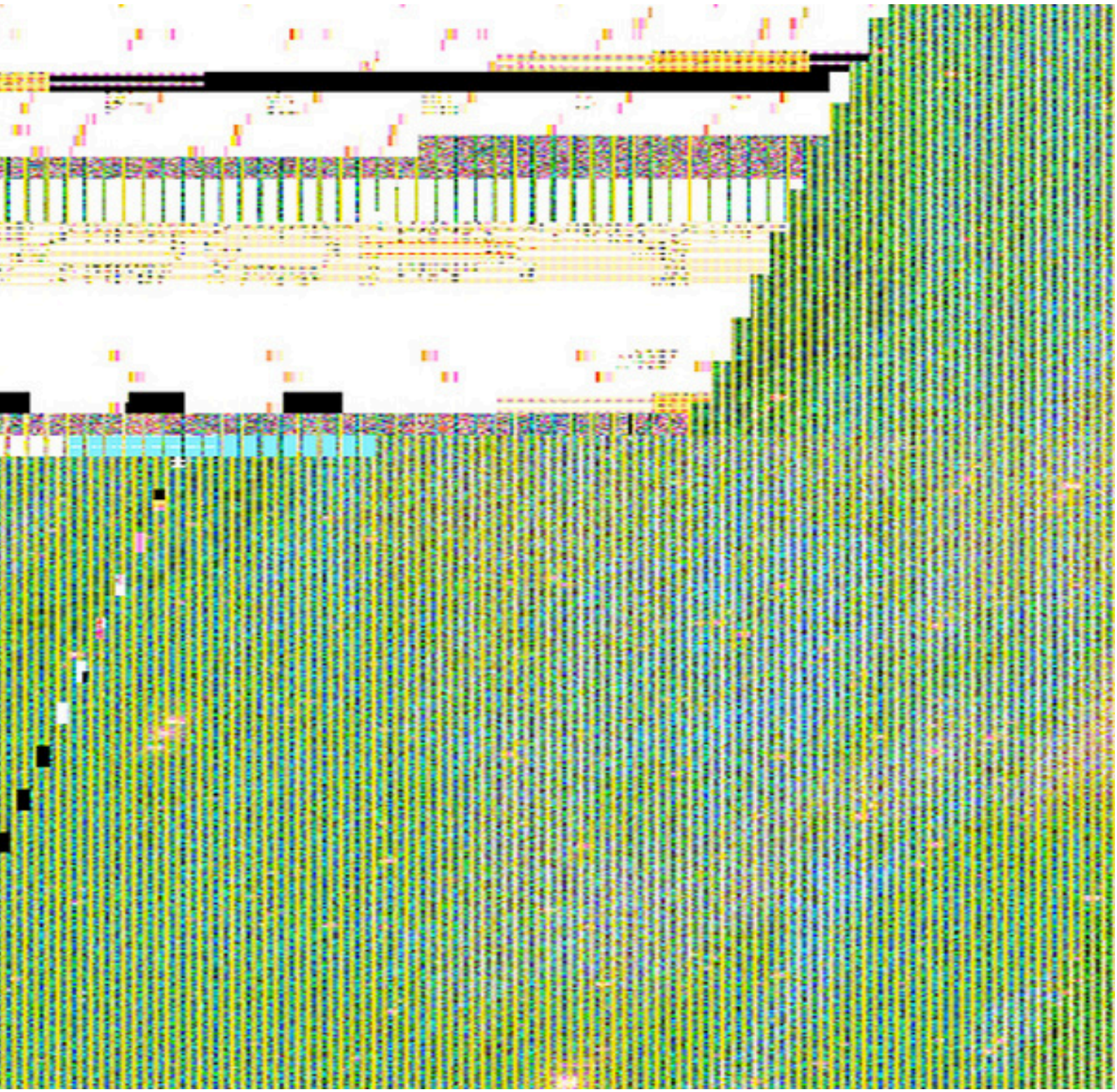
My practice focuses on live experimental audio and visual performance. These projects are generated and controlled through custom-made interfaces. These are constructed by using a variety of software such as Max/MSP, Processing, Isadora, Audacity, and Adobe Suite CS5. The result is a complex arrangement of glitched audio and visuals, often non-representational and experimental, typified by noise, abstraction, ambience, dissonance, and sometimes harmony.

Glitch to me is something that happens unexpectedly or wrong within something normal. It could be an error in the signal, corruption of data, a bug, and/or faulty equipment. In analogue media it could appear as discoloration, chunks of visual information in random spots, and shifts within the images. Digital media is especially susceptible to glitch: the slightest corruption in the digital code can completely alter the integrity of the original information. Ultimately, this malfunction distracts us, reminding us that what we considered as "normal" can easily be disrupted. By integrating computer and software malfunctions, crashes, and faults in technologies my work explores notions of imperfections, failures, and accidents.

In my performances I try to draw correlations between the audio and visuals through synchronization. This results in a single entity, an illusion of unification between sound and the image. I generate sound on the computer either by transforming files such as .PSD to wav files, or by using code oscillators. Sometimes I selectively record sounds from the environment around me, choosing small cuts, and organizing, manipulating, and reshaping them into different forms. In a sense, I like to take what is considered a "normal sound" and make it into what is generally considered as unusual.

I create visuals through a variety of processes. I capture footage using a video camera, built-in iSight, or by screen capturing digital files on my computer. I focus on things in my environment that are intriguing, beautiful, thought-provoking, or might simply imply narrative. I import the captured footage into my computer, turning it into data, and manipulating it until it becomes unrecognizable or glitched.





Journal of Computational Design
Issue 5

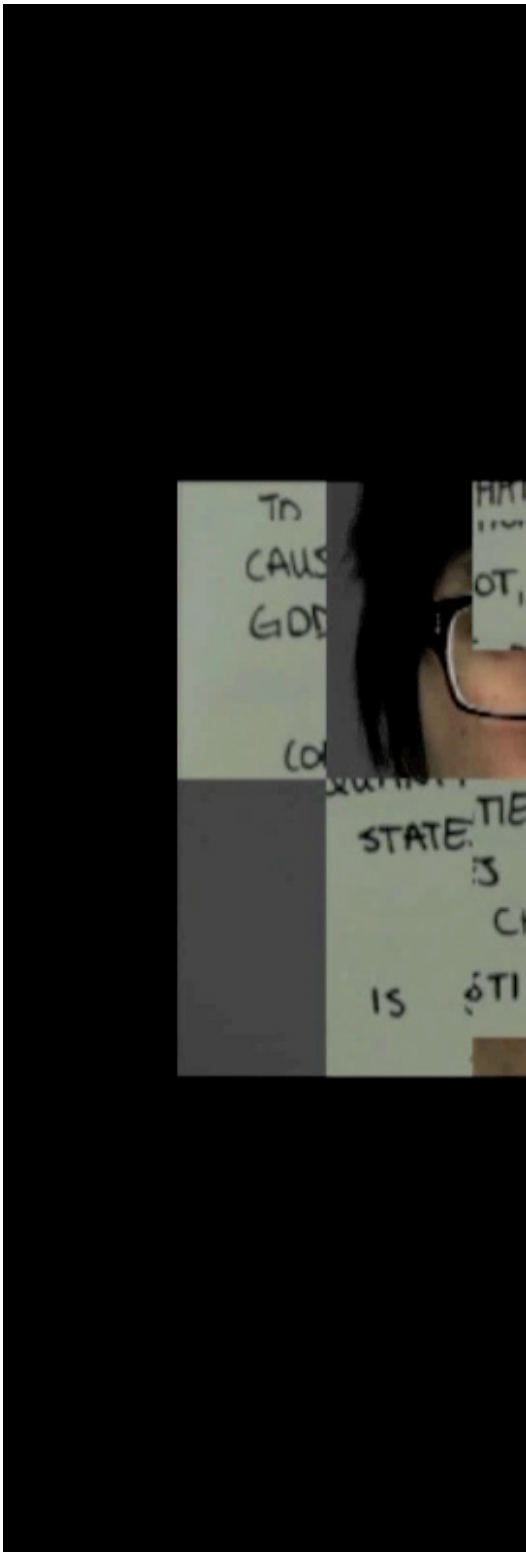
Article:
Glitch in Audio/Visual Performance

Author:
Kim Seung Pen

The power of glitch is in exposing that media is merely simulation of reality and not reality itself. Glitch creates disruptions in these simulations creating a window to their technological origins. The viewer is reminded that technology imitates reality, creating fake spaces that are augmented, mediated and virtual.

**Kim Seung Pen is a Canadian artist whose work focuses on audio/visual performances and installations, experimenting within the fields of sound art, glitch art, experimental film, visual art, and computer art. A graduate of the Alberta College of Art + Design, Kim won the Best in Show award at The Horse Show in 2010 and 2011 and has since been exhibited in galleries, shows, and events in Calgary including the Sled Island Festival, Soundasaurus, and Particle + Wave: A Festival of Media Arts.*

Mediating Poetic Performance



Every artistic discipline has its own doctrines of media and aesthetics. My interest lies unifying two or more disciplines to form one cohesive art piece, capitalizing on the swift interaction between technology and the depth of content of other practices. Nowhere has this been so apparent than in my collaborations between poetry and technology.

Fusing performance, literature and digital media, Multiverse, a collaboration with Sarah Grodecki, is an audio/video installation of two actors narrating a scientific text on the existence of multiple universes. The image of this reading is composed of several independent (and sometimes disjointed) videos puzzle-pieced together, unable to synchronize as if multiple instances of their movements are occurring at the same time. The audio portion is a recording of an improvisational exchange of the actors uttering and repeating words from a paragraph, drifting from sentence to sentence until both reach an agreement to end the conversation in the final line.

Multiverse was created using the program MAX/MSP to create several instances of the same video. Each instance is affected by a delay that continually changes its timing configuration. The continual change in the delay causes the videos to stutter. The videos are then cropped sequentially and composited into a single feed resulting in a "Frankenstein" version of the original.

MAX/MSP was also used in my collaboration with poet and translator, Oana Avasilichioaei, to produced Audio Border Folds, a three-component project with an interactive video, a sound performance, and a poetry reading. The interactive video consists of Holocaust archival footage that 'glitches' whenever the narrator speaks. In the sound performance, two performers generate poetry and sound effects solely through gesture using sensors of a Wii remote. The third part strips away the technological interference with two people conversing to one another using only a simple poetic text.

These poetic collaborations have allowed me to explore a wide variety of technologies while keeping me grounded with meaningful content and expanding my aesthetic bound-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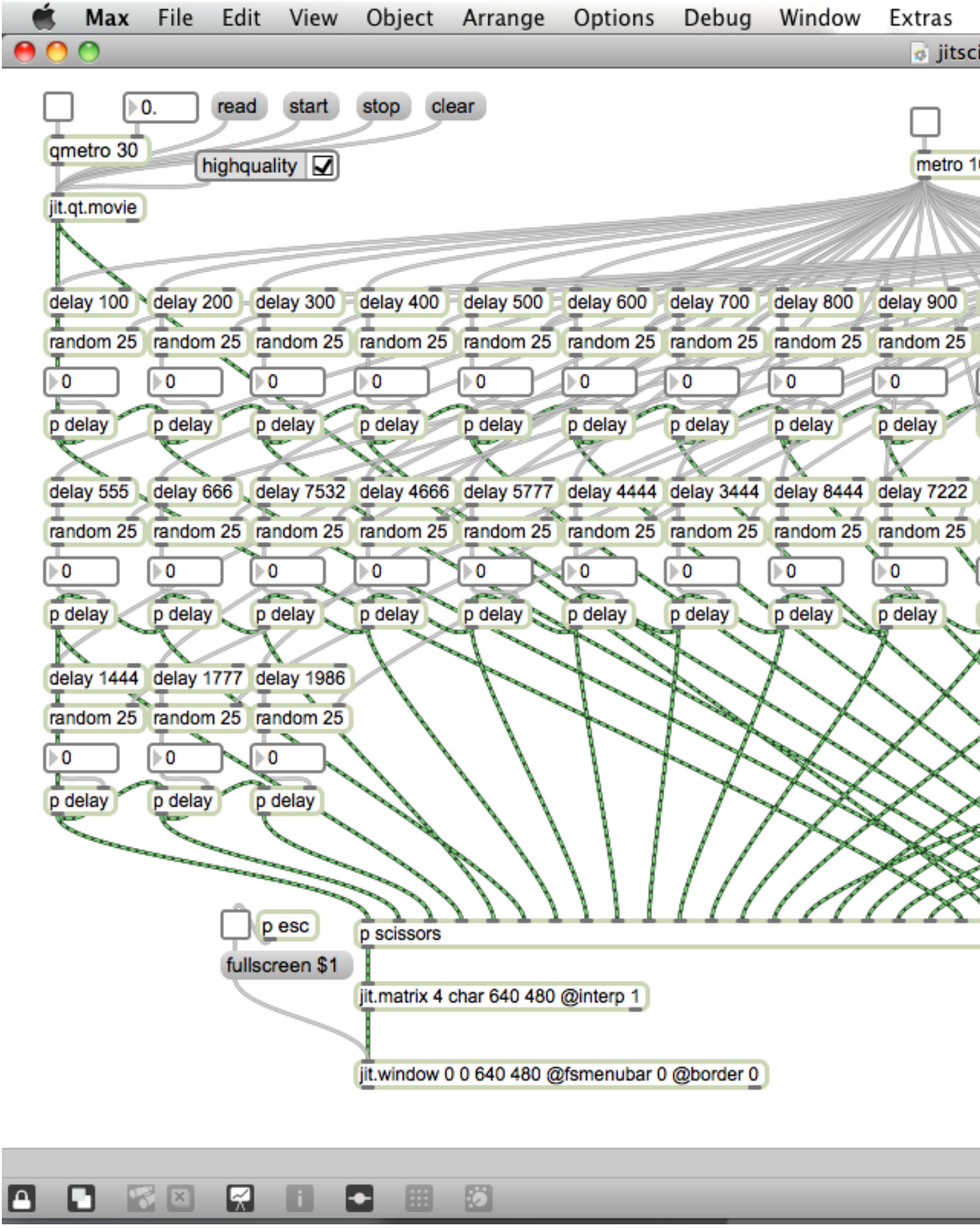
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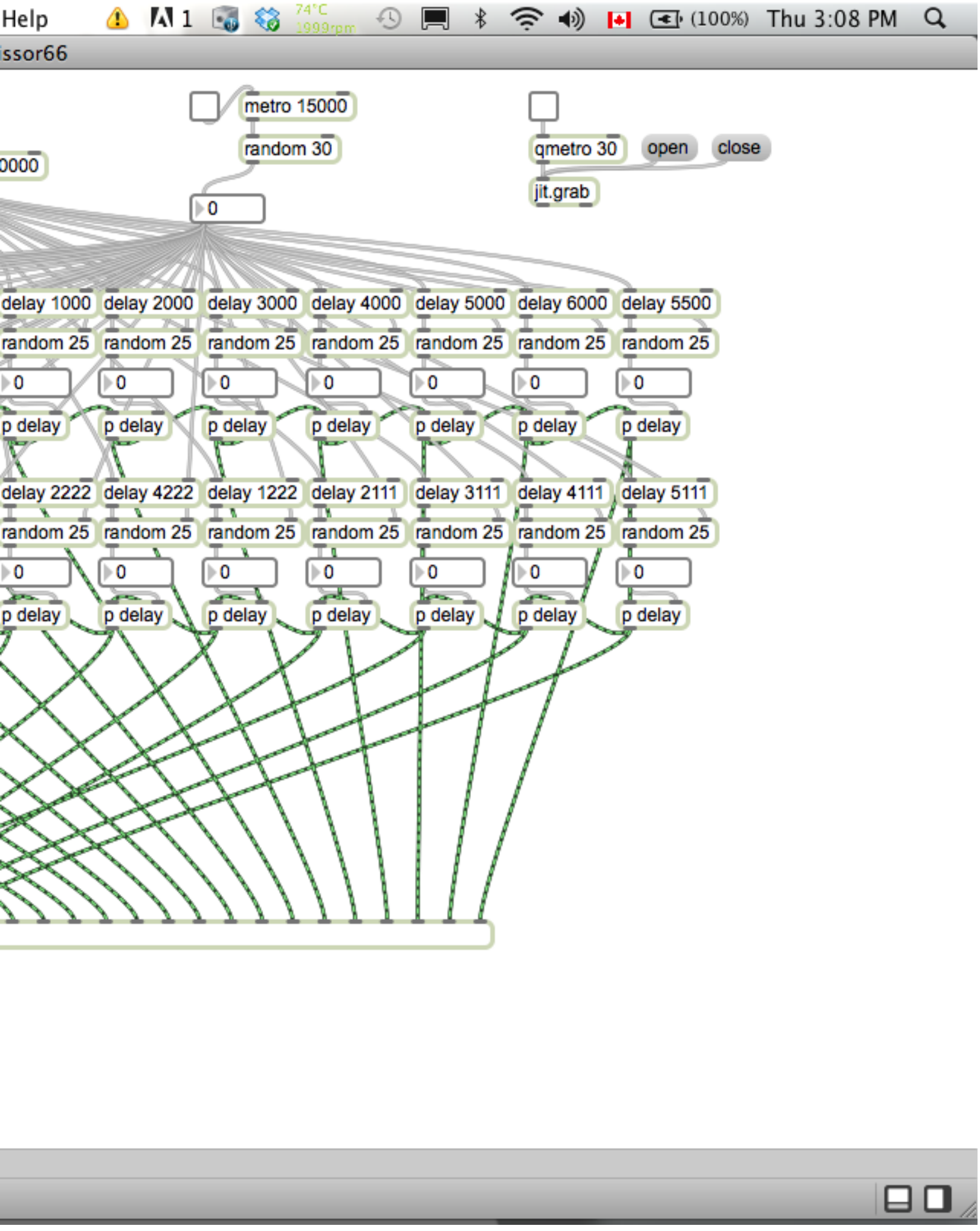
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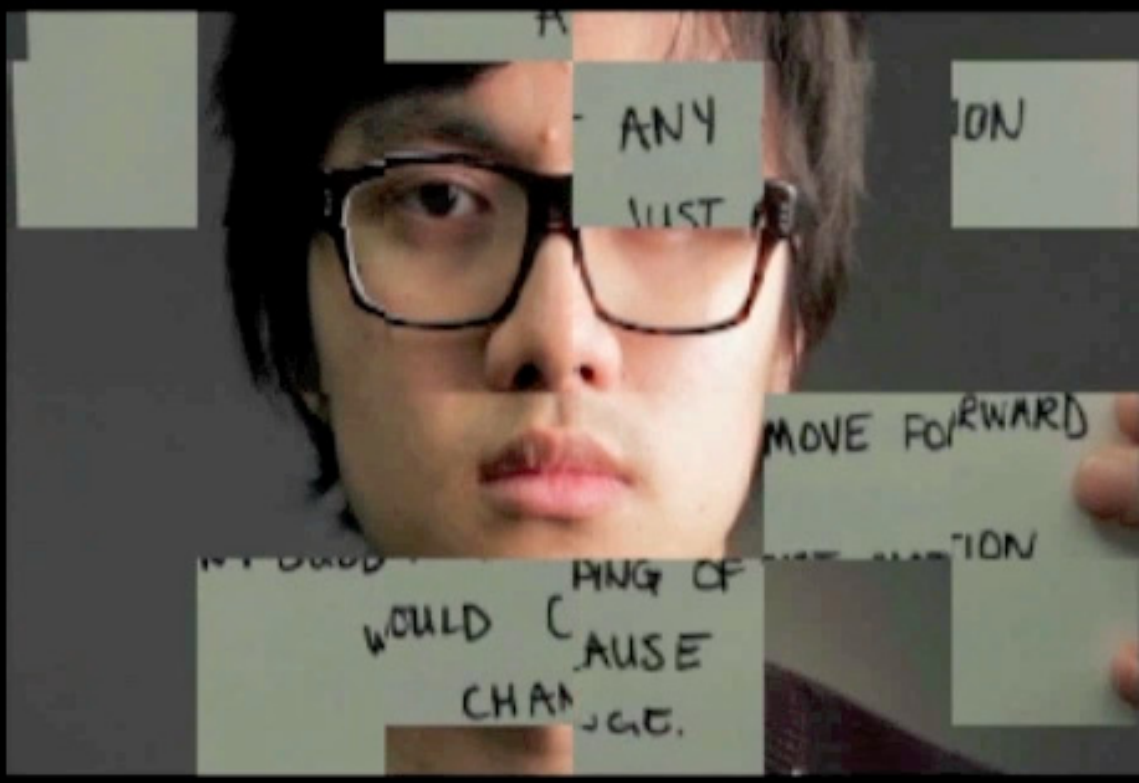
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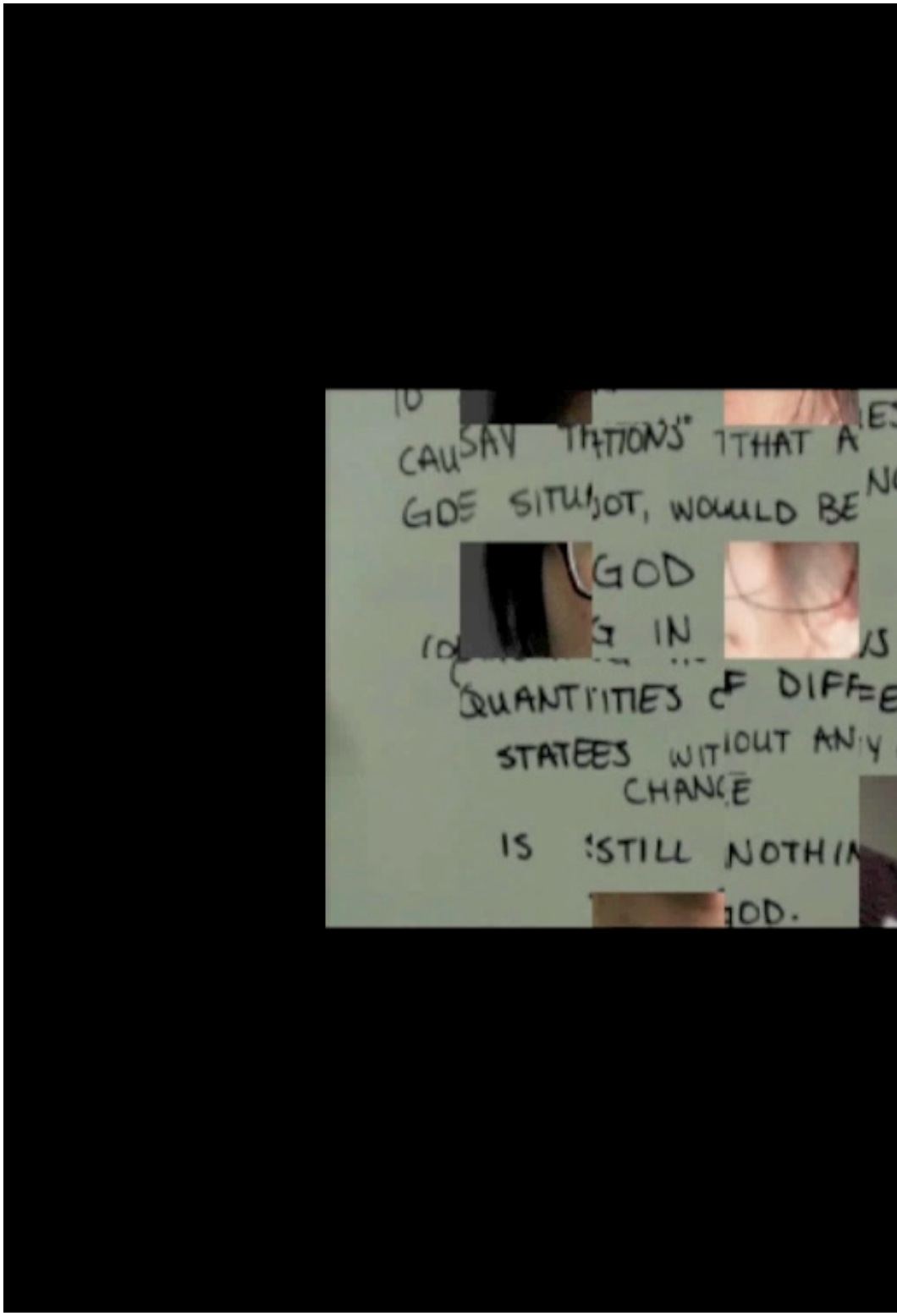
aries. The collaborative exchange is certainly not one-sided: such technologies as Ableton Live, HTML C4, Processing, Openframeworks, and Max/MSP have also helped my colleagues develop their thinking about literature and performance.



*Jessie Altura is an artist specializing in performance, video, and music. A graduate of the MADT program at ACAD, has since become an avid cross-genre performer in the Calgary scene, most recently participating in the M:ST Performance Festival.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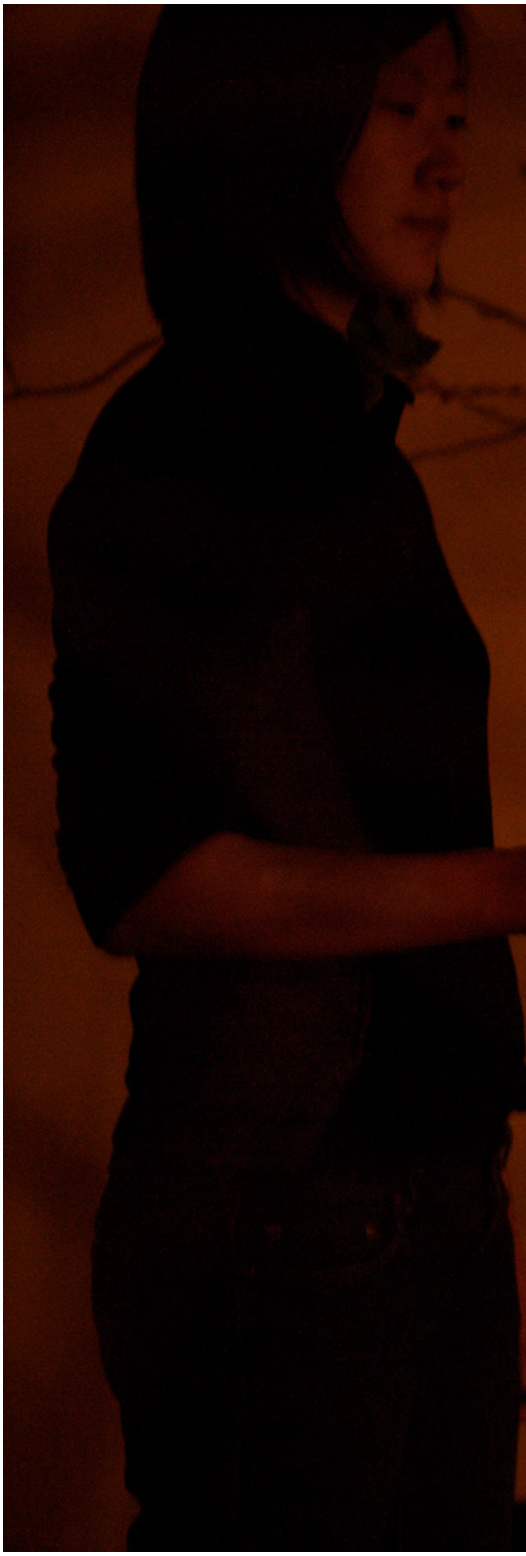
Sensing

I am interested in how digital technologies augment our awareness of the physical body and senses. Observing and re-purposing traditional functions of technology allows me to experiment with the new roles of our body as interface. Proximity, motion, touch, breath, sweat, heartbeat, and voice, thus, help define the relationships between people and objects.

Symforest (2009) is an interactive installation where participants navigate through a dark forest holding a lantern triggering a story of a night forest walk. The project is installed in a dark gallery space filled with trees. The lantern carried by the participants reacts to their stress responses superimposing the emotional state of the audience into the ambience of the room. A Galvanic Skin Response (GSR) sensor, traditionally used in lie detectors to measure the sweat in a users' hand, is embedded in the lantern's handle. The more the participant's hands sweat, the louder the audio and brighter the light become.

Symforest is controlled by two separate, but communicating systems. Firstly, a wireless GSR lantern measures the skin's conductance between two electrodes. Here, the participant's body acts as human resistors closing the circuit to control the brightness of an LED in the lantern. The GSR sensor, through an Arduino, wirelessly sends values to the computer, which controls the audio through a MAX/MSP patch. Secondly, a position detecting sensor grid, using laser pointers and dark-activated sensors, embedded in the 'forest' locates the user's position. Every time a participant walks around the forest and blocks the laser pointers, the MAX/MSP patch on the computer changes the types of audio triggered by the lantern.

A similar GSR set up was used for a very different static installation. In Kehai (2010, in collaboration with Garret Baumgartner) participants encounter an old chair in an empty gallery space. As they touch the chair they unleash a barrage of domestic sounds. The more vigorously the chair is touched the louder and more frenetic the sounds become. Kehai utilizes a GSR-based touch sensor connected to conductive threads embroidered into the arms of the chair. As with Symforest, the GSR circuit communicates through



an Arduino, this time activating a Processing patch to trigger the sound.

Here, the act of hearing is not only to sense what is making sound, but also to define a silent presence of what is missing. By activating and layering domestic sounds which once surrounded the chair the participants "touch" the chair's memories, sculpting the presence of absence of a room and time which no longer exist.

*Shiori Saito is a Calgary-based new media artist and designer born and raised in Beppu, Japan. Her multidisciplinary practice explores emotional narrative and interactivity through video, sound, imagery and sensor networks. Taking forms of interactive installations and experimental videos, her work seeks to create intimate and playful experiences that blur the lines between art, design, body and space. Shiori worked as a researcher and line producer at CE3C and is a graduate of the MADT program at ACAD.

Generative Explorations

I use generative and computational methods to create live 'drawings' or other unique compositions that explore the space between traditional, physical art and 'virtual,' digitally rendered pieces. My work compares and contrasts these trying to port the production fundamentals of one medium to the other. In doing so I try to move digital arts away from the polished, screen-based digital image or video that is divorced from its means of production.

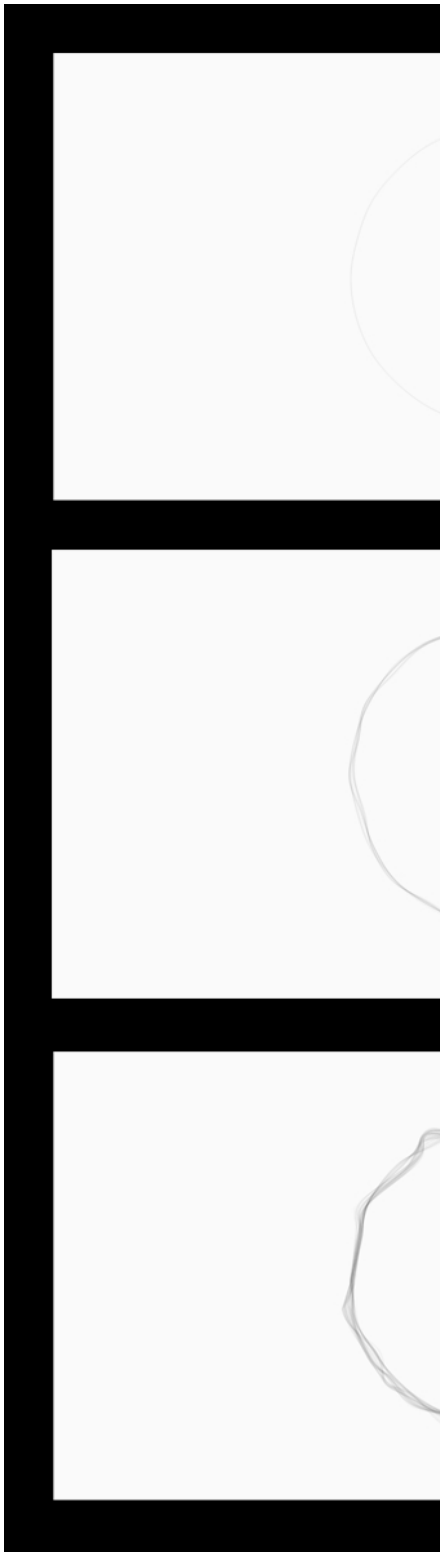
I do this either by translating the results of a digital rendering to another medium (painting, drawing, sculpture) through a process driven method, or I create programs that are unique each time they are executed and have them installed or projected into a space. In essence, I create work that the audience can experience in the same way they might with a painting or sculpture; allowing them to explore the process like they do for brush strokes on a canvas, or watching a form change like light and shadow over a sculpture.

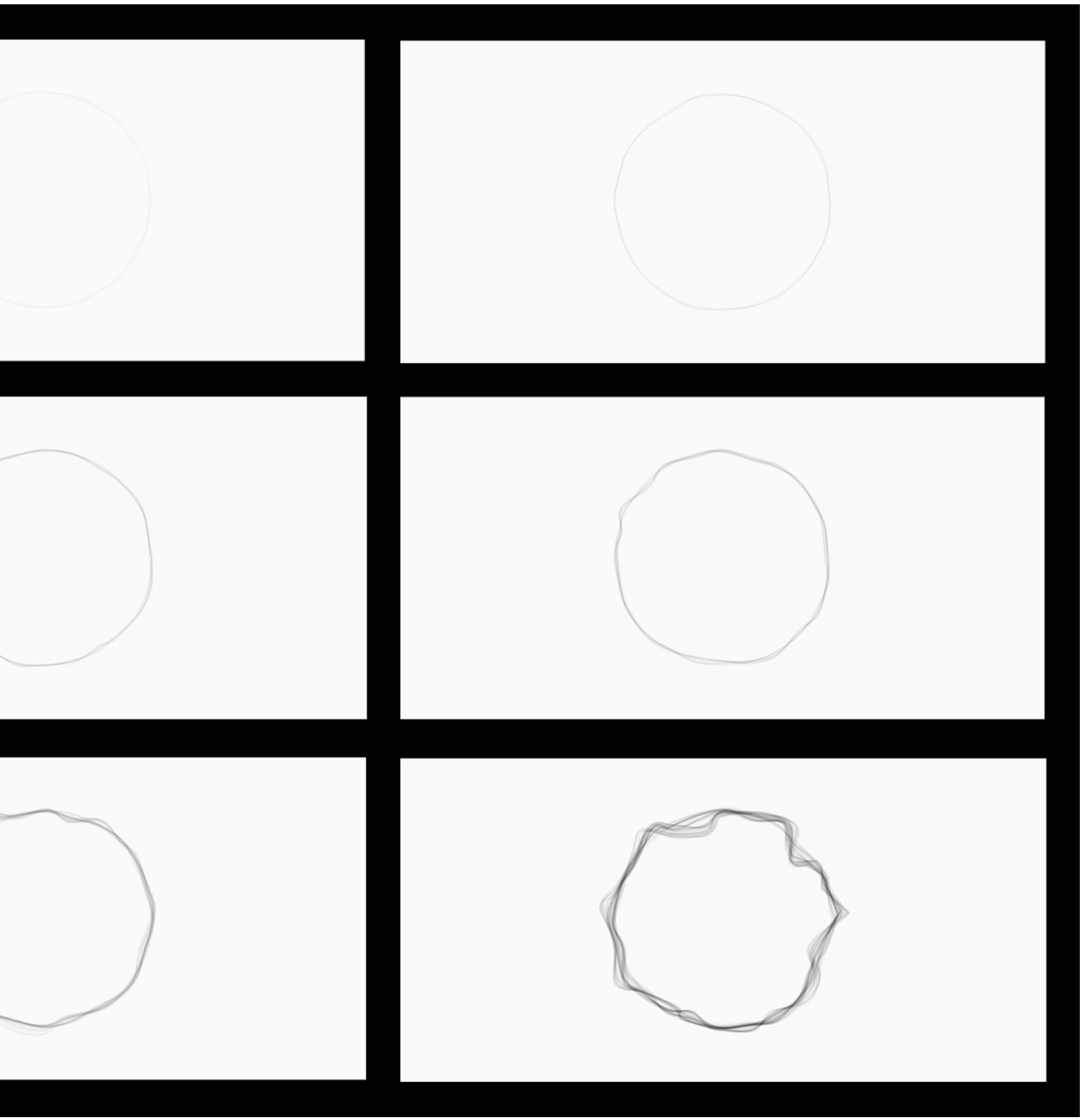
In my piece eclipse, the slowly morphing and changing rings of the circle try to capture the same feeling a person might experience while walking around and exploring a sculpture in 3d space. The work is different each time it is run, much like how each gallery space creates unique lighting conditions for a sculpture. In doing so, I attempt to connect the elements of a physical object to the digital one.

Eclipse was programmed in Processing. I created a polygon with several points and mapped each point to a position in a circle. As the program runs each point is given a small random change in position based on their previous location. The colour and opacity is set low, allowing for the shape of the object to slowly morph over time. As the program runs the lines overlap the previous iteration and the form of the object gradually comes into view.

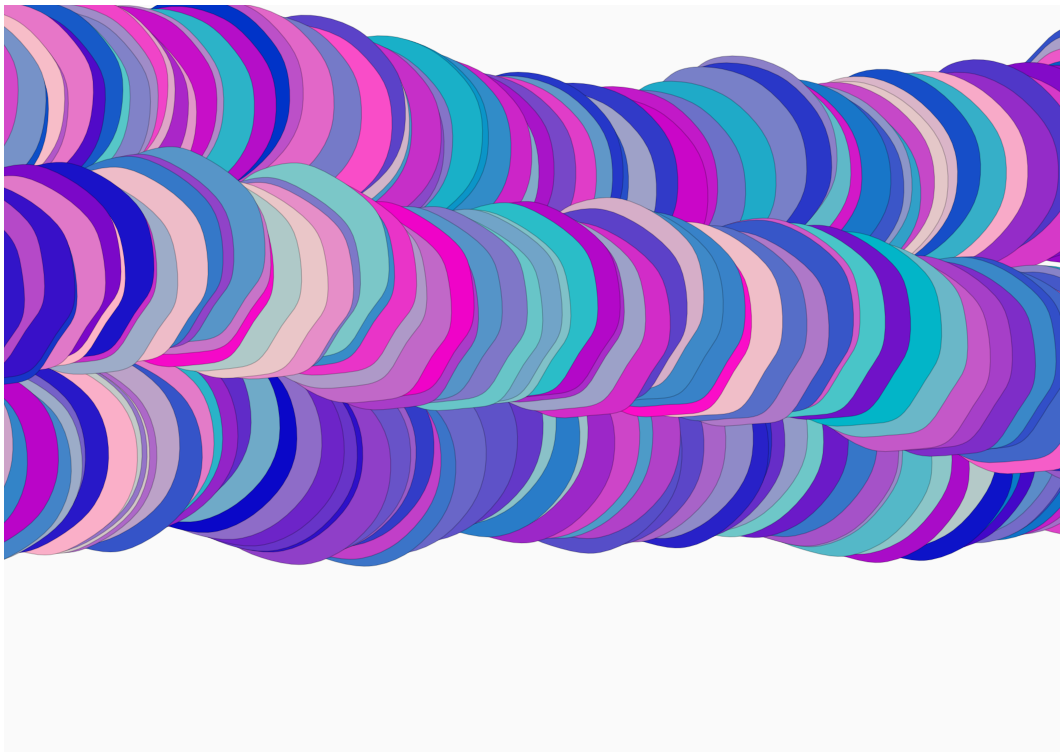
Dripping, imitates the process of drip-painting large amounts of paint to slowly fill a canvas by pouring the paint over the canvas and creating solid circles of colour. I use small variations in position and space to imitate the variation that a human artist might have, as well as the warping of the shape like it might with the change to a canvas as paint gets layered on.

Also programmed in Processing, Dripping slowly moves ellipses over the width of the screen. With slight changes to the distances be-

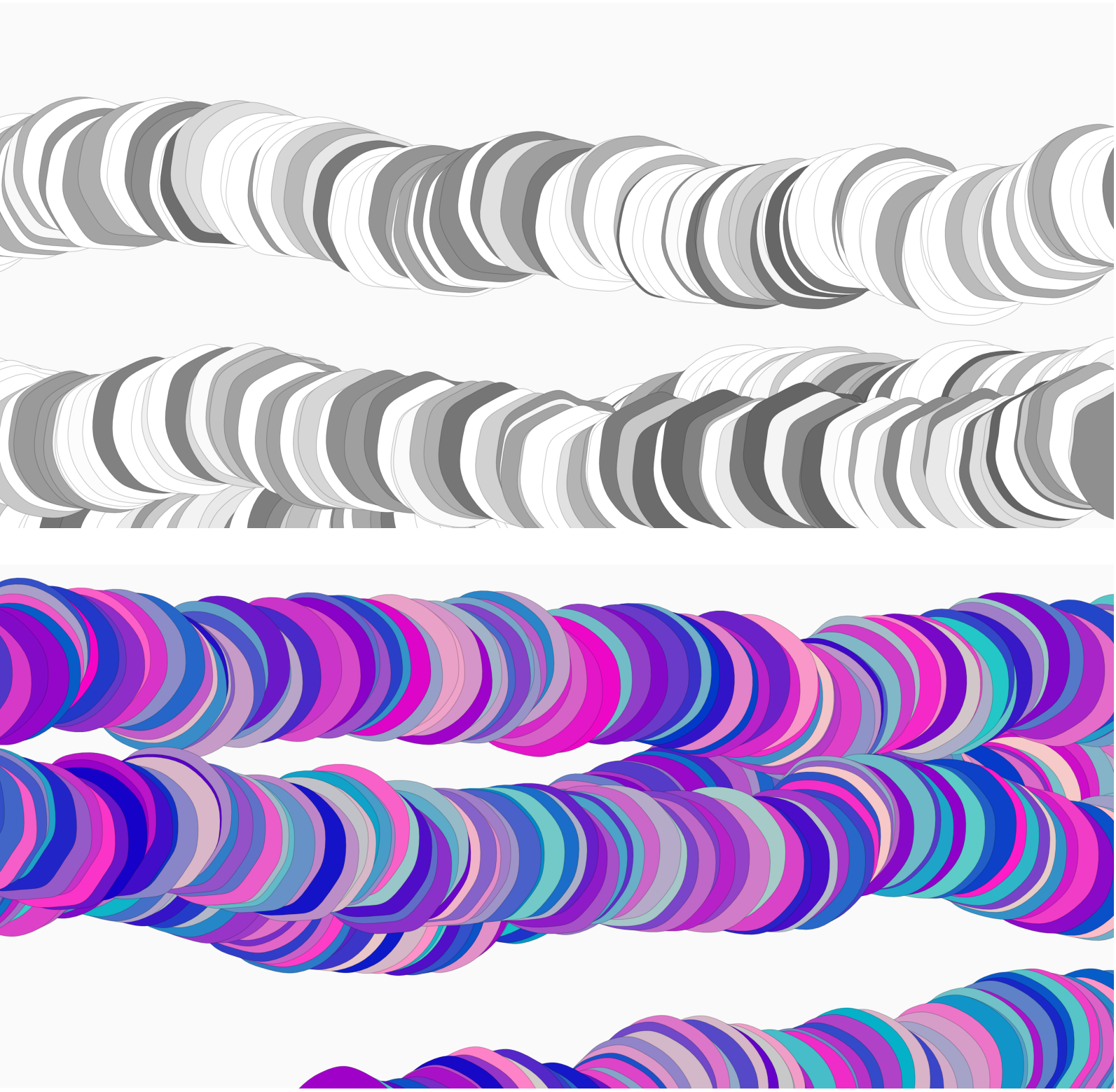




tween each ellipse and variations to their height, the canvas slowly fills with shape and colour. If the ellipses overlap one another then they are programmed to warp and skew, eventually the ellipses no longer resemble their initial shape and take on organic qualities.



Michael Wylegly is digital media student from the Alberta College of Art + Design in Calgary. His work explores the relationship between digital production and physical or traditional artworks. He practice focuses on different ways to reproduce digital work, either through exploring traditional media and techniques, or through the use of more contemporary technologies.



Digitizing Audience Participation

The power to augment reality, to either enhance our ability to interact with the physical world, or diminish our ability to distinguish between what is real and what exists only as bits of data on a computer, is what makes computer generated artwork such a compelling artistic medium for me. In my installation, Fountain Heads, I wanted to achieve a sort of surrealist feel in order to better explore and interact with this boundary between fantasy and reality.

Fountain Heads was coded in Processing and makes use of a digital camera, a projection screen, and a fiduciary marker set up in the middle of the room in order to 'augment' the reality of the viewer. When participants entered the room they would see a simple plinth with an abstract-looking fiduciary marker on it. When they looked up at the screen at the back of the room they would see the same plinth; instead of the fiduciary marker there was a fountain; out of the fountain floated partially rendered replicas of the viewers head—as if the fountain was trying to replicate its own version of the spectator.

Using a 3D imaging software called Blender the installation renders one or more augmented particles in the shape of a human head whenever one or more people are looking at the piece. Each individual ' head' is textured in real-time with the faces of whoever is looking at the piece. This is done using facial detection software based around OpenCV.

Many of the design and conceptual decisions were made as ways to work around problems that I encountered due to either limitations in the hardware I was using, or gaps in my own coding knowledge. For example, I chose the particle system to emulate a fountain because I would have an easier time concealing the fiduciary marker during the rendering on screen. The camera needs to see both the marker and viewer's faces; I felt that seeing the fiduciary marker on screen would detract from the work.

Another example was dealing with the rendering and camera mount requirements for capturing and mapping the viewers' heads onto the augmented head particles. Using photos to texture the entire surface of each head would have required both a more complex camera rig and further experimentation in blending each photo together

seamlessly. Instead, I only textured the face, filling the rest in with a color taken from each facial capture, and using a hand-painted texture map to fill in any extra details—namely, the inside of the ears.

**Jordan Peterson is a graduate from the Media Arts and Digital Technology Department at the Alberta College of Art + Design. Throughout 2012 Jordan was a production assistant on the C4 research project at CE3C at ACAD. His work revolves around interests in computer driven projects especially 3D modeling, 3D animation, and augmented reality.*

Go slow, go slow, Crete

Jill Saunders

I love maps.

I was that kid in gym class who actually liked orienteering. I like knowing exactly where I am, where I'm headed, and plotting the most efficient route to get there. I have three paper maps as backup in my car in case my Google printout gets derailed by construction or an accident. I get frustrated when people give me directions by landmarks. "Just give me the address so I can look it up on the map!" I want to shout at them.

Perhaps this was why the prospect of spending five weeks in a foreign country, with no idea of my itinerary, or where I'd be at any given time of the day, was mildly terrifying. Even if I had a map, it could hardly have helped – the street signs looked like particularly difficult mathematical equations, all omegas and deltas.

I spent five weeks on a group study abroad in the Kounoupidiana – a small town on the Greek island of Crete. It was such a small town that we never needed to venture off the main road. One road led to the technical university, and the other to the grocery store. I still have no idea what that road is called, though I walked it at least twice every day of the trip.

This is what I thought my story would be about: Learning how to let go of my compulsion to plan, to unplug and to unwind. And I did. Greece is perhaps the best possible place to lose track of time and the reasons why you keep to time in the first place. I ended up loving all the things I thought I would hate about the Greeks', especially their indifference to trifles like schedules. It was impossible not to adapt to the laid-back culture.

There were a few things that should have bothered me but didn't: the bus driver took several detours to people's houses to drop off their groceries; the professor that always showed up fifteen minutes after class his class was supposed to have started; the shops that routinely shut down for siesta, but the tavernas did not; the goat and roosters outside my window that bleated a raucous greeting to the sun every morning.

Another fact of note is that my Greek was abysmal. So terrible, in fact, that I'm still not sure what the word for 'no' is. What I do know is that the Greek word for 'yes' sounds like 'no,' so it was really quite impossible for me to turn down anything. This was how I ended up eating the suction cups off octopus tentacles, drinking homemade raki with a snack-shack owner on the beach (He claimed that his 'Greek water' was the best on the island.), and buying 'worry beads' that the old men sit around

and play with all day – although I am still not sure what you are actually supposed to do with them. But knowing such details was trivial in Crete; the important thing was taking the time to do nothing, and to do it well. Dinners usually lasted up to five hours. It was not that the food was too important – though it was absolutely phenomenal; it's just seemed like they placed more value in doing things that were pleasant, in more ways than I had ever experienced before.

If the weather was hot, you were more likely to sit in the shade with a friend and nurse a cold drink. If it was cold, you would sit and chat with the locals in a café, drinking excessively strong, syrupy coffee. If it was cool and comfortable, you explored the side roads and watched the most beautiful sunsets in the world. The important thing was enjoying the pleasure of good food and good company.

I'm not sure if it was the beauty of the place itself or the beauty of this philosophy that makes me pine for the Greek islands so much. The island itself was stunning, rich in Minoan history, and full of the most delicious feta, lamb, and gyros that you would ever eat. But what I find myself remembering most fondly was not just these obvious pieces. I miss the attitude that seeps into you; the peacefulness that comes when there is no rush to do anything, when everything you do is pleasurable. It was difficult even to work up worry when the bus driver was careening down narrow cliffside roads. The locals on cafe patios simply scooted their chairs over to make room for the bus, and all was well.

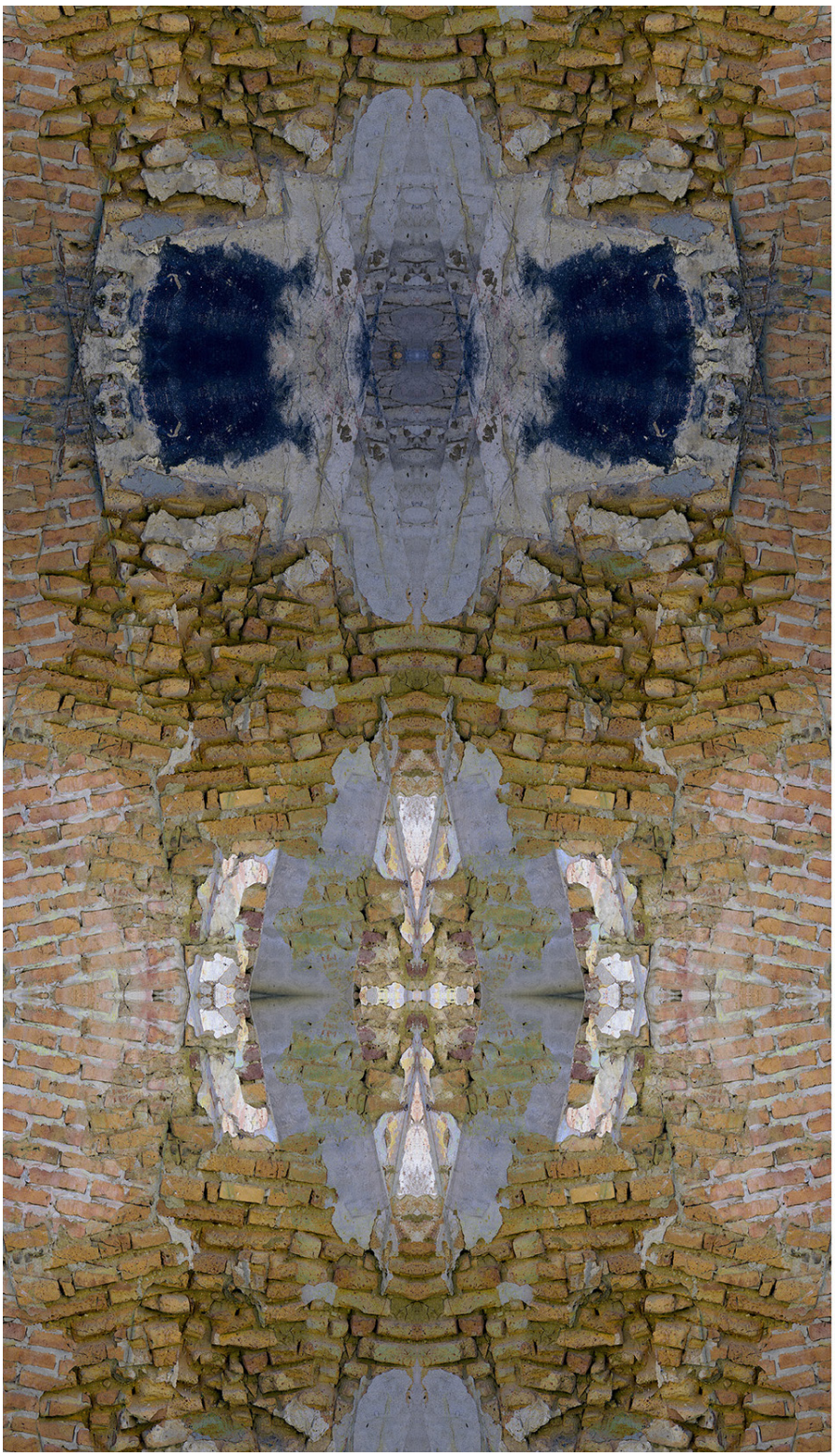
Can I spend an idle evening at home in Canada, watching the sunset with a friend and a bottle of wine? Yes. Do I? No. It is much easier to unwind when you are never really wound up. This pervading sense of calm hangs over the island, a feeling that life will continue, unrushed, as it always had been. This, to me, is the essence of Crete. It is a place that is comfortable in its own skin, at ease in letting the world hurry past.

I'd like to go back someday. But there's no rush – that wouldn't be true to Crete.

End

Jill Saunders was born and raised in Red Deer, Alberta, and is currently finishing a degree in civil engineering with a minor in architecture.

Photos courtesy of Jill.




Who Made That?
Why Authorship
Doesn't Matter
Anymore and Why
We need to Ask
Different Questions
in Digital Art

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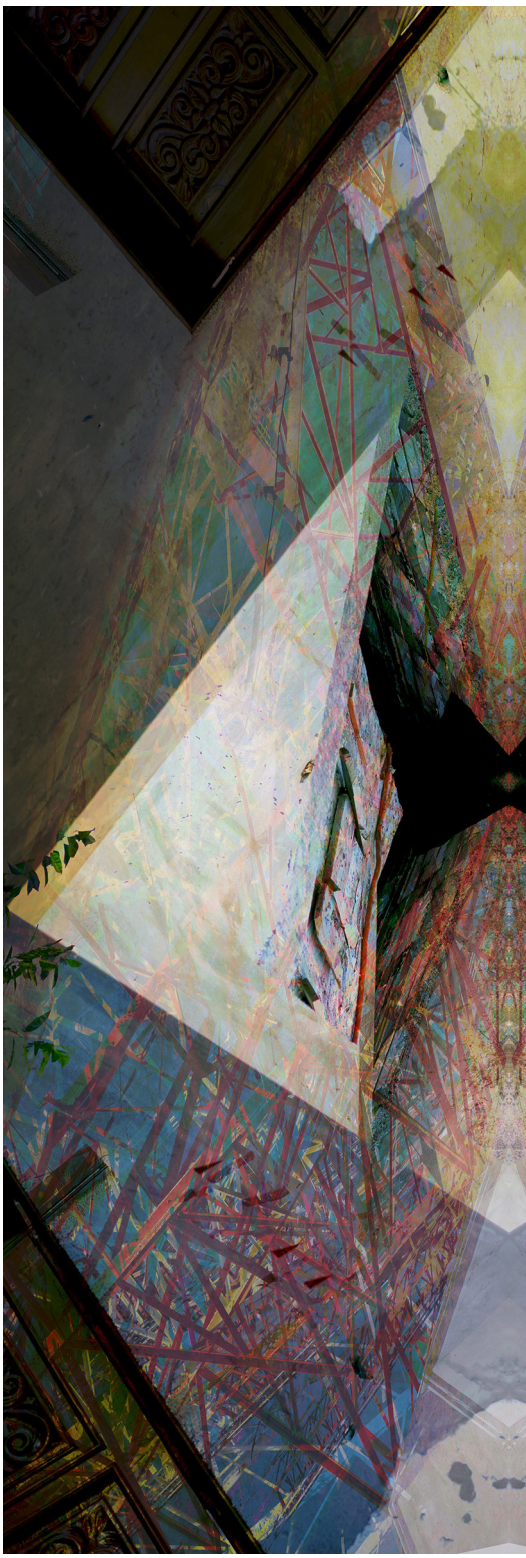
Jennifer Eiserman, PhD and
Gerald Hushlak, MFA, RCA

Who Made That?

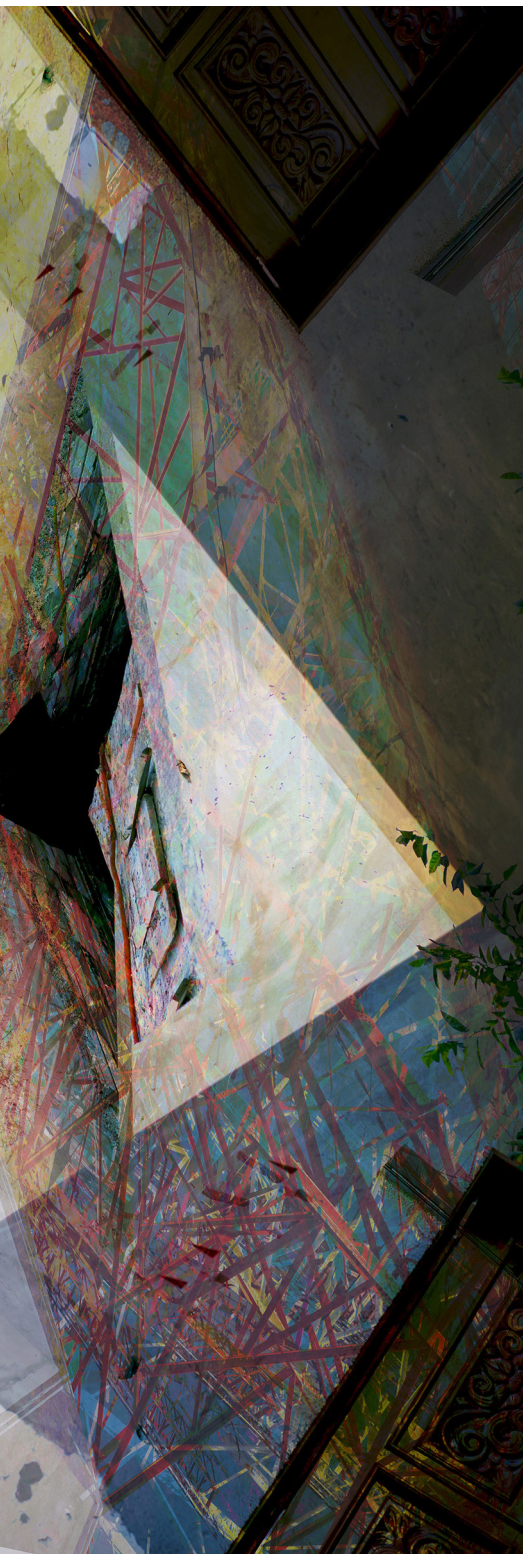


Abstract
In this paper, we elaborate on a set of critical criteria for 2-D digital artworks based on inherent properties and possibilities of digital manufacture: To what extent does the artwork make use of the potentialities of the media it involves? Does the work provide opportunities for the makers and users to establish and share their reactions to the work? To what extent does the process allow makers and users to create and share knowledge? How do digital outcomes position themselves relative to contemporary drawing, painting and printmaking? Because digital art is an expansive discipline, this paper limits itself to 2-D outcomes identifying with the paradigms of contemporary drawing, printmaking and painting.

Keywords
Digital image, digital art, social networks, information cultures, collaboration

Introduction

As an art museum educator for ten years, very rarely did the author hear a non-expert visitor ask, initially, “Who made that?” More often the first questions about a work of art were, “What is that?” “What does that mean?” These questions might be followed by “How was it made?” or “Why was it made?” “Who made that?” rarely became an issue to the non-expert viewer. Despite this lack of concern by the viewer for authorship, critiques have spent the last thirty years decrying the lack of uniqueness, the specialness, the authorship, of works of art created with computer technologies. When digitally generated drawings surfaced in the mid seventies the question of authorship was moot: the technical quality of the results from the available tools was not comparable with drawings or photographs created by humans. However, today, the question of authorship takes on new significance with computers functioning as creative partners resulting in highly articulated imagery. We are beginning to think that all this fuss about authorship and the uniqueness of the work of art is like trying to eat soup with a fork. “Who made that?” is just not an appropriate question in the world



of digital art. That which Bloon wrote about media texts (2011), can also be true for digital art,

It is logical as can be, but not apparently for the publishers of paper. In an environment with new possibilities, I do not want to be confronted by old limitations. I want my media to be diverse (also audio and video), I want my media to be up to date (latest information always available), I want my media to be social (be able to share content with people), and I want my media customized (matching my interests). [1]

We propose that in the digital art world criticism needs to focus on the issues that are of actual concern to the artform. In this paper, we elaborate on a set of critical criteria for digital art that are based on inherent properties and possibilities of digital art: How is the media being used? Does it make use of the unique affordances of the digital paradigm? Are metaphors borrowed from non-digital forms still useful in contemporary digital art practice? Does the digital work of art allow the user[1] to share their experience with others? Does the digital artwork provide issues of interest to the user? How are quality and worth determined when original artworks can number in the tens or even hundreds of thousands? Given the capacities of digital media to be collaboratively produced between artists, between artists and machines, replicated, transformed, and shared through online networks, questions of authorship and uniqueness important to modern art[2] of the last 600 years are no longer relevant. However, first we need to separate what is of digital concern from the concerns of drawing, painting, and printmaking.

Subject Matter and Narrative

In the work of the co-author, evolutionary computing processes manipulate input digital photographs through a transformative process yielding iterative images that self augment to a point at which reference to the original input subject becomes insignificant. Photography required for this process is almost opposite to the renowned digital transparencies of Jeff Wall who meticulously plans every aspect of the photograph. The implications of talented authorship are diminished because the computer does its job as mediator and partner in the creative process. Therefore, we propose that within the digital art paradigm, input subjects matter less. The machine/software imposes its own style onto the outcome; therefore, the digital input imagery addresses not the picture but rather what is required for the evolutionary/batch computing method. The machine's authorship

1 We believe the idea of "viewer" is now obsolete in this art world and discuss this further below.

2 Art historians have labeled work beginning in the 14th Century that shows that qualities of known authorship, humanism and naturalism as "modern" as opposed to medieval.

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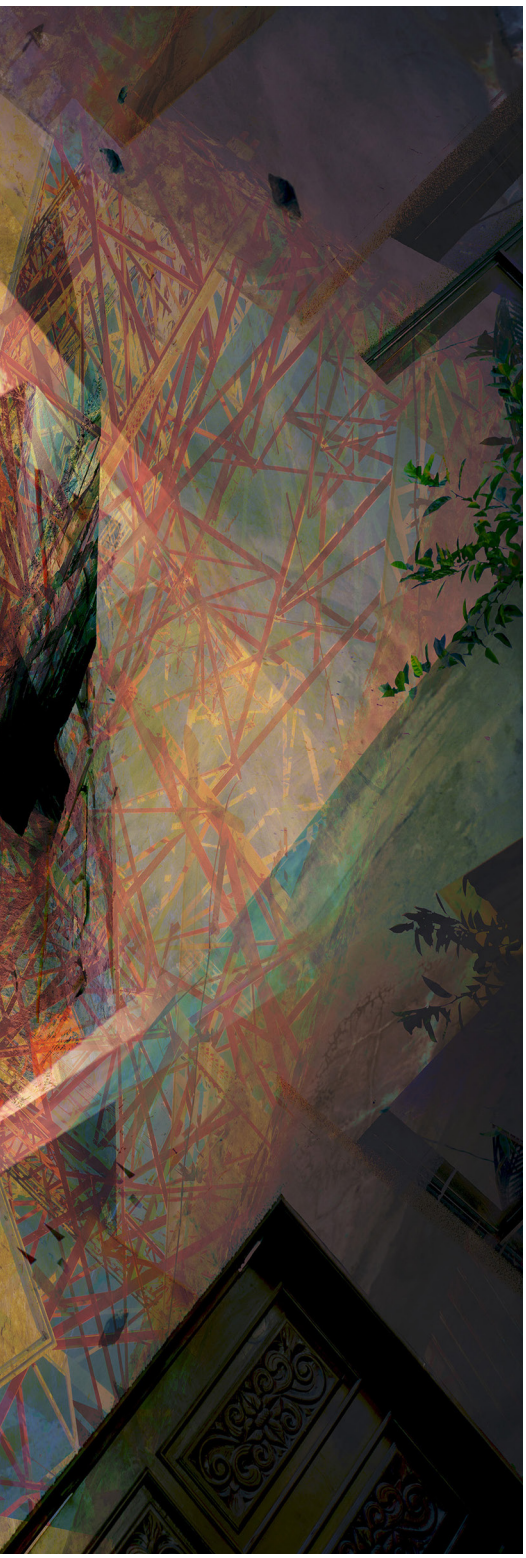
is at least equivalent to that of the photographer providing fodder for the process. Achieving success in the programming procedures often sacrifices that compelling engaging subjective ambiguity inherent in art. A deficiency in the poetics of the final look of the computer partnered work can be the result of functional expediency. Although not an exclusive example, "movement" of forms within a two-dimensional composition traditionally engenders a narrative. In a digital image the form/subject serves as a visual placeholder to communicate the initiating creators' ideas, however, similar to cloud watching, as the images evolve so must the viewer's narrative response. There is no "story", the iterative work doesn't conclude, although it may end.

If one operates outside limiting narratives one can optimize the virtuoso generative processes as the unimaginable is created. The symbiotic computer partner excels at design based outcomes. Rather than focusing on the creation of a singular visual image advocating a particular message or corresponding to a particular art theory, the machine and artist together evolve, mutate and recycle images and ideas. Instead of legislating the process towards a conclusive product, content is extracted from the continuum of iterative generations. An example of this dynamic taken from traditional art is a painting process involving pouring paint that invites a balance between the craft/skill of application and the randomness of how paint flows. The master will read the subtly varying floor elevation as a symbiotic drawing partner to control paint flow. A symbiosis establishes itself between control and accident; the accident helps author the piece. The language created through the artist partnering with the paint to create mediated failures and accidents is similar in spirit to evolutionary computer process embracing, keeping and recycling elements towards intended outcomes that occasional go splendidly rogue.

Materiality and the "Hand" of the Artist

Another element that defines authorship, and thereby value to a traditional 2-D artwork is the personal "handwriting" of the artist. Notation is a unique function of the artist's use of a particular material. It varies from the transparency of watercolors influenced by the physical inconsistencies of the texture of the paper and the opacity of the wash, to thick impasto applications of oil paint applied to canvas that track all inflections of the movement of the artists' arm within each single unique mark. Within the mark the art-



ist's jitter, calm, pressure, weight interact with the paint materials opacity, flow, resistance etc. The computer may be tediously programmed to emulate some aspects of the human touch but the notational mark of the artist, as influenced by their surroundings, that agitates or calms is never part of the computer "look" even when entered with the most advanced drawing tablets. Because the "handwriting" of the artist cannot be properly emulated through software, it has been minimized as part of the software design drawing process. Although artists and connoisseurs who come to digital art from traditional forms may decry this lack of individualization, a new generation of artists who have grown up engaging with computer screens accept the democratized surface as the only available idiom. The software designer engaging the computer has distilled out one of the fundamental pleasures of engaging traditional artworks. Predictability and recognition of the sign for an object has replaced not only the object but the scrumptious interpretation as presented within the materiality of painting. Notations that defined the artist's authorship have been substituted not because the simple outcome is better, but because it is arduous to program.

Artist, Exhibition and the Viewer

Since the time of the petrographs, the roles of creator and viewer of the image have been distinct. The artist creates the image and it is presented to the viewer for its educational information or transcendental value. Traditionally the viewer has been a passive receiver of the image. Again, the digital artist has the capacity to print an image, either two or three dimensionally, which can then be exhibited within a real space, usually an art gallery or museum, to be collected, either privately or publically and treasured for its unique physical existence. The hardcopy of a digital image can exist like any other artwork on paper or canvas. However this same art image also exists in its digital form offering unprecedented opportunity for engagement with the viewer by sharing and even collaboratively augmenting outcomes. Virtual worlds, social networks, on-line databases can provide the digital artwork and the user a platform for interaction. No longer is the receiver of an image a passive viewer. The intention of the artist in creating the image (to communicate information, to educate or to provide a transcendental portal) is no longer fixed. The image is valued not as a conclusive statement, but as input for a further unfixed dialogue. Posted on artists' and museum websites, flickr, facebook, etc. users do not necessarily access images for the traditional activities of contemplation and transcendence. Images of-

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fer the potential to be downloaded, reworked, re-contextualized, uploaded again as they become part of a globally networked visual dialogue. Within the context of digital art, the notions of the master artist and the passive viewer have little meaning. All become authors who create.

So, who is the Artist and what is Art in within Digital Art? Below we propose a theory of digital art situated within a Deleuzian ontology, using the co-author's work as an example of a Digital Artist and Digital Art.

Artist and Art

Proposing a Theoretical Context

We propose an aesthetic theory for digital art that situates the digital image within a Deleuzian ontology as a shifting, moving occurrence that is always in a state of becoming in the present. This context provides for the unique qualities of the digital image as described above: categorization, infinite permutations, multiple authorship, and networked global dissemination.

The element of time

Fundamental to Deleuze's ontology is his notion of time. For Deleuze, the past, the present and the future all exist in opportunistic possibility. The present occurs while actualization takes place. The past is a great reservoir of virtual being Deleuze calls "nothing". Deleuze uses the example of DNA codes to describe this "nothing". The codes stored in our DNA are nothing, they are instructions that may, or may not, be carried out in the present. This is why he calls the being of the past "virtual". The things that exist are not really there, only the instructions for what may come to exist. In the present, conditions exist that reach into this reservoir and connect with a virtual being that can be actualized.

The future is pure potential that radiates from its present source in infinite permutations. Deleuze describes this as throwing a dice [2]. We throw the dice in the present; the future is created when they land. We have no idea which of the infinite permutations will come to be until they come to rest.

Deleuze urges us to focus on details, fragments, difference, and the countless ways that details can be connected to each other [3]. It is in this way

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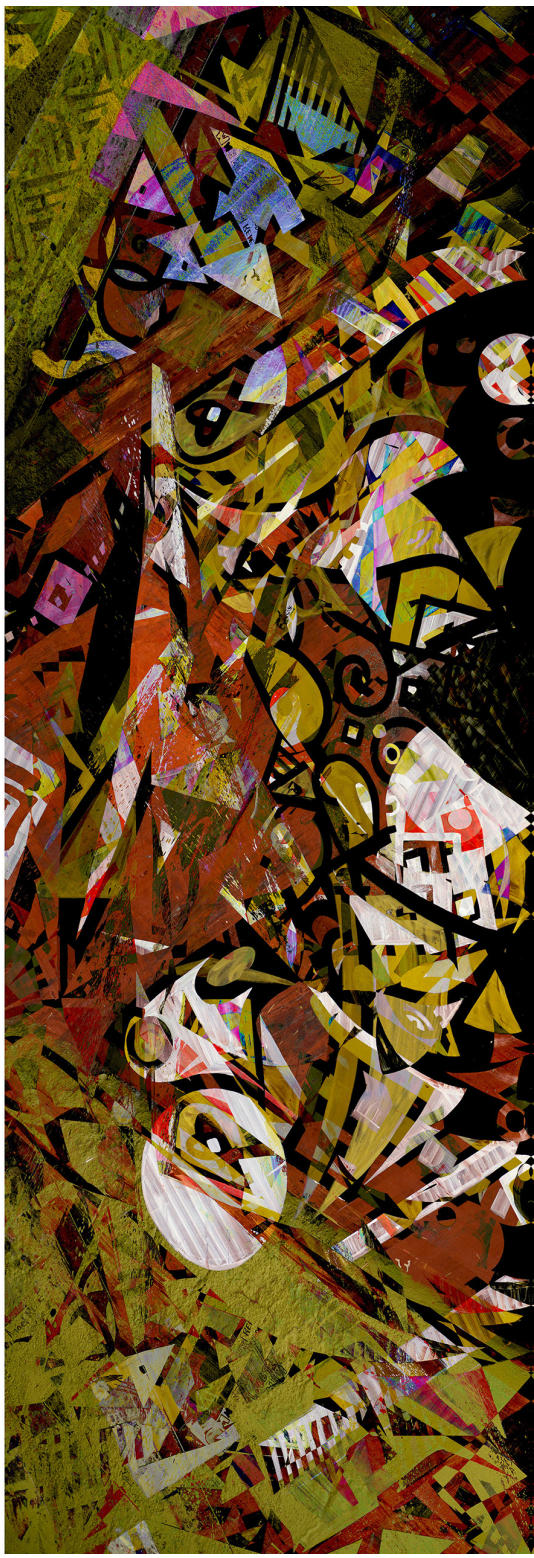

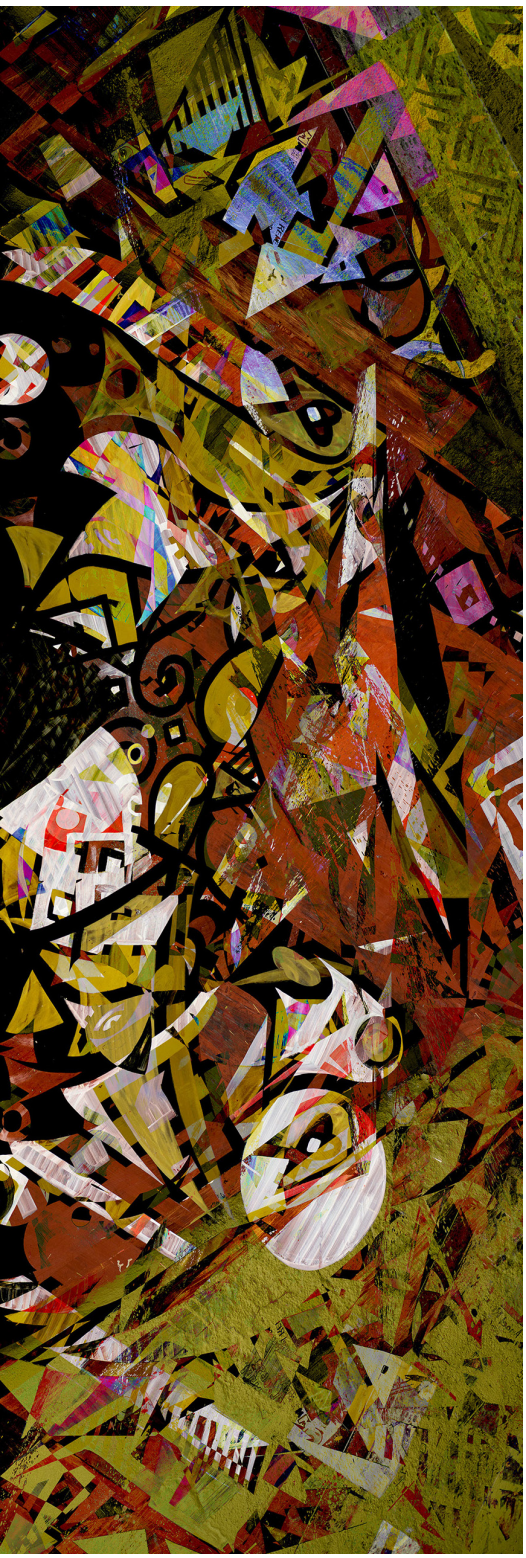

that we can get beyond our pre-conceptions and generalizations about the nature of things. To use an example from Deleuze, we can understand differently when we contemplate the connection between the bee and the orchid, and not simply the bee, and then the orchid as discrete: whole things define themselves though a relationship. The universe opens up further as new connections are discovered between things that seem to have no connection at all. This is fundamental to a rhizomic approach to understanding.

To apply these concepts to the creative process, one needs to consider that the artist actualizes something in the present, to set the dice in motion for future actualizations. The artist, Deleuze believes, helps us to create new networks of understanding; the artist finds new problems, asks new questions by making unlikely connections between details. It is in this way that partnering with the computer, the artist continually generates possibility.

Digital images can be printed, which stops them in time, or alternately, they can be emitted from a monitor or projected onto a surface that could imply further creative opportunity with a simple click of a mouse. In the universe of the digital image there are no surfaces, only the potential of energy becoming light, moving along paths set by the conditions of code. It is this quality that provides the opportunity for the digital artist's Deleuzian creativity. A code may provide an origin from which the source images, in generative systems, reorganize themselves. As the images transform through self determining processes they actualize into new entities: sometimes these images are unimaginable, and sometimes they subvert art expectations.

The element of space

Deleuze and Guattari discuss what they call a "smooth" space, "open and unlimited in every direction...[that] does not assign fixed and mobile elements but rather distributes a continuous variation"[4]. When one examines digital images, one discovers an arbitrary end that concludes at the edge of the screen like the edge of paper. However, digitally one understands that this edge can frame a larger universe of the image, in which the permutations are evolving "unlimited in every direction" [5]. This space covers a lot of ground, not only from left to right, or top to bottom, but into the transformative depths of the image. However, it is not inconsequential, cursory or misleading (as one definition of "superficial" states). Unlike analogue photographic prints, digital images succinctly reveal precise relations

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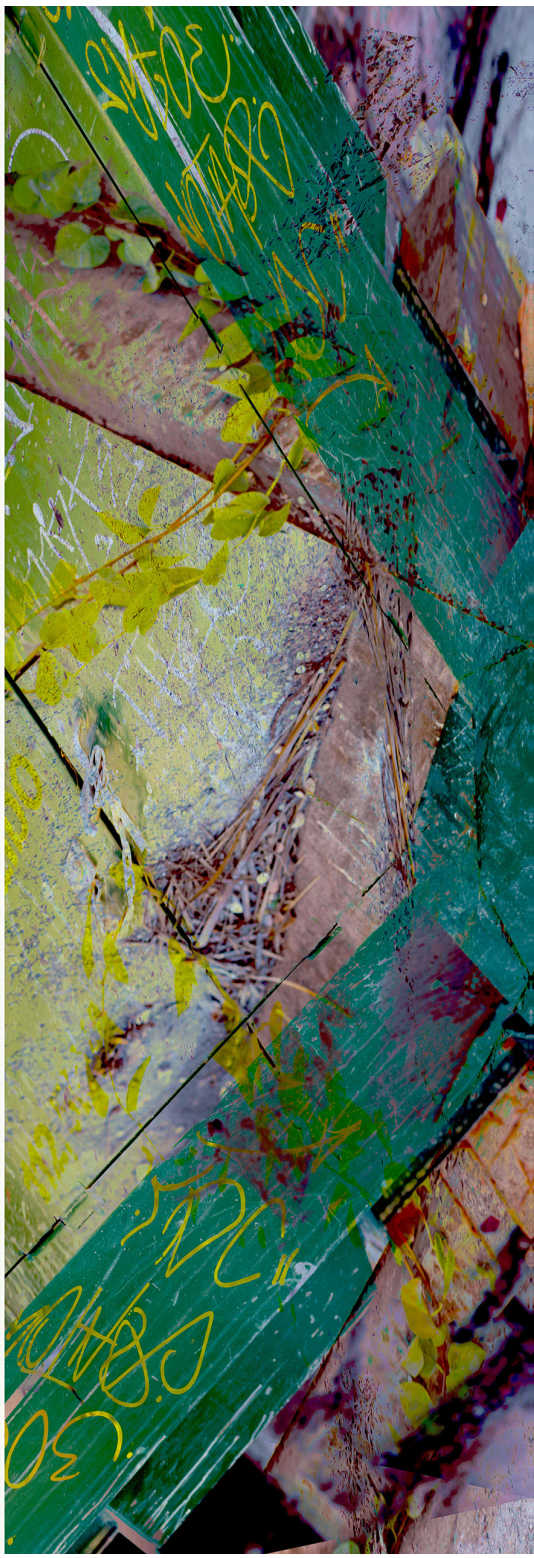

when we zoom deep into the complicated image space on and behind the complexity defined through image surface.

Images "present" events

As one can discern from the above, this work is not concerned with representation, signification, or memory, or in Aristotle's sense, "a presence of past things". As Deleuze and Guattari concur, images that re-present are based in understanding time as linear. The image that exists within a linear time system is shackled to the cause/effect narrative structure of that system. It must correspond to a moment on that time line, a moment that is the result of something which existed before and that will affect the moments to come. It re-presents that which was; it establishes the structure for that which will be. Instead, the co-author's images exhibit a Deleuzian concern with the coming to be of things in the present: they actualize and re-actualize the relationship between the source data and the program code at any given moment. The images are presented; they do not re-present.

In the co-author's work, the image, engaged in an event that is always occurring in the present, does not engage in narrative. Deleuze's notions of "image-time" and "intensive" time provide us with an understanding of this. As observed and articulated by Harland [6],

If haptic visuality can be the experience of a 'close view', without the classical perspective of distance, then might haptic time be a form of temporality that has no structure of distance? In the Deleuzian transition from the time of the 'movement image' (a logical continuum of moments in a linear sequence), to that of the 'time image' (a non-sequential collapsing of the actual/virtual) do we not enter smooth territory, a close or perhaps inside view; a time without entry or exit? Haptic time might propose itself as a time which eschews narrative, on which privileges material presence over representational structure, a 'direct experience of time through the body' (Marks 2000:163).

Thus, the co-author's drawings become extractions, samples or models of the events presented. We conceive the work of art as the digital image equal in value and quality to tens of thousands of other drawings done by the same artist. With this new understanding, the drawing becomes a document that is witness to the event. Like the insect pinned to a board, a specimen of the living system of which it is a part, a detail, the drawing is

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a specimen of the digital image's actualization. The exhibition of drawings is an archive of documents attesting to events.

The idea that the art object is a trace or document resulting from the artist's engagement with materials is not new. What we bring to this idea, in the light of Deleuzian ontology, is that the digital artwork, rather than being a trace of the artist's activity, is an event that results from the artist creating the conditions for images to present themselves. The printed images that the co-author chooses to isolate are not a trace of his activity. They are specimens of the relationship between source data and code; a brilliant beetle that was once part of an intricate eco-system but is now de-contextualized, objectified, named, pinned and unrelentingly begs reclassification.

The Work of an Artist

Partnership with the iterative computer program nurtures the accident and embraces the surprise; it allows the artist to overlook the past and exist in the now of the current iteration unraveling and redirecting its process. The network of the artistic past is inherent in the software programs that can be stored like preserves for lean creative times; the computer that offers "isms" of the past does not intrude unless summoned to do so. If accident is part of the process it is better to work badly than not to work at all; the next iteration that happens in seconds could generate a research direction for the next year.

An artist should never stop making or thinking about art. The present nurtures better questions and this translates into a more meaningful quest. This position of never losing ground is applied to the software and machines that run 24/7. Like the dial on a radio the artist can change the settings into any predetermined station offering a level of assurance that a particular setting will position you in the ballpark of predictability. During the earlier stages in this process, the direction of a dozen machines was set for the day or week, and occasionally for months allowing the computers to build folders of drawings on their own. Working with a dozen computers each doing a different thing is logistically challenging; current preferences are to to work with a half dozen 8-core machines each connected to a couple of multi terabyte hard drives. It is interesting to reflect on the implications of reorienting creative directions upon returning from an extended absence while the machines worked 24/7. If there is one machine iteratively working,

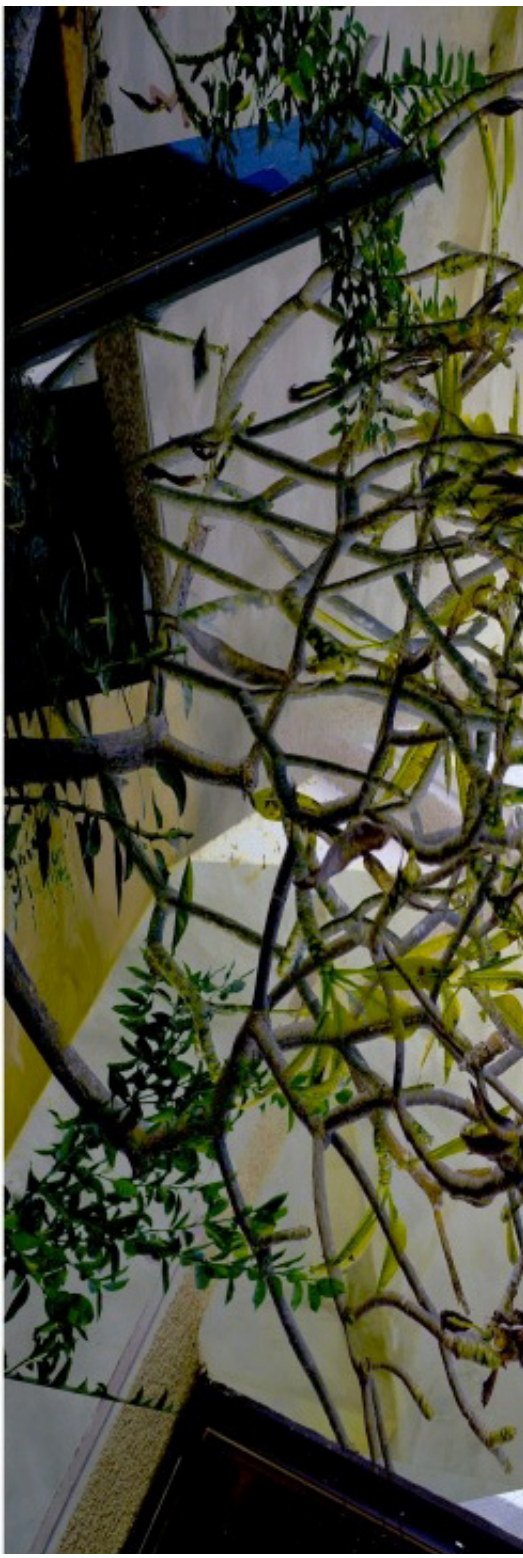
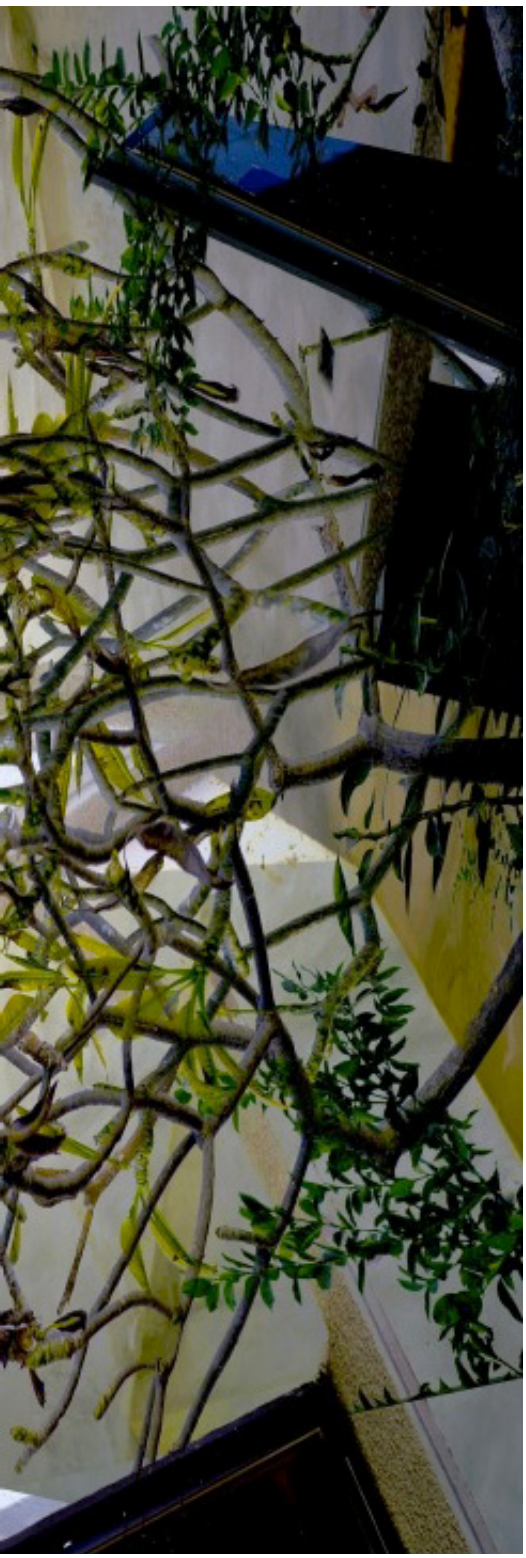


Figure 1. Computer evolved drawing by co-author



remembering artistic purpose establishes a useable point of reference, with a dozen machines strange related attractors begin to occur. When there are thousands and thousands of images without recognizable signs creating themselves, one forgets and looses context. The images that result from offering instructions through a satellite phone to technicians (while photographing three dozen zebras as they become a changing blanket of interactive stripes) are more idealized and often result in better solutions than the results defined by the pragmatic efficiency that informs the impatient artist present in the studio. Staying away, and letting the machine take the lead is a humbling artistic testimony.

Often as one intrudes into the process to check that the machines have not crashed, one discovers visual relationships at random entry points that are inconceivable and sometimes provide unanticipated answers around pondered questions. The drawings are watched like a detached security guard watches life go by on video monitors. When an interesting image comes up, it is extracted and placed into a new software string commencing a new iterative pathway generated on separate machine. Some place in the ephemeral world of media information I remember the utterance that "dreams are answers to questions not yet asked". This applies very directly to becoming a voyeur of your own creativity when the numbers of results are overwhelming.

Conclusion

With digital and on-line technologies something new has arrived for human image makers: the ability to automatically generate thousands of images that never require intervention by the human hand that can be shared and altered by millions around the planet, and that can continually generate possibility. This unprecedented image making technology creates new functions for art yet to be explored. As artists embrace this image making technology and art becomes something new, it is important to consider how it is becoming; and, as Deleuze might have said, what it might become. To apply aesthetic concepts to digital art based on traditional technologies of the brush and chisel is to limit its ability to generate possibility. It is to circumscribe digital art within a paradigm that uses forks, when we need to use spoons.

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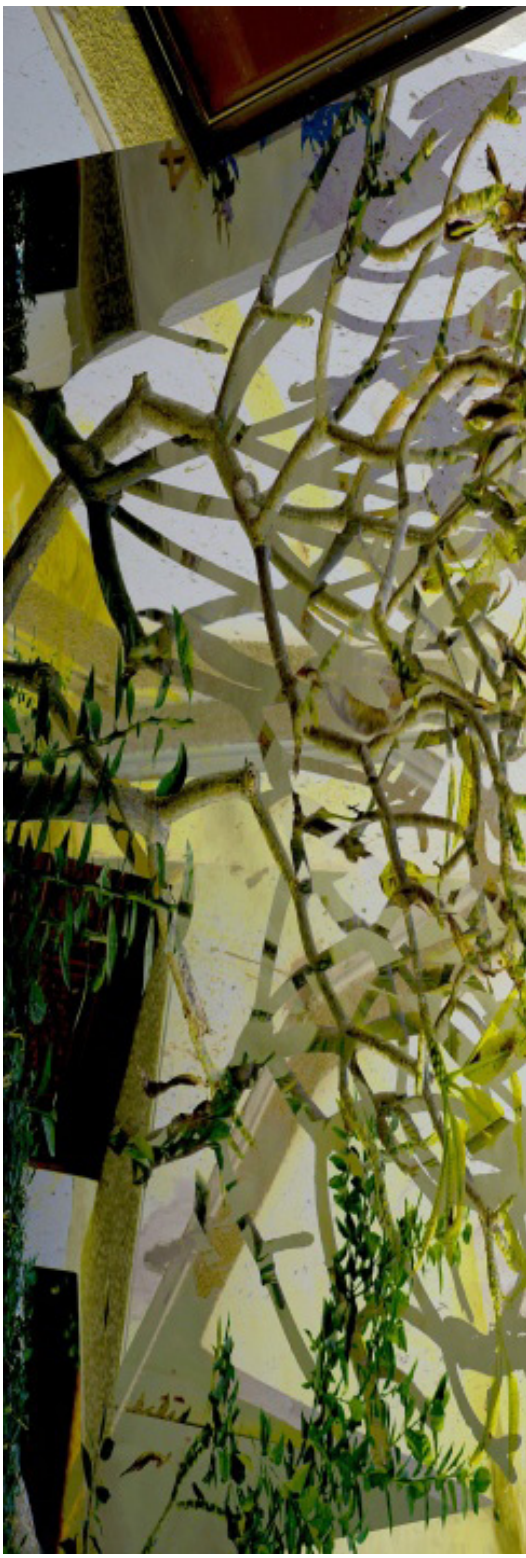
In this paper we have explored how the subject, narrative, authorship, ownership and preciousness of an image are no longer relevant issues in the world of the digital image. We have proposed an aesthetic theory for this world that provides for the active, collaborative creativity of digital art in its networked, global context. We have shown, through the example of the co-author's work, the extent to which the work can make use of the potentialities of the computational, evolutionary media processes. We have explored the potentialities of the active use of the images by users to create and share knowledge. As Hall wonders about scholars and their authority we also posit regarding the authorship of the artist:

Instead their authority shall rest on their ability to search, find, access, and even buy knowledge and information using online journal archives, full text search capabilities, online table of contents alerting, and citation tracking, and to organize the results in patterns, flows and assemblages? [7]

I am not sure that I exist actually. I am all the writers that I have read, all the people that I have met, all the women that I have loved: all the cities that I have visited, all my ancestors. [8]



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[5] Ibid, P. 25.

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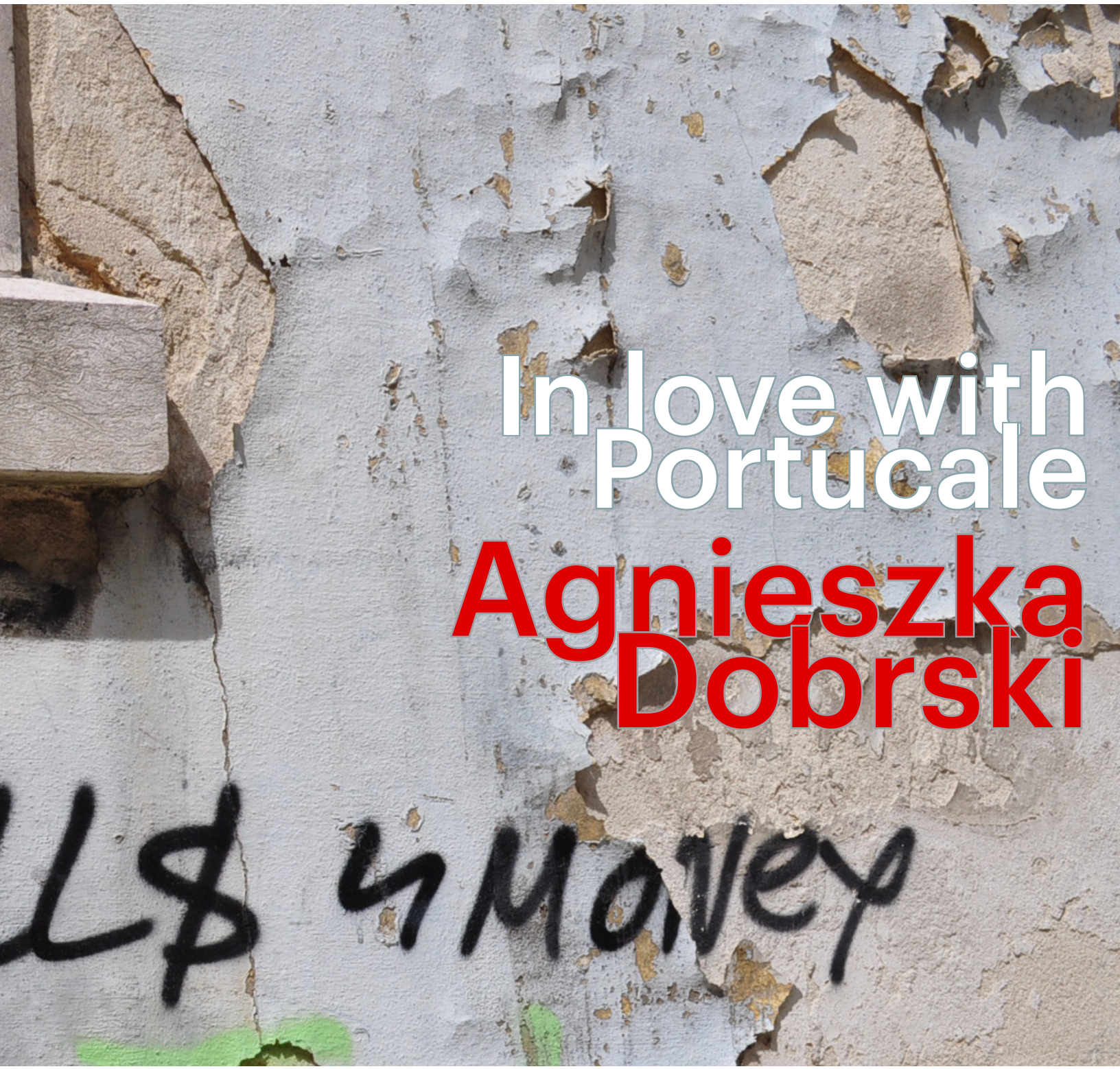
[8] Quote from Jorge Luis Borgese


ROBERT K.


In love with
Portucale
Agnieszka
Dobrski

The thing that stands out the most, really, is the way in which everything seems to have evolved organically in Portugal – bits and pieces, accumulations of artefacts, dust, history, and sensual detritus. Here, in my younger corner of North America, all is orderly, mandated by corporate decree – repetition of style, function, form; repetition of brand name, artificial flavour, industrial safety standards. Older places are more human in scale: grown rather than built, imperfect, shabby at the edges, crumbling charmingly or gleaming sleekly (often side by side), overgrown, disorganised and madly beautiful.

Having spent the last few decades in the grid pattern, it was easy to get lost in the myriad of turns and corners that led to our apartment, but I noticed quickly that Lisbon required of me a greater engagement with my surroundings. I needed to orient myself spatially in a very different way than back home. The legibility of the place became paramount; meandering was the preferred mode of transportation. We walked and walked and walked, the soles of our feet slapping rhythmically against the granite cobblestones that covered not just the streets but also the sidewalks of the city, eyeing the peeling facades of

grand old buildings slowly slipping into a glorious decrepitude.

That first night, walking the winding narrow streets of Alfama with friends we hadn't seen in years, we did manage to lose ourselves – the wine was so good, the dense bread and the local cheese, the multi-coloured streamers blowing in the evening breeze in preparation for a saint's day celebration. We spent hours in a neighbourhood Fado club where everyone sang – the waiter surprised us by bursting into song along with a young woman and an old lady with the voice of a thousand lovers. Later on, snacking on smoky sardines at an outdoor grill, listening to more Fado streaming through the speakers, it became patently obvious that we were far from home and things were good.

Every step of the way the Portuguese people opened up their hearts to us: at the market, where a little old lady refused to take money for a handful of sweet golden plums we wanted to try; in Porto, where a man who did not speak a word of English attempted to explain to us how lost we were; at the roadside vegetable stand where a toothless old man mimed for us that the melon we wanted to buy was for seeds and not for eating; at every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store and every restaurant and every café where we were treated like long lost friends and not annoying tourists who did not speak the language. Perhaps the biggest difference that we noticed was that in North America the locals expect you to make yourself understood; in Portugal the locals bend over backwards to figure out what you want from the broken bits of language you have managed to cobble together.

Portugal is a country of red tiled roofs, rolling hills, windmills and winding country roads. It is teeming with monasteries, farms, orchards, castles and so much picturesque charm it almost becomes indecent. Around every corner beauty catches you unaware, grips your heart and threatens never to let go. Its imperfection is part of its charm – there is nothing sleek or packaged about Portugal. In fact its greatest tourist attraction, the southern coast of Algarve, is the one place that feels least like Portugal and most like a travel brochure. It is the one place I would not recommend at all, not with all of that the west coast has to offer, minus the glitz and expense.

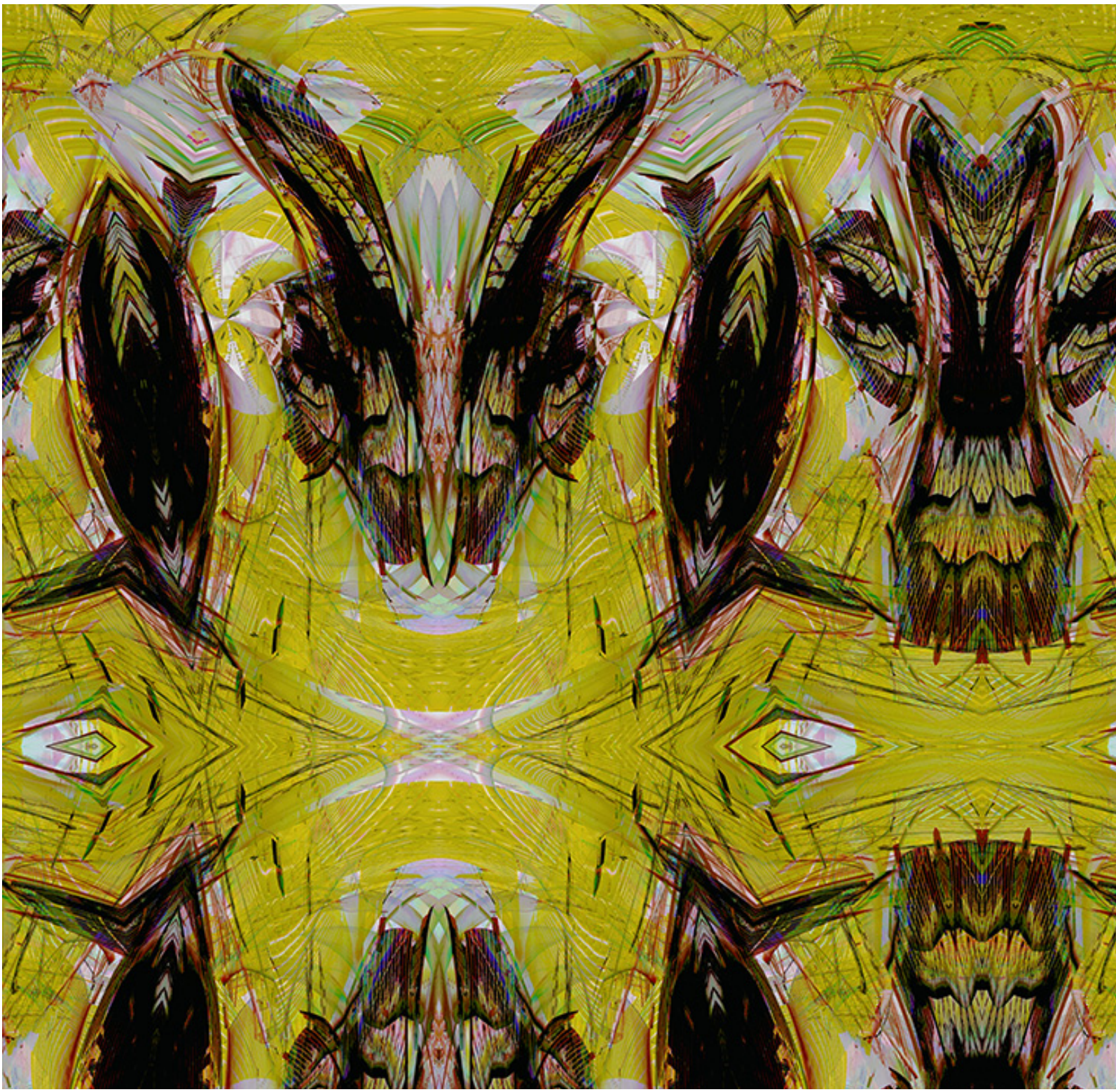
I love the new world, it is my home and I have no desire to go back to

the old, but gods, it feels good on occasion to go back to the starting point, to see the colourful imperfect beautiful alternatives to the orderly thing we call our "lifestyle;" to see the reality of family life instead of the lip-service paid at plastic-boothed chain restaurants; to eat food that tastes like it came from the ground instead of a sterile Styrofoam tray. We fell in love with Portugal completely; we fell in love with the Portuguese people with equal intensity. Disinterested kindness, hospitality, patience, a non-servile desire to please greeted us at every point. I really cannot remember being that charmed by any group of people in my life and will most certainly go back.

End

Agnieszka Dobrski was born in Poland but immigrated to Canada 30 years ago. She holds a diploma in dental hygiene, a bachelor in English, and is currently working on her master's degree in Urban Planning.

Photos courtesy of Agnieszka.




Portfolio
Gerald Hushlak

Interview with Gerald Hushlak

What are you working on right now?.

My scattered working process requires that I have too many projects happening at one time, forceing me to invent new ways of implementing efficiencies. These usually entail using a computer or assistants. A nurturing environment in which unresolved and changing ideas cross-fertilize is required for my work to be mobile, sometimes forward and sometimes backwards but always changing in overloaded clamor.

Presently I am working on two SHHRC funded projects which impose focus because of a deadline. "Digital Dance" deals with an interactive body movement transferred telematically between two locations, and Breeder Art deals with evolutionary imaging.

Digital Dance is a collaborative project across universities: my task as Principle Investigator is to adapt Swarm- based software that embellishes, augments, and enhances image capture data using MOCAP systems and Kinects. This data is reconstructed and refolded in Maya where we have created a virtual morphing environment that changes, builds and self generates sculpture offering unprecedented object relationships.

Three dimensional animation clusters of design elements fuse, collide and attach themselves to become an unrelenting image generator palpating meaning from the input source image signs. Presently we are capturing images using ballet dancers, however once the software infrastructure is in place, it is our intention to apply the animation procedures to any 3-D form: an inanimate totem will dance and self generate new form with actions to similar those of a ballet dancer.

The exhibition and dissemination aspect of this project is to use telematics to facilitate real time interactive dance/movement between two locations. Dancers and audience members will interact and collaborate with each other as their real time images are projected on 24M planetarium type projection domes.

The second project is titled BreederArt. BreederArt uses a half dozen 8 core computers running 24/7 to manufacture thousands of large very high resolution images (1GIG) that through scripting are evolved towards gargoyle type form deriving from unrelated photographic input. Even though the input is photographic, the first stages of the process intentionally reconsti-

Interview with:
Gerald Hushlak

Artwork:
Gerald Hushlak

tute the image to negate its perceptual and identifiable relationship to the parent photograph. The photograph becomes raw data that is skewed to operate within the evolutionary process through our scripting.

The underlying objective of this research is to understand how different ethnic peoples derived their first imagery and how its appearance derives from indigenous and localized materials. Drawings and forms similar to those of the ethnic groups are being created by the computer as a by-product from the evolutionary processing .

These images are being translated into the computer to examine and determine what types of visualization strings (styles/subject) are common to different ethnic groups that were isolated from each other through physical location and time.

The research attempts to understand how the particular ethnic aesthetic we have come to understand as "primitive" also emanates from the computer evolution of imagery.

Which work / exhibition / image have you seen recently that really excited you?

Because I am working with MOCAP from dancers I was excited to see the Alberta Ballet's interpretation of Twyla Tharp's interpretation of a snappy Philip Glass tune. It always good to see Gilbertoyed a book that didn't relate to my work (that book would have been Siddharta, which I remember was a wonderful counterpoint to going out to a Saturday night art opening where consistently the vertical pronoun is so very prevalent) : I say this as I very slowly make my way through Deluze's thoughts and ask whether part of his soul is hanging out at my studio.

Who do you admire? Why...

Anyone who has not gotten fat on both the inside and the outside: mostly those individuals secure enough not to need to be right.

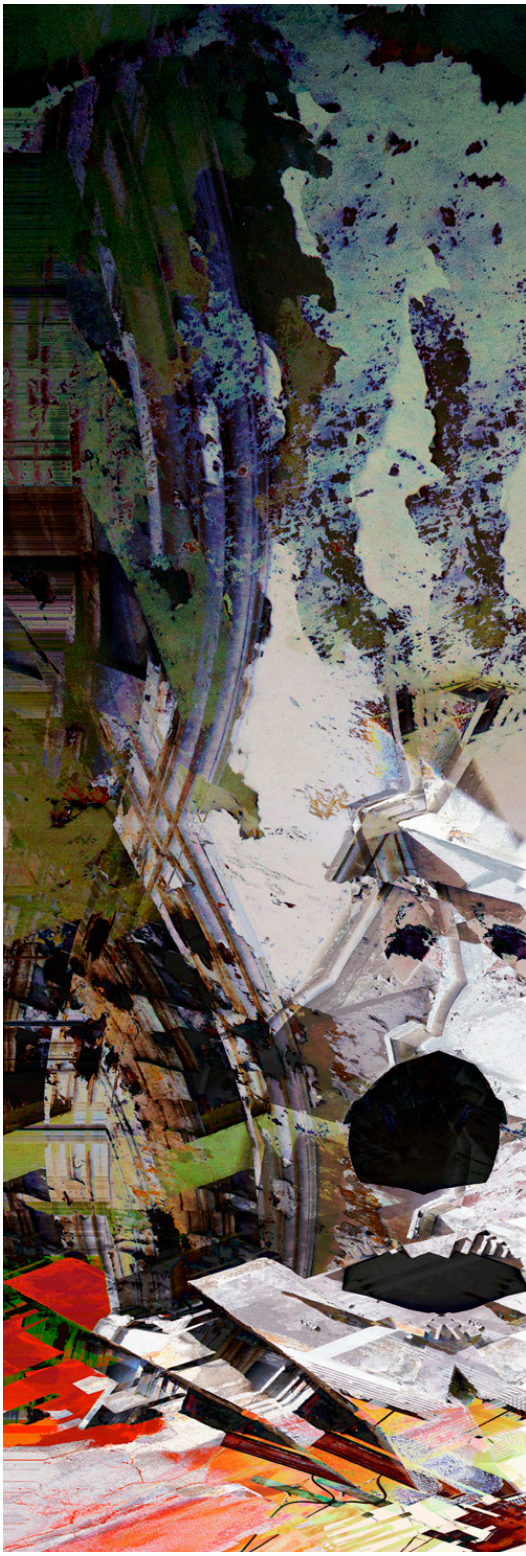
I also admire people my age who are not on marginal fixed incomes so they still have the opportunity to dream and play. If you want an artist's name it would be John Baldessari.

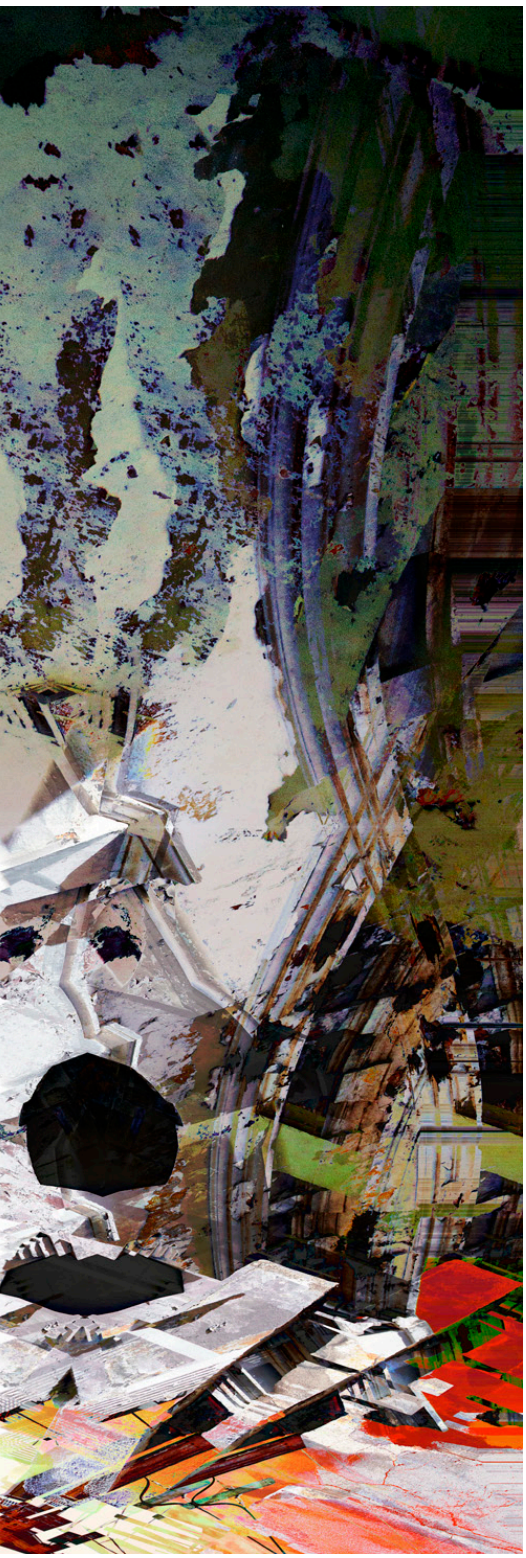
What's your favorite motto or quote?

If it ain't ambiguous it ain't worth doing.

Your favorite art work of all time?

Mark Rothko's maroon painting suite when they were located in the wonderful changing light of the Tate.





What is your idea of perfect happiness?

Establishing an evolutionary system for generating imagery which would self perpetuate and learn and evolve itself long after my demise. In this life, making art that only has to go through the door of my studio without having to consider whether it is a success or failure on the marketplace.

If you could choose a different profession or career, who/what would you be?

I would need to invent a name for the job and of course give it professional status...I have unsurpassed success at taking products back to resisting stores after they have been purchased.

What/who is your greatest fear?

Dying before my work has exhausted itself.

(And finally, the most important question:) What are you wearing?

Same thing every day, old jeans, black T shirt, Fruit of the Loom boxers and very expensive Italian designed running shoes that, unfortunately, don't stop me from slipping on corners. I look consistently like I wear the same clothing, but when I find a sale good quality clothing I buy a half dozen Armani blazers that are the same, or a dozen pairs of Prada shoes. I just hate shopping for clothing so I buy in bulk.

About Gerald Hushlak:

"I exhibit mural-size paintings in museums, build rapid prototype sculpture defined in a three dimensional modeling package, Cinema 4-D, and plot 36"x 50" Giclee printed drawings derived from our own evolutionary computing software. In collaboration with Drs.Jacob Boyd, professors in Medicine and Computing Science respectively, we have created audience driven interactive computer installations using evolutionary computing. Over my art career I have participated in 40+ one-person exhibitions in public museums and art galleries. In the last five years we have presented installations, or hardcopy deriving from the installations, in more than a dozen exhibitions in different public galleries around the world. SwarmArt, the name we have given to this interactive visualization process, has been screened on Discovery Channel many times and is featured in "Leonardo"."

Interview with:
Gerald Hushlak

Artwork:
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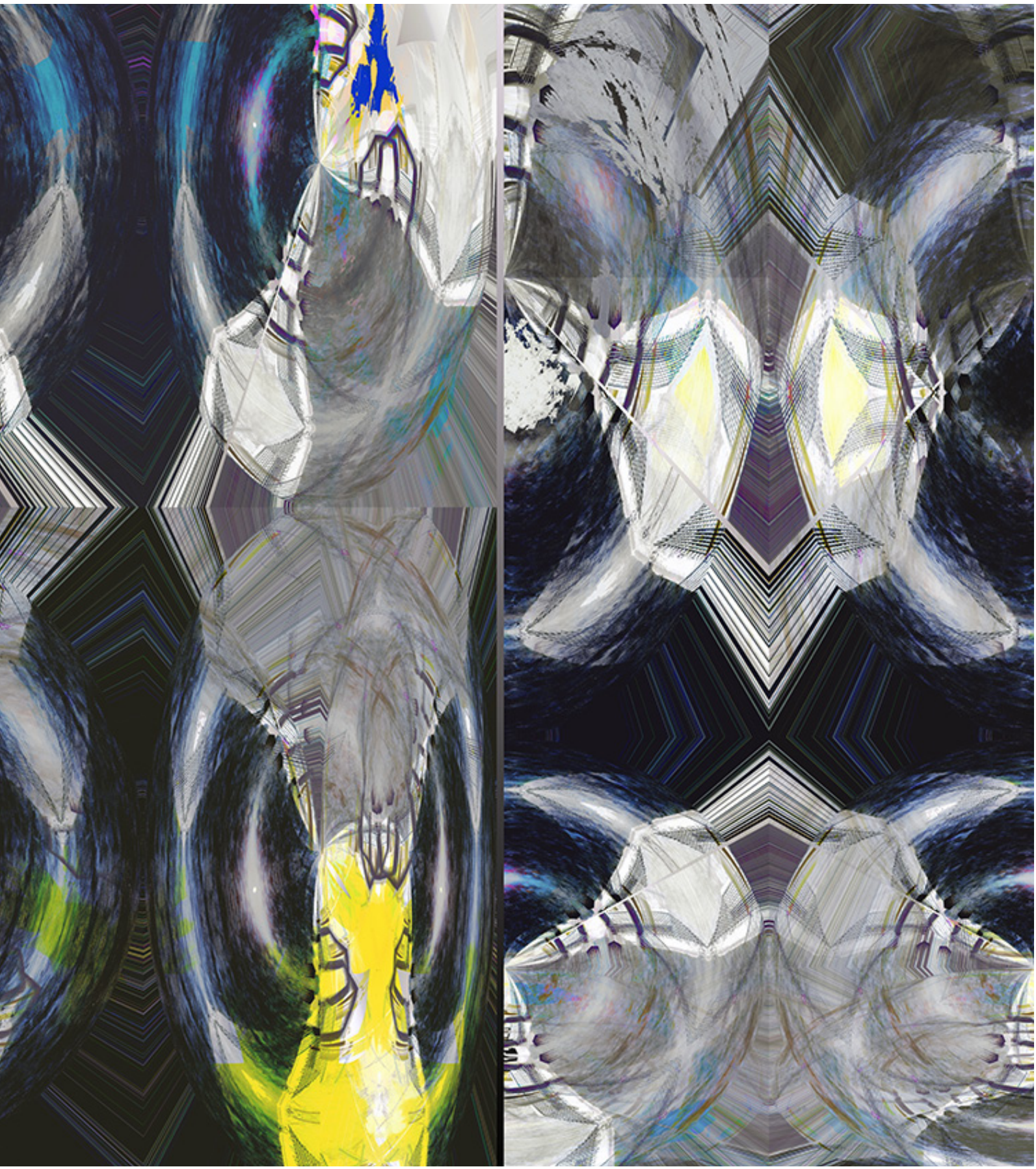

Interview with:
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Artwork:
Gerald Hushlak

Mt. Kailash – A Tibetan Pilgrimage

Eva-Maria Hempe

The jeep just hit another pot hole, although given the state of the roads for the last four days we are starting to expect nothing else. From the dashboard our only tape is blaring Chinese music. It vaguely sounds like "buying macaroni"; so Florian, Sarah and I join in to the tune and sing about pasta. But however catchy the tunes might be, after a while they start to wear on us, not helped by the fact that we have been listening to the same 60 minutes of tape for the last week. So we resort to reading aloud from the books we have brought along. Florian's "The multiorgasmic man" clearly provides the greatest entertainment value in our collection. Seven hours later we reach, shaken and just a bit stirred, Darchen. Immediately there is a drove of women and children surrounding our jeeps, trying to sell us some jewelry. We grab our bags from the car but they follow us all the way to our rooms.

We are now at 4,560m altitude. The Holy Mountain, for which we have come over 1,000km on pot-hole-strewn dirt roads since leaving Lhasa a week ago, is right behind us but elusively wrapped in clouds. Mt. Kailash is not just the holy mountain for one religion but for four – namely Buddhism, Hinduism, Jainism and Bön. So far we have only seen pictures but one can easily see why it is holy. It has four almost symmetric sides and it is believed that its name was derived from the word for crystal. But it is not just the shape; Mt. Kailash also lies near the source of four of Asia's longest rivers, the Indus, the Sutley, the Brahmaputra River and the Karnali (which is a tributary of the Ganges River). It has never been climbed but our guide tells us that 'according to Hindu beliefs, you would be standing in Shiva's living room if you did.'

Our guide also tells us that this is the Navel of the World. However, for such a holy place, it is pretty god-forsaken. A couple of buildings and beyond just kilometers and kilometers of sparse grasslands, mountains, dust and stones. We are staying in a simple mud-walled house. Our initial excitement about showers – we have not seen those for a week – quickly subsides as we discover that they are out of order. So we resort to the tried and tested bottle method. When we set out into the Wild East of Tibet, we quickly learn that at these simple mud-walled inns, which are your only option out here, one can usually fetch big, wildly patterned thermoses full of hot water in the smoky room that serves as kitchen and living room for the inn keeper. In an empty plastic bottle one can then combine cold well water with the hot water (not the other way round, otherwise the cheap plastic will

melt). This bottle then serves as a makeshift shower and if you crouch over a bowl and get a friend to help you, you can even wash your hair.

We are told that we are facing a 6.30am start tomorrow – which seems a bit excessive. But we do get up at 5.30am. The light is not working, so we are scrambling around with torches, hoping everything we need has made its way into our bags. And somehow we manage to be indeed all packed and ready to go at half past six. However, we might be ready but the two porters, whom my friends hired, are not, - or at least they are nowhere to be seen. Fully clothed, we try to catch a bit more sleep and eventually a young man and his sister appear. The guy will carry Dani and Roland's bag and the girl is supposed to carry Sarah, Sina and Florian's luggage. Frieder and I will carry our own. However it is not quite that easy, because the bag the three have packed for her is too heavy. After a fair bit of back and forth and repacking, we are finally off.

It is 7.30am by now and it is still dark. Unfortunately we only have three torches between the nine of us and hence I immediately step into a yak dump. And we are not alone; we hear prayer mills stirring and a groups of three Tibetan pilgrims overtake us. Tibetans aim to surround the Holy Mountain in a day. We have learned on our travel that circling holy places is an important part of Tibetan religious tradition. These circles – or Kora's – exist on a number of different scales, from the 10 minutes or so which it takes to circle to Jokhang temple in Lhasa to day- or week-long pilgrimages. Completing the Kailash Kora is, due to the altitude, pretty much impossible for the average European; but even the Tibetans have to get off to an early start to make it. There are some early passes to warm up; we see some grazing yaks and those typically Tibetan valleys with sparse vegetation. What we do not see is the Mountain – but supposedly it is somewhere over there in the clouds.

As we walk on, the group gets more and more drawn out. We are moving quite slowly and with frequent breaks. I thought I packed lightly but my backpack still feels really heavy on my shoulders. It is lonely out here, somewhere in the wilderness between Lhasa and Afghanistan. Our path winds along enormous rocks walls with black streaks.

We manage to find a little hut for our next break. It is cozy and warm, which brings out the tiredness in all of us. Dani is not doing too well. It is colder than we had expected and I am very thankful that I had packed my gloves. Our plan is to circle the mountain in two and a half days. For today's leg to a monastery, which

has a small guesthouse we had estimated about 8 hours. But it feels like it is dragging on forever. I have done some trekking and hiking tours with my parents and grandparents ever since I was a small girl but this is very different to climbing a mountain in the Alps. There are no summits which could provide any orientation regarding how far we have come already. A bit disconcerting is the fact that we are supposed to circle the Mountain but so far we seem to walk in a straight line. I feel so tired – a group of other tourists completely decked out in the latest mountain wear are pulling past me.

I meet them and my friends again for lunch in one of these typically Tibetan nomad tents: large circular structures, furnished on the inside, sometimes even with a television. The floor is usually covered in rugs and there are some cushions or a sofa to sit on. There is already a colorful little group assembled there, amongst them two Austrian women who had come from Kathmandu and a young Scottish guy whom we had met early on our trip.

But as there is no rest for the wicked and the only way out is through, we push on. The outside of the tent is strewn with garbage and there are dogs everywhere. Finally, there seems to be a bend in the path; but no monastery or guest house in sight. Why am I doing this to myself? What is the point in walking around a mountain which I cannot even see? For Buddhists, doing the Kora is supposed to purge your sins, but as I am not a Buddhist, I am afraid that won't work for me. And to top it off, the weather is taking a turn for the worse. A biting wind is blowing straight in my face and it has just started hailing. Occasionally, and almost mockingly, there is a small ray of sun poking through the clouds. But it never lasts long.

Our group has completely disbanded. Somewhere in the distance I can still see Flo, Sarah and Sina. We are walking along a dry river bed and suddenly I can see a small orange building on the other bank. Perhaps we are there after all? But I am not sure where to go. Which bank is the right one? My backpack has not gotten any lighter either. I sit down on a stone and wait for Roland, who has our map. The one porter comes along, walks straight past me but motions me to walk up the bank with him. I'm exhausted, but I realize there is only one way out. I am moving quite slowly, and the porter is getting smaller and smaller in the distance until I lose sight of him completely.

Eventually, after crossing another river valley, I see houses, a tent and prayer flags. I tried to not get my hopes up too high. I cannot be there

yet, can I? I check my watch and it is still quite early but on the other hand, the small river is full with garbage – sadly a pretty reliable sign of human habitation in this area of the world. And indeed I find Sina, Sarah and Flo sitting in the warm kitchen. My room is a drafty clay hut but I do not mind – a bed is really all I am asking for. There is a big hallo with familiar faces from the trail. The Scottish guy is already there and a while later Dani and Roland also arrive. Dani is really not doing well, she must have caught a bug and we are worried that she might not be able to continue tomorrow. I am sipping some sweet milk tea – to me a clearly preferable option to the traditional salty yak butter tea. I have tried the latter but found that it tastes like 'wet goat' or at least how I imagine that wet goat tastes like. Most of my group heads straight for bed, while I start chatting with the Scot about studying physics, travelling the world and Tibet. The weather is marginally improving with even a bit of sun poking through, but the Mountain is still out of sight.

I am sitting by the fireplace with my travel diary, which makes me the center of attention particularly among the locals. Tibetans have a deep love for books and are very interested in what I am writing. A Russian guy whom we have met earlier comes and joins me and Sina. We start chatting and he tells us that he is a computer science PhD student and had come on the Trans-Siberian Railway. We talk about his trip and his home country and by the end of the evening there is another country on my ever expanding list of places to see. I guess that is one of the common misconceptions about travelling: your list of places to see never gets shorter but, by contrast, each trip seems to inspire at least three others.

Having started at 4,560m altitude in Darchen, Dira-puk monastery is already at 4981m. However, the real climb was still to come – after a good night's sleep. The next morning we are having a lie-in. At around 9am there is finally some movement in the huts. But Sarah is not feeling well; she seemed to have caught a cold yesterday. The weather has not gotten much better and staying at the monastery for another day is not a terribly appealing option. Sarah, Flo, Sina and Frieder decide to stay for a day and see how Sarah is feeling tomorrow, while Dani, Roland and I continue climbing.

At around 9.45am we set off, just around the time when the Tibetan one-day pilgrims reach Dira-puk. We climb two small ridges, and pass several herds of yaks. We also notice a valley with lots and lots of items of clothes strewn around. This place

is called "Shiva-Tshal" and pilgrims leave an item of clothing or another personal item for deceased friends or family.

At around 1pm we reach the foot of the main pass. Drölma-la Pass is with about 5630m the highest point of the Kailash Kora. As the Mountain is also holy to Hindus, we also see several Indian groups. We watch one group of rather overweight Indian pilgrims in sports suits being rocked up to pass on the back of yaks or ponies.The pass is basically a gigantic pile of rocks and the ascent is very exhausting. The altitude is really getting to me. I can only make tiny steps and each of them takes an incredible amount of energy. We still get overtaken by Tibetans one their one day circuit, singing and striding along with apparent ease, although I do notice them slowing down a bit once they have passed me.

I move slowly, taking frequent breaks, sipping some water. The pass should be easy to spot by the prayer flags which typically decorate Tibetan passes, but there was none to be seen. I start to worry if I would ever make it up there: Why am I not there yet? I have nothing left. Why am I doing this to myself? The porters are no longer to be seen and Dani and Roland are struggling like me. Eventually, Roland finally spots the colorful prayer flags – we really made it. The porters are already waiting for us. It is incredible to see how high up we are. Although it is summer, there is snow around and we are almost level with the glacier on Mt. Kailash.

I am a bit worried about our friends – Frieder's backpack is really heavy and Sarah was not well at all this morning. Perhaps it would be best for them to turn around tomorrow instead of getting stuck here. But mobile coverage is non-existent out here and so all we can do is hope they will make a sensible decision. On the other hand, sitting up here on 5630m is a truly exhilarating feeling and we have come so far for this hike.

But there is limited time for pondering; it is rather chilly up here and we still have a long way to the next monastery, where we can spend the night. And although we have reached the pass, there is more climbing to do. After a small descent, there is another little ascent and the porter who is leading the way is sprinting ahead. But the view is breathtaking: blue lakes in front of a mountain panorama.

After climbing down over rocks and crossing a snowfield, I have lost the others. The porters are moving very fast and Dani and Roland are close to their heels. However, I feel more comfortable going at my own pace – after all, there is no mountain res-

cue out here and hence I rather not fall and twist or break a limb. One and a half hours later, I finally reach the bottom of the pass and in the conveniently placed tent I meet a range of familiar faces over some tea. While it is good news to see that everyone made it down, the not so good news is that we have another 4 to 5 hours of trekking to the monastery.

Hence I keep the pause brief and just stubbornly dog the porters' steps. The valley which we are crossing is lushly (for Tibetan standards) green, a welcome change after the barren stones of Drölma-la. However, I am glad to be able to follow the porters because a path is not really discernible. We cross little rivers by hopping from stone to stone, trying to avoid the bits where grazing yaks have turned meadows into swamps. The porters are fast but after a while my legs just move by themselves. I just walk, walk, walk – only interrupted by a few short breaks.

At the end of the valley, the path bends and the Indians on their yaks overtake us. But soon we get them back again. The path is sloping upwards again and eventually I can smell incense. And indeed, after the next bend there is the monastery with the guesthouse in front of it. My feet hurt but I am happy. As I am warming up by the fireplace, the porter comes to fetch me and introduce me to the owner of the guesthouse who speaks some English. Shortly after, the Indian caravan arrives. There is still sun, it is warm outside and it is beautiful to watch the yaks being unloaded and tended to. Roland and Dani also arrive and although I am tired, I remain in front of the guesthouse to write and draw and watch the day pilgrims hasting onwards to complete the 53km of the Kora before the end of the day.

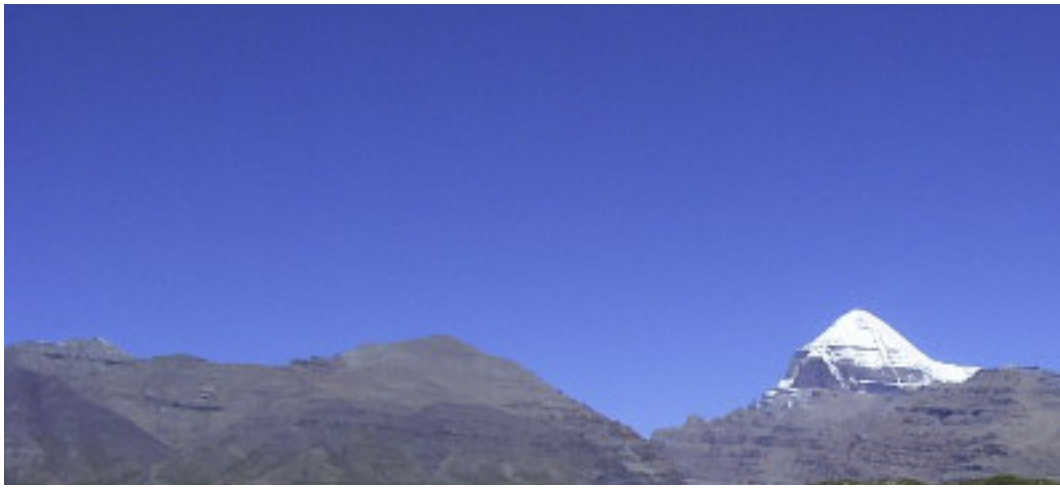
However, it does get a bit chilly and so I am heading towards the kitchen to get some water. The family of the owner, which is assembled in the kitchen invites, me to join them and I am introduced to David, the guide of the Indian group. He is Tibetan but has lived in India for several years. His English is very good, and, thanks to his ability to translate, I soon find myself in the middle of a dinner conversation about the relationship between the Tibetans and the Chinese, and about what really is the source of happiness. Eventually the long day gets the better of me and I head to bed.

The next morning I exchange addresses with David and at around 9.30 we head off for the last leg of our journey. At first the landscape is very mellow, gentle hills, green grassy patches, and a river down in the middle of the valley. But after a while the scenery changes and be-

comes more rugged. But the colors are amazing – the rocks have a strange violet tint, which contrast beautifully with the clear blue river. The porters are still storming ahead but at a much more reasonable pace compared to yesterday and occasionally there is even some sun. The sun is remarkably strong and while I was glad for my gloves yesterday, I am getting really warm as soon as the sun battles its way through the clouds.

After a final tea house, where jeeps are waiting for several of the tourists on the trail, we just have to follow the road, which winds up and down, all the way back to Darchen. And so we are back to where we started. We still have not seen the entire mountain, as the top has stubbornly remained in the clouds for the entire three days but several days later, when we drive past the Holy Mountain again on our way back to Lhasa, we do get at last a beautiful view of the "Jewel of Snow" against the deep blue Himalayan sky.

End



Eva-Maria Hempe has been travelling and writing from an early age. She started writing for the youth section of her local newspaper in Germany when she was 12, and was a regular contributor for several years. When she was 15 years old, she undertook her first big trip and went to live in the US as an exchange student for a year, when she was 17 she spent a month in South Africa, and at age 18 she travelled to New Zealand and Australia. She has since visited and lived in many other places, including Cambridge, where she recently earned a PhD in Engineering Design.

Photos courtesy of Eva-Maria.

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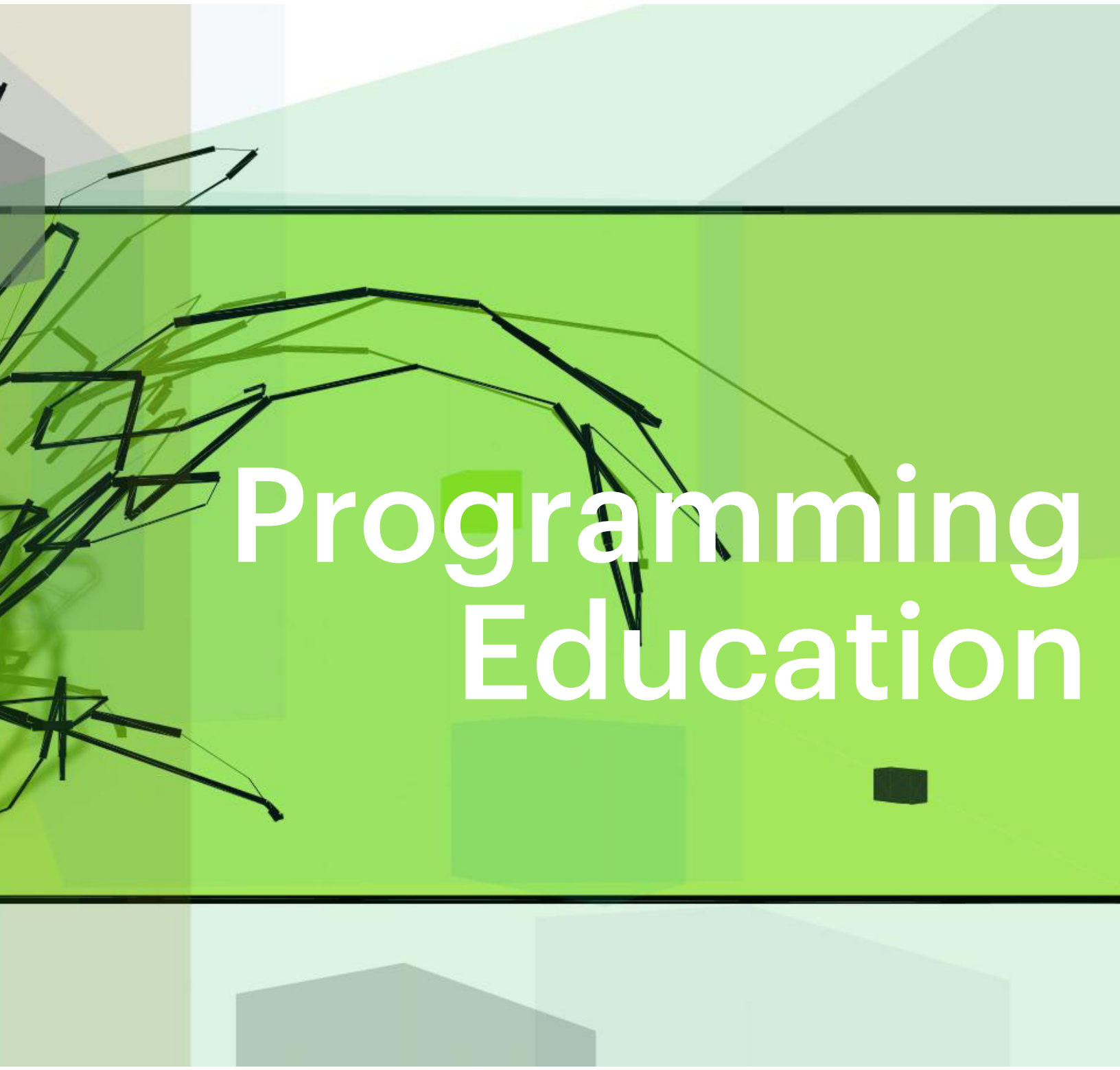
Programming
Education

Programming Education

"If you are not involved in 'programming' you will be 'programmed." This is a quote from Douglas Rushcoff, media analyst, teacher and writer. He believes that media literacy implies knowing how to program software and that coding should be a required skill for the future. Rushcoff also believes that we are becoming more and more dependant on the media around us, especially where a lot of those medias are within the digital world. In his latest book, 'Program or be Programmed', he advocates ten commands for the digital age which revolve around the main idea that gaining greater insight in to our technological world implies not just understanding new media but rather redefining what it actually is and how we use it.

Although I share and agree with a lot of Rushcoff's ideas, his book is aimed mainly at programming and media for the Internet. In general, I've noticed that once you start talking about programming, many people tend to make an immediate link with programming for the web. As far as I'm concerned, the web has never really been my main concern in teaching code and we often forget that the web is only one media and platform amongst many for presenting or interacting with programmed systems. The scope of programming is vast and it's introduction in our education systems for the future will prove to have many (positive) effects in a great number of subjects and professions. In this short article however, I want to put forward some thoughts and ideas based on how I see the current higher education landscape within a specific domain, that of graphic design and design at large.

Design and art schools,(in France) have developed over the past fifteen years what for the most part have been labeled multimedia courses and modules which have evolved into the rising global discipline of what we now call, interaction design. Nomenclature aside though, as I do not want to divert down that slippery road, what can be observed is that design has become a multi-disciplinary practice. And with this growing mix of techniques and approaches in design, many schools have succumbed to following and attempting to implement these latest evolutions. This had made most courses both subject and technically heavy, consequently putting pressure on students to have their hands and heads

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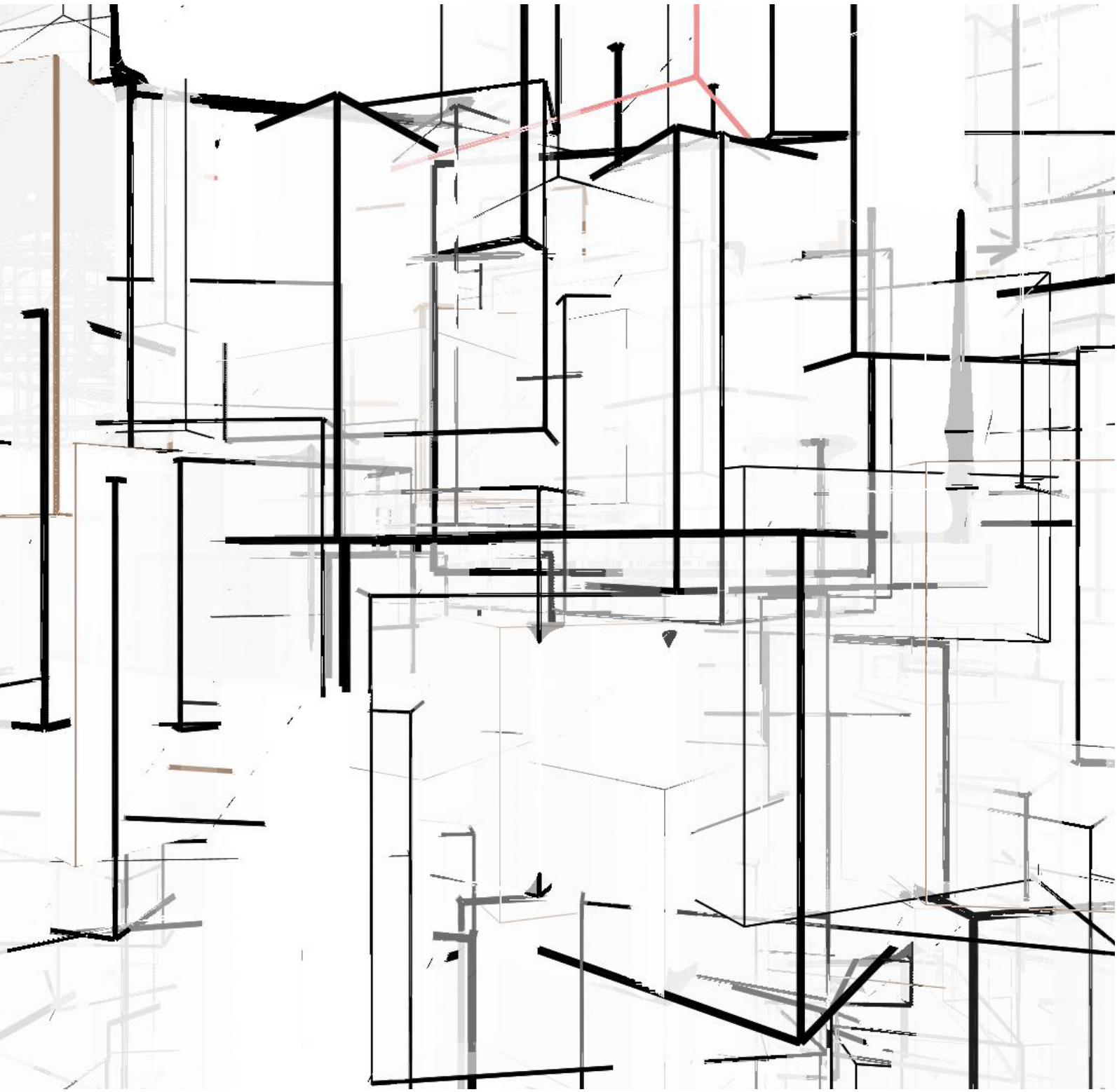
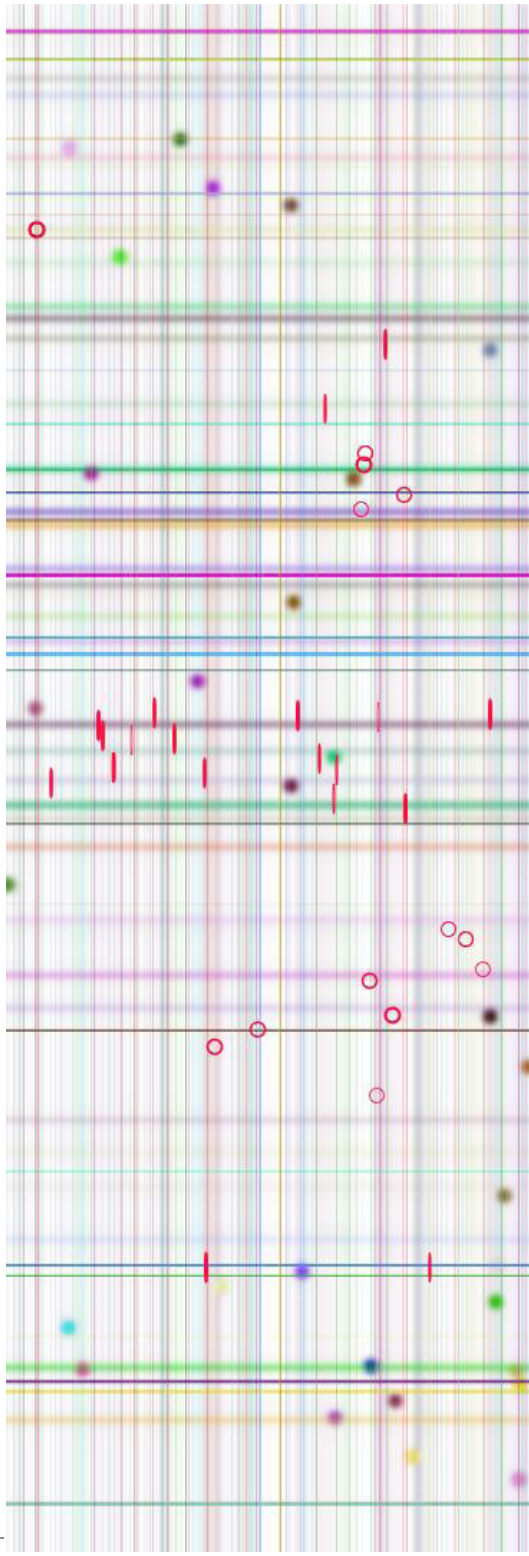


in all parts of the pie and be fully equipped for the professional market.

Back in the days (beginning of desktop publishing), the graphic designer had a few computer tools to learn – a staple three which remain today at the core of all school curriculums. Over the years though, the student has been overwhelmed with learning a greater number of techniques, disciplines and tools, mostly in the domains of video, the web and of late, mobile applications. There is of course pressure from the outside, from industries and the evolution of professions which play a major role in how schools position themselves, develop their courses and adapt to this ever increasing pace of change. The fact of the matter though, is that there is a real gap between what can be taught on an educational level within three to five years and what can be expected and eventually implemented on a professional one.

To complicate matters, I feel in general that there has been far too much effort to integrate the web in graphic design courses. Again, this reiterates the view I mentioned before – that programming is seen essentially as learning HTML, CSS and the odd bit of javascript here and there with, of course the implementation of tools like Flash. Whilst some understanding of these tools is perhaps necessary, I feel they shouldn't be at the core of a teaching curriculum. Unless, that is, you are clearly educating students to specialise in or become web designers. There are courses, albeit rare, that are introducing programming tools such as Processing in to the field of graphic design in France. There is however, and understandably, reticence from school directors to develop on this. Again, we come back to the problematic of adding yet again something new to the box of tool sets we are asking of our students to learn. So, how can this be adressed?

Perhaps first, there is a different question all together to ask: Why should programming be introduced more widely and extensively in school courses? In order to answer that question it's important to view programming in a different perspective (and beyond the web). What if programming was used as a core element in design teaching and not just simply as a technical tool? That is to say that it isn't just a module, a technique or just another tool to learn in the classroom amidst the mass of others. Rather, that it becomes one of the underlying fundamental approaches to the whole design process. This is one of the stances I maintain when teaching (graphic) designers to use code in their creative workflow. I firmly be-



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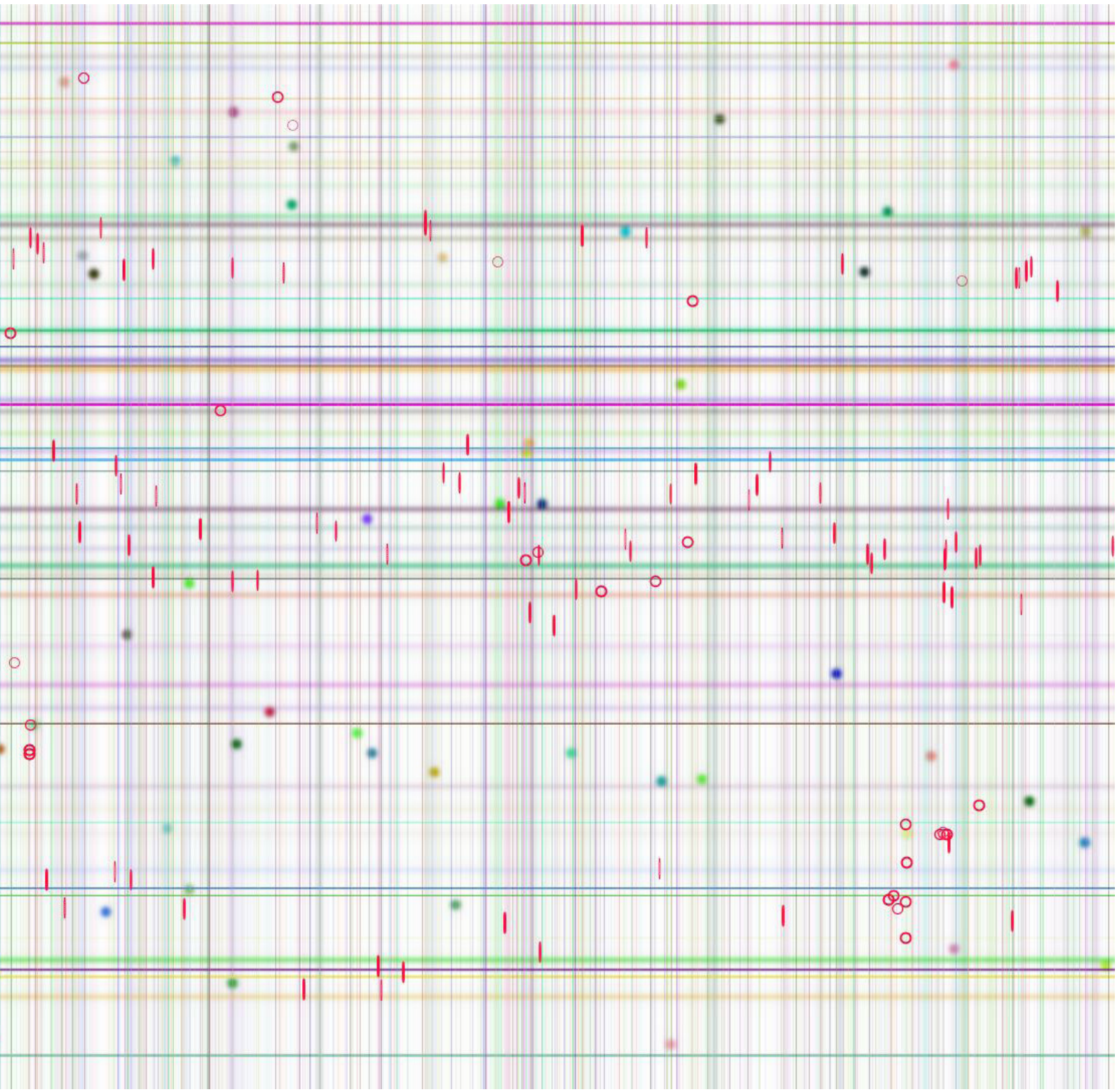


lieve that programming should be an integral part of their education and that they have a lot to gain from learning not just code but 'programming' in general as an apporoach in their practice. The objective is not to develop expert programmers, to become a developer, nor is it to diverge from the basics of the core elements of design. Rather, it is to open up new doors of conceptual and creative possibilites which compliment and enhance the design process. (Furthermore, it is a formidable pedagogical tool that can help structure a course).

"The entire sequence of specifying computer operations is similar (albeit not equal) to that of human thinking. When designing software, one is actually codifying processes of human thinking to a machine.

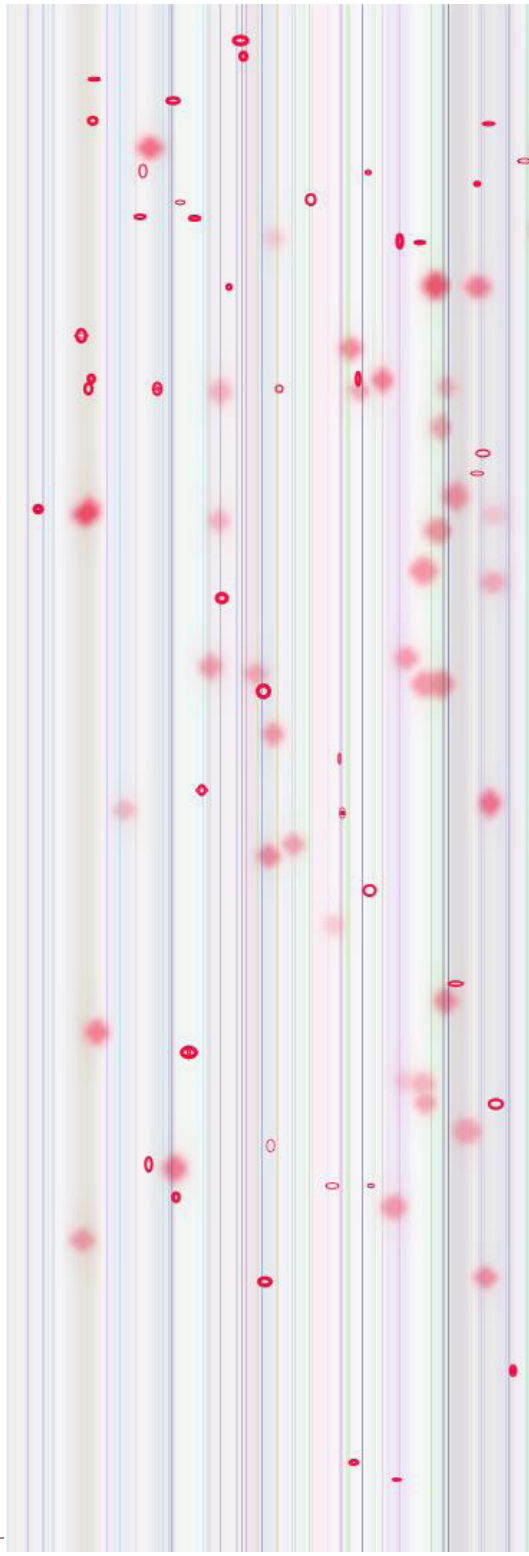
The computer becomes a mirror of the human mind, and as such, reflects to a certain level our own way of thinking." - Kostas Terzidis.

In his book, Algorithms for Visual Design, Kostas Terzidis makes a number of convincing arguments to show that programming is intrinsically linked with a fundament of design: Concept. Conceptualization is the most important starting point for any design solution and this process of conceptualization is reflected equally in how a computer program is conceived, developed and ultimately written.

The conceptual processes used in design and programing are indeed very similar. There is however an important stage in working with code that must be attained beforehand and differs from the more traditional method of simply putting pencil to paper and drafting out concepts. This is the actual 'transcoding' of the idea via an abstract system. This implies learning a language's syntax and being able to understand how a program is written which, for a visual practitioner, is not always a welcome approach.

On a personal level, to help designers get over that initial fear factor, I often try to make analogies. For example, in code we use and develop algorithms which are an ensemble of logical rules within the system. Put plainly, algorithms are like cooking recipes – you follow the instructions and bake your cake. Once the basic concepts and some simple syntax have been learnt, I've found that most designers are quickly able to make the link with other rule based traditions within their field: Typography, gridmaking, layout, structural and spatial design (architecture), image composition, and info-design to name but a few.

Again, these are all good analogies between design and programming which can be traced, in part, back to Karl Gerstner's theoretical work from 1964, 'Designing Programs'



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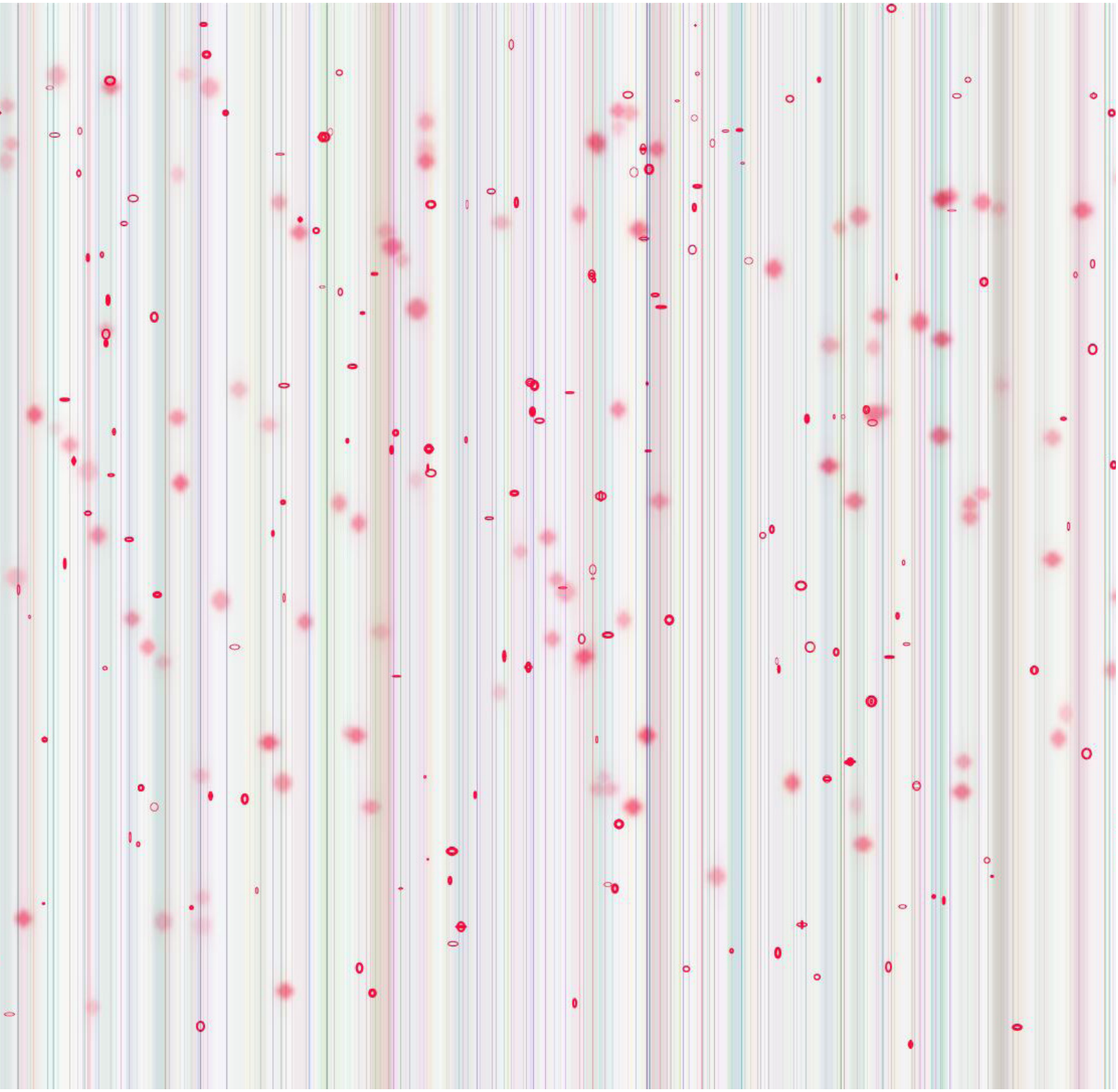


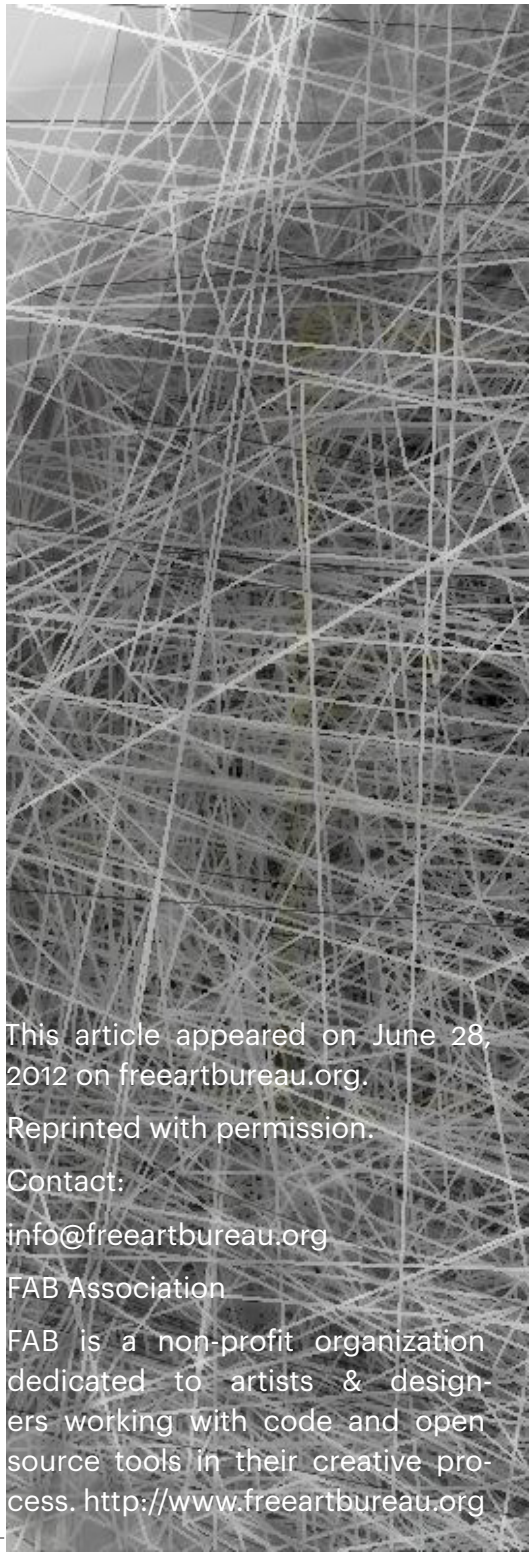
in which he explains a number of 'systematic approaches' to the design process. The book is a treasure trove of examples of how programming can be viewed and applied in design. Most striking perhaps is that all these examples of work require no computer, indeed Gerstner never even used a computer. And if you are looking for a contemporary example of this, look no further than Jonathan Pucky's et.al. Conditional Design. Learning to program therefore can be a complimentary step that can help the designer envisage better the conceptual process and reinforce skills that are all too often left aside by teachers. Moreover, these skills are often the hardest to teach and get across to students yet are essential for their education in the field.

Another factor that is of importance in programming and to the designer is the possibility to explore and eventually produce many iterations of a single idea/system. The designer very rarely produces a single solution. He/she is constantly exploring and re-evaluating the graphic system before arriving at a final piece.

With code, a program is capable of producing a multitude of variations of the system by simply changing a small number of parameters within the code. This is an extremely powerful and efficient tool for the designer. Moreover, these many iterations can also serve as an objective in itself – creating unique variations at each execution of the code for the final product/image. So, is there a possiblity for educating a ('hybrid') designer where programming could be adopted as one of the core approaches and tools – both on a pedagogical and creative level? This is the question I have asked myself many a time and have, through workshops and conferences attempted to learn more about.

There is a valid interest to learn code as a media and medium within the design community. That, I can confirm. Moreover, there is a growing interest in having designers equipped with the capacities to code in the profession and in line with this perhaps an evolution of a sort of hybrid designer in which computational strategies are at the heart of their design process. The question remains though of how to reconcile a real demand on both sides starting with educational institutions and courses.

Until then, I will continue to teach and spread the good word about programming as well as search out those ears open to further discussion – to take action being the ultimate objective.



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Contact:

info@freeartbureau.org

FAB Association

FAB is a non-profit organization dedicated to artists & designers working with code and open source tools in their creative process. http://www.freeartbureau.org

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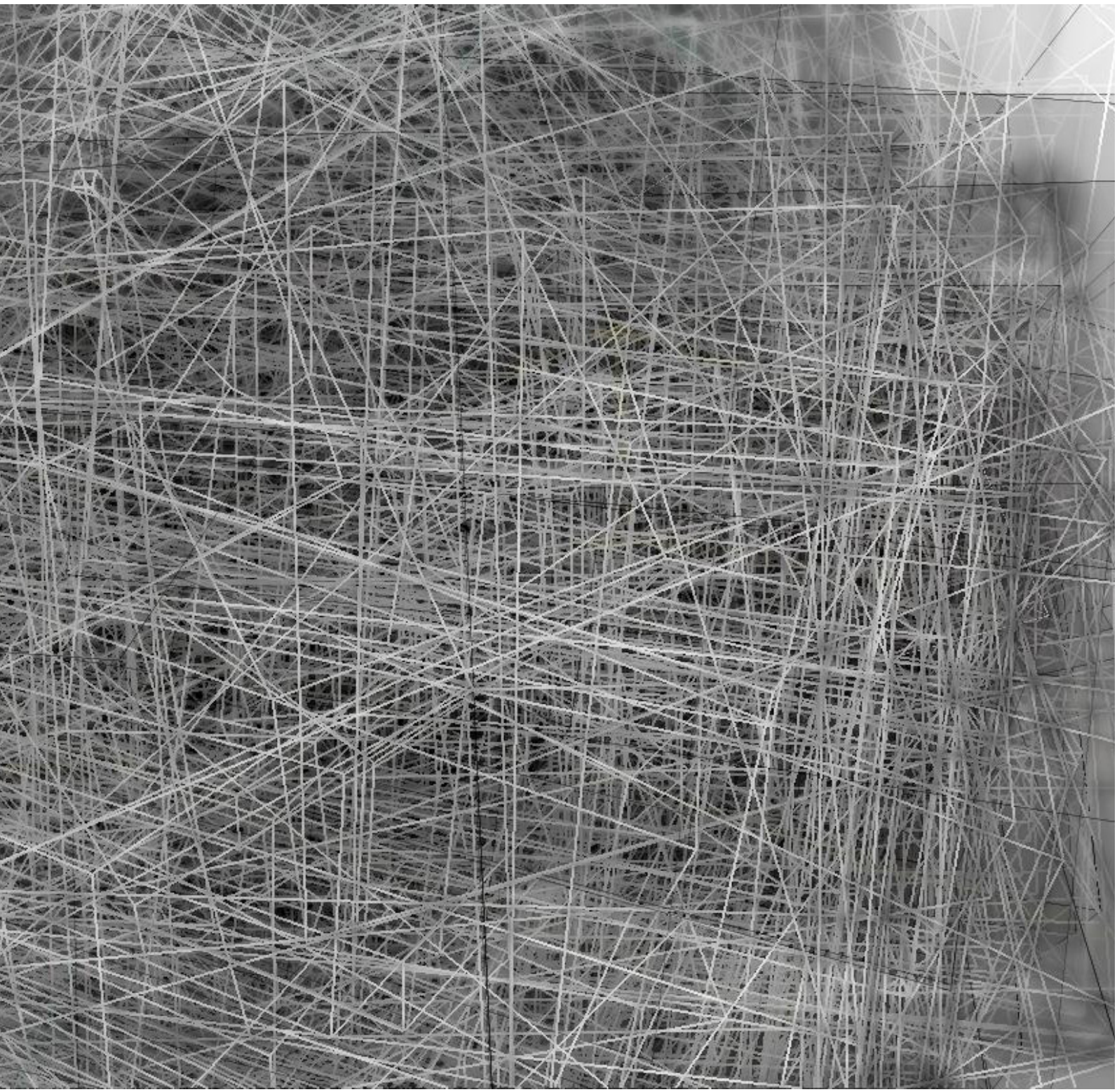

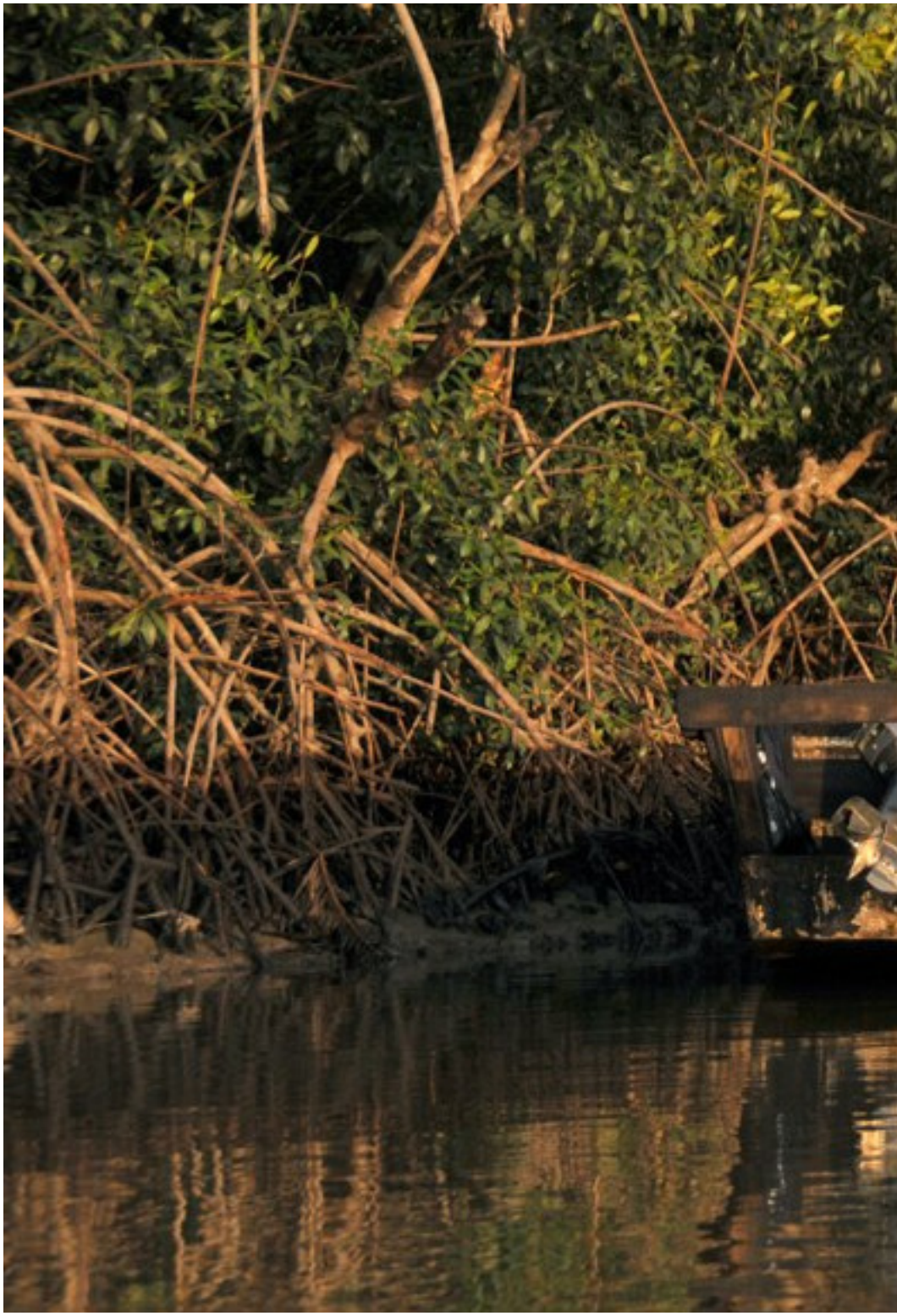

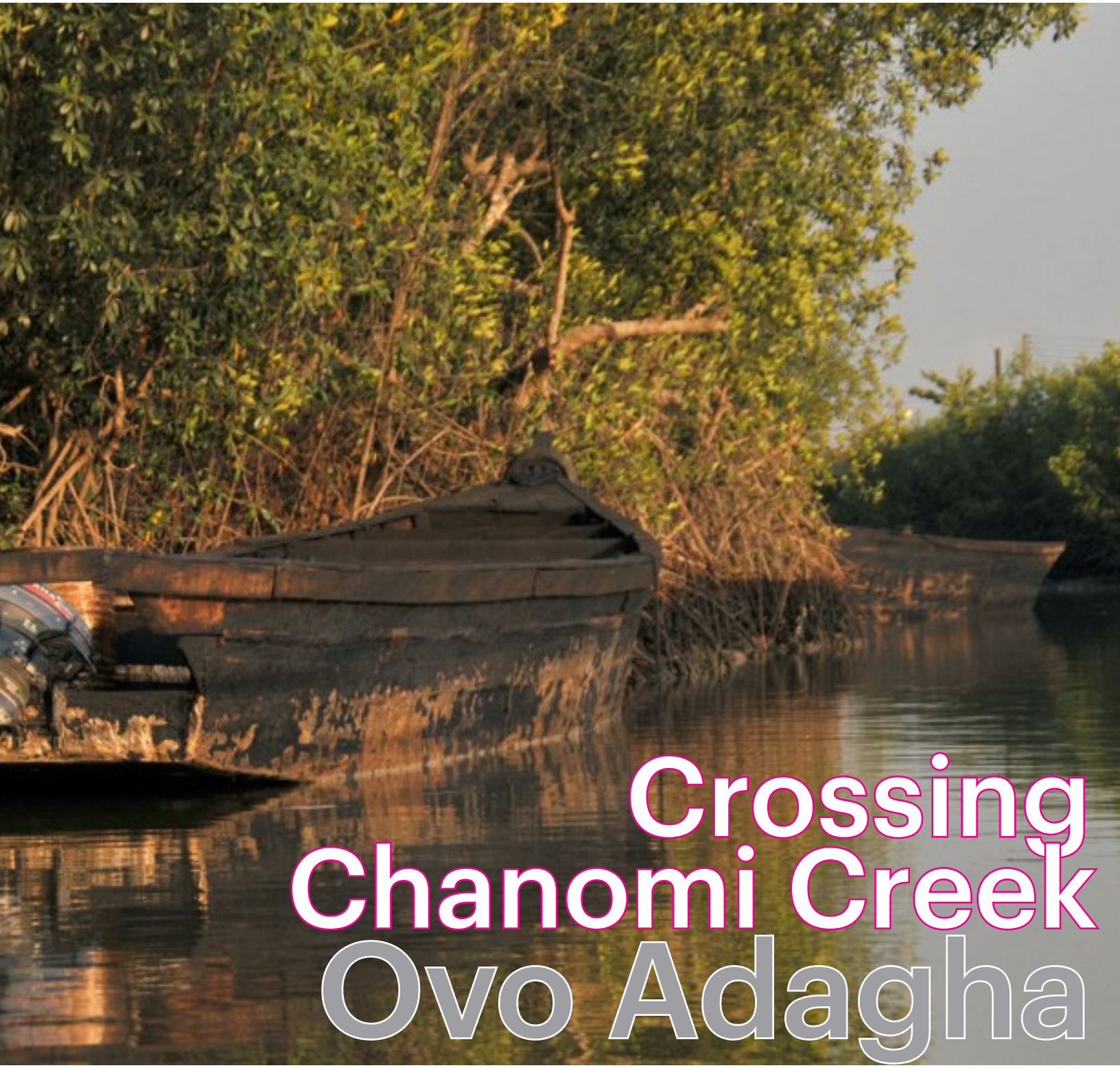
Crossing
Chanomi Creek
Ovo Adagha

Arriving at Oporoza that hot and humid afternoon, Domkat immediately set out to find the village bar. Slowly, like someone entering another world, he began to walk down the narrow, sun-baked road. Surely, he thought, there has to be a drinking bar in any Ijaw village – a tribe notorious for its bootleg liquor. Perhaps he would find a guide there, someone to take him to Camp 5. He approached a group of children playing homemade drums under a palm tree, and they pointed to a shack down the dust road. Just keep walking, they said, you won't miss it.

But something about their enterprise enthralled him: perhaps it was the unconstrained quality of their play, the care-freeness with which they danced and stroked their drums, their half-naked bodies glistening with young sweat. They seemed abandoned by the all gust and responsibility that was the curse of adult life. It stirred some old feelings in Domkat – a childhood memory, reckless play in the sunlight, running under a shade of trees – from the rare times he visited his ancestral village in Jos. It occurred to him to record the scene. Why, he thought, the children would indeed make a lovely picture. He could also use the footage to promote the story he was here to write.

But as he whipped out his camera, one of the children saw him and motioned to others. Suddenly they broke and scampered in different directions, disappearing into the nearby huts.

After they had fled the streets became deserted. Domkat shrugged and began his march, following the directions the children had given him. Already an hour past noon the heat was fierce, nervous sweat trickled down his arms and legs. He passed a stockade of mud huts and bamboo walls which formed a barricade of sorts on both sides of the road. Two or three columns of smoke, rising adroitly into the afternoon air, from behind the huts, bore the acrid smell of burning fish. The village smelled of fish, of swept dust, and decaying compost; and the smell grew stronger as he advanced. There were no signs of movement beyond the straggle of goats and chickens wandering about. Yet from behind the shut doors and shoulder high windows, he could feel the unwelcoming glare of many unseen eyes. It was almost as though they were willing him to go away. He felt like a spy, an impostor, who had entered the village without an invitation.

He continued to walk, and to look at the landscape around him; the sense of uneasiness gripped him even more. This mission, the dan-

gerous work he had brought himself here to do, seemed rather far-fetched and abstracted from the classic rural settlement he had come upon. Their rudimentary, everyday life lay open to him like an ancient history book. He had come to take change for granted: new buildings, fast cars, the internet... In Oporoza it did seem as though the clock had been turned back a hundred years when the entire Niger Delta was a stockaded cluster of huts, planted around tiny track roads leading to the river.

It wasn't long before he made it to the bar – a featureless box of zinc sheets held together by a trap of nails and bamboo sticks. It didn't have a proper door, only a narrow opening in which one had to stoop to enter.

Inside the bar, he was greeted by draft of hot, fetid air. The semi-dark interior gave the impression of a cave, whose walls were lacquered with whitewash. There were a clutter of bottles, tall and short, set upon on a haphazard assembly of tables and worn-out cane chairs. Giant, noisy flies hopped up and down on their stained brown surfaces – showing the cigarette ashes, and on the faded rings left by wine glasses. There was also a stone grate, stuffed with smouldering charcoal, with a small black pot sitting on it. Domkat felt himself clasped by the wave of balmy heat.

When he entered his appearance elicited no immediate surprise, no consternation, as he had feared it might. Three men sat around a table, smoking. Domkat went over to the make-shift counter and sat down on a long stool. The bartender – a stout, bearded, pot-bellied man, his hair flecked with grey – promptly appeared from a back entrance. He poured Domkat a shot of the native gin, *kaikai*, and watched him from the corner of his eyes.

Domkat sipped his drink and dialled the office number in Lagos; but he couldn't get a network signal on the phone.

'Don't you get service here?' he asked the bartender.

The bartender shrugged his shoulders. 'Hardly,' he said, 'sometimes it comes and goes.'

Domkat could not believe his ears. He had studied the maps before setting out. He had checked everything; there should be a GSM mast on the outskirts of the village.

'You mean there's no service mast somewhere nearby?'

'Ah, the Government boys pulled it down a few weeks ago,' the bartender said.

Domkat wondered how he was going to overcome this set back. He

was indeed on a dangerous mission and it wouldn't do to be cut off from the office. The terse invitation from Government had promised nothing, not even his safety.

He glanced at his watch. It was getting to two o'clock. Perhaps if he set out immediately he could cross the creek and return to Oporoza before dark. The distance on the map was roughly 20 sea miles. It shouldn't take up to two hours to cross on a speed boat.

'I need to cross over to Camp 5,' he said to the bartender. 'Do you know where I can find a boat?'

One of the men turned his glazed, red eyes at Domkat. There was a pained, incredulous expression on his face, as if Domkat had pronounced death on any one who was listening.

'Who are you?' The bartender said, his eyes narrowing. The customer-friendly affectation had vanished, replaced by a wary look of suspicion.

The charcoal glowed and shifted in the stone grate; the small black pot hissed and pissed into the smouldering remains. Domkat cast a nervous eye at the men around him. He was not afraid, but he knew that they carried a drunken threat. He was outnumbered, and they could do anything. So he decided to introduce himself: a journalist from Lagos writing an exposé on militants and their demands.

They listened uneasily, measuring him from head to toe with disbelieving eyes. In desperation Domkat produced his identity card and a letter which relayed his invitation to interview Government Egbomgbolo – son of the soil, militant commander and king of the creeks. He then asked them for a guide, and a boat, to sail to Camp 5 – the militant camp.

The bartender spoke rapidly, in Ijaw, to the three men who had formed a circle around Domkat. They all burst into laughter. One of the men came forward and shook Domkat's hand. He said his name was Heineken.

'But you don't look like a trouble maker,' Heineken said, 'only trouble makers go to Camp 5.' Yes, he knew a good fisher man, a man of reliability and honesty, who could agree to sail to Camp 5. He would take Domkat to see the man as soon as he was ready.

2.

Later, Heineken and Domkat went out to the waterfront to see the boat. A huddle of thatched houses clustered near the edge of the creek. Pieces of fish were spread out to dry on wire meshes; baskets and fishing nets hung from the thatched roofs; some thick bundles of raffia

thatch and a yellow jerry can were lying near a smothered cooking fire. They stepped onto the dock – made from long bamboo sticks. Heineken called out to someone.

A small thin man, lying asleep on a straw mat, under a canopy of palm branches, stirred. 'Who is it?' he said drowsily, blinking his eyes at nothing in particular.

'That's Tamuno, the canoe man,' Heineken said, 'he travels up and down the creek at night and sleeps during the day.'

'Where is the boat?'

'There.' Heineken pointed vaguely to the dock and then went to speak to Tamuno, who was now sitting up on his mat, yawning and fanning himself with a straw hat.

Domkat walked slowly across the dock and descried the sights around him: streaks of sunlight seeped through the dock to reflect on the water surface below; thick vegetation and immense forests rose high around them, going on and on out of sight; the tall palms and banana fronds took turns in hugging the water; the seaweed plants floated by. Perhaps there was poverty in the land but surely there was a bounty of greenery; even the water, as he peered at it, looked a dull shade of green. A wooden dinghy, tied to the bamboo stilts, bobbled gently, to and fro on the water – it had a paddle, a lantern, a machete, and a bailing pail.

He raised his voice, 'Where is the boat?'

Heineken came over, a crooked smile on his face. He pointed towards the floating dinghy.

'There it is,' Heineken said.

'What?'

Domkat wanted to speak but the words wouldn't come. He had pictured a motorboat, like the ones that run the short jaunts to Lagos Mainland – but *this*: he wouldn't have sailed in his bath tub with it. The thought of crossing Chanomi in what looked like an open coffin, served on a plate to prowling alligators, caused him to break out in fresh sweat. But more terrors were still to come.

Heineken was haggling with Tamuno. Domkat was still too baffled to speak. Instinctively he reached for his phone and dialled the office line again, but the signal bar was flat. He couldn't get through. Suddenly he felt abandoned and helpless. He wanted to speak to someone at the head office. To hear Heineken and Tamuno arguing about the fare sounded to him like graveyard talk.

Heineken came over and said: 'He says it would cost a lot of money.'

'Ask him if he has a motor boat?' Domkat said, wiping his face with a

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Issue 5

Short story:
Crossing Chanomi Creek

Author:
Ovo Adagha

handkerchief. 'I will pay him whatever he wants.'

Heineken flashed another crooked smile. He seemed to be enjoying Domkat's discomfiture. 'No sane person from this village will sail to Camp 5 on a motorboat,' he said, 'the Government boys will hear the noise and they will surely blow you out of the water with their bazooka guns.'

Domkat shivered inwardly. Camp 5 was gradually fading away, and with it his hopes of a scoop. Did he come all this way for nothing? He had the feeling that his journey had only just begun; and yet it seemed as if he had come to the end of the road.

He said, 'Ask him if we can leave now and return before dark?'

Heineken stepped aside to converse with the canoe man, a heated exchange followed, and then he returned with more bad news.

'He says he can only sail at night. The Government boys do not differentiate between friends and foes. He doesn't want them to see him coming.'

Domkat leaned on the handrail, his thoughts in disarray. He didn't want to return to Lagos empty-handed – the shame would be too great – but he didn't want to die either. If only he could ask someone at the office for advice. Then a familiar voice began to whisper in his ears: 'No one else has taken a photograph of Government and his gang. It will be a scoop. Your peers will be jealous of you. Besides, Government is expecting you; there is nothing to be afraid of.'

He recognized it. It was the same voice that had led him into trouble before. That word 'scoop' again, Domkat shook his head; it was like a juicy bone tossed at a hungry dog. No one took him seriously at the office. This story, if he was to get a handle on it, could be his ticket to fame. He imagined his green-eyed colleagues doing full page reviews on him. He saw his face splashed on the pages of every newspaper in the country. He would receive his long overdue promotion, and his editors would have no option but to send him on international assignments.

He said aloud, 'Tell him to prepare the boat. We'll sail once it is dark.'

While Tamuno got the boat ready Heineken and Domkat went for a walk along the shore; nothing to be seen but the ramshackle stalls, the vultures, and pockets of women doing their washing. The vultures were everywhere: squatting on the sand, hugging the roof of the fish stalls. The smell of decay – rotting fish and blood – seemed to excite them. They flapped their wings and jumped clumsily from spot to spot. Domkat was perturbed by the sight of them.

Then they met the village school teacher – a tall, dapper young man of some education who spoke in a haughty manner. Domkat told him of his plans to sail to Camp 5. The school teacher was unimpressed and did his best to dissuade Domkat. The militants were on the other side of the river, armed to the teeth and watching everything with powerful binoculars, the school teacher said. He warned about how dangerous the creek was. He had seen it all before, he said, people coming from the city thinking they can sail across the creek with ease. The navy had tried in the past to attack Camp 5 from this route, but they were thwarted. The passage can only be done under the cover of darkness. You could be blown off the creek at any time, he warned.

Again, Domkat had the uneasy feeling that he was being taken for a fool: the big shot city reporter who knew nothing about country life, whose stubbornness was going to kill him. It seemed that Heineken and the school teacher were convinced he was walking into a watery grave. And while they were adamant in advising him not to sail, he could that sense they were speaking about him, whenever they switched to their native dialect, with pity and amusement. The dank heat and the indignation of their mockery caused the hairs under his collar to bristle.

Yes, he was scared. But he was determined to prove them wrong, to show them he was not a coward.

It was three o'clock and night was still far away. With thoughts of doom on his mind, he felt he needed a distraction.

He said, 'Let's go and have a drink.'

They retired to the bar and sat outside under a big mango tree. Domkat ordered pepper soup and beer. The office had given him a generous allowance and he thought: it might be well to spend the money now, lest it sinks in the waters with me. Heineken and the school teacher, surprised at the unexpected generosity, became loquacious and showered praises on him. 'That's the fearless journalist from Lagos,' they announced proudly to the passer-by's, 'he is going to write about us.'

It was pleasant under the mango tree; the sun sank lower and lower, painting the sky in glowing copper and gold. Shadows fell across the road, lengthened, and drew abreast of them: tired-looking men, smelling of fish, coming in from the river to wash down the day with a drink or two. They came in pairs, some dragging their fishing nets with them.

After a few beers Domkat's spirits began to climb. He began to feel better, to think of the coming night as an opportunity for an once-in-a-lifetime adventure. He had been

raised in Lagos, where the only boyhood adventures he could boast of was the scaling of dormitory walls for nightly trysts with girls from a neighbouring school. This, in comparison, was different – almost spectacular. He began to think of himself as Sinbad – sailing on the creeks to establish his name in folklore. This beclouded vision excited him and made him restless with anticipation.

His companions blossomed too. They were like buddies who knew they were sharing some last moments with a departing friend. The sweet exotic smell of the mango-trees, the dry irritating odour of dust, the wet musty smell of free-flowing beer, added to their intoxication. The school teacher's rich and powerful voice rose higher and higher with each topping of alcohol. 'Ijaw people are patriotic people! We love this country!' he declared in his condescending manner. Heineken was sniffling a lot. It seemed as though the pepper-soup was bothering him. He nodded vigorously to everything the school teacher said. Soon their table became charged with loud bragging and political talk.

'I wish I could personally introduce you to Government,' the school teacher said, 'he and I used to be classmates.'

'Really?' Domkat said, looking at the school teacher with new interest.

'Yes, we went to the same primary school and I bested him in every class,' he boasted.

'Why not?' Domkat said, 'the boat is big enough.'

'I have to teach at the school tomorrow and I don't know when you will be coming back.'

'Tomorrow is Saturday.'

The school teacher scratched his head and drank from his cup. Domkat ordered for more drinks.

'I'll pay you as a guide if you come,' Domkat said persuasively. This seemed to throw the school teacher, for he reacted indignantly: He didn't need Domkat's money. He is a patriotic citizen and not a militant, he said. He will accompany Domkat to Camp 5 just to prove to him that Ijaw people are kind – they take care of their friends. 'We will sail together on the canoe and discuss the state of the nation with Government,' he said.

Domkat felt moved by such noble talk; to have inspired such patriotism, such camaraderie in only a few hours. If only there were many of his type in this country, he told himself. The two men shook hands and raised their glasses to One Nigeria.

Soon the school teacher turned and called out to everyone sitting around them, 'I'll be escorting the journalist to Camp 5 tonight, to

prove that Ijaw people are not militants.' The people gathered around admiringly and he began to explain the mission to them.

Domkat saw that the school teacher was already making the most of the situation. Nevertheless, he felt a sense of careless oblivion overspread him. What had started out as a foolish undertaking had transformed into an act of heroism. He basked in the boastful talk and smiled indulgently at the people who came to shake his hand.

An elderly man appeared with a bottle of schnapps and poured libations on the floor. He prayed for a safe passage and a friendly reception on the other side. Heineken was busy taking pictures with Domkat's camera.

A small boy carrying an ice cooler came into the bar. 'That's my son,' the school teacher said, and called out to the boy. When the boy came over, he patted him on the head and Domkat overheard him saying, 'I'm going to Camp 5 with an important man from Lagos. Tell your mother I won't be coming home tonight.' The boy's eyes lit up with wonder, and he ran home to tell of his father's great undertaking.

3.

Domkat hadn't realized how close the night was. One moment they were patting each other on the back, reaffirming their determination to see out the journey, and in a blink the sun had disappeared and nightfall was upon them. They set aside their cups and made their way to the waterfront by the light of Heineken's electric torch. All around them the noises from the bush whistled and crackled as they passed: a few fireflies flickered here and there, the grass rustled like newspaper, and a frog croaked miserably to complete the ensemble.

Domkat quickened his pace. Soon they were approaching the banks, where he could feel the leafy ground giving way to a soft, slippery soil. There was a sudden cartwheeling, a loud crash, and Heineken`s torch went flying into the darkness.

'I stepped on a snake!' cried Heineken, breathing heavily as he rose from the clump of shrubbery where he had fallen. He picked up his torch and began to swing it around, with the violent mien of one confronting a swarm of vermin. When he had satisfied himself that the snake was away, he went out to fetch Tamuno.

Domkat stood beside the school teacher, watching the huts nestled peacefully among the mangrove trees. How still it was, he reflected, with only the hushed voice of the water whispering ominously through the reeds. In the darkness, the voice was like strife upon his

soul, cutting him in two minds: to turn back and return to Lagos – to safety; or to lap the sea and sail to an uncertain fate. He saw the stars drawn across the distant sky, like sad tears, looking down on him. Perhaps there was great sorrow in the eyes that shed them, he thought.

Not long after, Heineken and Tamuno emerged from one of the thatched huts. The latter gathered his net and unhitched the canoe. No one said anything. Domkat and the school teacher stepped in and sat on the hard, stern seats.

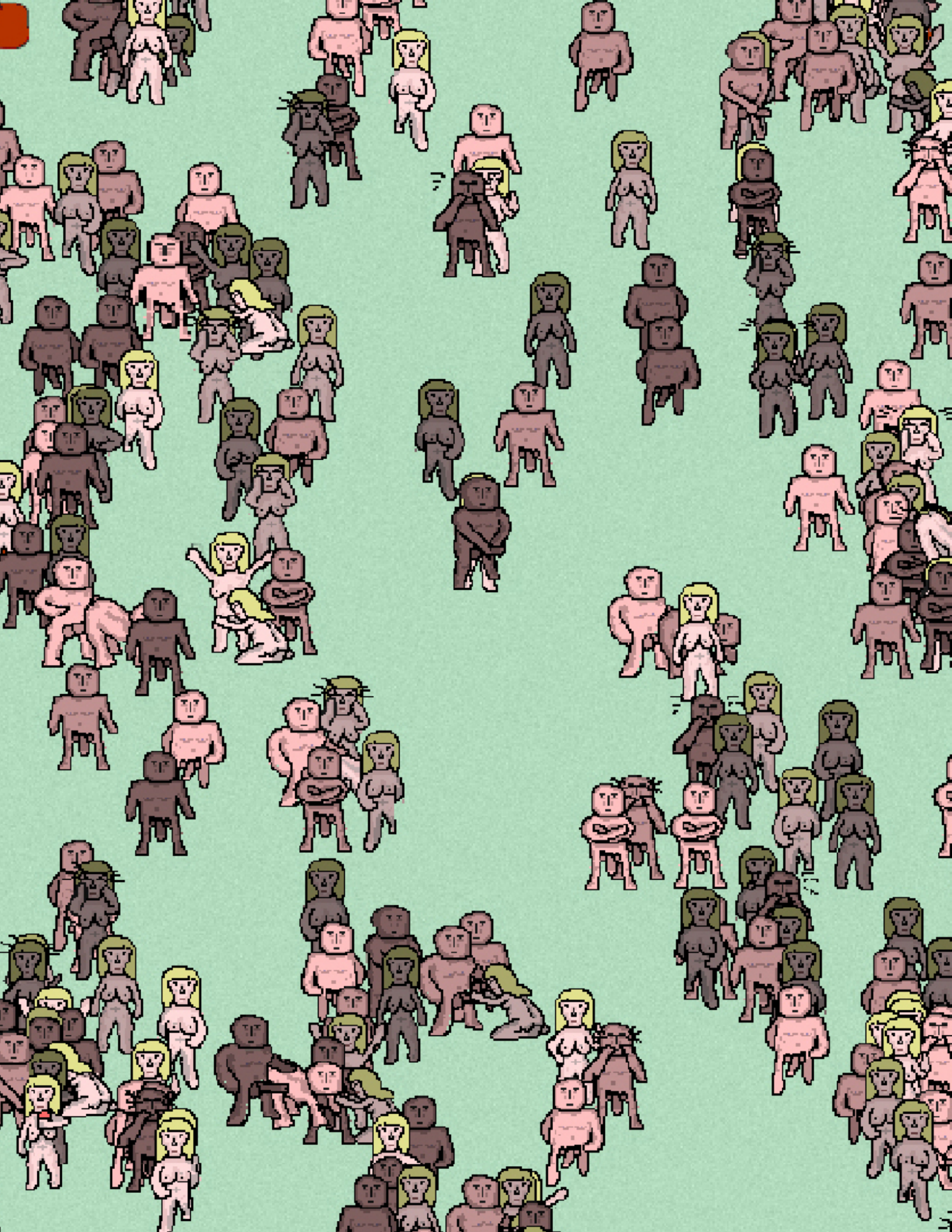
Heineken was flashing his torch from the banks, guiding the boat, as it sailed away. Before long a troop of mosquitoes fell upon them. Domkat looked at the school teacher, who sat hunched, head bowed, as though a great weight was on his shoulders. He was by now aware of the school teacher's loud airs, but *this* meekness, *this* effeteness, made him another person. The school teacher batted ineffectually at the mosquitoes and muttered inaudibly to himself. When they were about fifty yards away from land, Domkat said to him, 'Are you sure you really want to come?'

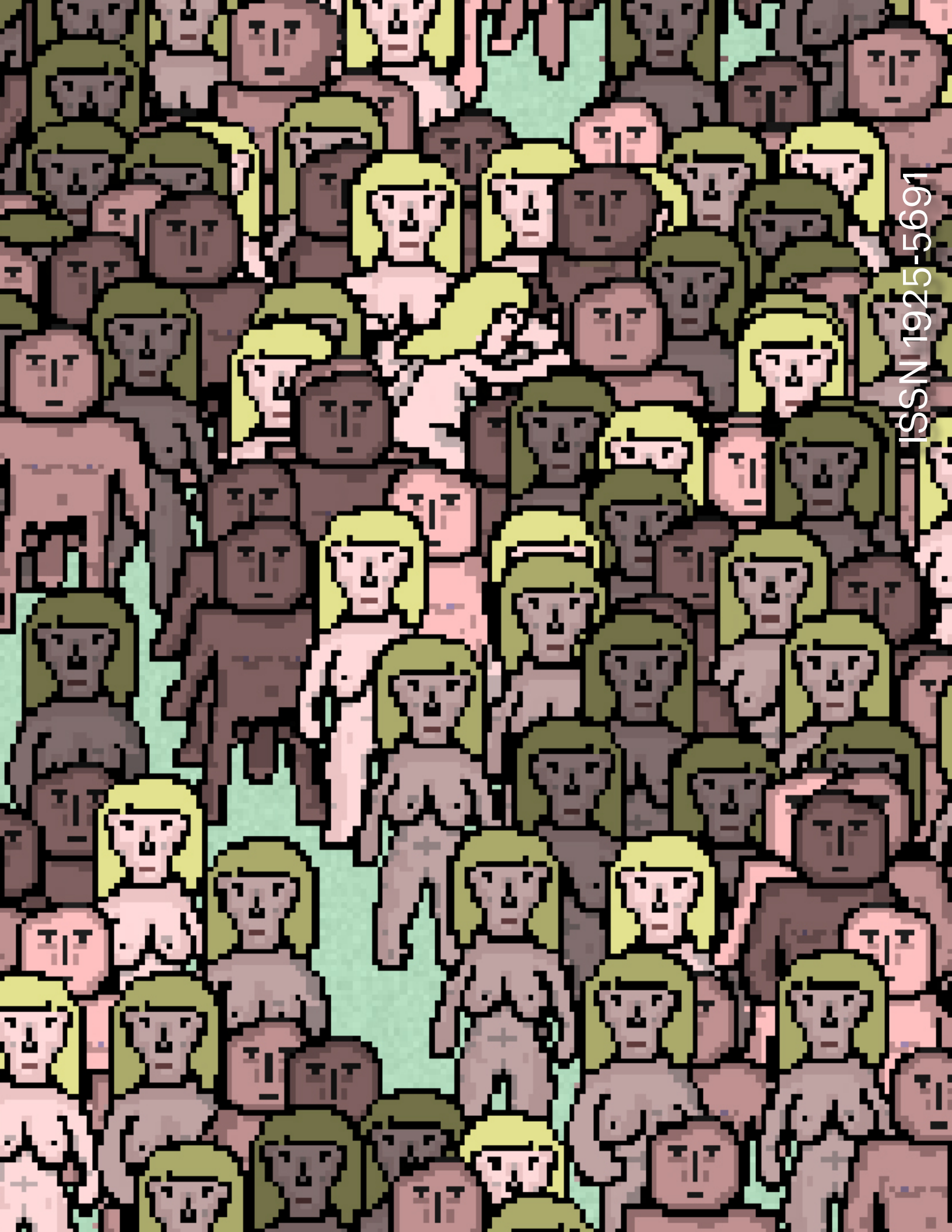
Even in the darkness Domkat could see a light turn on in the school teacher's eyes. He looked remorseful, shame-faced. He murmured something about his wife – she was pregnant; he could not bear to have her worrying about his whereabouts – and, without waiting for Domkat to respond, he dived into the water and swam quickly to shore. From there, his disappearing shadow waved and shouted, 'Send my greetings to Government!'

End.

Ovo Adagha is a Nigerian writer. His work has previously appeared in some online journals and print anthologies including Caine Prize Anthology and One World: A global anthology of short stories.

Photos courtesy of Ovo.

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