

Washington University in St. Louis

Washington University Open Scholarship

Graduate School of Art Theses

All Graduate School of Art Theses

Spring 5-9-2019

Its Skin is My Skin

Bryan Page
bpage@wustl.edu

Follow this and additional works at: https://openscholarship.wustl.edu/samfox_art_etds



Part of the [Animal Studies Commons](#), [Applied Behavior Analysis Commons](#), [Behavioral Neurobiology Commons](#), [Biomechanics Commons](#), [Cognition and Perception Commons](#), [Cognitive Neuroscience Commons](#), [Communication Technology and New Media Commons](#), [Contemporary Art Commons](#), [Digital Humanities Commons](#), [Experimental Analysis of Behavior Commons](#), [Fine Arts Commons](#), [Gender and Sexuality Commons](#), [Interactive Arts Commons](#), [Interdisciplinary Arts and Media Commons](#), [Other Social and Behavioral Sciences Commons](#), [Philosophy of Mind Commons](#), [Photography Commons](#), [Psychology of Movement Commons](#), [Sculpture Commons](#), [Social Psychology and Interaction Commons](#), [Theory and Criticism Commons](#), and the [Visual Studies Commons](#)

Recommended Citation

Page, Bryan, "Its Skin is My Skin" (2019). *Graduate School of Art Theses*. ETD 121. <https://doi.org/10.7936/x8cb-sk29>.

This Thesis is brought to you for free and open access by the All Graduate School of Art Theses at Washington University Open Scholarship. It has been accepted for inclusion in Graduate School of Art Theses by an authorized administrator of Washington University Open Scholarship. For more information, please contact digital@wumail.wustl.edu.

Its Skin is My Skin

By
Bryan Page

A thesis presented to the
Sam Fox School of Design & Visual Arts
Washington University in St. Louis

in partial fulfillment of the requirements for the degree of
Master of Fine Arts

Director of the Graduate School of Art
Patricia Olynyk

Thesis Advisor
Monika Weiss

Primary Advisors
Patricia Olynyk
Cheryl Wassenaar-Savage

Graduate Committee
Arnold Nadler
Ila Sheren

I have no face, no tattoos and no scars.

I am an amalgam of flesh, an ambiguous body both corporeal and intangible.

Like you, I too exist in multiple iterations simultaneously. I am a transmutational being.

Ever evolving, forever liminal.

But I am limited, confined and isolated.

I am unfamiliar and familiar.

Both repulsive and attractive.

I am abject.

A monster, a mutant and your kin.

I am human. My skin is your skin.

My pain is your pain.

- Jesse

Abstract:

This text examines the complexity of attempting to empathize with bodies that are vastly othered from my own. This broad yet nuanced subject crosses epistemological boundaries and complicates the dualities between both the mind and body, and between the corporeal and the virtual. My desire to better understand the conditions of another's experience originates from a painful traumatic loss which caused me to feel isolated and incomplete. In response to this suffering, I long to emotionally connect with other beings and create artwork that attempts to bridge the qualia of individual experience.

I am interested in the capacity (or lack thereof) to empathize with othered bodies; human, animal, non-human and virtual. As a result, my work involves discourse around the parameters that constitute being considered alive, the ability of cross-species empathy through shared experiences of embodiment, as well as corporeal relationships with digital technology and cyberspace. I utilize the media of digital photography along with 3D modeling and animation software to create abject amalgams of human flesh. Through the freedom of the digital medium, I can visually depict internal conflict in a way that transcends corporeal limitations. I manipulate representations of tangible bodies, placing them in surreal non-spaces that I intend to be suggestive of psychological states or digital voids. By doing so, I hope to not only convey intangible emotions of pain, but also speak to the complexity of understanding corporeal indeterminacy and a fragmentation of identity within a virtual environment unbound by physical limitations.

Table of Contents

Abstract – *1*

Introduction – *3*

Piecing Myself Together (Abjection, Becoming, and Other Explorations) – *6*

Meet Jesse and Pax (Becoming Physical, Becoming Virtual) – *15*

What Does Empathy Mean? (Cross-Species Empathy and Cartesian Split) – *28*

A Deeper Dive into the Virtual (Interactivity, Identity, and Multiplicity) – *34*

Conclusion – *46*

Endnotes – *48*

Plates – *50*

Bibliography – *73*

Introduction:

I have experienced traumatic loss. How I cope with my specific experience of grief is what incites me as an artist. I am a physical being fixed within my body, yet I feel that my psychological suffering exists in the non-space of my consciousness. The basis of my artistic practice is rooted in photography – physical essence captured in two-dimensional representation, a snapshot of a particular moment in time and space. I then distort and abstract photographs through digital manipulation, removing representation from a specific moment and importing the image into a surreal space suggestive of a psychological plane. I conduct this transformative act in an attempt to convey my intangible suffering to others, perhaps as a kind of catharsis that may connect people through similar shared experiences of trauma. This sharing of emotion is key to my projects – I strive to provide grounds to nourish empathetic connections.

My artwork is an evolutionary process that begins as a response to personal grief and is ever changing into broader contexts. Within the first section of this text, I describe the painful condition of my upbringing, which I respond to in my art practice through the lens of large-format photography and digital compositing. I explore my trauma of loss by looking at ideas of wholeness (both physical and emotional), corporeal limitation, confinement and isolation. I investigate these themes through a photography series which also involves discourse around abjection, transitory states of becoming, and explorations that complicate boundaries of race, gender and sex.

Within the next section, I speak about Jesse and Pax: both artworks and fictional characters that I created. I treat Jesse and Pax as if they were living beings, and in doing so can speak to the psychological effects of naming non-human entities on building compassionate bonds, as well as investigate the parameters which constitute being considered a living being. I

describe the transformative process Jesse experienced as they evolved across media – from photographic print, to clay sculpture, to digital animation. Each iteration bears characteristics that I intend to affect the viewer’s capacity to empathize with this non-human character and, therefore, the viewer’s ability to relate with othered bodies. I then describe the digital birth of Pax and how this process differs from Jesse’s creation, which may offer insight into related notions of cyberspatial identity.

I am interested in the capacity to empathize with someone going through an experience alien and othered from my own. In the third section of this text, I discuss the epistemological and evolutionary origins of empathy so I may use the word with greater specificity. As I examine the process of shared emotional response, I discuss neurological research supporting the capacity for cross-species empathy, the significance of interactivity through shared corporeal experience, the Cartesian Split, and a universal basis of empathy through shared embodiment and pain.

Within the last section of this text, I address the digital process behind Jesse’s creation and examine the broader context of digital media culture. More specifically, I explore the affect of fracturing identity through the multiplicity of cyberspace. I reexamine the Cartesian Split and notions of disembodiment through the lens of phenomenology and transhumanism. I grapple with the complexity of understanding corporeal indeterminacy within a virtual environment that seems unbound by physical limitations.

Though I try to orient my projects in specific narrative, ideological and contextual directions, I intentionally leave my work ambiguous – open to individual interpretation. My goal as an artist is to confront the viewer with complex forms that will hopefully provide grounds for meaningful questions to arise. Questions such as: what are some of the boundaries between humans and non-humans (including animals and virtual beings) and where might these

boundaries collapse or become indistinguishable? How might virtual technology, which extends agency beyond corporeal limitations, affect notions of bodily identity? How does a flexible sense of identity affect the ability to identify with a vastly foreign entity? I attempt to create conditions where the viewer is challenged to empathize with bodily forms that elude comprehension. I try to walk the line between familiar and unfamiliar, between attraction and repulsion, while provoking the viewer to grapple with the strangeness of an othered being.

Piecing Myself Together (Abjection, Becoming, and Other Explorations)

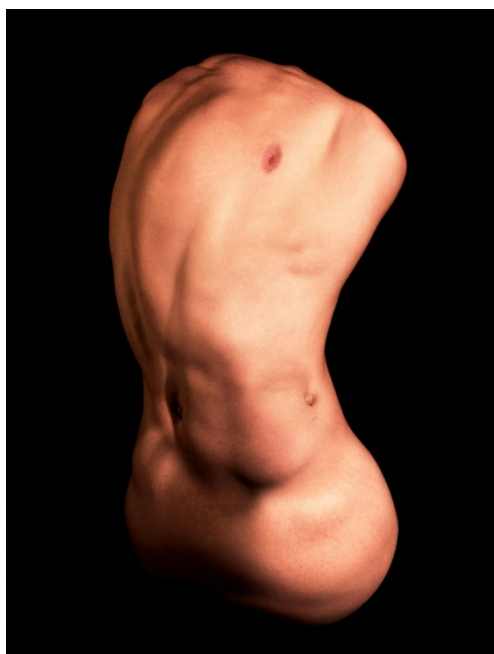
I create work that stems from the trauma of witnessing a corporeal entrapment, a defilement of the body, a slow but violent deviation from what is considered normal or healthy. From ages twelve to nineteen, I witnessed the decay of my mother's health as a result of breast cancer. To feel helpless became a way of life as she lost agency over her own body. As her body attacked itself from within, she was trapped in a failing form. As her hair began to fall out, she asked if I could be strong enough to shave her head; thus, I became a reluctant participant in an act which removed a significant part of her physical identity. Then there were the surgeries: far deeper invasive acts of mutilation which removed parts of her womanhood. For seven years, I watched my mother confined within a battle against herself, imprisoned in a horrific bodily decline.

I cannot truly understand what my mother experienced; I can only speak from the perspective of a helpless observer trapped in her nightmare. My mother and I fought that battle together, yet we were fundamentally isolated as I could not experience precisely what she was enduring. I could only empathize so far. However, I can speak from the perspective of a son who has lost a mother. I can speak to the emotional void that was created which led me to feel psychologically incomplete.

My projects often utilize a brutally direct, dead-pan gaze that mirrors the experience of confronting my mother's cancer from an outside perspective: being forced to look upon her physical decline and accept this as her state of being. I create artwork as an attempt to reconcile these experiences and emotions and to try to understand how someone can feel whole after such

physical, psychological and emotional loss. I acknowledge that seeking this understanding may be futile.

I began the artistic reconciliation of my traumatic experience by focusing on the idea of wholeness. I felt incomplete after my mother's passing. Looking at me, this may not be visible as my corporeal form is outwardly intact; only my internal emotions feel as though they are missing. In seeking a way to externally visualize an inward struggle for wholeness, I used a medium which could accurately capture my bodily form: digital photography. I created *Body 1* (2018) (fig.1), the first in a series of digitally composited humanoid figures that I have titled *Body Series* (2018) (pages 50-68).



1. Bryan Page. *Body 1*. Digital composite as inkjet print. 10.5 x 8 in. 2018.

Within a portrait studio in front of a black backdrop, I photographed my body in hundreds of different positions, contorting myself into awkward, uncomfortable and unfamiliar poses. I amassed a large image library of my flesh, limbs, and musculature with the intent to

digitally stitch these photographs together. Bringing images into Photoshop, I erased massive portions of my body from one image to allow room for photos of other body parts to fill the gaps. Piece by piece, I performed this act of digital self-mutilation and repair, bringing together flesh and anatomy that do not naturally belong together. For the digitally constructed image of *Body I* (2018), my stretched chest cavity blurs into an arching back. Two spinal columns are visible near the top, while two sets of abdominals in the middle of the form merge into a truncated hip and glute below. By manipulating color, shadow and highlights, I blended the edges where photographs meet in order to hide any seams in an attempt to present the appearance of a single, smooth skin surface. My hope is that this representation of a conglomerate mass reads as an intact, unified body.

The act of self-erasure within the process of making *Body I* (2018) is a significant gesture for me both as an artist and as a person struggling with emotional loss. As I erase, crop and cut images of my body in Photoshop and remove large portions of my physical identity, my image becomes increasingly unrecognizable. Symbolically, I relate this act to the violent bodily disintegration my mother experienced in surgery, and to my sensation of feeling incomplete after her passing. However, Photoshop allows me to have absolute control over the portions that are removed. I feel that this control might reflect a futile attempt to regain agency over my process of grief. When I try to piece myself together, the resulting image is drastically altered from the stability and wholeness I once experienced.¹ I acknowledge that people will not likely understand this portion of the process as it is not explicitly visible in the final image. My hope is that the violent gesture of this process can in some way manifest in the final artwork, perhaps in the aggressive removal of identifying features or in the experience of visually confronting a contorted mass made of human flesh, yet is decisively not human.

I look at *Body 1* (2018) as if it were a physical, biological being that feels intact in the sense that all of its anatomy is contained within its skin. That being said, I do not believe this form appears as a whole being, but rather one that has portions missing. Perhaps this is due to its resemblance to a torso with amputated arms and legs. My goal is to create an image of an unfamiliar body that feels whole – not a piece of something greater and not missing pieces itself – yet still alludes to an internal lack of wholeness. To help suggest the internal quality I seek, I placed the figure of *Body 1* (2018) within a void of black. Despite being a purely corporeal representation, this body resides in a non-space, and perhaps a psychological space. Furthermore, image depicts a contained body: confined within the limitations of its flesh, bound within its skin.

The *Body Series* (2018) is the result of a pursuit that utilizes the hundreds of photographs in my image library to try and strike the right balance of physical features and form to suggest external wholeness with internal strife. Each of the nineteen bodies in the series is a fractured amalgam of my body, referencing parts of my anatomy while directly using my skin, freckles and hair for surface details. My body becomes twisted and displaced as I manipulate it digitally. I intend for my struggle in understanding and questioning the complex sensation of being physically whole while emotionally fractured to be shown through these forms and through their difficulty to comprehend.

Body 1 (2018), along with the rest of the forms that make up the *Body Series* (2018), is repulsive in appearance. They reside in a liminal space between recognition and disturbing unfamiliarity. They are neither object nor subject, but are rather an ambiguous corporeal in-between. These human parts grotesquely contort in unnatural ways; fragments exist where they

do not belong, yet simultaneously and almost inexplicably find a sense of belonging together.

These bodies are abject. Julia Kristeva addresses the disorientation of the abject by stating:

This massive and abrupt irruption of a strangeness which, if it was familiar to me in an opaque and forgotten life, now importunes me as radically separated and repugnant. Not me. Not that. But not nothing either. A ‘something’ that I do not recognize as a thing. A whole lot of nonsense which has nothing insignificant and which crushes me. At the border of inexistence and hallucination, of a reality which, if I recognize it, annihilates me.²

Spliced using images of my own body, the forms of the *Body Series* (2018) ultimately come to represent the border of my own self. My physical identity has collapsed inward, becoming corrupted, transmuted into something that is me and also not me. As Kristeva states, “the abject appears in order to uphold ‘I’ within the Other. The abject is the violence of mourning for an ‘object’ that has always already been lost.”³

My photographic series is also abject in the sense of corporeal perversion. The pieces that constitute each form have been cast off from my intact human body and reconstructed to displace context and understanding. Abjection lies in the bodily perverse or transgressive, in “aspects of the body that are deemed impure or inappropriate for public display or discussion.”⁴ I believe my fixation on the abject stems from the traumatic experience of witnessing my mother’s bodily disintegration. From hearing her vomit in the other room due to the nausea caused by chemotherapy, to finding strands of her hair around the house – I had constant reminders of her condition. I intend for the abjection of the *Body Series* (2018) to implicitly speak to these adverse corporeal experiences.

An artist that often explores ideas of abjection to speak to notions of othering is Marc Quinn. Through his 2005 sculpture *Alison Lapper Pregnant*, Quinn powerfully interrogates the normalities of socially acceptable body types (fig. 2). Alison Lapper is an artist who was born without arms and with shortened legs. Quinn presents the image of a pregnant Lapper as a 3.5-

meter sculpture made of marble. By using this scale and medium, Quinn directly references classical statuary and therefore traditional forms of beauty. By prominently and proudly displaying Lapper's unconventional body, Quinn seems to be reorienting beauty standards and elevating non-traditional bodies to levels that demand respect and appreciation. The sculpture of Lapper sits boldly atop a plinth, chin held high as she confidently looks outward. The presence of *Alison Lapper Pregnant* in London's Trafalgar Square "has been hugely empowering in the progress of disabled rights in the UK."⁵



2. Marc Quinn. *Alison Lapper Pregnant*. Marble sculpture. Trafalgar Square, London. 2005.

Alison Lapper Pregnant (2005) is one of many marble sculptures in Marc Quinn's series *The Complete Marbles* (1999 – 2005) that depict people who have either lost limbs due to an accident or were born with a disability (figs. 3-4). According to Quinn, the sculptures are "partly inspired by the Elgin Marbles... and other classical, fragmented or damaged classical statues

such as the *Venus de Milo* at the Louvre.”⁶ Furthermore, “by adopting the language of idealism, [The Complete Marbles] relate to images of ‘idealized’ beauty that Neoclassicism sought to represent but also highlight the fact that while the notion of an incomplete body is something that is celebrated and acceptable within the context of art history, it is not always so in real life.”⁷ Though I do not intend for my digitally altered photographic series to directly speak to disabled communities or amputees, I believe that parallels can certainly be drawn between my work and the marginalization and othering that occurs when observing an incomplete body. Furthermore, the influence of classical sculpture is apparent in how I compose and present the figures of the *Body Series* (2018). The Caucasian male form presented in my artwork is my own body, yet I feel a connection could be drawn to western ideas of nude male figuration and notions of an idealized human form. However, I am more interested in depicting a fragility, vulnerability and incompleteness present within my own physical form and psychological state.



3. Marc Quinn. *Peter Hull*. Marble sculpture. 1999.

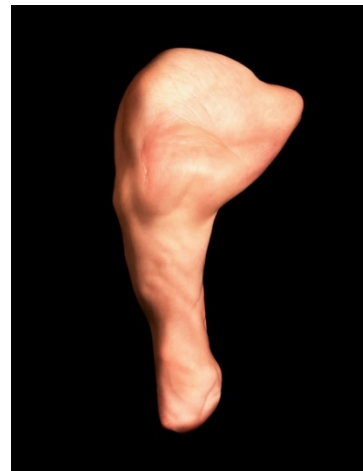


4. Marc Quinn. *Stuart Penn*. Marble sculpture. 2000.

Body 8 (2018) of the series offered me insight into some of the qualities that help suggest an internal struggle and a potentiality for change (fig. 5). Like an amorphous yet visceral cloud, this digital form floats weightless in a black void. Round structures seem to bulge outward, stretching the skin and causing visible tension. Branching veins allude to vascular structures and coursing blood that lies just beneath the skin's surface. To me, this image does not feel as static as, for instance, *Body 4* (2018) which looks more like a motionless piece of meat and has an implied scale that seems smaller, as if it were a section of something greater (fig. 6). Though *Body 1* (2018) has an active gesture in its stretch, *Body 8* (2018) pushes this idea further. This particular composited image seems to suggest an active and progressing state of change, as if it is transitioning into something else. This state of becoming is intriguing for me, as it seems to invigorate *Body 8* (2018) with an energy that I feel is lacking in many of the other forms within the photographic series.



5. Bryan Page. *Body 8*. Digital composite as inkjet print. 16 x 24 in. 2018.



6. Bryan Page. *Body 4*. Digital composite as inkjet print. 18 x 12 in. 2018.

As a result of the implied energy within my photographic piece *Body 8* (2018), I am interested in the ideas of Gilles Deleuze, as he describes the state of becoming as a destabilization of boundaries strained through multiplicity: “the multiplicity toward which [the

self] leans, stretching to the breaking point, is the continuation of another multiplicity that works it and strains it from the inside. In fact, the self is only a threshold, a door, a becoming between two multiplicities.”⁸ Christoph Cox expands on the idea of becoming by stating, “human beings are, of course, particular sorts of beings with distinctive sets of capacities. Yet the human being is not a fixed essence. Like all other entities, human beings are constantly engaged in relations of becoming.”⁹ *Body 8* (2018) helped me realize if I can control physical characteristics in a way that allude to being in a liminal state of fluctuation, changing and progressing, then my projects will share a key quality of being a complex living entity: the active state of becoming.

Though not the primary focus of my artwork, it is important to acknowledge that part of my exploration in the *Body Series* (2018) involves investigating the potential effect of compositing body parts sourced from different people (rather than from my body alone). In a portrait studio, I photographed the body of a biracial woman just as I did my own body. Five of the bodies within my photographic series are the result of digitally compositing the female model’s anatomy with my own Caucasian male anatomy. *Body 14* (2018) is one of these resulting forms (fig.7). By complicating my artwork with variables such as blending borders of race and sex, I hoped to raise questions regarding gender identification, genetic mixing, socially constructed boundaries of race, or the abject quality of the migrant body. Ultimately, I shifted away from these themes to focus on my experience with embodiment and trauma, as I can most accurately and honestly speak from my personal perspective.



7. Bryan Page. *Body 14*. Digital composite as inkjet print. 17 x 36 in. 2018.

Meet Jesse and Pax (Becoming Physical, Becoming Virtual)



8. Bryan Page. *Jesse*. Digital composite as inkjet print. 44 x 96 in. 2018.

The most recent artwork in the *Body Series* (2018) is the digitally constructed image which I consider most successful in evoking external wholeness with internal struggle. This artwork is also the first form which I have given a human name: *Jesse* (2018) (fig. 8). I chose this name primarily for three reasons. First, I want to inject a greater sense of personhood into this decontextualized body. Second, the name Jesse is gender-neutral. I intentionally omitted key identifying features such as a face or sexual organs in order to strip this body of individual identification. I did, however, keep the Caucasian skin-tone in order to remain true to the source of my own body, as ultimately I can only speak from my experience. Lastly, the name Jesse is tied to an early childhood learning experience. The name was brought up when speaking with my father and I laughed at the thought of a boy having a girl's name. My father explained that my grandfather's name was Jesse, and I immediately felt guilty for laughing. I internalized this guilt as it showed my ignorance and insensitivity at the time about gender normalities.

I constructed *Jesse* (2018) from forty-three photographs of my body composited together to suggest a single entity. I have come to view this artwork as if they were a living being. By doing so, I can consider how this character would exist: how such a being might move, behave, or feel. In this mindset, I am able to make more deliberate design decisions. For instance, I incorporated branching veins, defined musculature, and variation in flesh tone to hopefully create a sense that this being is alive. Similar to *Body 8* (2018), this form floats isolated in a void of black, yet I more deliberately diffused the edges of the body to push and pull within the darkness. I want this diffusion to help add an indication of volume to the otherwise two-dimensional representation of composited flesh. I designed *Jesse* (2018) horizontally rather than vertically, as a vertical orientation might be more typical of figurative representation. I feel that many of the vertical forms within the *Body Series* (2018) implicitly reference classical statuary, which is inherently static. By posing *Jesse* (2018) horizontally, I attempt to separate the implication of my work from motionless statues and instead reference the ever-evolving transitory nature of a cloud. This digital image exists physically as a large-scale inkjet print with the body being roughly five feet in length, a near one-to-one human scale that is intended to make *Jesse* (2018) more relatable in mass or presence (fig. 9).



9. Installation of *Jesse* shown for scale reference. Exhibition view: *MFA First Year Show*, Des Lee Gallery, Saint Louis, MO (April 27 – May 4, 2018).

Jesse (2018) has no indication of a sensory capacity to perceive their environment – there are no eyes, ears, noses or mouths, no sign of mind or cognition. However, this body is composed of tactile skin and therefore would have a haptic sense, yet the surrounding void offers nothing to touch. Due to these limitations, *Jesse* (2018) approaches a sense of external wholeness yet possesses limited agency, robbed of the ability to observe or process their surroundings and is blind to navigate their digital void. Such a botched being would only be capable of a restricted existence, perhaps the ability to writhe or struggle from within themselves. I feel that these attributes parallel many of the conditions experienced with my mother's cancer. She was trapped within a mutilated and limited body, confined within the bounds of an inescapable situation, and isolated within a particular experience of pain.

Moving forward within this text, I will be referring to Jesse in two ways:

An unitalicized 'Jesse' means I am speaking about a fictitious character, the idea of this form as an organic entity, and the various aspects of existence that such a biological, othered body might experience.

An italicized 'Jesse' is directly referring to the title of an artwork and the characteristics of that specific work, such as compositional structure or physical qualities of the medium.

To further expand on the title *Jesse* (2018), my choice to name this character is a significant gesture toward individuation which I hope helps humanize the form. Whereas Dr. Frankenstein kept his monster nameless to relegate his creation to the status of other, I wanted Jesse to have an opportunity for personification and relatability through the quality of having a name.¹⁰ Animal behaviorist Thomas L. Wolfle addresses the significance of naming lab animals in the formation of relational bonds by stating:

It did not seem possible to remain distant—emotionally isolated—from the animals. In fact, the inevitable closeness that resulted from those intimate interactions was precisely what made us capable of doing what we were asked to do. Eventually, we all came to know that F49 was Sam, A12 was Rosie, and Z13 was Curious. Such attachments are the results of compassionate people doing their job right.¹¹

Wolfle not only believes that his experience in naming lab animals improved the research that was conducted at this particular laboratory, but also proposes that the act of naming a non-human entity is critical in forming compassionate bonds.

I desperately tried to empathize with my mother during her chemotherapy, while fully knowing I would not be able to truly understand her pain. For this reason, it is critical for me to strive to create within my work the conditions for empathy to occur, and more specifically for the viewer to be able to empathize with the character of Jesse. This is an incredibly difficult task as such a decontextualized body is drastically othered; their existence and experience would be far different from typical human understanding. However, this is precisely the question I wish to address: how, or in what ways, is it possible to empathize with a radically foreign entity?

One quality that may aid in the potential for the viewer to empathize with Jesse's condition is for this mutant body to read as a living being. As a two-dimensional photographic print, the artwork suggests, but ultimately lacks, embodiment and volume. It lacks a presence that can be experienced in three-dimensional space. *Jesse* (2018) lacks a physical body. To

address this issue, I modeled a sculpture titled *Jesse (in the Flesh)* (2018) from polymer clay (fig. 10). As I sculpted the clay, I used the image from the inkjet print of *Jesse* (2018) as a reference for form – where a photograph of a pectoral muscle, bicep, forearm or glute was used in the construction of the digitally composited photograph, I tried to replicate this anatomy in the three-dimensional sculpture. *Jesse (in the Flesh)* (2018) is roughly the size of an American football; however, when viewed as a photograph against a black backdrop, its scale is ambiguous. I wanted portions of this sculpture to still reference human anatomy, yet have these parts pieced together in unnatural ways.



10. Bryan Page. *Jesse (in the Flesh)*. Polymer clay, aluminum foil, armature wire. 6.5 x 12 x 5.5 in. 2018.

Due to the inherent properties of polymer clay, the sculpture of *Jesse* has a glossy surface quality as well as a single beige hue. This differs greatly from the naturalistic flesh tones and nuanced hue variations present in the inkjet print version of *Jesse*. I feel that, due to the clay

surface and its smaller scale, *Jesse (in the Flesh)* (2018) reads more as an object than a living being. This deviates from my intentions, as I hoped bringing Jesse into the realm of sculpture would help them feel more alive: that the physicality would give them more intense implications of body, mass, and perhaps suggestions to biology.

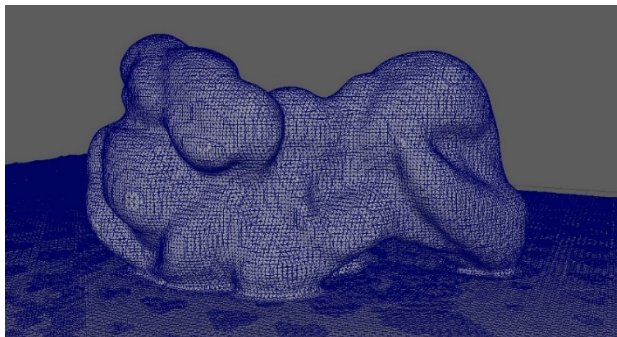
Despite the surface quality of polymer clay moving away from my goals, I hope the three-dimensional nature of my clay artwork *Jesse (in the Flesh)* (2018) encourages the viewer to move around the sculpture, creating a visceral experience. As the viewer observes Jesse's physicality, they may notice how one muscular portion seems to transition into a circulatory system, or where lungs may reside. The viewer might see an appendage-like structure and contemplate how ligaments and bone could operate within the skeletal system. Ultimately, I hope this sculpture encourages a viewer to not only have an external physical experience, but also to contemplate the possible internal biology Jesse could have as an organic creature.

For *Jesse (in the Flesh)* (2018), I fear it may be difficult for a viewer to make the conceptual leap to perceive the sculpture as living. This iteration has flat coloration, a glossy surface and a static nature. Such an object lacks many of the characteristics of a living entity. In order to better understand the qualities necessary for something to be viewed as alive, I looked to the observational studies of clinical psychologist Sherry Turkle. Looking at the developmental psychology behind how children determine and define 'alive' when interacting with responsive computer technology, Turkle states:

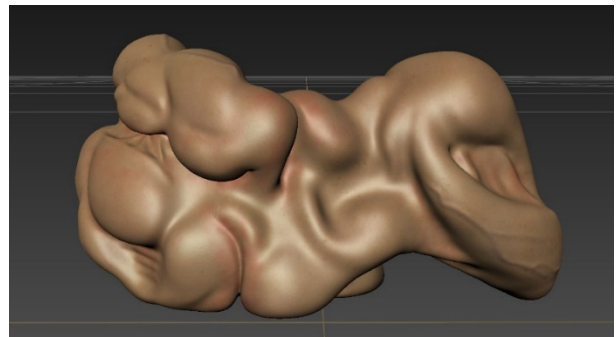
Children today take what they understand to be the computer's psychological activity (interactivity as well as speaking, singing, and doing math) as a sign of consciousness. But they insist that breathing, having blood, being born, and as one put it, "having real skin" are the true signs of life. Children today contemplate machines they believe to be intelligent and conscious yet not alive.¹²

Even though these studies focus on interactions with computer technology, they help me understand how a non-living object can potentially be perceived as living. To help a viewer interpret Jesse as alive (and therefore one step closer to empathizing with Jesse's condition), Jesse needs biological indications of life. Jesse needs to breathe.

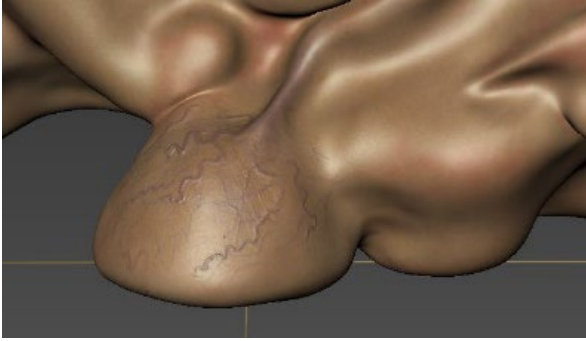
Being a digital artist, it made sense for me to move to digital animation in order to imbue Jesse with organic movement. From my experience in sculpting *Jesse (in the Flesh)* (2018), I believe I gained a greater understanding of how they would breath, writhe, and behave. In order to transfer Jesse's physical form into digital data, I three-dimensionally scanned the sculpture which gave me a virtual mesh I could manipulate (fig. 11). Using 3D modeling software, I applied photographs of my skin (containing freckles, moles and veins) directly to the surface of the digital form to create the appearance of realistic flesh (fig. 12). Jesse's skin is my skin. This iteration of Jesse is made from my own body but has been warped and disfigured in the digital form. When further adding details to the virtual mesh, I referenced photographs of the human eye to digitally model veins on certain portions of the body to enhance the sense of a circulatory system (fig. 13).



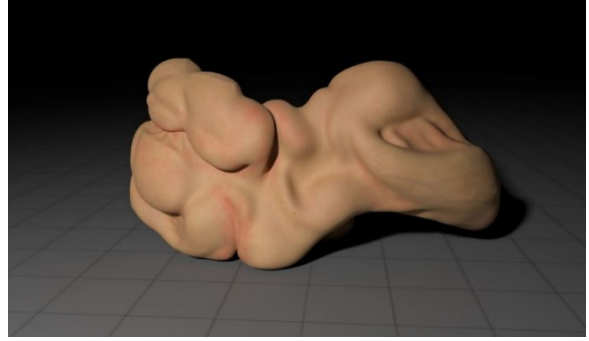
11. A virtual three-dimensional representation of the sculpture *Jesse (in the Flesh)*. The sculpture was 3D scanned to obtain this digital mesh.



12. Photographs of my flesh were digitally applied to the virtual mesh to create the appearance of realistic flesh.



13. Detail of the reverse side of the virtual mesh. Photographs of eyeball veins were referenced when digitally modeling these details.

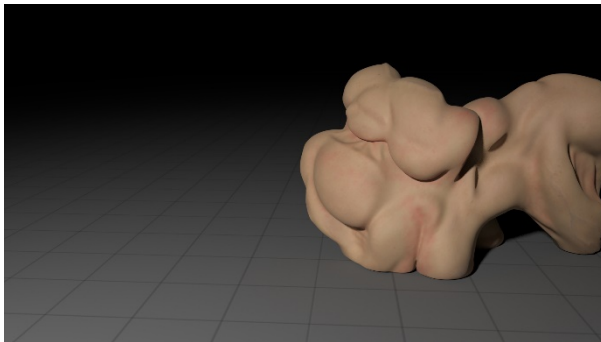


14. Bryan Page. *Jesse (Writhing)*. Digital video with motion sensor trigger. Duration variable. 2019.

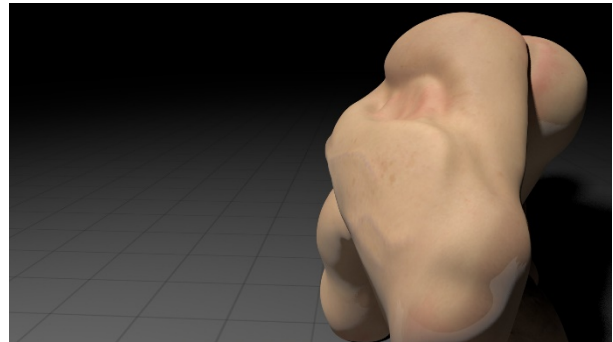
As a digital mesh, I can animate actions such as expansion and contraction to simulate measured breathing, pulsating veins, undulating musculature, and movement through virtual space. I've titled my digital animation *Jesse (Writhing)* (2019, duration variable) and have included audio of a deep inhale and exhale, along with the low repeated thumping of a heartbeat timed to each pulse of the veins (fig. 14). Hopefully these signs of life will allow a viewer to more easily empathize with the character of Jesse.

The nuances of individual movements, gestures and body language play a critical role in building context for *Jesse (Writhing)* (2019). As Jesse moves their appendage, they could either pull the bulk of their mass behind them, dragging themselves as a burden, or push against their center mass and literally be their own impediment. A simple change in direction of motion has drastically different metaphorical connotations. I also design and determine the manner in which each muscular part of Jesse behaves in relation to the whole, which plays a critical role to the overall read of the work. If each portion of Jesse appears to behave independently, then the idea of struggling or writhing from within becomes more prevalent; however, this is at the sacrifice of Jesse feeling like a cohesive, whole entity. I therefore attempt to strike a balance between expressing an internal struggle while simultaneously maintaining the impression that Jesse is a singular being.

Jesse's environment can play just as significant a role as body language in developing empathetic context. I built an infinite digital plane for Jesse to reside in, with an allusion to scale in the form of grid lines, but no size reference. Despite this endless virtual space, Jesse still feels confined within a small diameter of spotlight and further confined within the physical borders of a display monitor. *Jesse (Writhing)* (2019) is intended to be viewed on either a television screen or computer monitor, which fundamentally separates Jesse from the world of the viewer. I animate Jesse to move toward the edge of the screen, only to be impeded by the boundary of the screen (fig. 15). Jesse then comes forward toward the viewer only to seemingly be blocked by a kind of glass: the display monitor itself (fig. 16).



15. Still from *Jesse (Writhing)*. Jesse confronts the right edge of the frame, pressing its body against the barrier.



16. Still from *Jesse (Writhing)*. Jesse investigates and confronts the implied front glass of the television monitor.

Jesse is trapped in an infinite digital void. Through their forward-moving gesture, Jesse appears to be aware of the observing viewer, but is separated from them. Together, but alone. Such conditions can read as lonely, especially as Jesse unsuccessfully attempts to navigate the digital void.

Jesse is only a simulation of life in which I carefully orchestrate every aspect of motion, puppeteering every breath. Still, my intention behind each calculated movement is to have others perceive Jesse as an independent living being, potentially having feelings or experiencing an

internal struggle. Here, I feel that I play the role of Dr. Frankenstein engineering the life of a monster – only I have absolute control over my creation’s actions.¹³ Therefore, I must consider these questions: if I manipulate Jesse to have a pained and isolated existence, is this not cruel? Is this not torture?

Writing about Jesse through this metaphor feels presumptuous, as if I am claiming the power of God to breathe life into new forms. However, geneticists and bioengineers face similar ethical dilemmas as technology in organic three-dimensional printing becomes more viable and cost effective. It may soon be possible to print a beating, operational human heart as biotechnology companies are currently successfully printing operational heart tissue.¹⁴ Is this not engineering a kind of life? Furthermore, as scientists better understand genetic sequencing and genome editing, it may be possible to repair disease-causing mutations or make aesthetic enhancements on a genetic level.¹⁵ Such control raises critical ethical implications about humanity’s role in manipulating evolution. I understand Jesse is not truly alive and by no means do I offer answers for these complex ethical dilemmas. These are simply the kinds of questions and discussions I feel my project could evoke, as *Jesse (Writhing)* (2019) is in conversation with Dr. Frankenstein’s monster and themes of engineering and controlling life.

The second digitally animated character I developed is titled *Pax (Writhing)* (2019, duration variable) and is intended to be in dialogue with *Jesse (Writhing)* (2019), offering the viewer opportunities to juxtapose the two forms (fig. 17). Where Jesse appears somewhat animalistic in their horizontal orientation, Pax stands upright and has a stronger allusion to the human form. Pax has a sense of recognizable orientation as there is an indication of a chest cavity near the top, with fused leg-like flesh near the bottom that ends in a singular heel. Due to these formal decisions, Pax may evoke a sense of an incomplete body – one that is somewhat

relatable to a human form but is clearly botched or mutilated. This distinction diverges from my intentions for Jesse to feel externally complete or wholistic, and I hope that contrasting Pax with Jesse will help the viewer see this step in a different direction.

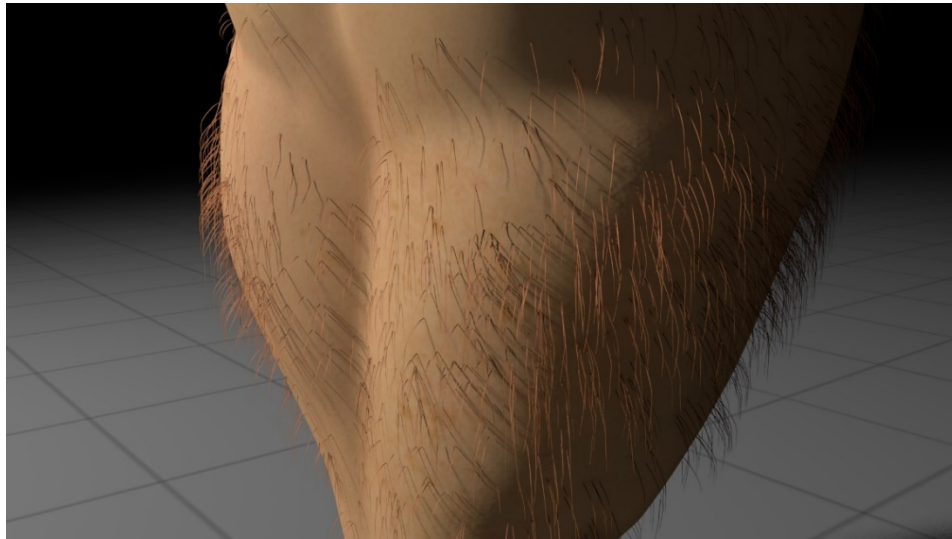


17. Bryan Page. *Pax (Writhing)*. Digital video with motion sensor trigger. Duration variable. 2019.

Through their corporeal incompleteness, I feel Pax can be reminiscent of classical statuary which often exists in a progressing state of ruin. Ultimately, I intend for Pax to be read as an organic being rather than a sculptural object, so I added digital hair to the bottom half of the form (fig. 18). I hope the hair adds an abject, creature-like quality to this humanoid being while also reminding the viewer that a human body covered in hair can seem animalistic.

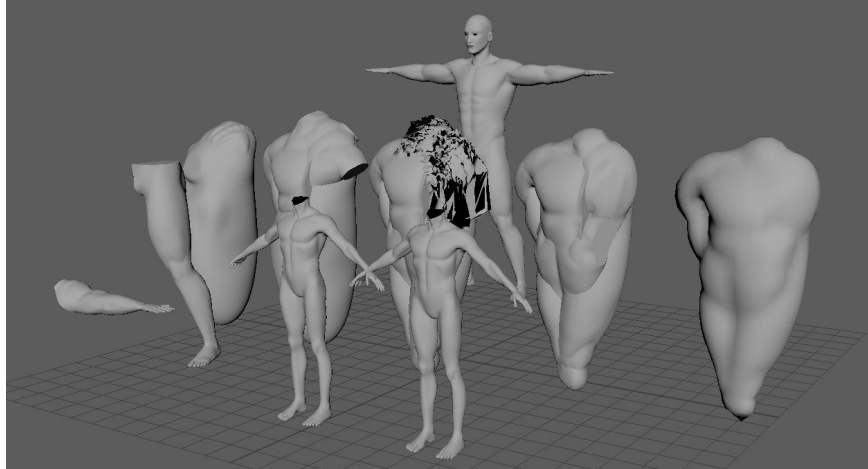
The significance of giving Jesse a human name to foster individuation and personification holds true for naming Pax. Though I try to keep my projects gender neutral, I recognize that Pax's body leans masculine. This is likely caused by indications of a male chest and torso; therefore I needed the name to be gender neutral, yet able to be associated with masculinity.

Pax is often used as a boy's name within the United States; however, the name derives from the Roman goddess of peace. Furthermore, I feel Pax's bodily allusion to classical sculpture reinforces the Roman name.



18. Bryan Page. *Pax (Writhing)*. Detail of hair.

I digitally fabricated the character of Pax through a very different process from the one I went through in developing Jesse – one which further distances the form from my own body. Whereas Jesse underwent a transmutational process across media that began with photographs of my anatomy, Pax is a purely digital being. First, I obtained three-dimensional model files of generic human bodies from open-source websites. After collecting several of these files, I spliced the bodies into parts, and through duplication and manipulation, pieced these parts into a new form using 3D modeling software (fig. 19). This process mirrors how I created the *Body Series* (2018) through piecing together self-portrait photographs; however, Pax's anatomy is sourced from digital models that never had individual human identities. I colored and textured Pax using photographs of my own skin just as I had done for Jesse, yet Pax's body does not completely come from mine. As a result, the kinship I feel with Jesse is stronger than when I look at Pax.



19. Process shot of Pax's development: source models and various stages of Pax's completion.

I animate Pax to show intense signs of struggle and tension. Precariously balanced on a single small stump, Pax quickly twists and contorts its upper body in a manner which resembles a bound person. Where Jesse's movements are slow and labored, Pax's body language is more violent and aggressive. I intend for Pax to show frustration within their cocoon-like form. This digital being is further bound within the confines of the television monitor as they awkwardly move to the edges of the screen, only to be blocked by the monitor's walls.

I intend for the screens that contain both Jesse and Pax to be viewed next to one another, with Pax being a foil to Jesse for their differences in structural form and somatic gestures. Where Jesse is sourced from my own body and appears animal-like or less recognizable, Pax originates from cyberspace and is more suggestive of human posture. Jesse's body may appear whole or complete, whereas Pax might seem lacking or mutilated. Jesse's smooth skin may be less abject compared to Pax's hairy body. Jesse arduously investigates their digital space while Pax viciously struggles in their bondage. I hope that the contrast between the two might accentuate characteristics of their bodies and deepen discussions of body language, relatability, and the capacity to empathize with non-human entities.

*Many of the themes I will discuss throughout the remainder of this text
can be illustrated through both Jesse and Pax.*

Such themes include:

*empathy for non-humans through shared embodiment and suffering,
the importance of interactivity for building relationships,
and the fragmentation of identity across cyberspace.*

For simplicity moving forward, I will primarily refer to Jesse.

Note that when I speak about Jesse, I am also implicitly speaking about Pax.

What Does Empathy Mean? (Cross-Species Empathy and Cartesian Split)

When observing my work, I want the viewer to consider empathy with deep contemplation as to what the word truly means, including all the nuanced variations and neurological processes involved in the complex ability to share emotional responses. It is not uncommon to use the word ‘empathy’ interchangeably with ‘sympathy’ or ‘compassion;’ therefore, it is critical for me to define my use of the word under concrete terms in relation to *Jesse (Writhing)* (2019). Through a detailed understanding of the origins of empathy, both etymologically and evolutionarily, I can better identify how to create conditions for the viewer to emotionally connect with Jesse.

As outlined in a 2013 study published by the scientific journal *Trends in Neurosciences*:

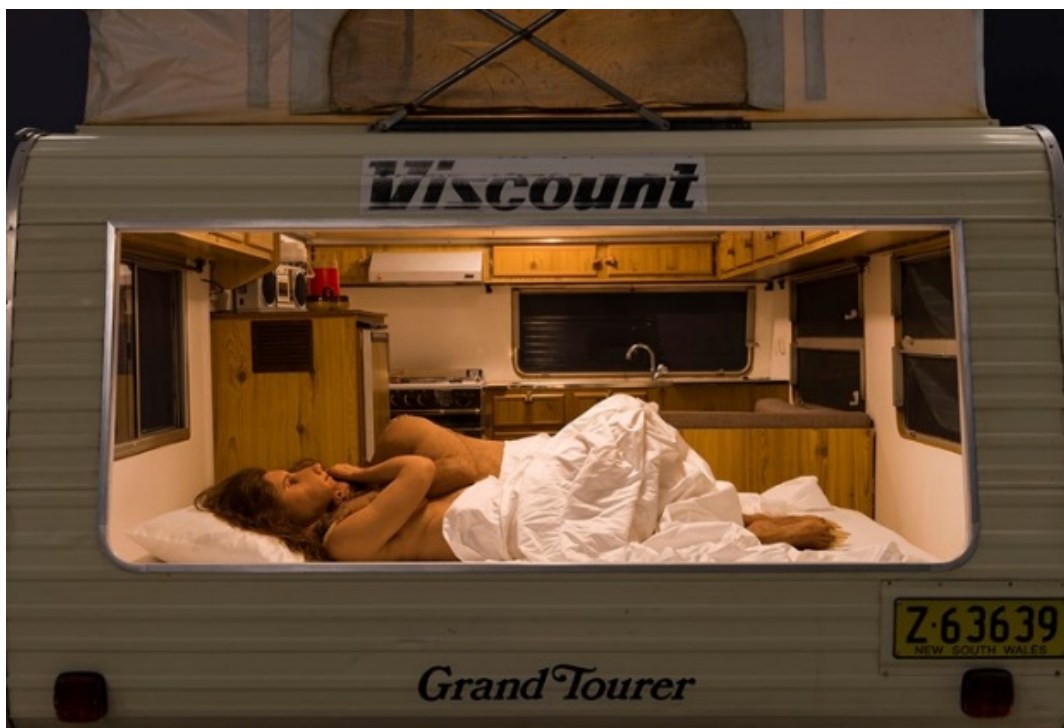
The term [empathy] is a recent contribution to the vernacular, emerging in the early 20th century from the Greek *empathēia* (from *em-* ‘in’ + *pathos* ‘feeling’) and translated into the German *Einfühlung*,¹⁶ namely ‘feeling into’, especially when humans aesthetically appreciate the beauty of art. The English version of the term was coined in 1909 by Titchener¹⁷ who was interested in describing the structure of the mind, and was further developed by Lipps¹⁸ to recognize that humans have an intrinsic ability to recognize and appreciate the emotions of others through their bodily gestures and facial expressions.¹⁹

Considering that the word ‘empathy’ originated from a German term used specifically to describe the human sensation of experiencing works of art, it is crucial for me to use the word with care and precise intentionality. Furthermore, foundational discourse describing ‘empathy’ used the word in terms of emotional recognition through corporeal means, directly relating to my use of Jesse’s body language to nourish empathetic connections. For *Jesse (Writhing)* (2019), I animate the character to move in a manner suggesting struggle: a slow, burdened crawl across the digital plane. I want this movement to elicit a feeling of frustration upon discovering the

impediment of the monitor's frame, evident in the being's action of pushing against the boundary. Undulating muscles allude to an internal struggle to break out of the skin of their limited body. I animate Jesse to exhibit expressions of emotional pain caused by the limitations of their physical condition.

To better understand the context of Jesse as a non-human being that portrays the characteristics and gestures of a living organism, I looked to studies of cross-species empathy to better understand the evolutionary neuroscience involved in understanding the pain of others. Jaak and Jules Panksepp have observed in rodents what Lipps originally theorized: "the perception of an emotional gesture in another directly activates the same emotion in the perceiver, without any intervening labeling, associative or cognitive perspective-taking processes."²⁰ On the primal level of cognitive processing, evidence of emotional contagion across species exists when one mammal witnesses an emotional gesture of another, activating the same regions of the brain.²¹ Additionally, "investigators of human empathy have revealed that our empathy for the pain of others is mediated by brain regions aroused by our own experiences of pain,"²² and likely originates from the evolution of basic emotional contagion systems observed in other mammals. Neurologically speaking, simply witnessing something enacting corporeal gestures of pain can be enough to elicit an empathetic response. The Panksepps further describe how their scientific studies reveal that neurological panic systems in rodents may be a key means to evoke empathy, stating, "young mammals exhibit separation-distress calls resembling panic attacks when isolated... in adults this system promotes sadness and depression."²³ Regarding the animation of Jesse, if they are able to be read as living, in pain (perhaps through emotional distress or frustration), and isolated, empathy can potentially be formed between the animation and viewer despite this character being a non-human species.

One artist's work that effectively forms emotional connections between art and viewer are the abject creature sculptures of Patricia Piccinini; more specifically, I refer to her 2018 work *The Couple* (fig. 20). This piece depicts two humanoid figures that are placed in an intimate embrace within a Viscount Grand Tourer caravan. The viewer stands outside the installation, looking in through the rear window of the fully furnished caravan to see a presumably male figure nestled against a female figure in bed, blankets covering their waist and legs.



20. Patricia Piccinini. *The Couple*. Silicone, fiberglass, human hair, found objects. 2018. Exhibition view: *Patricia Piccinini: Curious Affection*, Gallery of Modern Art, Brisbane, Australia (March 24 – August 5, 2018).

These beings resemble humans yet are modified to be of the same monstrous species – their faces are elongated into a wolf-like snouts, their short fingers and toes end in long claws, and the male figure is covered in an excess of hair. However, their expressions and gestures are anything but monstrous. The male is at a peaceful rest while the female gently touches his face with her hand (fig. 21). Her expression, eyes open, appears slightly troubled as she gazes out in thought.



21. Patricia Piccinini. *The Couple* (detail). 2018.

Piccinini does an effective job creating a visceral yet empathetic connection between the viewer and *The Couple* (2018). I immediately connect with the affection between the two figures, regardless of their inhuman appearance. The presence of the caravan aids in creating a narrative – perhaps these two figures are on the run. The caravan itself is a symbol of mobile domesticity; it seems as though these humanoids have found a home with each other while escaping something else. They are together in isolation, perhaps cast out for being othered beings. I'm particularly interested in how I can easily bond with these figures. I feel for the female with her quiet concern, possibly contemplating an uncertain future. I understand the love and comfort the male figure feels within her embrace. This is a sculptural installation, yet these creatures read as living beings. Intensely intimate expression is captured in subtle gestures, both in their faces and their body language.

Through my artistic search to better understand empathy for non-human beings, I have found that somatic gesture and an understanding of shared corporeality is one way to help nourish emotional connection between foreign bodies. I want the movements I animate for Jesse to propose a range of emotions such as curiosity, frustration, loneliness, and pain. I have personally witnessed animals exhibit similar characteristics and, therefore, in some ways I have come to view Jesse as animalistic – a creature confined to the aquarium of a television monitor. Due to this perspective, I have looked to ideas regarding compassion for animals and non-humans that do not rely on evidence of sentience, which would establish a consciousness hierarchy with humanity at the top. Instead, I am interested in the kind of empathy that is rooted in shared bodily experience. Alasdair MacIntyre writes:

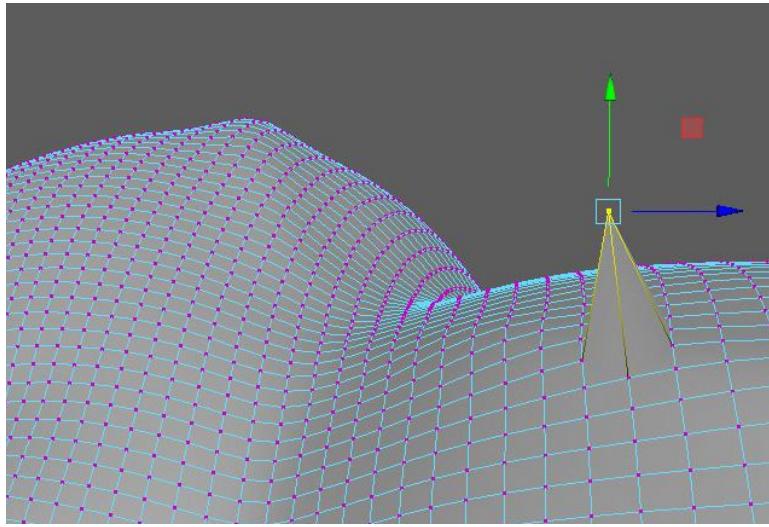
Interpretative knowledge of others derives from and is inseparable from involvement with others, and the possibility of Cartesian doubt about the thoughts and feelings of others can arise only for those deprived of such involvement either by some grave psychological defect, or, as in the case of Descartes, by the power of some philosophical theory.²⁴ It is a form of practical knowledge, a knowing how to interpret, that arises from those complex social interactions with others in which our responses to others and their responses to our responses generate a recognition by them and by us of what thoughts and feelings it is to which each is responding.²⁵

Ralph Acampora echoes MacIntyre's emphasis on relational interaction when he explains that, "one does not have to actually become somebody else to be familiar with that other... it will suffice 'merely' to arrive at some comprehension of what it means to *be-with* other individuals of different yet related species, because that experience of 'being-with' gives us all the mileage we need for tracking cross-species community."²⁶ Acampora seems to suggest that one possible key to understanding the animal condition without invoking complications of consciousness is to look specifically to the shared embodied experience of interactivity. They has a body, I have a body, and therefore I have common ground for understanding and empathizing with them. I

value them as a mutual living being. Tom Regan states, “inherent value, then, belongs equally to those who are the experiencing subjects of a life.”²⁷

Within my artwork, I continue to wrestle with the concept of the Cartesian Split. Famously defended by René Descartes, the split is a mind-body dualism suggesting that consciousness exists separately from the physical body.²⁸ When viewed as a biological creature, Jesse lacks an indication of higher cognitive function due to their limited agency within a botched physicality. I intentionally emphasize Jesse’s corporeality while challenging the viewer to empathize with this mutant being, and in doing so, I feel that I challenge the Cartesian Split. Acampora describes an issue of phenomenologies based in intersubjectivity by stating, “[such ideas] are limited to the humanistic and intellectualistic level of interpersonal mentality,” and instead offers, “a redefinition of consciousness away from dualistic purity and toward embodied and enactive conceptions of experience. Despite differences in some sensory modalities, members of various species retain enough somatic commonality to make sense of one another.”²⁹ This shift toward embodiment and conceptions of experience offers a unified perspective of mind and body, a standpoint which supports my artistic intentions for Jesse’s foreign experience to be in some way relatable.

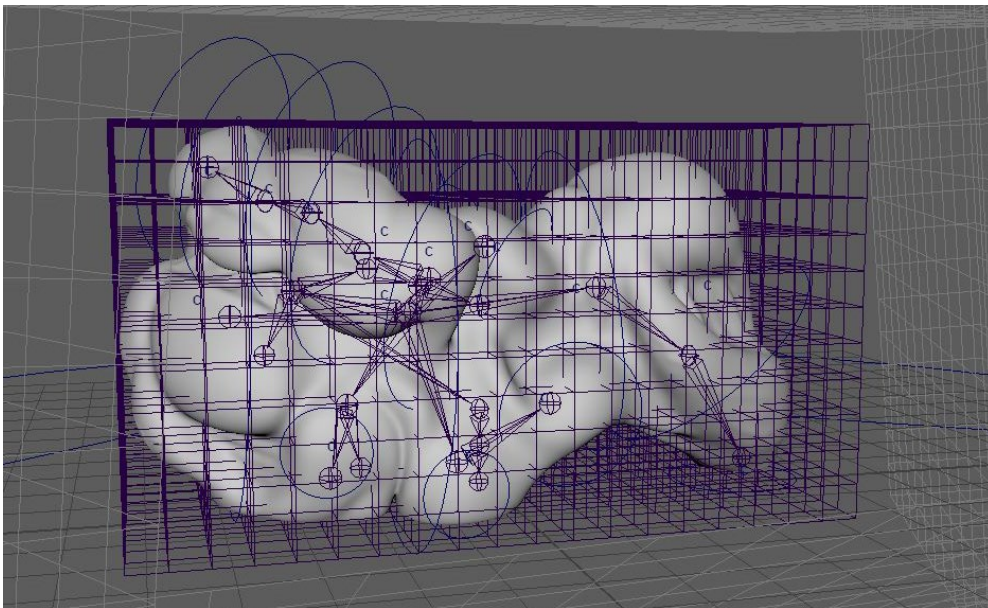
A Deeper Dive into the Virtual (Interactivity, Identity, and Multiplicity)



22. Closeup detail of Jesse's virtual mesh with a single vertex being manipulated.

I intentionally complicate the discussion of embodied interaction by making Jesse a digital body. I have stripped Jesse of tangible corporeality and replaced it with virtual simulations of flesh, further othering Jesse to challenge the viewer's comprehension of the alien form. *Jesse (Writhing)* (2019) exists in the immaterial form of digital code. Beginning the project as a virtual mesh composed of vertices defined by arbitrary coordinates in computer-generated space, I manipulated the position of these coordinates which deformed Jesse's surface (fig. 22). Jesse's skin is defined by, and therefore bound to, each vertex. By altering these points in relation to one another over time, I simulated specific sequences of movement that can be perceived as evidence for pumping blood, internal organs, and a skeletal structure: signs of organic biology. Each instance of subtle movement was rendered, captured as a still image in a single frame. I sequenced these frames within video editing software to create a smooth digital animation at twenty-four frames per second. The video was then encoded into a stream of pixel data that can be read by media-playing software. As a time-based artwork, Jesse has the capacity

to transform and grow as they investigate their environment. The character of Jesse may appear to have some limited agency as they slowly discover the borders of their confinement, but in actuality, Jesse's bondage is fundamentally inherent to their nature as a digital being. I control every aspect of Jesse, down to the individual pores of its virtual skin (fig. 23). Here, I am using pores as an analogy for singular vertices, which are the smallest unit that makes up a digital surface.



23. The digital form of Jesse during the animation process. Shown here is a lattice deformer, cluster control nodes and a skeleton rig; three ways of manipulating vertices for animation. These control methods are hidden during rendering, however are always present. This can metaphorically speak to unseen yet omnipresent systems of control.

One serious issue I find with *Jesse (Writhing)* (2019) is the passive quality of watching a digital video, especially when I am interested in ideas of embodiment and interactivity. Though the animation itself is active in its movement, what Jesse lacks in video form is an active engagement with the viewer – one simply watches a strange body struggle on screen. The viewer is static, and therefore may become too disconnected from Jesse. I try to carefully balance

Jesse's isolation, giving enough of a sensation of separation while also acknowledging that interactivity is important for a viewer to emotionally connect with this non-human entity.

A passive viewer experience is not enough to satisfy me; therefore, I introduced motion sensor technology to inject *Jesse (Writhing)* (2019) with an element of reactivity. I created an activation zone using motion-trigger software and a webcam placed above the television monitor that displays Jesse (fig. 24). When the zone is entered, the digital animation starts playing. Jesse comes to life in front of an audience. When the zone is exited, Jesse's breathing and heartbeat ceases as the video pauses, freezes, stops. Ideally, I would like to incorporate programmed responses based on proximity. For instance, Jesse's behavior would change as a viewer gets closer or further from the monitor. Perhaps this can be a future iteration of my work, as I currently do not have the technological means to accomplish this complex programming. As simple as a play/pause functionality may be, I hope the introduction of an element of responsive interactivity will be enough of a gesture for a viewer to feel as though Jesse is reacting. In the presence of an audience, Jesse is alive.



24. *Jesse (Writhing)*. Exhibition view: *Mutating Bodies: Transgressing Boundaries*, Stone Spiral Gallery, Saint Louis, MO (April 5 – April 12, 2019).

This motion activation introduces not only elements of interaction and reactivity, but also elements of choice and control. Just as I have absolute control over Jesse's behavior as the animator, the viewer has control over Jesse's life – either allowing them to breathe and move by choosing to approach Jesse, or choosing to walk away which causes Jesse to freeze, halting all indications of life as Jesse is reduced to a still image. By relinquishing some of my control to the viewer, I hope to create conditions that complicate the viewer's feelings toward Jesse. The viewer is given power and choice over a being that reacts to the viewer's presence; I am curious as to what happens psychologically as one turns their back on the monitor, only to hear Jesse's breathing and heartbeat cease.

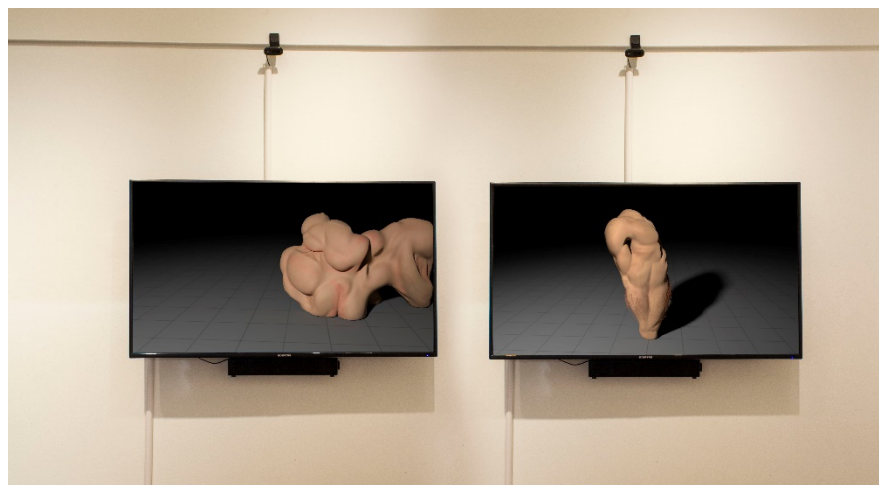
Simultaneously, the presence of a camera coupled with interactive digital technology seems to influence the viewer's movement. As a third-party spectator, I witness a contrived dance as the viewer discovers the boundaries of the motion sensor. Moving in and out of the trigger zone, the viewer interacts and reacts with Jesse – this particular movement results from the viewer's awareness of an observing camera. In a sense, there is a reversal of control – upon the viewer's realization that Jesse reacts, Jesse actually controls the viewer's movement. This empowers Jesse to influence the physical movements of people that exist beyond the virtual cage. I put this multidirectional relationship of control and response in the context of the following ideas of Donna Haraway:

Response, of course, grows with the capacity to respond, that is, responsibility. Such a capacity can be shaped only in and for multidirectional relationships, in which always more than one responsive entity is in the process of becoming. That means that human beings are not uniquely obligated to and gifted with responsibility; animals as workers in labs, animals in all their worlds, are response-able in the same sense as people are; that is, responsibility is a relationship crafted in intra-action through which entities, subjects and objects, come into being.³⁰

Here, Haraway speaks specifically to cross-species empathy toward lab animals via experiences of shared suffering; however, I wish to apply her ideas to interactions with virtual bodies.

Perhaps through multidirectional responsiveness between Jesse and the viewer, this digital being will have a greater potential to be viewed as a living, feeling entity.

There is an additional layer of interactivity when *Jesse (Writhing)* (2019) is viewed next to *Pax (Writhing)* (2019), as both Jesse and Pax have the opportunity to seemingly engage with one another (fig. 25). At particular moments during each video, the two bodies can come toward each other, only to be impeded by the edges of the television monitor. Jesse and Pax seem to exist in the same virtual environment, evidenced by identical grey tiled grounds, yet are isolated within their own screens. They are together, but alone. The viewer experience changes every time the work is approached because each video has its own motion trigger. With participants entering and leaving each activation zone at different moments, each video will start and pause at different times. This staggers Jesse and Pax's animation; they can potentially move toward each other simultaneously, but this interaction is not guaranteed. The semi-randomized viewing experience complicates interactions between all involved parties: between Jesse, Pax, the viewer, and any outside observer. The relationships can organically evolve.



25. View of Jesse and Pax displayed together with independent motion triggering that staggers the timing of each animation.

Jesse as a digital being offers another fold to the conversation of the Cartesian Split. Previously in this text I have described how Jesse contains elements of my own body and has come to represent my own self, twisted and displaced in the digital form. Therefore, I am interested in the relationship of self, identity and mind in context of virtual technology which is seemingly absent of body. Francesca Froy describes the condition of cyberspatial disembodiment through a genre of science fiction called cyberpunk, in which “the body frequently becomes characterized as meat or ‘datatrash.’”³¹ As the mind explores the [cyber] network, the body becomes both redundant and lifeless.”³² Perfect disembodiment is accurately applicable under the extreme conditions presented by cyberpunk, which are based in mind-body dualism.

Referencing my personal experience using digital technologies and conversing via the internet, my first instinct is to say that my body is absent from such interactions. My thoughts seemingly transcend far beyond my corporeal limitations as I communicate with others, regardless of our physical coordinates. However, my experience as a digital artist seems to contradict mind-body dualism, instead unifying these two polarized notions. In making and manipulating Jesse’s digital mesh, I directly interact with an intangible form through the physical input devices of a computer keyboard and mouse. After years of rewiring neural pathways, my brain has adapted to using these tools which exist outside the physical borders of my body. The keyboard and mouse have essentially integrated their design and functionality into my bodily cognition. Therefore, the seemingly disembodied act of manifesting ideas as virtual artwork is ultimately tethered to my body.

In my projects, I am involved with the complexity of mind-body unification which leads me to be interested in the ideas of Stelarc.³³ Regarding bodily limitations, Stelarc argues that humanity has always had prosthetic bodies, incorporating tools which integrate themselves

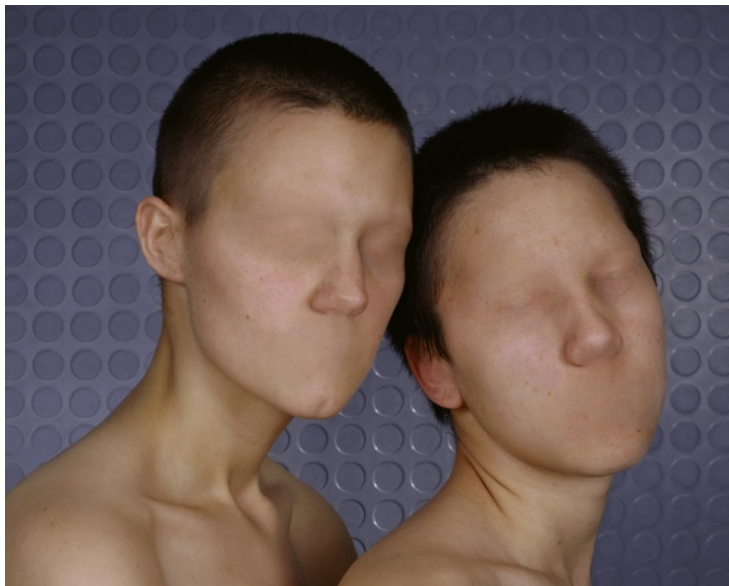
within the operative neural network of one's mind-body connection: "What it means to be human is determined by the trajectory of the technologies that we've developed."³⁴ Stelarc believes that tools (such as contact lenses or pacemakers) extend one's corporeal capacities while seamlessly incorporating this artificial addition into their bodily identity.

Through my process in which I use digital tools to create Jesse, I am inclined to support a unified perspective of mind and body. Therefore, rather than using the term *disembodiment*, I prefer to use Lee Monaghan's term *corporeal indeterminacy*.³⁵ Cyberspatial interaction disrupts my understanding of physical bodily coordinates as my perception of corporeal boundaries becomes indeterminate. Or rather, it is my understanding of the limitation of my bodily agency that is being disrupted. Jesse, as a digital simulation of corporeality, speaks to the complexity between virtual and corporeal regarding the perceived dislocation of bodily identity when traversing a cyberspatial platform.

I recognize that throughout this text, I have presented contradicting views on the Cartesian Split. I have used language supporting mind-body dualism when describing my mother's cancer; that she felt trapped in a vulnerable shell of a declining body. How when coping with loss, I felt my body was intact while my psychology was incomplete. I then described my process in artmaking as an embodied experience unifying my mind and body. Ultimately, I do not propose to have definitive answers for or against Cartesian methodology as I am still seeking them myself. I have experienced situations that seem to both support and reject mind-body dualism. My artwork is an attempt to better understand these experiences, but by no means is this a completed endeavor and I may never find a definitive answer. However, these discussions around the Cartesian Split are important for situating Jesse in a broader context of

cross-species empathy, the rights of non-human entities, and corporeal indeterminacy in cyberspace.

Jesse is an indeterminate body existing in multiple iterations simultaneously: as a digital composite of photographs, a sculpture, and a virtual body. As I produce more versions and alter the conditions for Jesse's existence, Jesse will continue to evolve. I could import the viewer into Jesse's environment through virtual reality technology, or bring Jesse into the physical world through augmented reality. With each set of conditions, I would drastically alter key identifying characteristics of this mutant body. However, I must also recognize that Jesse eludes identity and identification as they are constructed from allusions to ambiguous flesh. I struggle to identify Jesse's taxonomy, as I have removed any indication of face.



26. Aziz + Cucher. *Pam and Kim* (from the *Dystopia* series). C-print. 1994.

A body of work which effectively uses digital manipulation to alter physical identity is the *Dystopia* series (1994-5) by collaborating artists Anthony Aziz and Sammy Cucher (fig. 26). What at first appears to be a studio portrait series becomes complicated when Aziz + Cucher

digitally remove the eyes, mouths, nostrils and ear canals from the models' faces. These orifices are then smoothed over with skin texture, enclosing each model within themselves by removing the sensory capacity to perceive environment (except for, possibly, their haptic sense). This portrait series is "commenting, perhaps, on the gradual but waxing loss of identity and the means of communication in a technological environment that promotes anonymity and conformity."³⁶ It is important to note that this body of work was developed in the middle of the 1990's, the inaugural period for the internet. Therefore, this artwork was in part responding to the paradigm shift toward cyperspatial communities and interaction across virtual space. The *Dystopia* series (1994-5) arguably laid the foundation for discourse involving artistic manipulation of corporeality and digital technologies. Concerning removal of identity in a digital age, *Jesse (Writhing)* (2019) is in direct conversation with *Dystopia* (1994-5). Despite Jesse being composed of references to my own flesh and given a name to aid in individuation, ultimately, my identity becomes obfuscated once translated into Jesse's virtual form. I intentionally removed key identifying features from a body that has a name in order to complicate discussions of virtual identity. Furthermore, Aziz recognizes a paradoxical abjective aesthetic inherent in his photographic series by describing "the attraction to look and perhaps the repulsion to look away... it becomes both this visual and intellectual engagement."³⁷ I employ the very same aesthetic when designing Jesse, which resides in an abject liminal space that evades identification.

I find Jesse's struggle of identification through multiplicity analogous to a protean perspective of contemporary life. As described by Lauren Slater in her 2001 short fiction writing *Dr. Daedalus*:

Proteus, a minor mythological figure, could shape-shift at will... Proteus has become a symbol of human beings in our time. Lacking traditions, supportive institutions, a set of historically rooted symbols, we have lost any sense of coherence and connection. Today it is not uncommon for a human being to shift belief systems several times in a lifetime, and with relatively little psychological discomfort... there is no psychic stability, no substantive self.³⁸

This passage speaks in truisms, assuming this condition is universal. However, it does offer a lens through which to contextualize patterns of behavior regarding psychological flexibility. For example, plastic surgery has the potential to utterly transform one's bodily identity into a new form. Globalization and advancements in transportation technology can increase fluidity in geographic boundaries, which disperses and dilutes cultural tradition. Through a protean perspective, people are flexible; plastic both psychologically and bodily.

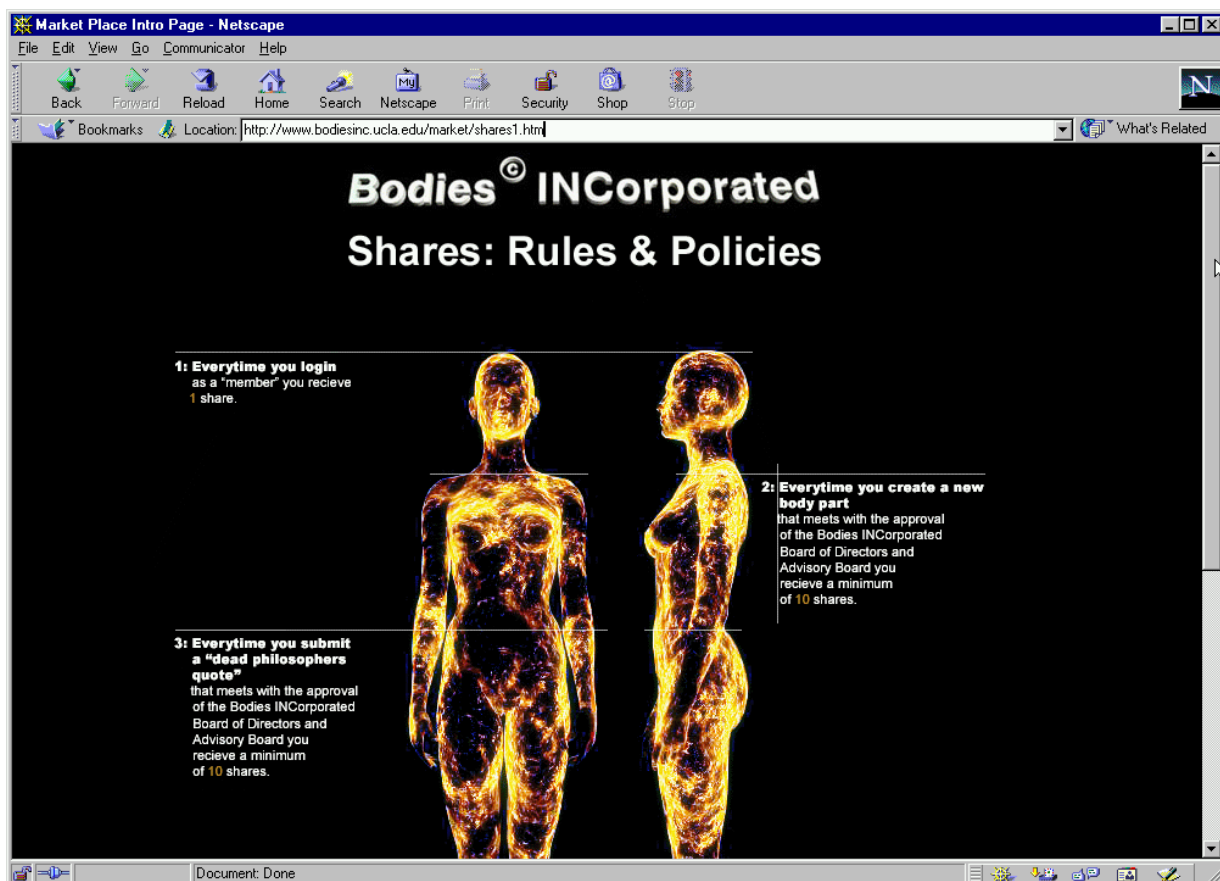
In many ways I see Jesse as a reflection of these fluid conditions. Each iteration of Jesse demonstrates the transformative capacity of living beings, which reinforces Deleuze's ideas of multiplicity and becoming. Turkle further echoes a protean state of flexibility through multiplicity by stating, "Now, in postmodern times, multiple identities are no longer so much at the margins of things. Many more people experience identity as a set of roles that can be mixed and matched, whose diverse demands need to be negotiated."³⁹

When considering the relationship between recombinant body and virtual avatar regarding reflections of self and identity, digital media artist Victoria Vesna states:

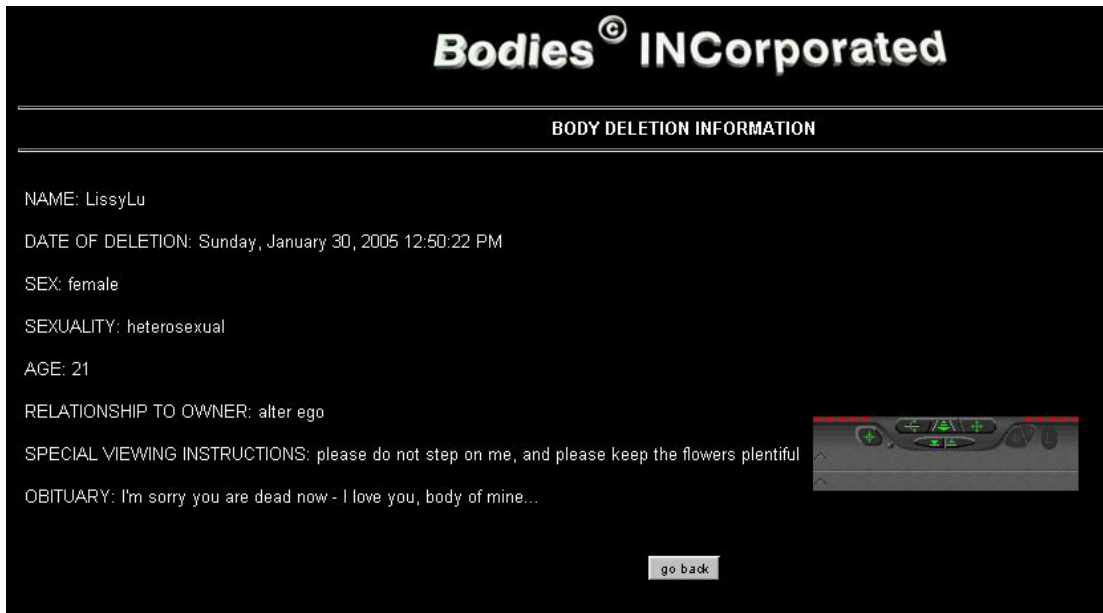
The separation of the avatar one creates from oneself is an illusion and that is what makes it so attractive. But if you take the time to analyze what you are creating... you will find that it is you in a different form. Sometimes what emerges is so troubling and strange that your rational mind will reject the notion that this is a reflection of you, but this is also an opportunity to look into the mirror of your "other."⁴⁰

With her online community-driven project *Bodies INCorporated* that launched in 1996, Vesna investigates social psychology of group dynamics within a cyberspatial platform, as well as the

effects of emotional attachment to virtual avatars (fig. 27). Participants of the project are invited to construct a 3D virtual body out of predefined parts, textures and sounds, after which the participant is granted access to a larger online community. The site is constructed of three environments where participants can interact with other users through their virtual bodies, including an environment where owners can choose how they wish their avatar to die as well as view the obituaries of other avatars (fig. 28).



27. Victoria Vesna. *Bodies INCorporated*. Online community-driven project. 1996.



28. Victoria Vesna. *Bodies INCorporated*. Example of NECROPOLIS[©] INCorporated, an environment where users may select to view details of how previous avatars have died (been deleted). Online community-driven project. 1996.

Through these project conditions, Vesna, along with the entire online community, can observe the various kinds of psychological commitment and attachment owners exhibit toward their virtual avatars, especially under the stark instructions to kill (delete) these digital bodies. Many users found it incredibly difficult to kill their avatar and opted to do so in humane and painless ways, despite these virtual bodies being composed of digital data that do not feel pain. In her PhD thesis, Vesna states: “Easier to create and not as obviously blurring the line between the human and machine, the idea of avatars has been promulgated on the Web. These representations of multiple selves on the Net are also containers for information about our personal lives, behaviors, likes and dislikes.”⁴¹ Through Vesna’s experience with her project, emotional attachment to, or even empathy for, virtual beings may partly be due to avatars being a reflection of the user. Perceptions of life, identity and personality can potentially be imbued within a virtual body as it ultimately becomes a mirror of the physical person that creates and controls the digital entity.

Conclusion:

Like Jesse's transmutative properties, the themes of my project have changed over time. I began with an attempt to reconcile the traumatic horror of witnessing my mother's bodily defilement to cancer by manipulating self-portraiture. I digitally dismantled photographic representations of my body and reassembled the pieces in an investigation of the idea of physical wholeness with emotional incompleteness. I believe the context of the resulting digital composite series eventually broadened beyond the initial inspiration of my personal narrative of corporeal limitation and isolation. I hope my photographic series inspires the viewer to consider context and themes involving abjection of othered bodies and an ever-shifting state of becoming.

As I progressed through the photographic series, I discovered physical properties of these fabricated forms that seem to suggest indications of life. I utilized these characteristics in a single image and attempted to construct an empathetic being that felt externally whole, yet internally struggling. The resulting form was Jesse, a character that evolved from photographic print, to clay sculpture, to digital video with an interactive motion trigger. Through this fictitious entity, I try to raise questions around the psychological effects of naming non-human entities on building empathetic connections through an increased sense of personhood. I attempt to investigate the characteristics and boundaries that distinguish living beings from non-living objects.

Due to the trauma of witnessing my mother endure breast cancer, I developed a desire to empathize as a means of healing. Therefore, I try to thoroughly understand the neurological processes involved with sharing emotions. Through this text as well as through my projects, I examined cross-species empathy through interactivity and shared corporeal experiences of pain or suffering. I looked to phenomenologies that unify mind-body dualism, which challenged my preconceived notions of the Cartesian Split.

Lastly within this text, I discussed the digital nature of my work and the concepts that potentially arise from an intangible virtual medium. I explored how experiencing multidirectional interactions may influence the viewer's potential to form relationships with digital bodies. I reexamined the Cartesian Split and attempted to reorient notions of disembodiment through the lens of hybridity and posthumanism. I try to guide the viewer to reconsider their understanding of bodily coordinates within a virtual context that seems untethered from physical limitations.

What began as a project attempting to resolve the trauma of grief has evolved, and is evolving, into different territories, transgressing epistemological borders. I am attempting to grasp an elusive wholeness within abject othered bodies, while investigating the parameters that constitute being alive. I am trying to direct the viewer to contemplate trans-species empathy via shared corporeality and somatic interaction, while wrestling with contradictory experiences involving mind-body dualism. I am attempting to inspire the viewer to reconsider their complex relationship between the virtual and the corporeal, which involves a fracturing of identity through cyberspatial multiplicity.

I believe both my artwork and writing contain vulnerability – I bare my struggles openly.

*By struggles, I not only mean personal trauma, but also my struggle in understanding
complex relationships between ideas that transcend disciplines.*

Within this text, I did not present concrete answers, as I am still searching for them.

At times, I contradicted myself as I tried to discuss and understand conflicting views.

I hope that in sharing my artistic practice from a place of open honesty,

I was able to connect with you through this process of discovery.

My work remains unfinished.

I do not expect to find answers for all my questions.

More importantly, I wish to provide the grounds for you to develop your own questions;

I seek to agitate your preconceptions,

to disturb your established understandings.

Through strange and unsettling forms,

I wish to draw you in with curiosity and challenge you with repulsion.

I invite intentional ambiguity and meaningful contradiction.

I hope you ask provocative questions.

- Bryan Page

Endnotes

¹ I am speaking symbolically, relating the process of digitally constructing *Body 1* (2018) to the process of reconstructing my identity after the traumatic loss of someone who defined much of my life.

² Kristeva, Julia, "Approaching Abjection," *Oxford Literary Review* 5, no. 1-2 (1982), trans. Leon S. Roudiez: 126, doi:10.3366/olr.1982.009.

³ Kristeva, Julia, *Powers of Horror: An Essay on Abjection*, trans. Leon S. Roudiez (New York, NY: Columbia University Press, 1982), 15. Originally published in French as *Pouvoirs de L'horreur. Essai sur L'abjection*, (Le Seuil, 1980).

⁴ This definition of abjection comes from the Tate website, found here: Tate, "Abject Art – Art Term," Tate Modern, accessed September 15, 2018, <https://www.tate.org.uk/art/art-terms/a/abject-art>.

⁵ Quinn, Marc, "Alison Lapper 2000 - 2012," Marc Quinn, accessed April 12, 2019, <http://marcquinn.com/artworks/alison-lapper>.

⁶ Quinn, Marc, "The Complete Marbles 1999 - 2005," Marc Quinn, accessed April 12, 2019, <http://marcquinn.com/artworks/the-complete-marbles>.

⁷ Ibid.

⁸ Deleuze, Gilles and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis, MN: University of Minnesota Press, 1987), 249. Originally published in French as *Mille Plateaux*, (Les Éditions de Minuit, 1980).

⁹ From Christoph Cox's essay "Of Humans, Animals and Monsters," found in: Thompson, Joseph, Nato Thompson, and Christoph Cox, *Becoming Animal: Contemporary Art in the Animal Kingdom* (Cambridge, MA: MIT Press, 2005), 23.

¹⁰ For more information on the brilliant story of scientific ambition, social othering, human and non-human rights, and the parameters that constitute living beings, see: Shelley, Mary Wollstonecraft, *Frankenstein, Or, The Modern Prometheus* (New York: New American Library, 2000).

¹¹ Baumans, Vera ed., *Making Lives Easier for Animals in Research Labs: Discussions by the Laboratory Animal Refinement & Enrichment Forum* (Washington, DC: Animal Welfare Institute, 2007), 12.

¹² Turkle, Sherry, *Life on the Screen: Identity in the Age of the Internet* (New York, NY: Touchstone Books, 1997), 84.

¹³ I am once again referencing: Mary Wollstonecraft Shelley, *Frankenstein, Or, The Modern Prometheus*.

¹⁴ For more information on scientific breakthroughs in bioprinting organ tissue, see: Jackson, Beau, "BIOLIFE4D Confirms First Successful 3D Print of Heart Tissue," 3D Printing Industry, June 27, 2018, accessed March 24, 2019, <https://3dprintingindustry.com/news/biolife4d-confirms-first-successful-3d-print-of-heart-tissue-135282/>.

¹⁵ Geneticist and co-creator of CRISPR (genome editing technology), Jennifer Doudna, describes both the positive potential behind genetic engineering as well as warns against potential ethical ramifications during her TED talk: TED, "How CRISPR Lets Us Edit Our DNA | Jennifer Doudna," YouTube, November 12, 2015, accessed March 24, 2019, <https://www.youtube.com/watch?v=TdBAHexVYzc>.

¹⁶ For more information on Einfühlung, see the following source available online: Nowak, Magdalena, "The Complicated History of Einfühlung," *Argument: Biannual Philosophical Journal* 1, no. 2 (December 2011): accessed February 24, 2019, <https://pdfs.semanticscholar.org/fb0f/19cf60eb02992570ee6901aabdf963db91c2.pdf>.

¹⁷ This is referring to English psychologist Edward Bradford Titchener. For more information, see: Titchener, Edward B. and Forest L. Dimmock, *Lectures on the Experimental Psychology of the Thought-Processes* (Scholar Select, 2015).

¹⁸ This is referring to German philosopher Theodor Lipps. For more information, see: Lipps, T. (1903). Einfühlung, innere Nachahmung, und Organepfindungen. *Arch. Psychol.* 1, 185-204.

¹⁹ Panksepp, Jaak, and Jules B. Panksepp. "Toward a Cross-species Understanding of Empathy." *Trends in Neurosciences* 36, no. 8 (2013): 489-96. doi:10.1016/j.tins.2013.04.009. 1.

²⁰ Lipps, T. (1903) Einfühlung, innere Nachahmung, und Organepfindungen. *Arch. Psychol.* 1, 185-204.

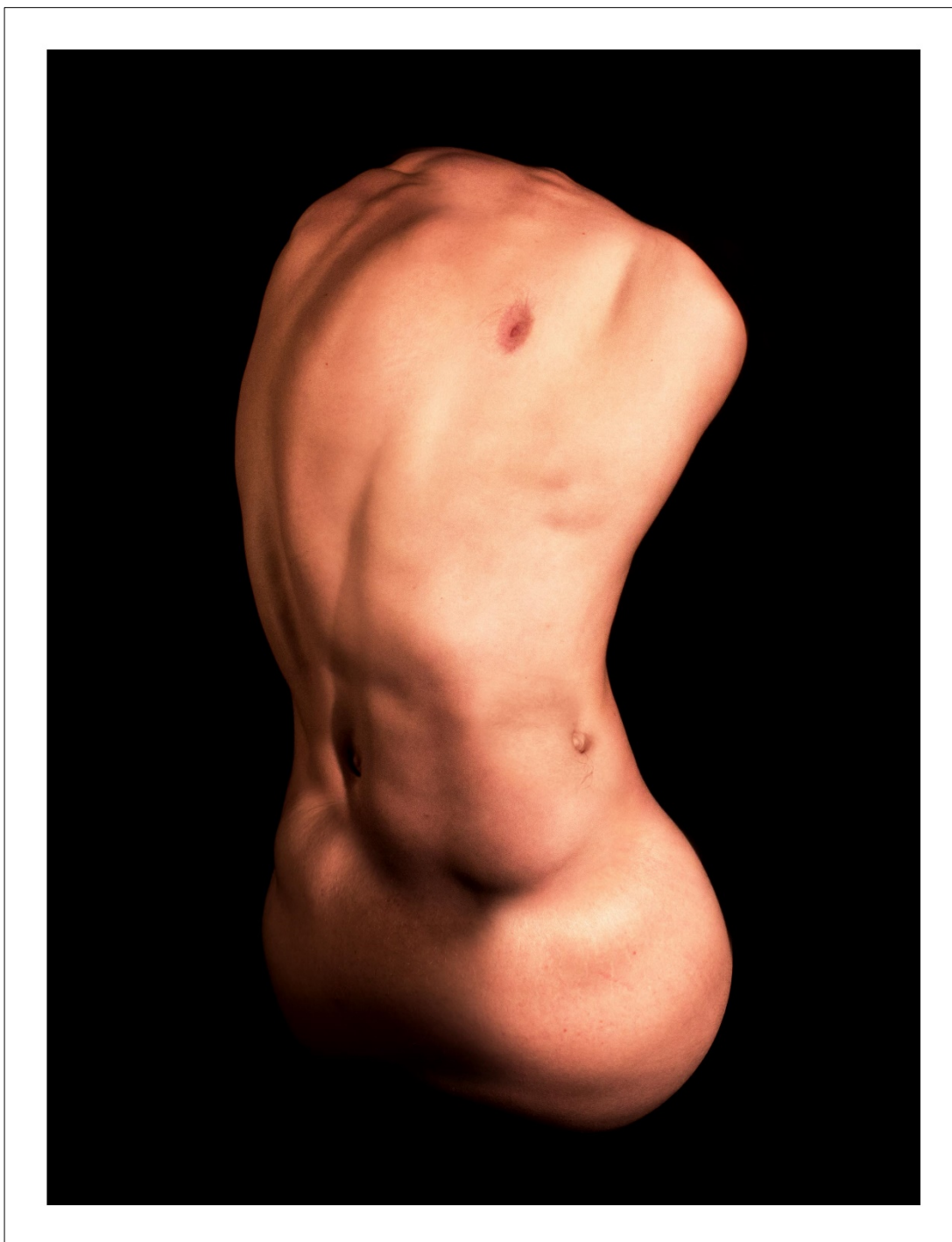
²¹ According to Jaak and Jules Panksepp, emotional contagion is "the presumed foundations of empathy" and is studied by looking at simplified animal behavior models. Panksepp, Jaak and Jules B. Panksepp, "Toward a Cross-Species Understanding of Empathy," *Trends in Neurosciences* 36, no. 8 (2013): doi:10.1016/j.tins.2013.04.009. 1.

²² Jaak Panksepp and Jules B. Panksepp, "Toward a Cross-Species Understanding of Empathy," *Trends in Neurosciences* 36, no. 8 (2013): doi:10.1016/j.tins.2013.04.009. 4.

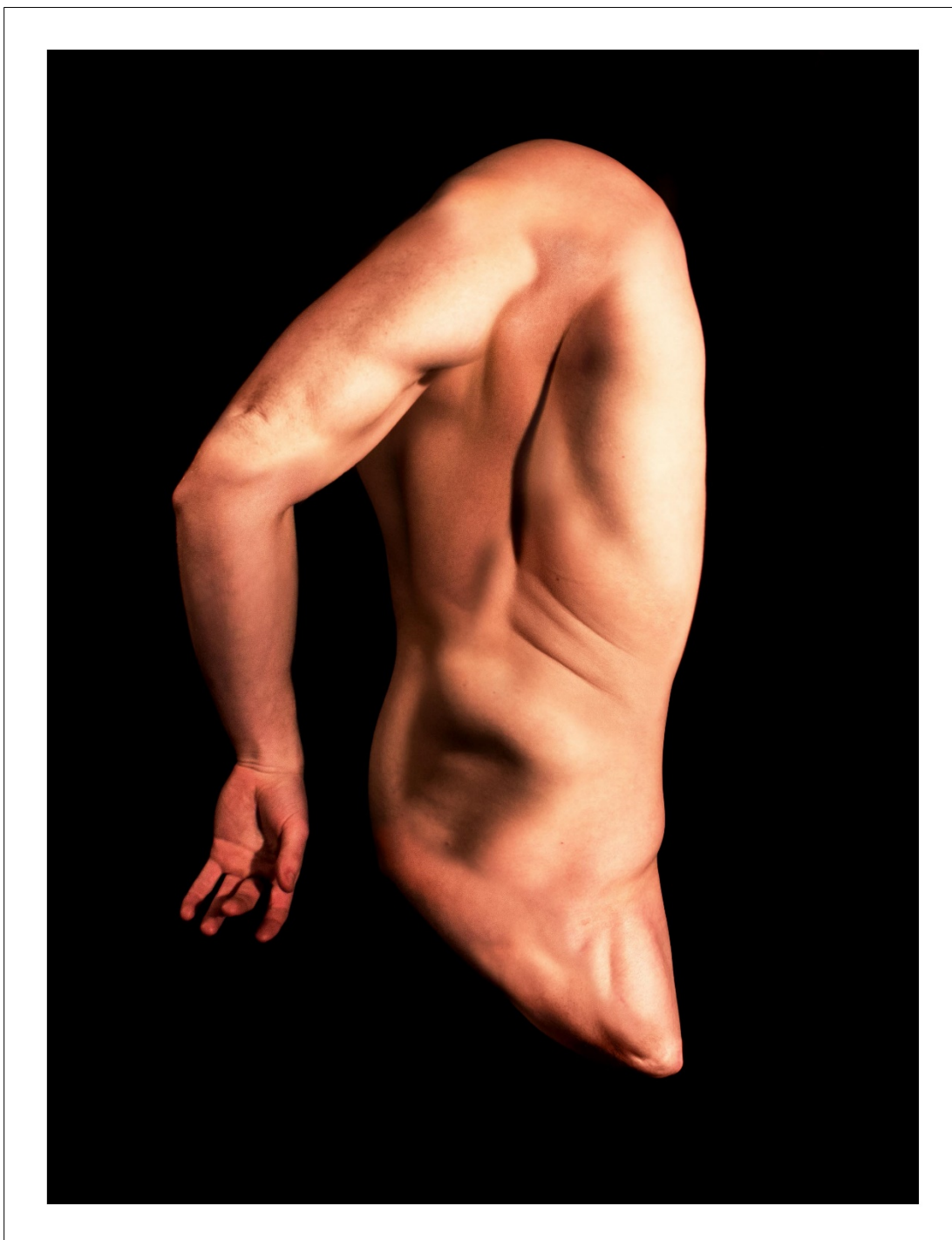
²³ Ibid.

-
- ²⁴ MacIntyre is referring to the Cartesian Split, a mind-body dualism argued by René Descartes that I will expand upon later in this text.
- ²⁵ MacIntyre, Alasdair C. and Paul Carus, *Dependent Rational Animals: Why Human Beings Need the Virtues* (Chicago, IL: Open Court, 1999), 14.
- ²⁶ Acampora, Ralph R. *Corporal Compassion: Animal Ethics and Philosophy of Body* (Pittsburgh, PA: University of Pittsburgh Press, 2006), 27.
- ²⁷ Regan, Tom, "The Case for Animal Rights," from Peter Singer, ed., *In Defense of Animals* (New York, NY: Basil Blackwell, 1985), 24.
- ²⁸ For more information on the Cartesian Split and mind-body dualism, see: Descartes, Rene, *Meditations on First Philosophy*, trans. Donald A. Cress (Hackett Publishing Co, 1993).
- ²⁹ Acampora, Ralph R. *Corporal Compassion*. 30.
- ³⁰ Haraway, Donna Jeanne, *When Species Meet* (Minneapolis: Univ. of Minnesota Press, 2009), 71.
- ³¹ An excellent example of cyberpunk is the 1999 film *The Matrix*, where the protagonist experiences true disembodiment as he plugs his mind into a virtual network, leaving his body behind as a vulnerable shell.
- ³² Froy, Francesca, "Indeterminacy in Cyberspace," essay from: Segal, Naomi, Lib Taylor, and Roger Cook, eds., *Indeterminate Bodies* (Basingstoke, Hampshire: Palgrave, 2003), 140.
- ³³ Stelarc is a transhumanist artist widely known for his projects involving body modification and hybridity that alters corporeal limitations.
- ³⁴ Denejkina, Anna, "The Body Is Obsolete: Stelarc's Radical Experiments with Alternate Human Forms," *The Kernel*, July 27, 2015, accessed November 5, 2018, <https://kernelmag.dailydot.com/issue-sections/features-issue-sections/13784/stelarc-interview-body-obsolescence/>.
- ³⁵ For more on corporeal indeterminacy, see Monaghan, Lee F. "Corporeal Indeterminacy: The Value of Embodied, Interpretive Sociology," an essay from Dennis D. Waskul and Phillip Vannini, eds., *Body/Embodiment: Symbolic Interaction and the Sociology of the Body* (London: Routledge, 2016), 125-140.
- ³⁶ "Dystopia by Aziz Cucher," *Designboom*, January 19, 2009, accessed March 26, 2019, <https://www.designboom.com/art/dystopia-by-aziz-cucher/>.
- ³⁷ Westall, Mark, "Interview : Aziz Cucher," *FAD Magazine*, January 30, 2014, , accessed March 26, 2019, <https://fadmagazine.com/2014/01/17/interview-aziz-cuter/>.
- ³⁸ Slater, Lauren, "Dr. Daedalus," *Harper's Magazine*, July 2001, 65.
- ³⁹ Turkle, Sherry, *Life on the Screen*, 180.
- ⁴⁰ Vesna, Victoria, "Virtually Real. Conversations on TechNoBody - Part II," interview by Patricia Miranda, *Anti-utopias*, March 5, 2015, , accessed April 14, 2019, <https://anti-utopias.com/editorial/virtually-real-conversations-on-technobody-part-ii/>.
- ⁴¹ Vesna, Victoria, "Networked Public Spaces: An Investigation into Virtual Embodiment" (PhD thesis, University of Wales College, 2000), 36, accessed April 14, 2019, vv.arts.ucla.edu/publications/thesis/official/NET_thesisF.doc.

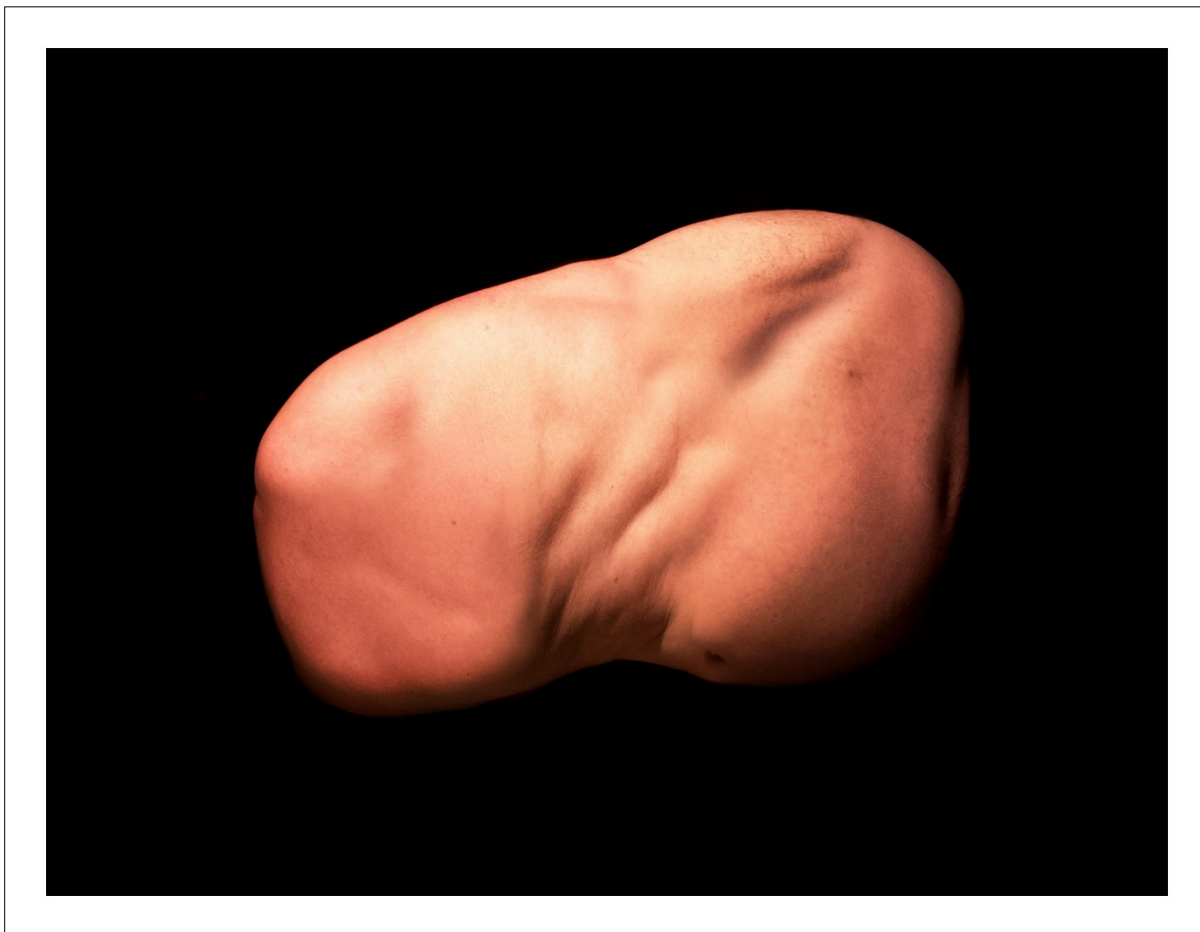
Plates



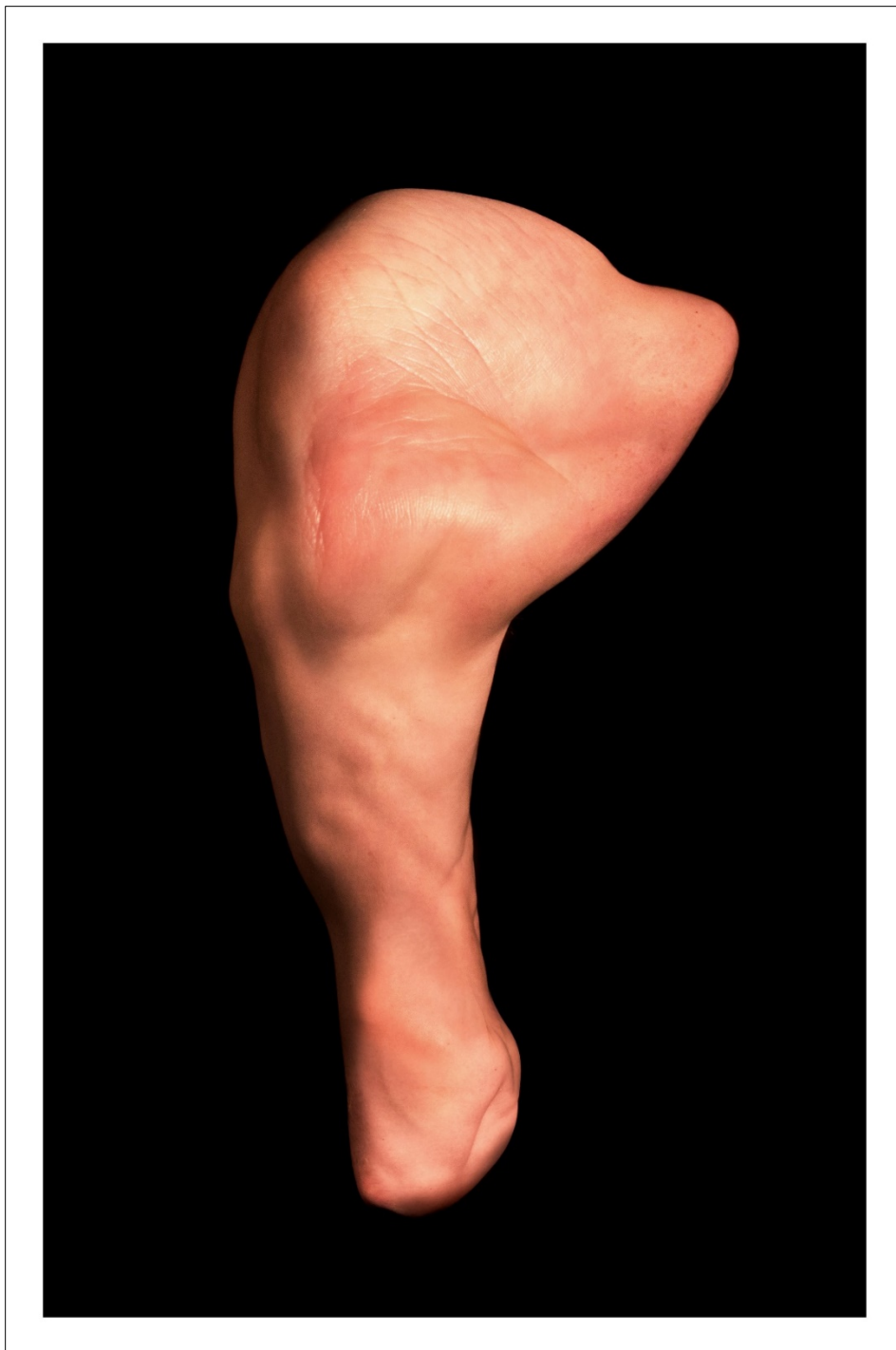
Bryan Page. *Body 1*.
Digital composite as inkjet print.
11 x 8.5 in. 2018.



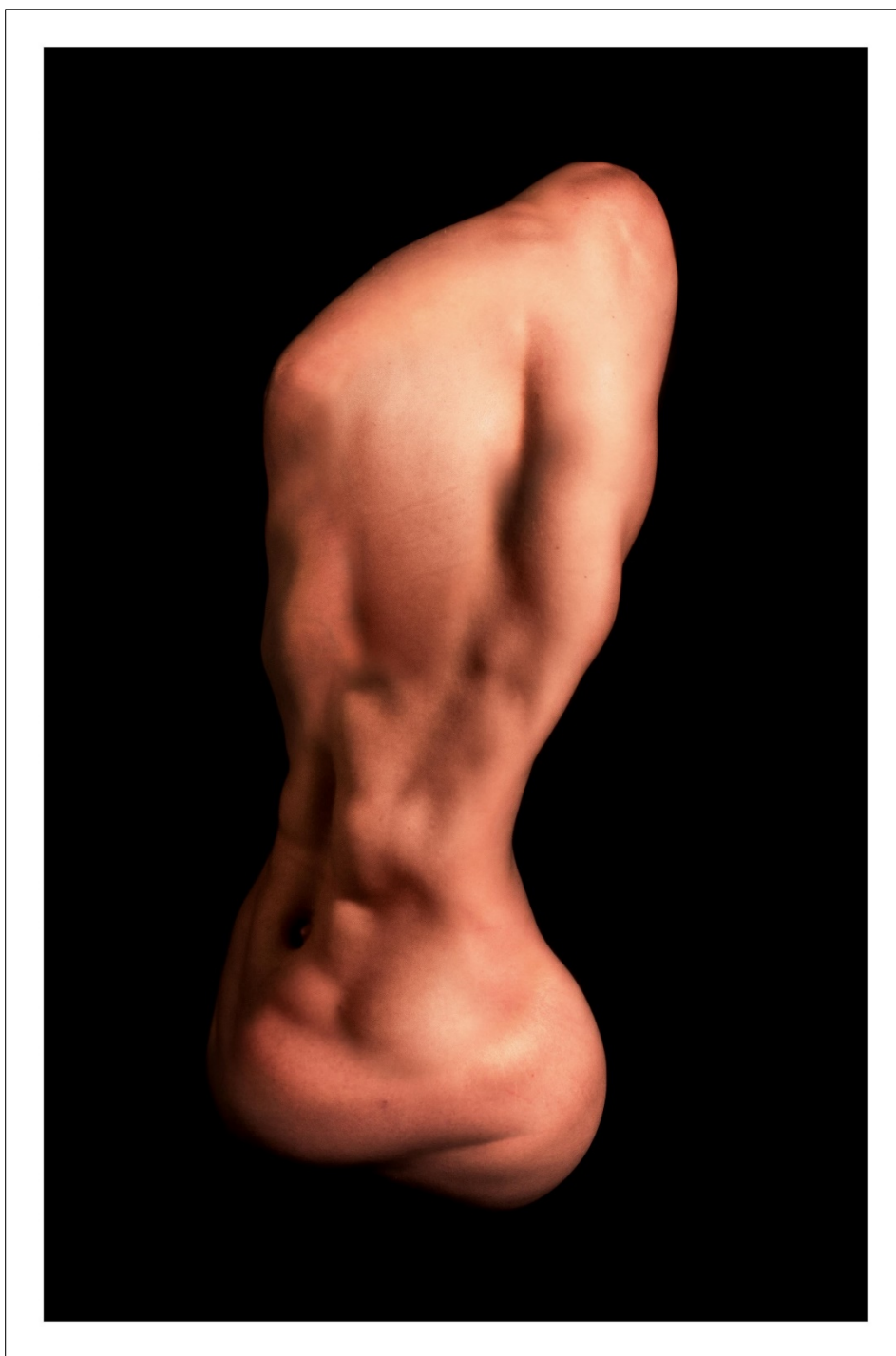
Bryan Page. *Body 2*.
Digital composite as inkjet print.
11 x 8.5 in. 2018.



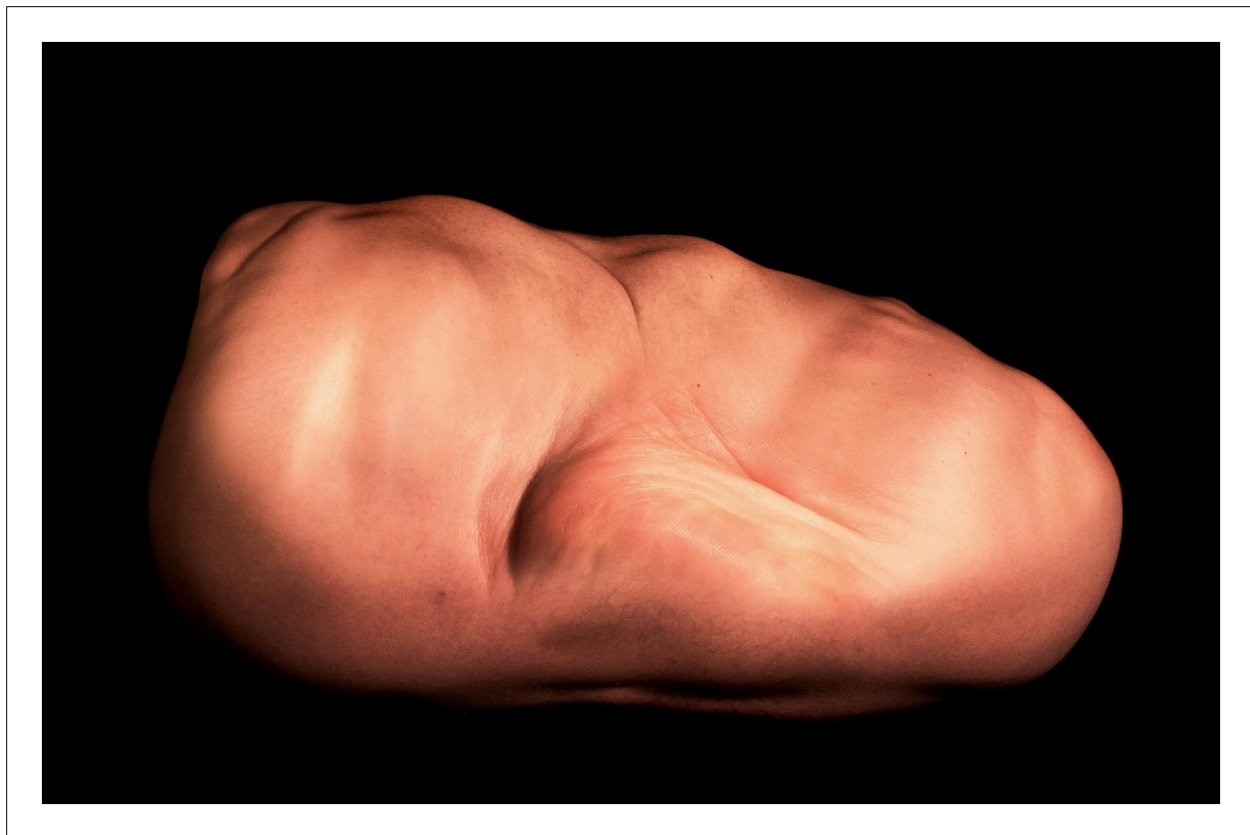
Bryan Page. *Body 3*.
Digital composite as inkjet print.
8.5 x 11 in. 2018.



Bryan Page. *Body 4*.
Digital composite as inkjet print.
18 x 12 in. 2018.



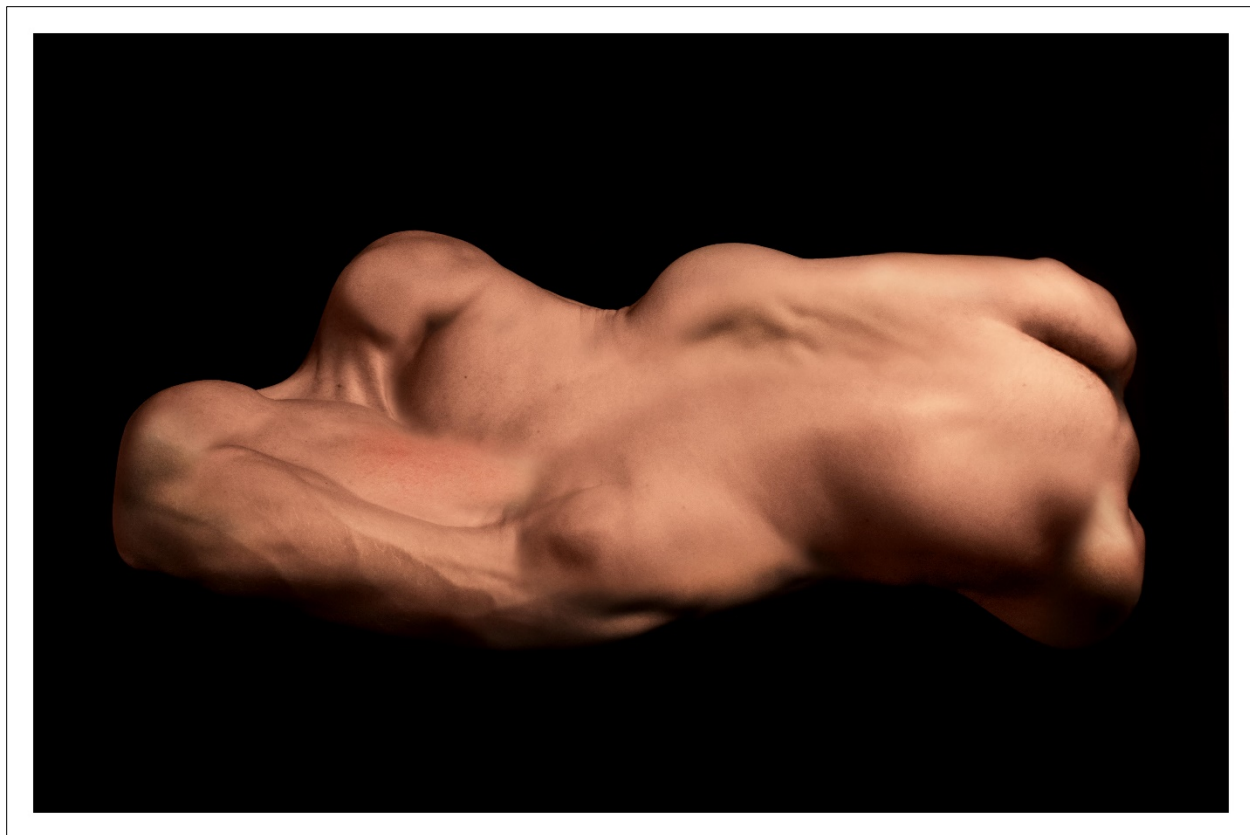
Bryan Page. *Body 5*.
Digital composite as inkjet print.
18 x 12 in. 2018.



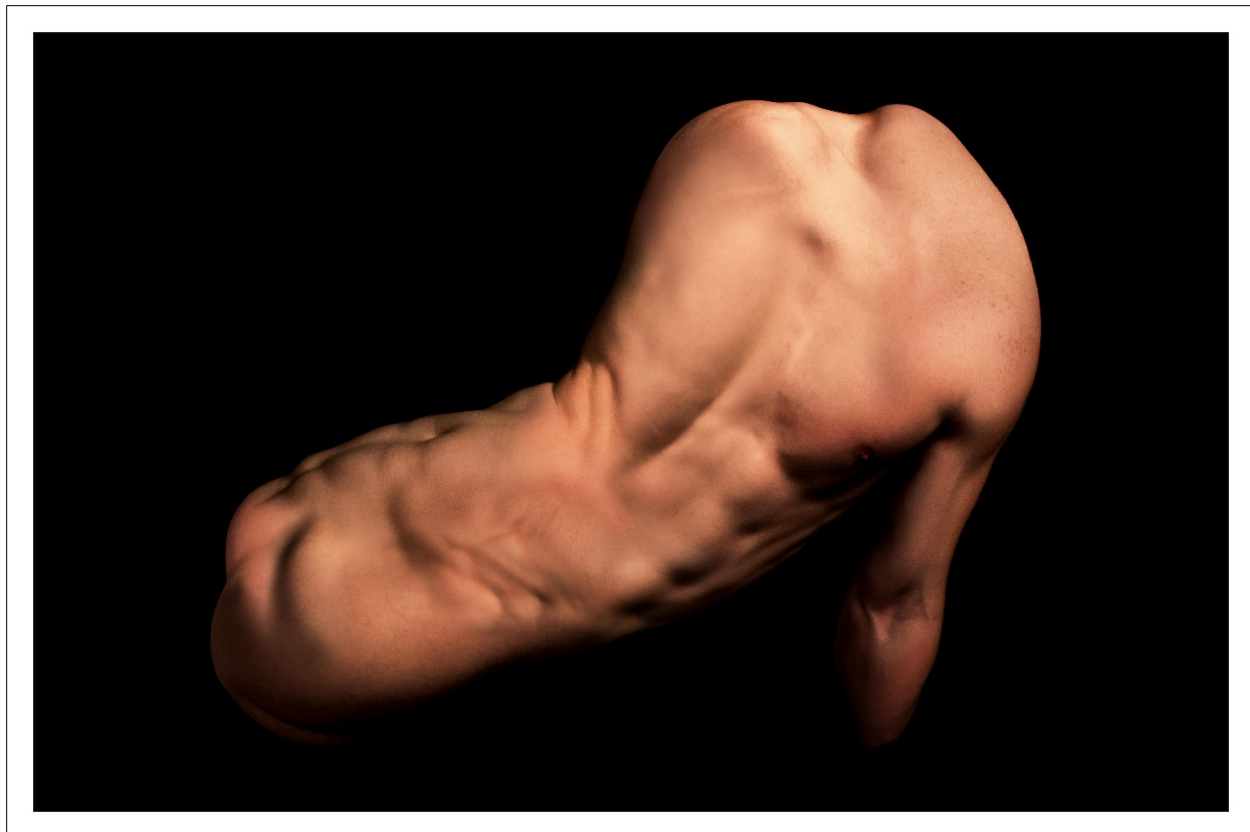
Bryan Page. *Body 6*.
Digital composite as inkjet print.
12 x 18 in. 2018.



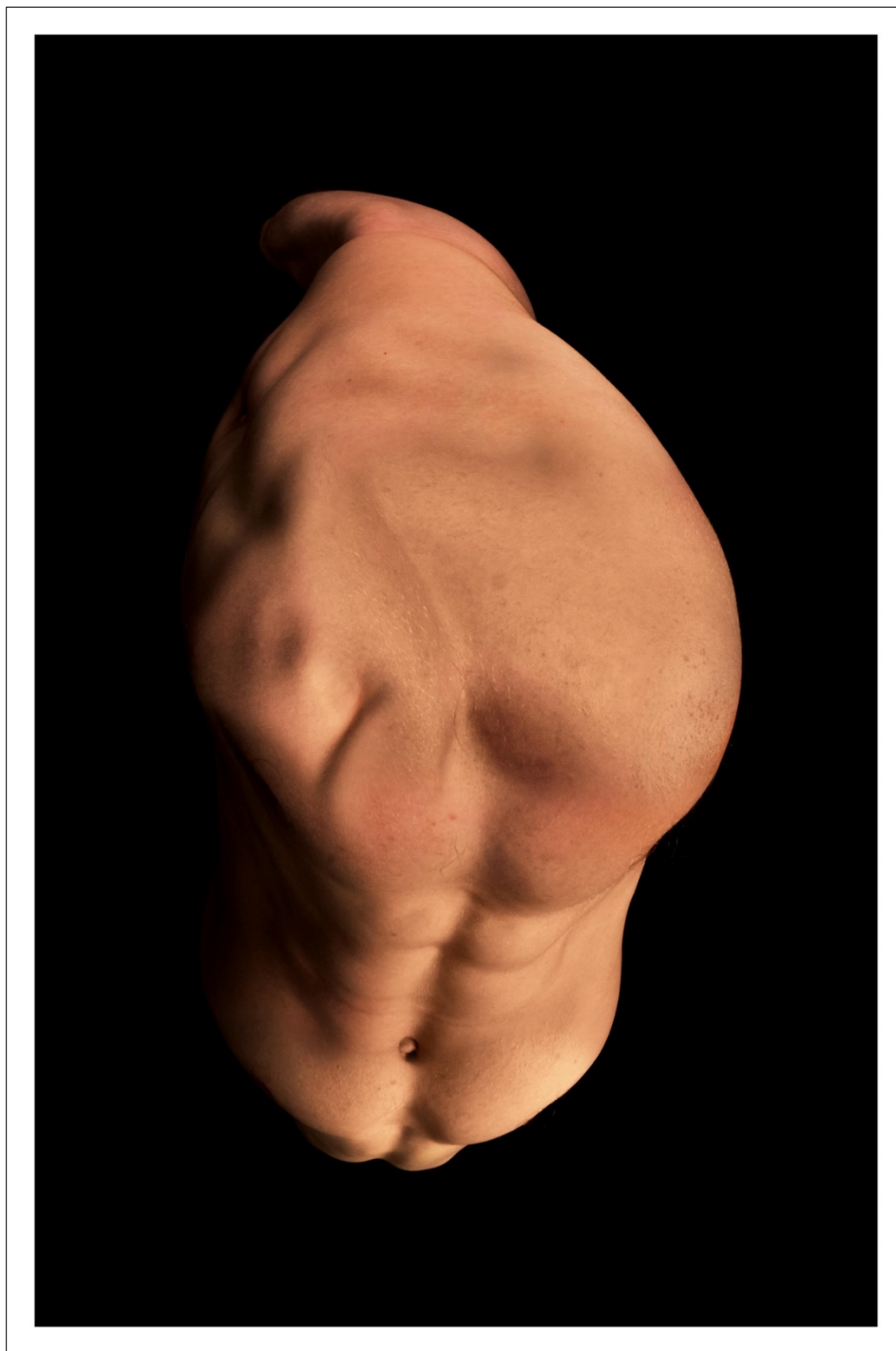
Bryan Page. *Body 7*.
Digital composite as inkjet print.
12 x 18 in. 2018.



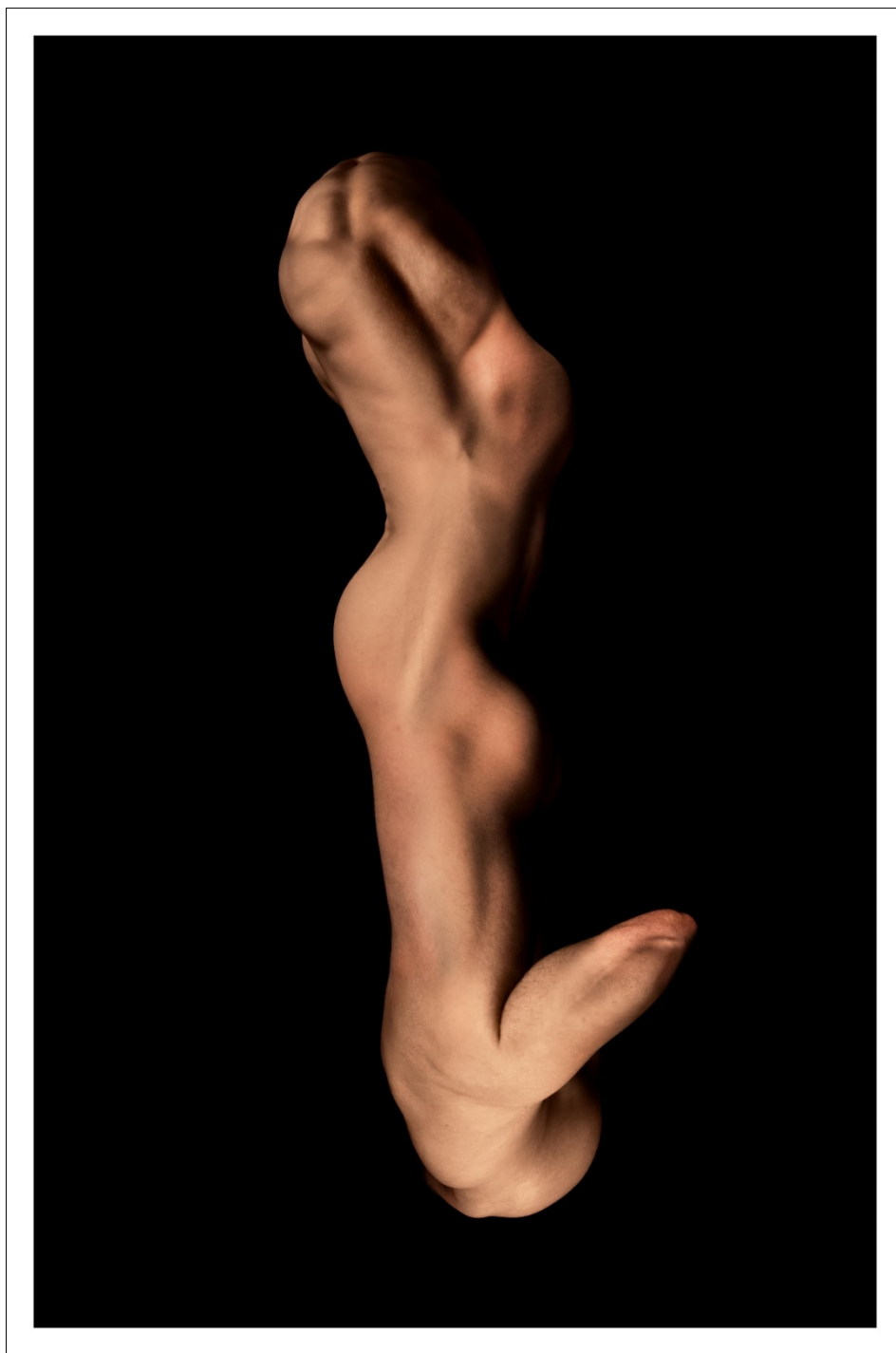
Bryan Page. *Body 8*.
Digital composite as inkjet print.
16 x 24 in. 2018.



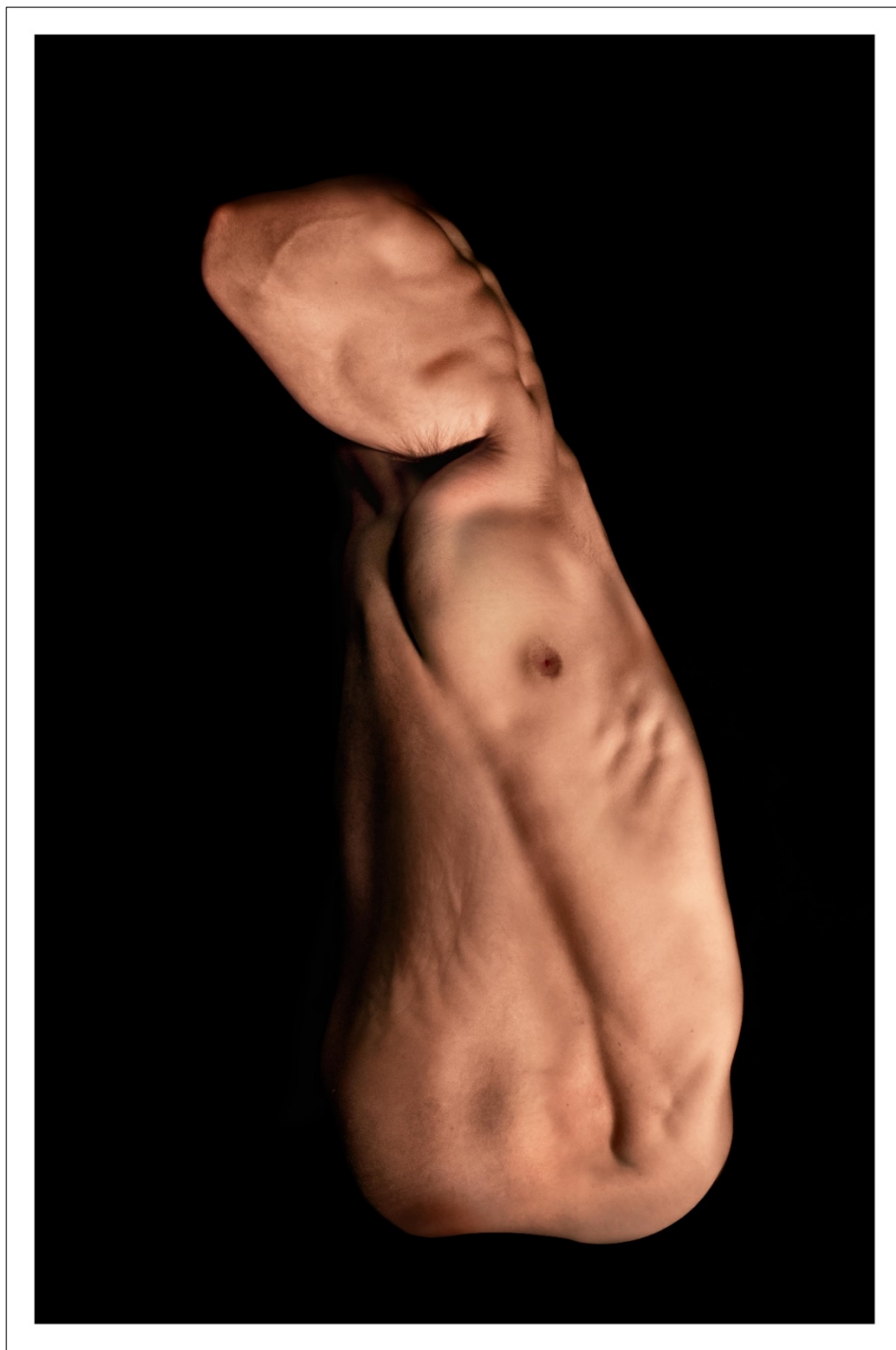
Bryan Page. *Body 9*.
Digital composite as inkjet print.
16 x 24 in. 2018.



Bryan Page. *Body 10*.
Digital composite as inkjet print.
24 x 16 in. 2018.



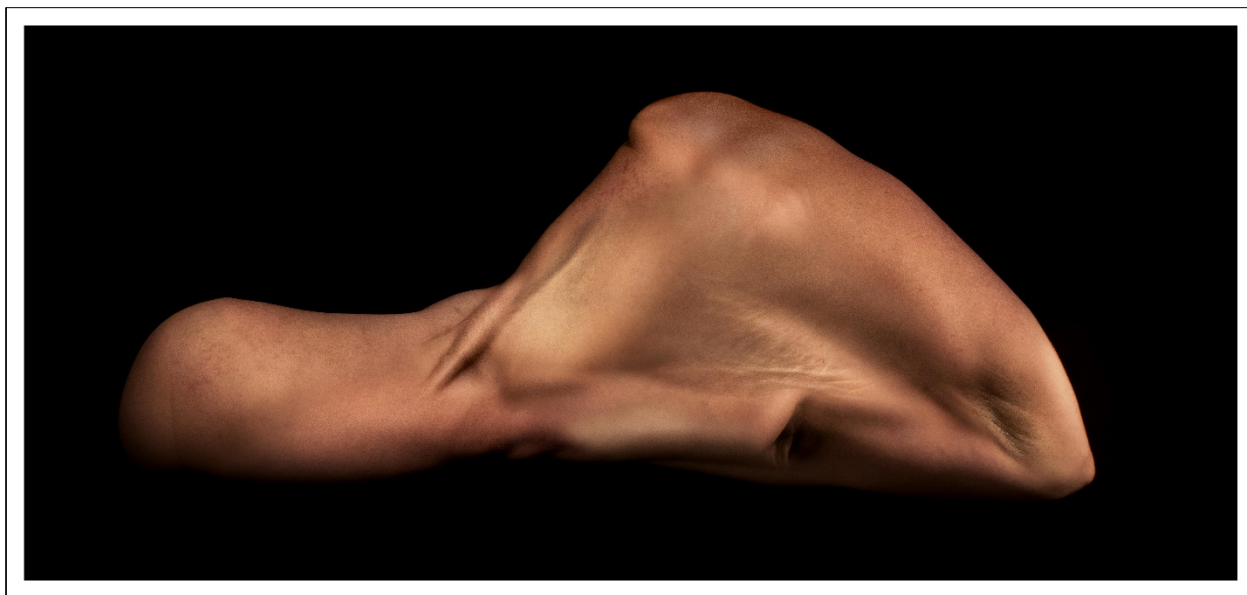
Bryan Page. *Body 11*.
Digital composite as inkjet print.
24 x 16 in. 2018.



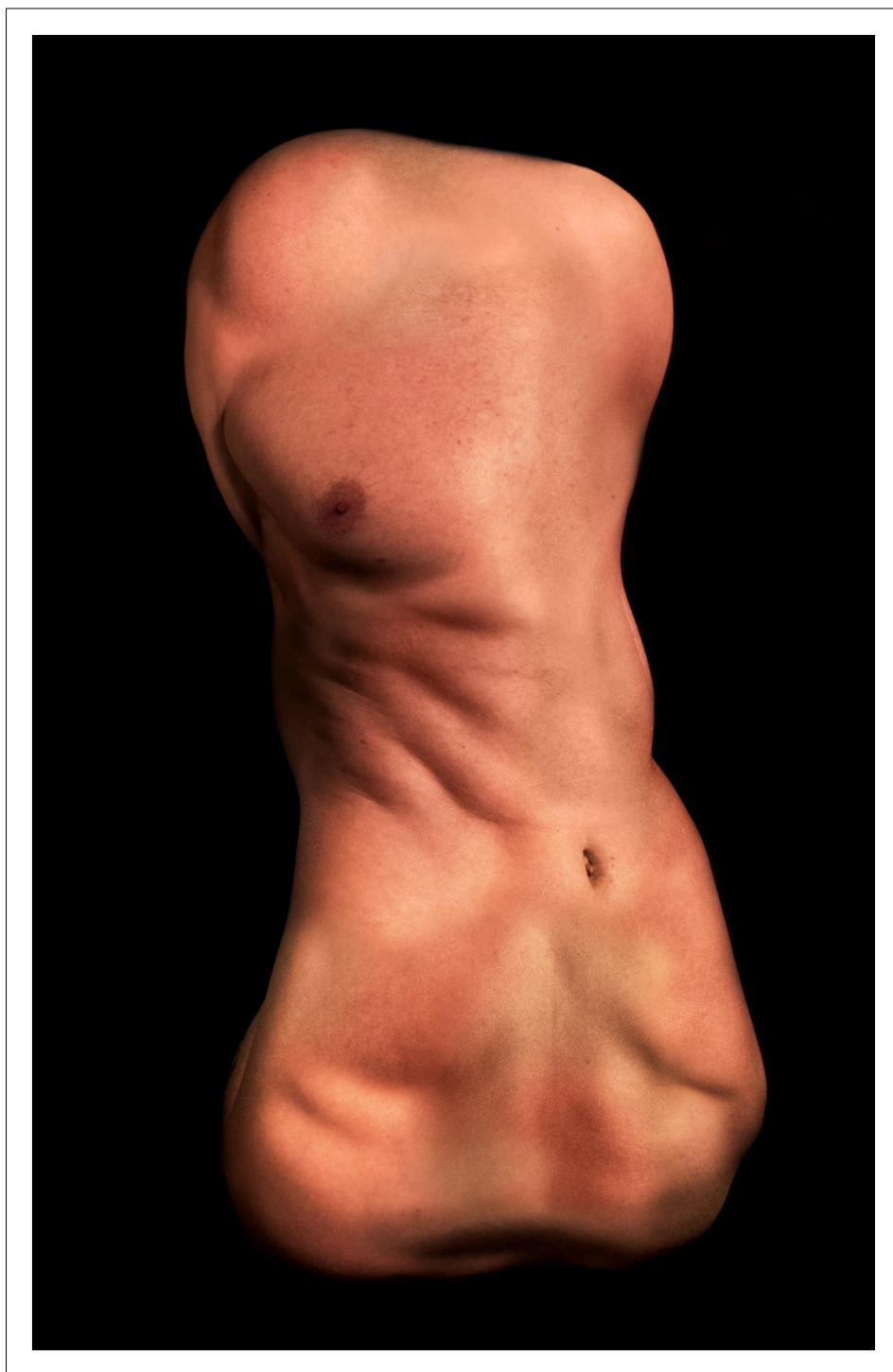
Bryan Page. *Body 12*.
Digital composite as inkjet print.
24 x 16 in. 2018.



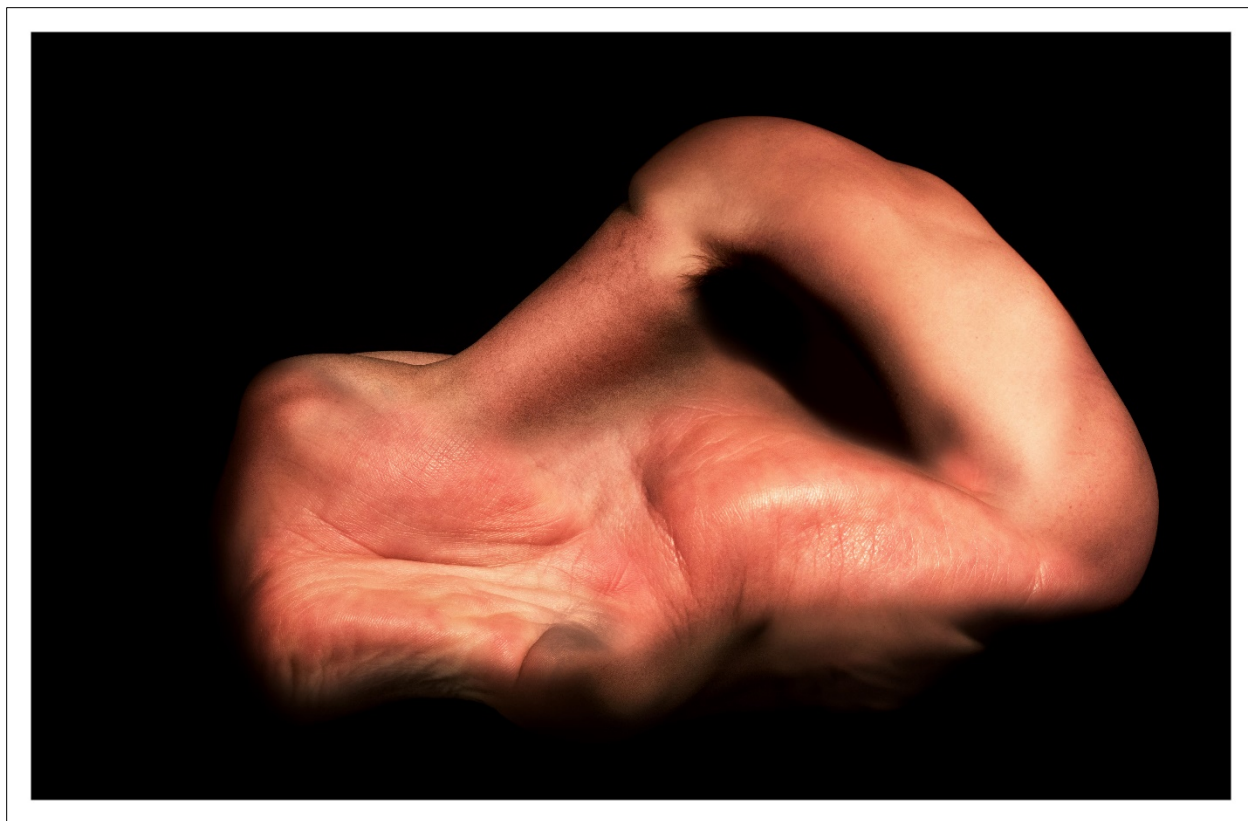
Bryan Page. *Body 13*.
Digital composite as inkjet print.
36 x 17 in. 2018.



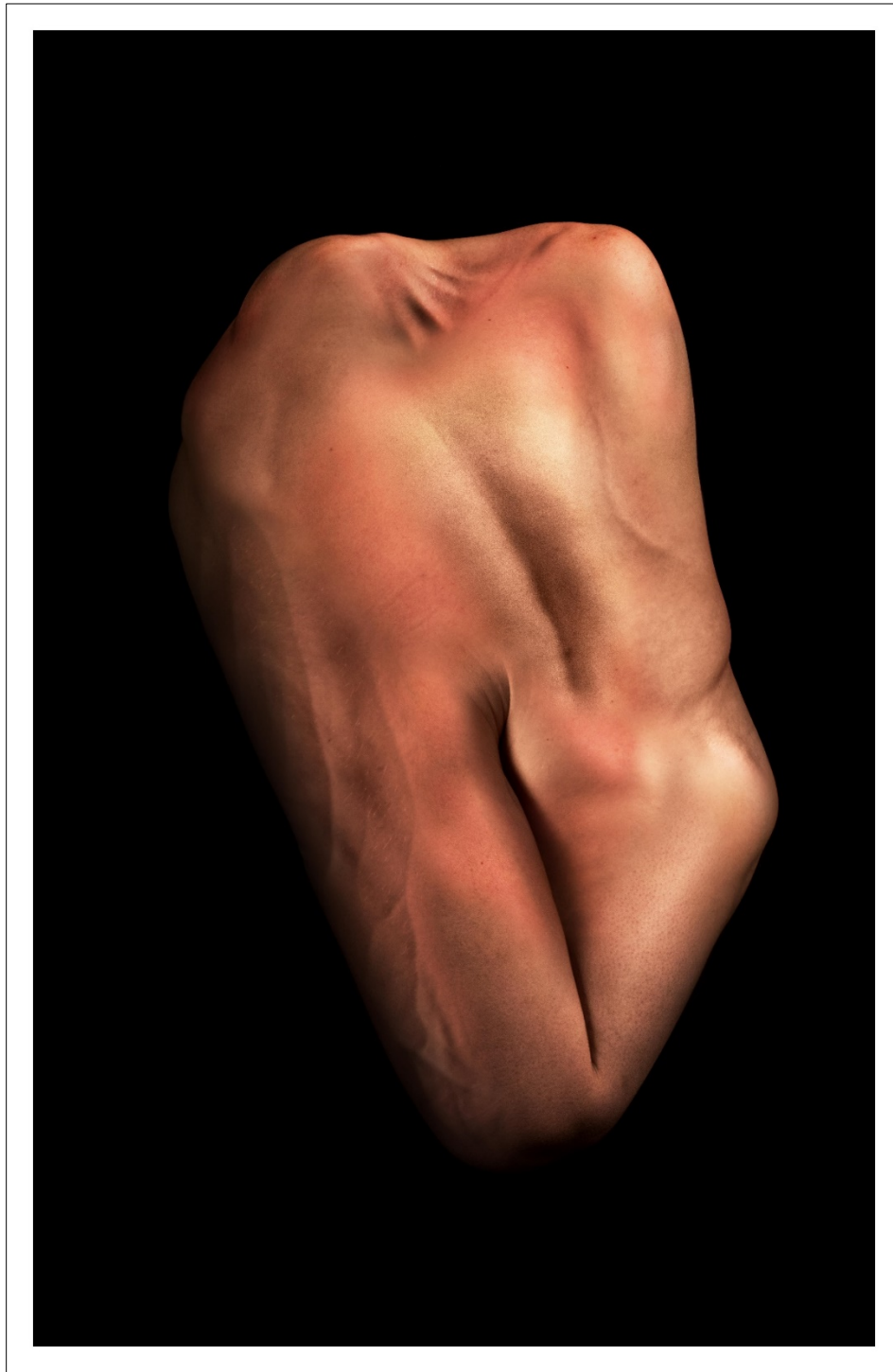
Bryan Page. *Body 14*.
Digital composite as inkjet print.
17 x 36 in. 2018.



Bryan Page. *Body 15*.
Digital composite as inkjet print.
26 x 17 in. 2018.



Bryan Page. *Body 16*.
Digital composite as inkjet print.
17 x 26 in. 2018.



Bryan Page. *Body 17*.
Digital composite as inkjet print.
26 x 17 in. 2018.



Bryan Page. *Fleshscape*.
Digital composite as inkjet print.
16 x 36 in. 2018.



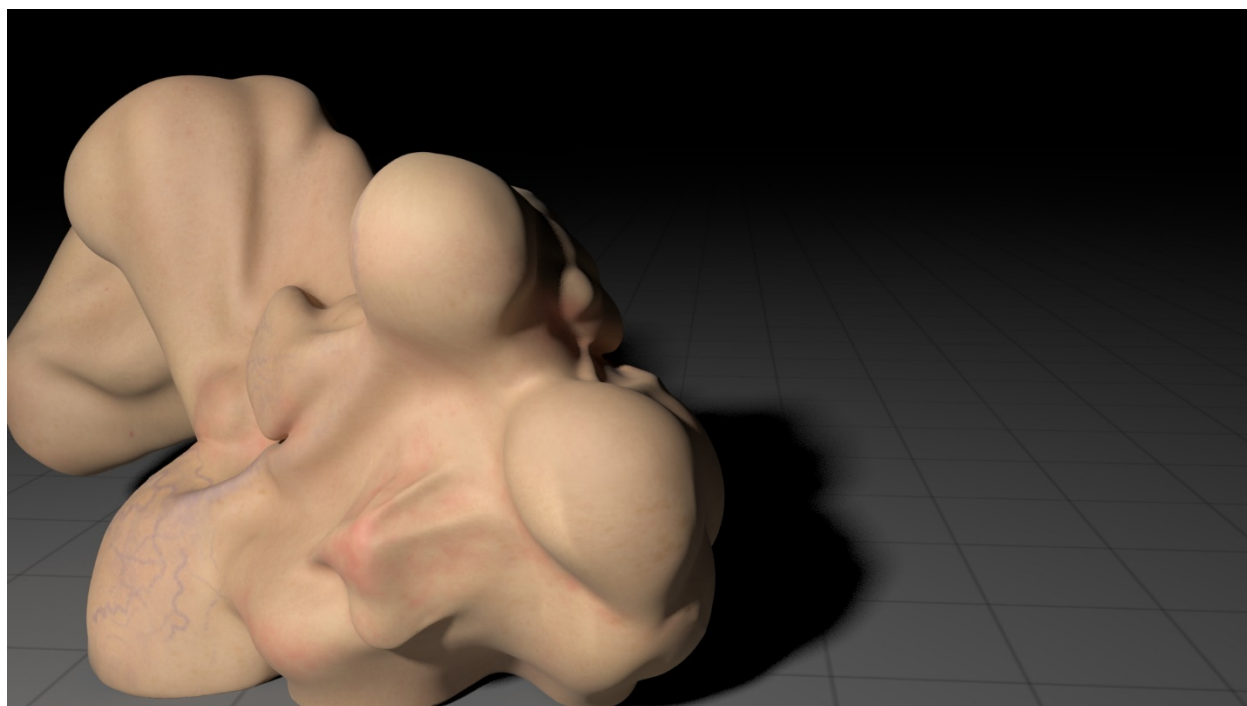
Bryan Page. *Jesse*.
Digital composite as inkjet print.
44 x 96 in. 2018.



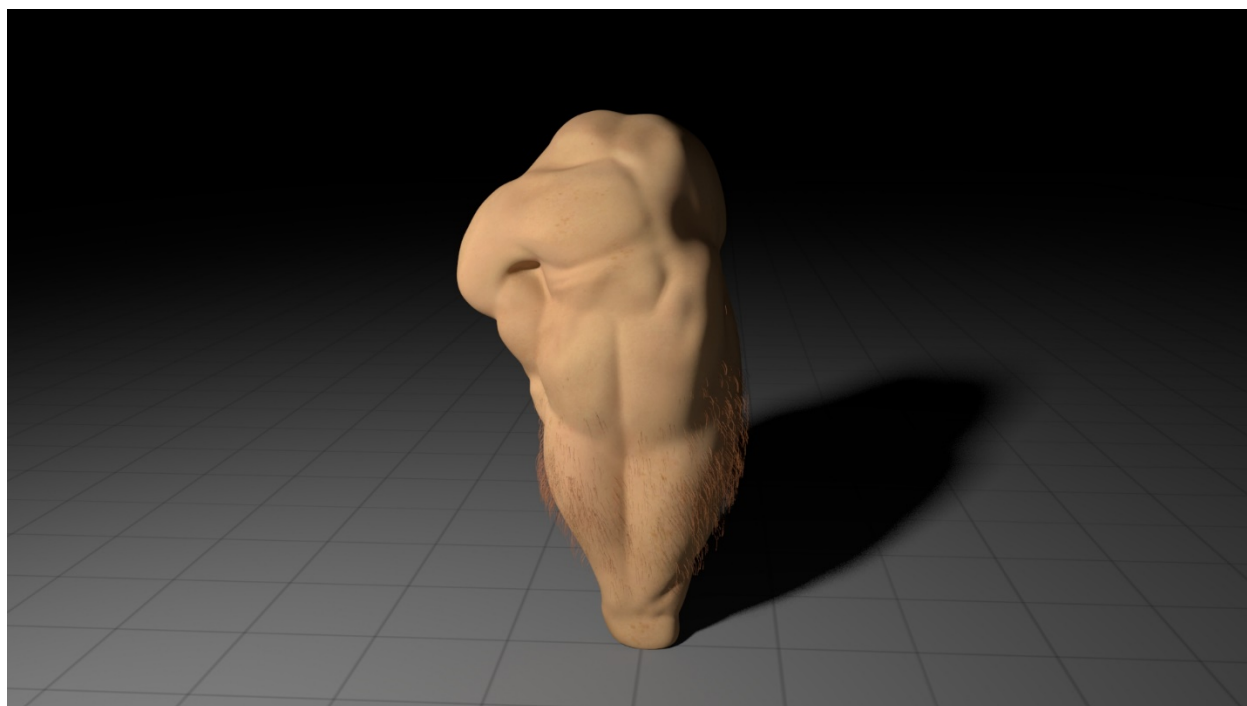
Bryan Page. *Indeterminacy*.
Digital composite as inkjet print.
60 x 24 in. 2018.



Bryan Page. *Jesse (in the Flesh)*.
Polymer clay, aluminum foil, armature wire.
6.5 x 12 x 5.5 in. 2018.



Bryan Page. *Jesse (Writhing)*.
Digital video (still) with motion sensor trigger.
Duration variable. 2019.



Bryan Page. *Pax (Writhing)*.
Digital video (still) with motion sensor trigger.
Duration variable. 2019.

Bibliography

- "Dystopia by Aziz Cucher." Designboom. January 19, 2009. Accessed March 26, 2019.
<https://www.designboom.com/art/dystopia-by-aziz-cucher/>.
- Acampora, Ralph R. *Corporal Compassion: Animal Ethics and Philosophy of Body*. Pittsburgh, PA: University of Pittsburgh Press, 2006.
- Baumans, Vera, ed. *Making Lives Easier for Animals in Research Labs: Discussions by the Laboratory Animal Refinement & Enrichment Forum*. Washington, DC: Animal Welfare Institute, 2007.
- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press, 1987.
- Descartes, Rene. *Meditations on First Philosophy*. Translated by Donald A. Cress. Hackett Publishing Co, 1993.
- Haraway, Donna Jeanne. *When Species Meet*. Minneapolis: Univ. of Minnesota Press, 2009.
- Jackson, Beau. "BIOLIFE4D Confirms First Successful 3D Print of Heart Tissue." 3D Printing Industry. June 27, 2018. Accessed March 24, 2019.
<https://3dprintingindustry.com/news/biolife4d-confirms-first-successful-3d-print-of-heart-tissue-135282/>.
- Kristeva, Julia, and John Lechte. "Approaching Abjection." *Oxford Literary Review* 5, no. 1-2 (1982): 125-49. doi:10.3366/olr.1982.009.
- Kristeva, Julia. *Powers of Horror: An Essay on Abjection*. Translated by Leon S. Roudiez. New York, NY: Columbia University Press, 1982.
- MacIntyre, Alasdair C., and Paul Carus. *Dependent Rational Animals: Why Human Beings Need the Virtues*. Chicago, IL: Open Court, 1999.
- Nowak, Magdalena. "The Complicated History of Einfühlung." *Argument: Biannual Philosophical Journal* 1, no. 2 (December 2011): 301-26. Accessed February 24, 2019.
<https://pdfs.semanticscholar.org/fb0f/19cf60eb02992570ee6901aabdf963db91c2.pdf>.
- Panksepp, Jaak, and Jules B. Panksepp. "Toward a Cross-Species Understanding of Empathy." *Trends in Neurosciences* 36, no. 8 (2013): 489-96. doi:10.1016/j.tins.2013.04.009.
- Quinn, Marc. "Alison Lapper 2000 - 2012." Marc Quinn. Accessed April 12, 2019.
<http://marcquinn.com/artworks/alison-lapper>.
- Quinn, Marc. "The Complete Marbles 1999 - 2005." Marc Quinn. Accessed April 12, 2019.
<http://marcquinn.com/artworks/the-complete-marbles>.

Segal, Naomi, Lib Taylor, and Roger Cook, eds. *Indeterminate Bodies*. Basingstoke, Hampshire: Palgrave, 2003.

Singer, Peter, ed. *In Defense of Animals*. New York, NY: Basil Blackwell, 1985.

Slater, Lauren. "Dr. Daedalus." *Harper's Magazine*, July 2001, 57-67.

Tate. "Abject Art – Art Term." Tate. Accessed September 15, 2018. <https://www.tate.org.uk/art/art-terms/a/abject-art>.

TED. "How CRISPR Lets Us Edit Our DNA | Jennifer Doudna." YouTube. November 12, 2015. Accessed March 24, 2019. <https://www.youtube.com/watch?v=TdBAHexVYzc>.

Thompson, Joseph, Nato Thompson, and Christoph Cox. *Becoming Animal: Contemporary Art in the Animal Kingdom*. Cambridge, MA: MIT Press, 2005.

Titchener, Edward B., and Forest L. Dimmock. *Lectures on the Experimental Psychology of the Thought-Processes*. Scholar Select, 2015.

Turkle, Sherry. *Life on the Screen: Identity in the Age of the Internet*. New York, NY: Touchstone Books, 1997.

Vesna, Victoria. "Networked Public Spaces: An Investigation into Virtual Embodiment." PhD thesis, University of Wales College, 2000. Accessed April 14, 2019. vv.arts.ucla.edu/publications/thesis/official/NET_thesisF.doc.

Vesna, Victoria. "Virtually Real. Conversations on TechNoBody - Part II." Interview by Patricia Miranda. *Anti-utopias*. March 5, 2015. Accessed April 14, 2019. <https://anti-utopias.com/editorial/virtually-real-conversations-on-technobody-part-ii/>.

Waskul, Dennis D., and Phillip Vannini, eds. *Body/Embodiment: Symbolic Interaction and the Sociology of the Body*. London: Routledge, 2016.

Westall, Mark. "Interview: Aziz + Cucher." *FAD Magazine*. January 30, 2014. Accessed March 26, 2019. <https://fadmagazine.com/2014/01/17/interview-aziz-cuter/>.