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## Traditional vs Digital: The Future of Forensic Art

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## Abstract

This dissertation explores the relationship between traditional and digital art methods in forensic art, exploring how both methodologies have strong components but arguably work dominantly better combined. I appreciate the value of both techniques ranging from hand-rendered drawings and sculptures to 3D printing and software data. My discussion of the future suggests a hybridity, integrating both handmade techniques and digital performance. The curated exhibition invites my intended audience (the younger generation), educating them by showing the wide range of techniques, not forgetting what is out there.

*Traditional vs Digital: The Future of Forensic Art*, will be placed at the LifeSpace gallery, Dundee. This is the best fitting venue for my proposed exhibition showcasing collaboration between artist and scientist. By choosing artists who are not forensic artists, I showcase forensic art methods through their work and the possibilities with collaboration, arguing it is key. This exhibition has been carefully curated displaying 14 artworks by 8 different artists, as from a fine artist perspective I am eager to follow the course of forensic and medical art. Having practitioners' meetings with Tobias Houlton and Danielle Adair helped shape my research by obtaining their input on where they see the future of forensic and medical art. As well as a film analysis on *The Fifth Element 1997*, exploring a futuristic concept of reconstructing a person's identity from DNA. This exhibition examines what the future holds for forensic art questioning identify, memory and reconstruction, which I continue to discuss throughout this dissertation, and which aligns with my art practice.

## Acknowledgements

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My sincere thanks to my family and friends for all their loving support and encouragement over the past semester. I especially want to thank my mum, Nicola Tully, who has supported me continuously throughout the years, and been my number one supporter. It has meant the world to me.

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## Positionality Statement

Throughout my years of studying, I developed an interest in forensic art processes which is shown through my art practice. During my studies at university, I have had the opportunity to experiment with creating sculptures and explore forensic art techniques through the use of 3D scanners in the Forensic art department at Dundee University. This has affirmed my interest in applying for the Medical art masters next year. I have always been fascinated with genetics and ageing especially through my own family. With inheriting physical traits, how I resemble my mum and gran, I use these subject matters within my art practice and real-life contexts. Forensic art aspects such as age progression connects to this dissertation on how these methodologies mirror my work. Forensic and Medical art has always been a key inspiration within my professional career path and creative practice. Both professions share the same key components of anatomy, reconstruction and identity.

# Introduction

This exhibition, *Traditional vs Digital: The Future of Forensic Art*, is a highly original concept intertwining fine art with forensic dialogue. To the best of my knowledge, there has been no previous exhibition that directly combines said methodologies. This dissertation supports and assists my art practice, interlinking both elements of traditional craftsmanship and manual reconstruction. This synthesis forms an interactive installation centred on an unsolved forensic case, *Isdal Woman*. The audience is invited to move beyond observation and step inside the investigation itself; transforming the audience from a passive viewer to an active participant immersed in and engaged with the cross path of scientific analysis and artistic interpretation. The core aim of this exhibition is to introduce the younger generation to how applications of forensic art can influence current methodologies within forensic investigations. This is achieved by showcasing a wide range of artistic techniques to the next generation and future forensic practitioners to encourage a hybrid-style methodology in solving more future cases.

Forensic art explores the space between art and science, and the use of creativity and anatomy through investigating, identifying and reconstructing. Taylor (2001, p.3) notes that forensic art is "any art that aids in the identification, apprehension, or conviction of criminal offenders… [and shows the] location of victims or identification of unknown deceased persons". This definition explores the two specialties, traditional and digital art. It is an art practice grounded in visual interpretation, allowing artists to translate information into a human form. Traditionally, this was achieved by incorporating hand drawings, clay sculptures or manual reconstruction, through the form of human touch.

Practitioners' meetings with Houlton (2025) and Adair (2025), generated discussions which expanded my research, supporting the argument of a hybrid future merging art, science and technology. I also had an informal meeting with Gina Czarnecki, an artist whose work is displayed in this exhibition. However on reflection, it did not benefit my viewpoint of this chosen dissertation. Instead, this helped my art practice. A film analysis on the Fifth Element (1997) brings questions of the future, expanding on DNA and 3D printing reconstructing identity.

This exhibition will therefore investigate how digital approaches can both assist and challenge conventional methods. In an age of AI expansion, the question of what makes artwork 'truthful' has become extremely hard to interpret. Masahiro Mori's 'Uncanny Valley' theory questions

where artwork is considered unsettling to the viewer when technology is used to create work that appears human like (Perera, 2023). As digital software is enhancing with AI-generated portraits, it risks the future of forensic art leaving human presence behind. This dissertation addresses how forensic art sits at the intersection of the debate between scientific accuracy and artistic interpretation. 'Heirloom' Czarnecki (2016) demonstrates using DNA portraits as to whether truth is purely biological or can be shown through artist interpretation. This opens a philosophical question whether truth is purely biological or can be nonbiological. Art and science can be combined leading to new creations, but the lack of publicity means the public are unaware of the range of methods. Where we now have digital forensic art techniques, this should not substitute traditional forensic art techniques. Human touch and interaction are lost when solely using digital, and it becomes harder for forensic art to contribute to a case being solved due to the lack of collaboration and discussion losing essential dialogue.

The structure of this dissertation will be split into four chapters. Chapter 1 explores a timeline between traditional and digital methodologies, and a potential hybrid future. Chapter 2 outlines the curatorial framework for my proposed exhibition. Chapter 3 analyses key artists whose practices align with science, art and the forensic art world. Chapter 4 presents other curatorial influences.

# Chapter 1

Forensic art combines a form of memory, identity, with the past and new beginnings. The proposed exhibition explores how forensic art has evolved at the convergence of art, science, and technology, focusing on how identity is visually reconstructed. To clarify this progression, the curatorial framework positions the tension between the physical and the digital. This exhibition will be structured as a mirrored progression of the evolution of forensic art. First by examining traditional hand-rendered artist methods, moving towards digital and bio-technological forms of portraiture. This structure will enable the audience to visualise the forensic representation by conveying traditional work transitions to digital contemporary approaches to identity. Remembrance, identity, and embodiment will be vocalised through the exhibition, negotiating between technical mediation and human presence.

## Traditional forensic art

### 1.1: Historical and methodical roots

Traditional art is known to emphasise the high quality of work, which represents the earliest intersection in forensic art cases. It is a practice renowned for its engagement with human interactions and immerses human touch through the act of drawing, sculpting and reconstructing, providing an understanding of physical form, material resistance and the embodied process of making (Zahreddine, 2023). Before the rise of digital technology, artistic observation from witness descriptions to create a composite sketch was the main technical route to solve a case. A case that exemplifies this is ‘Little Miss Nobody’. Karen Price age 4, was missing for 8 years when her skeletal remains were found wrapped within a carpet (Buckland, 2025). Forensic artist Richard Neave reconstructed a skull sculpted in clay after using Karen’s skull to envisage a model of her physical appearance. Buckland (2025) notes “what was deemed “a long shot” turned out to be groundbreaking and grabbed the public’s attention”. This case shows the success of human interpretation and the power of human craftsmanship, transforming forensic artwork as a way of remembrance.

It is important because remembrance is vital, keeping a person’s identity, and restoring humanity and empathy. The exhibition aims to bring light to the public on the *Isdal Woman*

case, combining artistic methods as a way to memorialise an individual. This aims to bring justice and closure to witnesses or their families who have lost a loved one.

Forensic artists convey human interaction or an element that bridges the artist to the witness, allowing the witness to feel somewhat at ease. The murder of Isaac Frederick Gould, London, 1881 is a historical example of traditional forensic illustration (Wilkinson, 2015). The police recruited an artist, creating a poster with the suspect's description, published in newspapers with a 'caricature-like image' of Percy Lefroy Mapleton, the killer. This was the first time a composite image was recorded within a forensic investigation. Historical cases like this mark how traditional forensic art relies on artistic engagement and material, echoing Zahreddine's discussion of physical engagement through traditional art.

In traditional art, drawing by hand is both technical and raw, carrying a sense of care and presence. The viewer will have the opportunity to interpret the artwork, giving their intellectual perspective. In a comparative study of traditional art techniques versus digital art, Asare *et al.*, (2023, p.24) note that scholars have argued "engaging with traditional media, such as drawing, painting, sculpture, and printmaking [techniques], fosters a deep understanding of artistic fundamentals, materials, and craftsmanship". This highlights the importance of traditional methods, teaching future artists how every artistic material behaves differently. Using traditional methods, it allows the artist to use human touch to complete artwork. For instance, instead of digital tools, they can use brushes, fingerprints, the human body, charcoal, etc, connecting with the equipment. This links back to forensic art by the tactile engagement of the process of reconstructing through memory, which in the exhibition starts by showing historical traditional art, demonstrating how solving identity has changed as digital technology evolves.

Traditional art allows artists to physically engage with texture and flow with materials directly in front of them, aligning with witness descriptions and observations. This working method is not an aesthetic choice, but logical approach. The audience will be invited to participate and interact with the unsolved case. They will be encouraged to critically analyse the challenges of reconstructing identity and enlighten the younger generation of what the future holds within the forensic and art field. However, Houlton (2025, Appendix A, p.68) explains how digital methods enable forensic artists to solve missing person cases and create age progression images using minimal data like photographs. While this technology has potential for further development, it ultimately relies on the general public for recognition.

# Digital forensic art

## 1.2: The digital turn

Digital art represents a significant approach to how creativity, technology and science interlink. Over the past two decades, digital techniques have transformed in forensic art through 3D scans, software, digital tools and AI's exponential growth. For example, Japanese roboticist Masahiro Mori's 1970 theory, the Uncanny Valley, "theorized [the] relation between the human likeness of an object and a viewer's affinity toward it" (Kendall, 2022). This supports the digital turn, evident in lifelike dolls, robots, and prosthetics. It questions the shift between comfort and discomfort, demonstrating how digital technology can provoke unease. This is because increasingly realistic digital appearances seem to lack human presence compared to traditional methods. This is visually shown by super realistic portraits but moves robotically. Digital approaches like this may help solving the *Isdal Woman* case where, in such cases, there are limited remains. Furthermore, Zahreddine (2023) and others have expressed concerns that digital methods lack direct engagement between the artists and the material. Working through a screen, it is harder to get an accurate representation of intricate details through texture, colour and scale. The absence of touch can be a limitation for forensic artists lacking direct engagement with their subject. Similarly, it has been stated that "[i]n the field of the digital network and the corresponding digital art network, many young people have more practical experiences than their elders, they have gained the corresponding rights to speak" (Du, Li and Gao 2010). This shows technology is constantly evolving but there may be a divide between generations, where younger artists may have more technical skills but might be a risk of losing materialistic knowledge.

However, despite these critiques, there are still many possibilities in which digital art can expand the future of forensic art investigations. Professor John McCarthy, an American computer scientist introduced the concept that AI (artificial intelligence) is the "science and engineering [of] making intelligent machines" Manning (2020). This emphasises that humans can program machines to simulate intelligence (Bramantyo, 2021). When working with digital software, you are experimenting with curiosity, with AI, which can act as a 'collaborator'. This does not necessarily entail total correctness, but it may help create a facial outline which is a useful starting point in a forensic case.

This transition towards digital methods involves more than just technical aspects but philosophical perspectives, such as the notion that "Science is art*",* as quoted by Regina Dugan, a technology developer (Steger and Young, 2013). Dugan emphasises that both science and art share similarities, allowing new forms of exploration. If both specialities are combined there is a higher success level of identifying victims or suspects. "By presenting a reconstructed face to the public, investigators hope to obtain valuable information about the individual's identity from witnesses or photographs of potentially relevant persons," Svenja Preuß *et al.* (2025, p.2). In the past decade, digital art has advanced in forensic art. It has transformed the process of identification, through techniques such as 3D scans, computer imaging and AI. Both traditional and digital techniques, explore reconstruction from victims' identity through methods, arts and forensic routes, which shows the synergy between the two disciplines.

Within the exhibition, digital art will be introduced through the timeline, allowing my audience to compare and analyse both processes. The chosen arrangement reflects both similarities and differences while incorporating the digital process. My aim is to capture the digital world and highlight the pros and cons of technology. I want to invite the younger generations to come to participate and engage in my interactive exhibition, allowing them to get a deeper understanding of both artistic methods. This is key to both the technical and traditional implications for the future forensic artists underpinning the truth.

## Towards a Hybrid Future: Forensic Art

### 1.3: Hybridity

The debate between traditional and digital art methods does not necessarily demand that one method is better than the other. Instead, the future of forensic art reveals a combined hybridity of both digital and traditional, as they are interrelated and interdependent. This is supported by Dundar, Gokalp and Tanis (2016) who stated throughout their conference segment that "It is seen that the process experienced by scientist and the creativity of an artist overlap"*,* suggesting both specialities; a scientist and an artist could intertwine their specialities, thus potentially benefitting the future of forensic art.

Today, contemporary artists will begin with using hand-drawn techniques before transitioning to digital tools, acknowledging the utility of both. For instance, an initial sketch might be the starting point to then use digital 3D models, reinterpreting the initial sketches.

Within my art practice, I combine the use of both methods, which is the foundation of the named exhibition. I start with 3D scans, editing on software to 3D print moulds, which I merge into traditional methodologies, pouring silicone into my moulds and painting on the surface. This cycle of work is my own interpretation of hyperreality, as this would not be classed as a 'traditional' approach, since you could mould a sculpture like this by placing plaster or silicone on a human model. Hybridity reflects on contemporary fine art and digital reality. This is supported by;

> The concept of 'hyper-reality' as used by Baudrillard [… ] [is] a state where all differences between past and future, mind and body, self and other, individual and society, audience and stage and author and reader have lost their meaning; therefore, the differences between real and unreal (virtual, fictive) is removed (Dundar, Gokalp and Tanis, 2016).

Baudrillard's concept suggests the divide between the two methodologies has collapsed since the rise of digital art. However, in *A Cyborg Manifesto* by Haraway (1985), evaluating a hybrid of human and machine challenges both fields. Analysing this in a forensic context, it captures contemporary artist roles as 'mediators' who blend science and technology.

Artists like Gina Czarnecki and Heather Dewey-Hagborg exemplify this tension where they both use biology and technology, demonstrating the boundaries between science, technology and art. Their work will be discussed (see pp. 24, 26) and shown in this exhibition demonstrating a potential hybrid future.

Traditional artists may feel a sense of threat from the rise of digital art; however, there are many pros and cons in both mediums. "Traditional will not fade in the digital age because it is the essence, and neither will cancel the other out" (Zahreddine, 2023, p.10) This implies it is not the artist's fault; it analytically comes down to society and different viewing angles. In this framework, this allows the audience to voice their opinions on this ongoing case study. It unites these wide-ranging methods into creating an interactive space for the *Isdal Woman*.

# Chapter 2

## 2.1: Choice of Venue

The exhibition is proposed to take place at the LifeSpace Research Gallery, Dundee where artists become both the makers and seekers, exploring the intersection of science and fine art. LifeSpace explores the connections between art, science and society through research, which embodies the concept the exhibition. The exhibition's core includes an unsolved forensic case (*Isdal Woman*). However, rather than a crime case to be solved, *Isdal woman* is used as a curatorial device. It is an unsolved investigation in which artists from a wide range of methodologies come together to solve a subject's identity. For instance, a traditional artist uses clay to create a sculpture, but a digital artist would use 3D scans, or a painter may interpret emotional depth through portraiture. The human face is often the focal point for forensics, with the anatomy, reconstructing from both data and depth, it forms a creative tension mirroring a debate between these two specialities. Throughout this gallery, I will showcase artworks arranged in order, providing a timeline of the evolution of forensic art. The placement and arrangement of this space will parallel the investigation process.

LifeSpace is not merely an art venue, it is a space enabling the amalgamation of artists, scientists and the public. Dundee University has a powerful innovation in forensic and biomedical science. The discussion between these approaches in forensic art will be a debate about the future of human interpretation in the world. Nowadays, where facial reconstruction is seen in everyday life, through this dialogue, it will embody LifeSpace's ethos, an exploration of how we visualise the human face and, in turn, ourselves. This exhibition layout is designed to engage the audience and not to overwhelm; from experience, some exhibitions can feel overstimulating to the viewer. It offers the space for the audiences to interact with group discussions as well as the case study.

## 2.2: Intended Audience

My primary intended audience for the exhibition would be school groups and university students which is a crucial part to transforming the future of forensic art, as they represent the

next generation. My secondary audience would be contemporary artists and scientists, who have the ability to interact with the exhibition from a professional standpoint.

The proposed 'why' for the exhibition lies on individuals' imagination and reflection. I considered Houlton's observation when walking into a gallery setting, how viewers are drawn to visual work before written contextual work: "people just get absorbed by that kind of imagery" (Houlton 2025, Appendix A, p.63*).* It is important to showcase historical roots, entering the space beginning with contemporary, handcrafted artwork flowing towards digital data-driven methods as Houlton (2025, Appendix A, p.64) notes that ″people have a much greater appreciation to the lives and lifestyles when presented with visuals, and that again is the strength of the artist in bringing that to the exhibition". This will spark a debate on how both areas function as a curatorial anchor. The main aim is to provoke, stimulating critical discussions on topics of identity, technology and the evolving role of forensic art in society.

## 2.3: Curatorial Influences

In researching potential exhibition venues, the Wellcome Collection, London, influenced my curatorial thinking. They exhibited *Forensics: The anatomy of Crime* (2015), which showcased historical roots and how science and art combine through forensics. I was intrigued by the venue space but also the forensic exhibition. However, I decided this was not the best option for exhibition as I had not been inside the venue and found it difficult to visualise my own exhibition placed in such a venue. In an article review of the Wellcome Collection, a reference is made to "a series of stops that the visitor encounters during their journey through the space […] the Morgue, the Laboratory, the Search and the Courtroom" (Sharma, 2015, p.1). This layout inspired my approach by considering how my audience would interact with each piece of artwork. Identifying the LifeSpace venue, I will show processes which are not typically visible in art exhibitions to the audience such as Gina Czarnecki using her daughters' cells to grow and create a sculpture.

The *At Play* exhibition series at South Hill Park, Bracknell was an interactive series inviting viewers to "engage physically, emotionally and intellectually, and to touch, play and explore." (Trench, 2012). This was shown through a wide range of work from drawings to games, to live performances. Furthermore, *Performativity in the Gallery* by Peter Lang touches base on this exhibition. Artist Samantha Mogelonsky stated "as a child, you want to play/touch art and then

are told not to" (Leino, MacCulloch and Remes, 2014, p.177). I was drawn to this idea of allowing the audience to interact and move the work around. This links to the exhibition, inviting my audience to take part in an interactive case study. Allowing my viewers to recreate sketches or share their thoughts and opinions on each artistic method will benefit the *Isdal Women* case and ultimately contribute to the future of forensic art by finding the best solutions and collaborating with fine artists. Leino, MacCulloch and Remes (2014, p.66) note that "general omission of exhibition histories becomes a problem if the particular field of art is also poorly served by history, due to being non-object based, or process based." Forensic art is a traditional function which helps solve ongoing cases; it is not a curatorial approach. By curating the named exhibition, I aim to expose critical discussions of forensic art, and how art and science interlink through a contemporary gallery setting. Clark *et al.,* (2020, pp.821-22) note how "both science and art are inspired by our basic observations of the world around us." This highlights how important observation can be when helping solve a case, offering a new take on hybridity and a new attempt at placing forensic art within a curatorial framework. This is because there is minimal documentation on themes like this in a gallery setting; I want this to be the first to show a hybrid nature.

# Chapter 3

## 3.1: *Isdal Woman*

Contemporary art and science have significant potential to work alongside one another. The younger generation having grown up totally consumed by digital technology, this exhibition aims to remind such an audience of what fine art contributes to the world, ensuring not to lose sight of what fine art has to offer, as well as exposing the range of career pathways available. By using an unsolved forensic case this will not only educate but demonstrate how art can be used to catch suspects or help to identify an 'unknown'.

*Isdal Woman* is a striking case of a missing woman. In November 1970, a female body was found in a Norwegian valley, the Isdalen. Cheung (2017) points out that despite decades of investigation, no identity was discovered. In 2018-19, forensic police helped carry out isotope tests for her teeth and jawbone, which were the only sections of the body not buried (Cheung, 2017). This deepens a critical discussion within forensic art: identifying the unknown with little remains. This exhibition will display various artist methods with a range of methodologies which could benefit this case and future cases.

This case is still unsolved, suggesting the limitations of forensics. Renowned forensic artists such as Karen T. Taylor and Richard Neave tend to work alone in solving cases. Dr Wilkinson noted in the *New Forensic Art Unit* (2005), that "you need artistic skills to produce a lot of the work we do, as for instance facial reconstruction requires sculptural skills". There is a misconception that art and science do not align but research initiatives at the University of Dundee's Forensic and Medical art programmes demonstrate the importance of integrating anatomy, art, and visual disciplines. Stommen (2022) states "The field is highly interdisciplinary, and forensic artists draw on a broad range of skills, knowledge, and relationships with colleagues to complete this work". This supports the argument that the future of forensic art should involve prioritising collaboration with artists outside of the forensic sphere, rather than an isolated investigation with less evaluated evidence. Clark *et al.*, (2020, pp.821-22) notes that there is an ongoing debate between on the intersection of art and science, stimulating discussions on what the future will hold. Its key purpose is "bring[ing] these very different perspectives…[feeling] the real value. And by artists knowing how scientists work and by scientists knowing how artists work. That's gold right there" (Clark *et al.*, 2020, p.825). This is an example of how both disciplinary methods are unconsciously used in day-to-day life.

Additionally, Houlton (2025, Appendix A, p.53) notes that “competition between the sciences and arts and that […] traditionally, scientists have had a very rigid idea about what the arts is and think it's within […] the great thing with the integration of arts and science is that […] it just introduces a very set structure”. This shared fundamental curiosity will be shown through a juxtaposition of traditional and digital methods, educating the audience on new methodologies of art and science coexisting.

## 3.2: Selected Artworks

A curatorial aim in this exhibition is to encourage the audience to analyse the origins of forensic depictions. Wood and Ladd’s work features at the start of the exhibition timeline and will display their combined methodologies through archival photographs. Their working methods precede digital techniques but provide the conceptual and digital foundation for the future technologies in 3D scans, printing and realistic portraiture.


*Figure 1 'Mask', By Anna Coleman Ladd, 1917-1919*

Ladd’s work (Figure 1) will be displayed first in the exhibition. Ladd was an outstanding facial reconstruction artist, helping wounded soldiers who had lost parts of their face in battle during war. Even though these sculptures are no longer present, her work will be displayed from

archived photographic evidence. Ladd's work demonstrates that by using traditional forensic methods such as sculpture, she was able to bring soldiers comfort through the war by providing prosthetics. This links back to forensic art when artists speak to witnesses to obtain witness statements, making sure they are at ease and comfort to get the fullest description for a forensic portrait. As the face became a central target fighting in war, these sculptures were hand sculpted and painted working with the soldiers' pre-war appearances as well as skin tones.

*Figure 2 Film Snippets of Ladd's 'Masks', 1919*

(Figure 2) will be film snippets from Ladd's facial reconstructions, displayed on a glass table, allowing the viewers to analyse the process closely. Ladd expanded Wood's techniques (Figure 3, below) moving from America to France in 1917, to open her own studio. She created over 150 handcrafted realism facial fragments recreating a person's identity (Vox, 2018). She used human hair, recreating eyebrows and eyelashes as well as incorporating fake glasses and disguised flaps to attach prosthetic fragments. The soldiers were referred to as "mutiles" after the suffered lives of isolation over disfigurement (Vox, 2018).

By the end of 1917, Ladd began her sculptural studies and opened her studio for Portraits Masks in Paris. Both Ladd and Wood aimed to produce masks that closely resembled the faces of the pre-war soldiers. Even though the only evidence of these masks are monochromatic photographs, it is difficult to say without a coloured photograph how realistic these actually were. However, this was one of the first attempts of facial reconstruction.

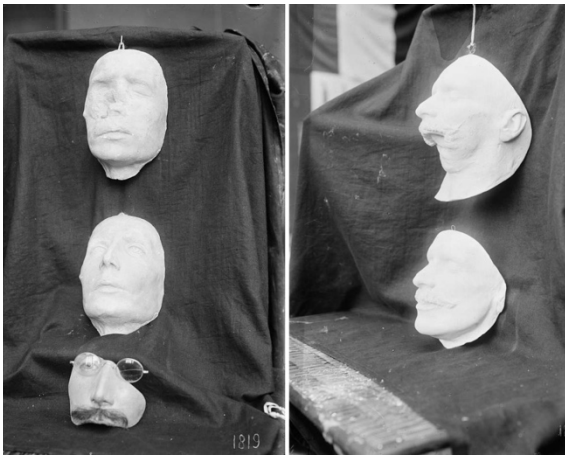

*Figure 3 'Tin Nose Shop', Francis Derwent Wood, Cast Masks, 1914-1918*

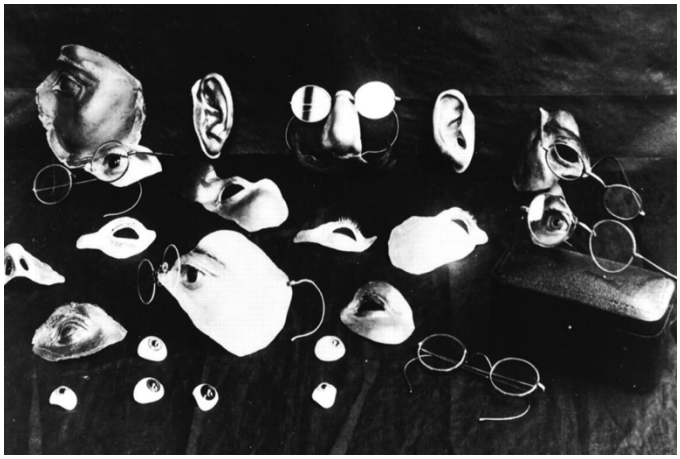

*Figure 4, 'Tin Nose Shop', Francis Derwent Wood, 1914-1918*

Wood's *Masks* (Figure 3 and 4) is archived from London General Hospital. Wood was a renowned British sculptor who established the *"Mask for Facial Disfigurement Department"*. Friend (2014) highlights that the department for reconstructing facial fragments was for those who had dealt with trauma from World War 1, thus 'offering hope'. Owl (2025) notes that "these weren't just injuries. They were transformations that stripped away every trace of the person who had once existed". Dedicating work to facial prosthetics helped the men to rehabilitate back into society with more confidence. Owl (2025) documented the process of creating these masks by using traditional materials working with plaster casts and photographs of the patients pre-war. This enabled Wood and his team to reconstruct realistic but artificial faces using tin and copper prosthetics working with oil paints.

*Figure 6 'Self-Portrait, Kathe Kollwitz, 1924*

*Figure 5 'Woman with Dead Child', Kathe Kollwitz, 1903*

*Figure 7 'Farewell', Kathe Kollwitz, 1910*

Kollwitz's work will be the next focus in the exhibition. Kollwitz was a German artist who worked with printmaking, drawing and sculpture. Having lived experience of both world wars, her art produces raw and compelling themes depicting grief and healing. Viewing Kollwitz's artwork at the SMK in Copenhagen (2025) has greatly impacted my decision to select her work in the exhibition. Seeing her work firsthand showed me as the viewer, the highly emotional portrayal via traditional methods. Kollwitz's emotional truth is perceived through her work, demonstrating how traditional methods document intense realities. Her three artworks (Figures 5, 6 and 7) will provide remembrance through expressive representation of anatomy using traditional materials.

(Figure 5) a line etching, was inspired by the trauma from the First World War, but became her reality in 1914 when her own son passed away. This piece conveys extreme grief and signifies her hatred towards the wars. (Figure 6) is a crayon lithograph transfer. The self-portrait shows Kollwitz expressing emotional depth on the effects of aging as her body becomes weaker. She is able to capture visual internal states of vulnerability within her own identity (Figure 7) is a charcoal piece, focuses on themes of death, mother, and child, and communicates Kollwitz's experience as a mother and the loss of a child. By featuring Kollwitz's artwork in the exhibition, I aim to highlight the historical roots of forensic depiction. Her work prompts my thesis to how traditional skills have power in documenting identity.

*Figure 9 'Ruben's Flap, Jenny Saville, 1998-1999*

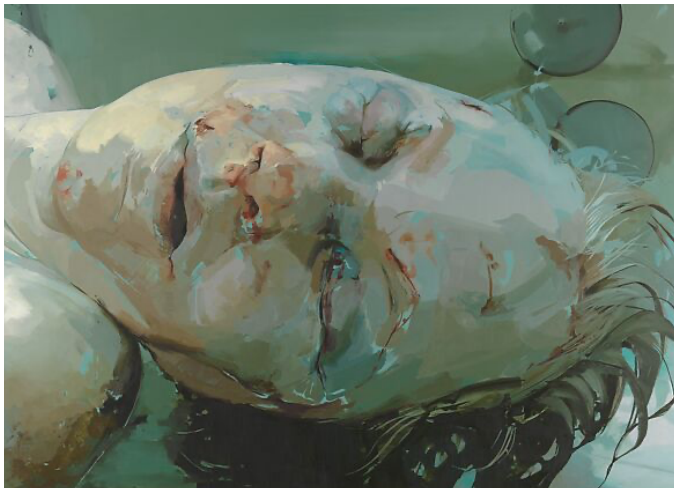

*Figure 8 'Still', Jenny Saville, 2003*

Saville's oil paintings will feature next in this exhibition (Figure 8 and 9). Both paintings show a psychological reconstruction rather than a physical one. Saville's subject matter and style show an emotional and ethical dimension of looking at a figure or portrait as a piece of evidence. Her use of colour palette conveys 'uncanny' and raw emotions which echo Foucault's definition of the medical gaze, which is "describing how doctors modify the patient's story, fitting it into a biomedical paradigm, filtering out non-biomedical material" Misselbrook (2013, p.312). This demonstrates how somewhat reducing doctors' emotional and personal feelings prompts reflection. The paintings in the exhibition prompt viewers to pause and consider what might be lost when the body is reduced to digital data. Both paintings will be placed on a white wall, allowing each viewer to approach closely and observe a traditional artist's technique, which combines forensic detachment with human empathy.

(Figure 8) portrays a disfigured body resembling a witness's description from memory. Saville (1999) states "I paint women as most women see themselves. I try to catch their identity, their skin, their hair, their heat, their leakiness". This shows the emotional depth between herself, as the artist within her work. Her painting style although raw, would benefit moving forward in solving the case through forensic objectivity. (Figure 9) is based on a photograph depicting a woman's head in a morgue. Her choice of colour palette and brush strokes suggests state of vulnerability and ghostly presence; traces and brushstrokes of someone who is not fully present. This painting prompts the viewer to confront uneased emotions through mortality.

*Figure 10, 'Mum', Alex Tully, 2025*

Exhibited next will be (Figure 10). This forms part of a series I am working on which will continue to my degree show. This style of work incorporates both traditional and digital methods. Here, I use 3D scans, printing, and create a mould into which I will pour silicone and eventually paint on top with silicone pigments. This series allowed me as an artist to involve myself especially within this exhibition theme. I have a passion for integrating age progression and family genetics within my artwork whether that be through sculpture, painting or printmaking. I felt this piece had to be in this gallery because it demonstrates both forensic art techniques and my vision for the future of my work, as when the viewer looks close to the sculpture, they will be able to analyse the 3D print markings merged with a thin layer of silicone pigments. This piece shows how fine art and scientific techniques are not incompatible; I hope my work can show my viewers that both methods can compliment one another as a hybrid which could potentially help in the justice system and forensic art.

*Figure 11, 'Probably Chelsea', Heather Dewey-Hagborg, 2017*

(Figure 11) will be the next artwork displayed. Dewey-Hagborg's work introduces questions about genetic privacy and authorship. This piece of work has been created by collecting mouth swabs from Chelsea Manning, using the DNA found to transform into 3D printed portraits using genomic data to identify different possibilities of who and what you are Dewey-Hagborg (2017). Heather had no face-to-face interactions with Chelsea, allowing her to reconstruct without any sight. Each portrait shows the viewers' notions of identification through biological data reconstructing a person's identity. These portraits are showing possible identification to what Chelsea Manning could look like using the same genetic information. Dewey-Hagborg's work transforms forensic science into an art form, using the biological, data-driven work compared to Wood and Ladd's tactile approach with human interactions. These sculptures will be displayed hanging from the ceiling, for the audience to walk around and take close-ups. Her work would help the future of forensic art by researching posthuman identity.

*Figure 12, 'Self' and 'The Other', Alex Tully, 2024*

(Figure 12) will also be displayed in this exhibition. These are 3D scanned prints created by Tully (2024) which explore a mother-daughter bond between myself and my mother. Both presenting as mirrors, as well as opposites which reflect on each other's spirits through touch. The monochromatic portraits were influenced by the yin and yang effect, that is: where no element is better than the other, both balancing each other out, ensuring conformity (Shan, 2024). This links to the debate on whether traditional art is better than digital art or vice versa; or whether a hybrid approach is necessary. Even though these sculptures are monochromatic with no raw colour palette, identity is implied instead of depicting detail, compared to my artwork 'Mum' where I focus on including the finer details using colour.

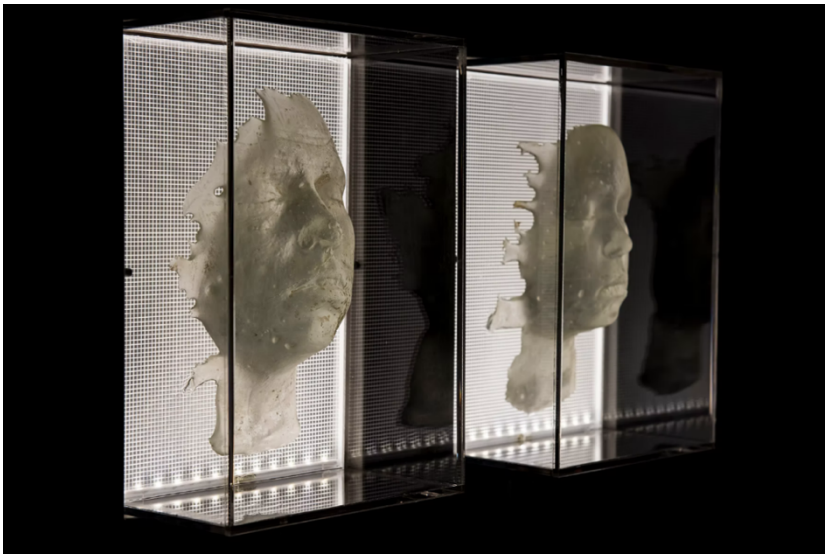

*Figure 13, 'Heirloom', Gina Czarnecki, 2014*

(Figure 13), created by Czarnecki, in collaboration with cell biologist Professor John Hunt, will also be displayed in the exhibition. Czarnecki's (2014) portraits began by using her own daughters' cells to create glass sculptures. She explored the potential impact of innovation on personal identity through digital prosthetics and science. This included the concept of having your teenage face restored in the future, which was finalised in 2016 (Czarnecki, 2016). This would fit into the *Isdal Woman* case, as Czarnecki's process is a subverted notion of portrait representing a person, not through paints such as oil, but from their own biological materials. She would bring the viewers to question ownership through living artworks, forming part of other human beings. The act of growing a portrait, rather than sculpting or even 3D printing it, conveys a compelling dialogue when compared to Dewey-Hagborg and Ladd's work. In the exhibition *Heirloom* will be side by side with Dewey-Hagborg's digital portraits, encouraging viewers to juxtapose two forms of what could be considered forensic art: one biological and the other digital.

*Figure 14, 'A Living Man Declared Dead and Other Chapter I – XVIII', Taryn Simon, 2008-2011*

(Figure 14) by Simon was developed over a four-year period. She travelled around the world documenting generational bloodlines and their stories. I was drawn to Simon's placement, with empty portraits within the work conveying absence of generational identity which includes military aspects, religion, as well as imprisonment (Simon, 2011). Simon worked with shadows, portraying a missing portrait which conveys reminiscence and remembrance. Her panelled portraits have a forensic manner, linking to early forensic cases when police used mugshots or created a multilayered case file which helped to solve a case. Using investigative archival research, I chose this piece of work placed in the dark room, as it brings together traditional forensic photography merging with data base mapping, which visualises what the future of forensic art will become. This style of work would not necessarily impact solving cases but intertwines with how these procedures are embedded in the process of solving a forensic case.

## 3.3 Exhibition Model and Layout

Throughout integrating chosen artwork in exhibit, the viewers can see how each artist brings a distinct perspective to a person's identity. Each work chosen demonstrates the ability of working with the human face.

Creating digital copies of my floor plan in LifeSpace allowed me to experiment with the timeline and placement of each artwork. Having the opportunity to go into LifeSpace to measure the layout allowed me to get an in-person visual to how I will place each artwork. This helped me use my creative perspective to know how I want to create my 3D exhibition model, experimenting with lighting and placement. At the end of the timeline, I have created a wall in which each viewer can write or draw what they took from the exhibition, whether that be a sketch or indeed written feedback of artists' work, or reflections on the intersection of art and science.

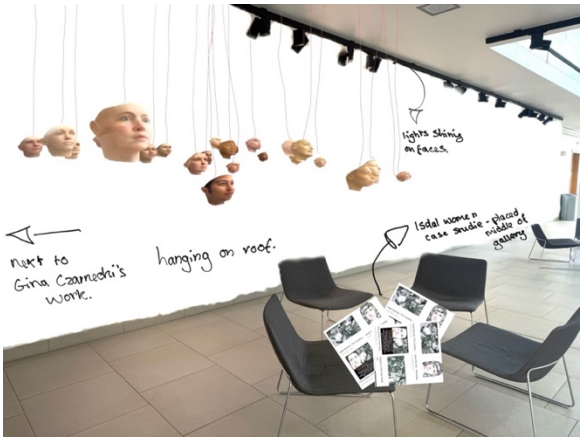


*Figure 15 Digital Copy, LifeSpace, mock-up 1*


*Figure 16, Digital Copy, LifeSpace, mock-up 2*

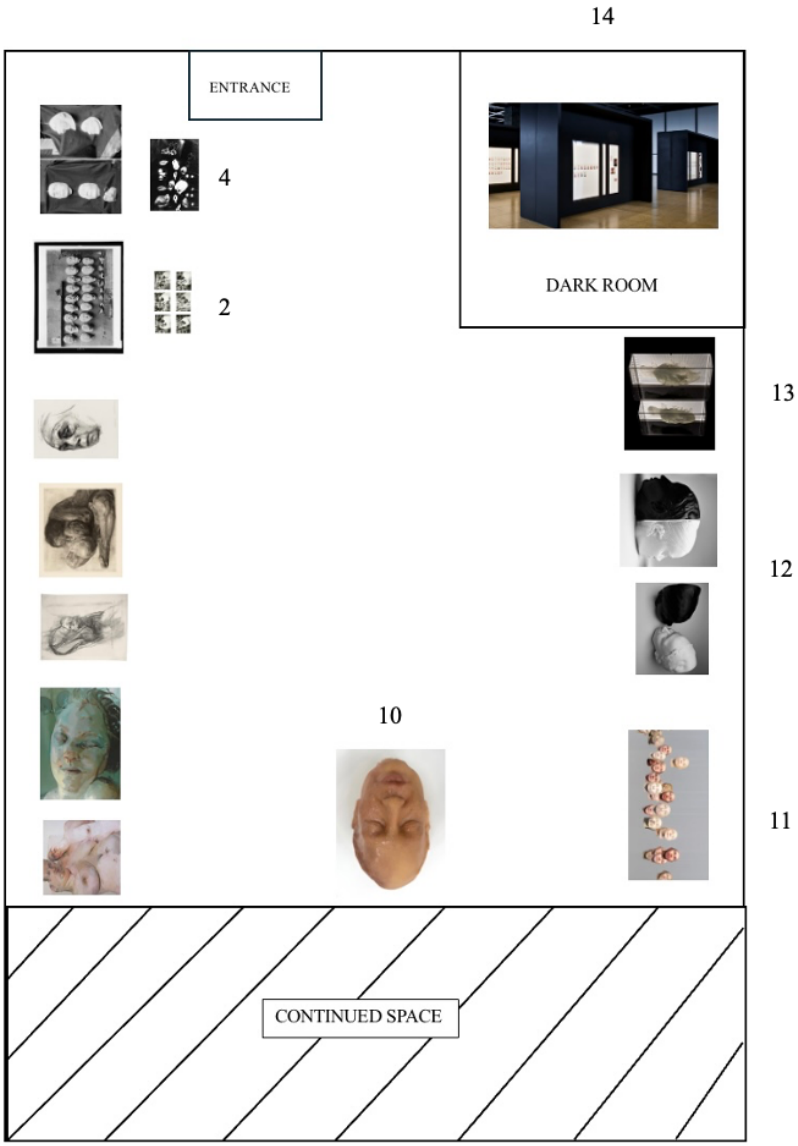


Figure 1 and 2, Anna Coleman Ladd

Figure 3 and 4, Francis Derwent Wood

Figure 5, 6 and 7, Kathe Kollwitz

Figure 8 and 9, Jenny Saville

Figure 10 and 12, Alex Tully

Figure 11, Heather Dewey-Hagborg

Figure 13, Gina Czarnecki

Figure 14, Taryn Simon

*Figure 17, Digital Layout, Birdseye View - LifeSpace*


*Figure 18, Exhibition Model, Birdseye View*

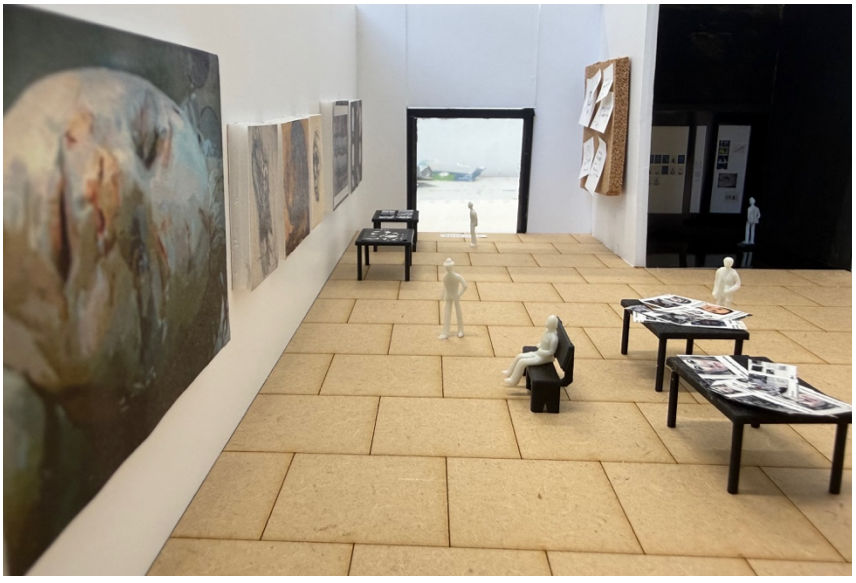

*Figure 19, Exhibition Model, Left Side View*


*Figure 20, Exhibition Model, Side Birdseye View*

*Figure 21, Exhibition Model, Dark Room View*

*Figure 22, Exhibition Model, Side View 1*

*Figure 23, Exhibition Model, Side View 2*

*Figure 24, Exhibition Model, Centre View 1*

*Figure 25, Exhibition Model, Centre View 2*

# Chapter 4

This chapter will explore my inspiration for the propositional exhibition. My studio practice at DJCAD was underpinned by the work of various artists, leading to this exhibition dissertation. It culminates my expertise in art and forensic science. This includes informal meetings with Tobias Houlton and Danielle Adair as well as a film analysis on *The Fifth Element* (1997). The propositional exhibition as a dissertation option is a topic I have been interested in pursuing as a career pathway. I hope that in my future career I am able to make this exhibition come to life. My career goals are to complete the medical art masters at Dundee University, and further along, to work within clinical settings where I am able to combine aspects of science and art. Arguably, my art practice mirrors my artistic ideas; it is a logical progression that my degree show will be formed from this exhibition.

## 4.1: Tobias Houlton

I had an informal online discussion with Dr. Tobias Houlton, a facial anthropologist and forensic artist, regarding his perspectives on art and science interlinking, and his vision of the future of forensic art. Houlton was program lead for the Masters in Forensic Art at Dundee University. This course inspired my initial interests in forensic art motivating me to apply for art school. Houlton highlighted how traditional forensic art methods such as sculptures offer a physical presence, whereas working with digital technology offers various layers for analysis. I have been fortunate to have had support from Houlton over the last two years, in using the forensic art department's 3D scanners, significantly enhancing my creative practice. These Artec space spider scanners, have a higher quality compared to the 3D scanners at DJCAD. Houlton notes that "for example, if you take some 3D-printed cranial anatomy made from Spider scans and set it side-by-side with a 3D print of the same piece of skull yet made using scans from other 3D scanners we've tried, you can see a massive difference in terms of detail, accuracy, and realism." This is also supported by McMillion (2022). This allowed me to produce my art practice as realistically as possible, combining both traditional and digital methods into one piece. My artwork is inspired by my fascination of generational genetics merged with physical appearance and my studio practice provides my own perspective on age

progression using my mum, gran and myself as subject matters. This practice combined with this dissertation, is helping me build strong foundations for my future career path.

According to Houlton (2025, Appendix A, p.46) "…if someone's got the foundation of traditional skill in the arts, then you know that [it] is a critical thing that people need to have" emphasising that traditional methods are an essential artistic skill, and without these skills it may negatively affect the way forensic cases are solved. He highlighted how using traditional media such as life drawing involves fundamental skills in helping the artist to have an artistic eye in paying attention to the finer detail. This helps when "translat[ing] what you see in front of you down on the page and captur[ing] information quickly and reliably, and dealing with shortening…" Houlton (2025, Appendix A, p.48). This supports my argument that without the skill of utilising basic traditional methods, the end results would not produce as realistic sketches which is crucial in true identification.

## 4.2: Danielle Adair

I reached out to Danielle Adair, a reconstructive scientist who graduated with a Fine Art degree and Masters in Forensic Art. The skills developed from her initial Fine Art degree allowed her to work with maxillofacial prosthetics, working with NHS patients where part of their face may be lost due to cancer and other forms of trauma (Anon., 2024). This is not dissimilar to Wood and Ladd's initial works carried out in the early 19$^{th}$ century. I was fascinated by how Adair came from a Fine Art background and is now creating custom parts of the human face and body to help patients rehabilitate. "I want my work to be part of the people I help – to be truly invisible" quoted by Adair (2024) in an article (Taking Art to the Next Level, 2024).

This is inspirational to me as a fine artist in being able to use my artistic skills to help others. Our informal online discussion focussed on art and science overlapping and her thoughts and inspirations. According to Adair (2025, Appendix B, p.99) "I think artists will always achieve, so science can be taught…But with art, I think it's kind of fed into you essentially, it's a part of your structure as an artist". This emphasises how artistic skills have the upper hand in producing detailed work, as it is easier for artists to learn science than it is for a scientist to learn art skills, highlighted by Adair (2025). This would benefit the future of forensic art as artists have this fundamental skill compared to scientists who trust relying solely on technology

to construct an appearance. Both specialities share vital skills, but intersecting both methodologies from two different backgrounds can help build the future of forensic art and lead to more cases solved.

## 4.3: The Fifth Element

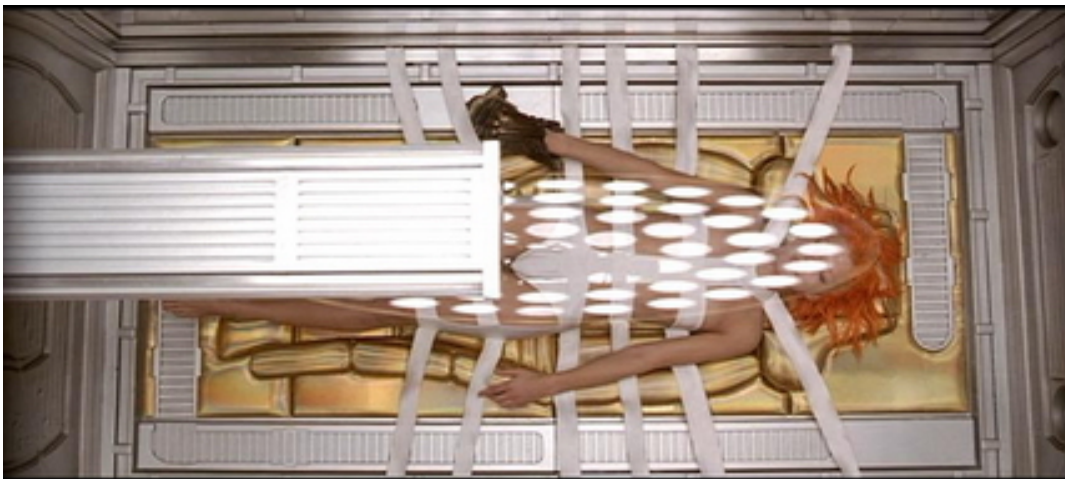

*Figure 26, The Fifth Element, Film, 1997*

*The Fifth Element* a science-fiction film based in the 23rd century and is an example of science and art overlapping. Even though this film is illusory, it made me visualise what the future of forensic art could look like. For instance, in a high-tech laboratory in New York City, the character Leeloo is reconstructed from her DNA fragments. In the movie, the lab machine acts as a machine sculptor in a contemporary art form, creating a new identity from DNA, mirroring the aims of forensic art. This brings questions to the future of 3D bio-printing. If compared to my dissertation thesis, traditional methodologies such as Wood, Ladd, and Kollwitz's hand drawn sketches and sculptures depend on an artistic interpretation. However, digital methodologies such as Dewey-Hagborg's work are used in tandem with DNA, creating 3D bio-portraits which rely heavily on technology and data bases. Leeloo's reconstructed figure also engages with the uncanny valley theory, as her body is genetically engineered with technology. *The Fifth Element* merges technology which demonstrates reconstructing Leeloo's figure through multiple layers showcasing a futuristic concept of identity. This film

hypothetically shows a hybrid amalgamation, visualising a futuristic example embodied in film form, which questions the future of forensic art if solely using 3D biological printing.

# Conclusion

*Traditional vs Digital: The Future of Forensic Art* has examined how traditional and digital approaches shape the world of forensic art. I argue that one approach is not better than another, nor should be. Both specialities share a wide range of success for the future by integration. I have explored how there are more paths to offer solving forensic art cases by collaboration with science and art, which has a greater chance when merging together. My research demonstrates how each artistic approach shapes the contemporary art world through science and art, and the future that lies ahead.

Throughout my framework, analysing artists, scientific methods, practitioners' insights, my own practice and a film, this dissertation has consisted of a debate whether traditional and digital forensics art can work as a continuum. I argue in favour of a hybrid approach featuring multiple forensic artists and even contemporary fine artists. This diverse representation fosters open discussions about forensic art, a field deeply connected to human visuals and interpretation. My conversations with practitioners have reinforced my thesis, particularly supported by Houlton (2025), who highlighted how the audience interprets visual artwork and space in the gallery first, and then through contextual written work, both vital aspects of public response.

My argument has been strengthened by intersecting my chosen artists and their work in this exhibition, as even though they are not defined in the forensic art field, each artist's practices and methods align with forensic art. For example, Wood and Ladd both produced prosthetics for facial disfigurement. Their work aligns with forensic reconstruction, mirroring modern forensic and facial reconstruction such as the work carried out by Adair (2025). For instance, solving a missing child case, using sculptural tools and methods to reconstruct what the victim or suspect appearance may look like over a time period. Kollwitz's work demonstrates how emotional dialogue can provoke ethical responsibility by showing trauma and truth, which echoes the forensic identification from a witness or victim testimony. Saville's work explores engagement through anatomy; her paintings show body disfigurement linking to witness descriptions using lose brush strokes and a raw colour palette. It is key to have an artistic eye in life drawing that focuses on the anatomical visuals like a suspect. Dewey-Hagborg and Czarnecki both use DNA and genetic identification, demonstrating human growth through

biological material. Linking this to forensic cases where there are little human remains, this is a possible form of reconstruction to create a full identification to help solve a case, such as the *Isdal Woman.* Simon's archival imagery speculates a timeline for the layout of framework in forensic evidence. My artwork explores inherited facial features, examining my perspective on age progression through generational genetics, which links back to missing person cases or reconstruction.

Therefore, I believe hybridity offers a crucial bridge between traditional and digital art, fostering the evolution of art within scientific disciplines. This means that bringing traditional, digital and fine/contemporary artists together is an essential continuum, as all specialities have significant value to help secure forensic art remaining in the future. Throughout my research, examining a range of artists, scientific approaches, films, and my own studio practice, I argue that integration and collaboration are vital components between science and art in the forensic art world.

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# Appendix

## (Appendix A - Teams Meeting -Transcript – Tobias Houlton)

24 November 2025, 14:05pm

42m 18s

**Alex Tully (Student)** started transcription

**Alex Tully (Student) 0:03**
I was hoping to start with your opinion on what you see, the future forensic art, and what direction it may go in.

**Toby** 0:08
Sure.
The future of forensic art and what all involved.

**Toby** 0:22
Yeah. So, I think, yeah, in terms of the future direction that we're going, I mean the digital has taken over a lot of the traditional practises. But you know there's areas were.

**Toby** 0:36
You can't beat the traditional practise or, you know, some might argue that. But there's a flexibility. Certainly, I'm thinking in mind the composite sketch process, so those are.

**Alex Tully (Student) 0:50**
Mm-hmm.

**Toby** 0:53
Artists essentially involved in drawing from witness descriptions and often people like witnesses, more from a kind of testing a theory perspective where they're testing the kind of. Applicability of programmes versus sketch artist. I mean there's a there's a flexibility and an organic capability with sketch that you don't get so much with.

**Toby** 1:40
I don't think you know they're going to shift from working with traditional sketch in many

police departments soon, many see the value of bringing in a portrait artist and you know the fundamental thing is.

**Alex Tully (Student)** 1:48
Yes.

**Toby** 1:56
You know, are they trained in what they what is called the cognitive interview, which is a process to help with people entering minds, eye and extracting information that could be deeply embedded in their memory and knowing the appropriate kind of cues and ways of orchestrating that situation.

**Alex Tully (Student)** 2:00
Mm-hmm.
Oh.

**Toby** 2:15
Not biassing the witness at all. So that's additional training. But you know, if someone's got the foundation of traditional skill in the arts, then you know that that is a critical thing that that people need to have.

**Alex Tully (Student)** 2:17
Yeah.
Good.

**Toby** 2:34
And I think kind of looking more broadly across the practise of friends cards, you know, we've got the likes of facial reconstruction, facial approximation and I know in many contexts Now it's kind of.
Drifted into a more computerised field, but there's still the pool for traditional reconstructions as well, where, you know, people could be.

**Alex Tully (Student)** 2:55
Mm-hmm.

**Toby** 3:07

Asked to do kind of more elaborate busts or full figure kind of statutes to illustrate people from the past, it's often in archaeology and palaeontology that people would want this more kind of interactive, dynamic kind of models being produced.

**Alex Tully (Student)** 3:12
Yeah.
Hmm.

**Toby** 3:25
Which people can walk around and get a sense of, and that's again where traditional practise really sits strong. But then in forensic contexts and in a lot of archaeological contexts as well. There's greater position really in terms of integrating science practise with the arts when incorporating software where you can just switch off the layers. It's like working with Photoshop. The thing is, we do that in 3D.

**Alex Tully (Student)** 3:46
Yeah.
Yeah.
Yeah.

**Toby** 4:00
So you have the benefit of being able to cross check yourself through each the process, and that's really the benefits of technology, artistic know how and the foundation and the science.

**Alex Tully (Student)** 4:04
Mm-hmm.
None.
Yeah.

**Toby** 4:14
So it's all kind of neatly lock in together to produce a reliable approximate for whatever the given purpose of that reconstruction is. So yeah, we're very much working side by side with technology.

**Alex Tully (Student)** 4:19
Yeah.

Mm-hmm.
Yeah.

**Toby** 4:34
The digital and always having our traditional foundations, because I think one thing for sure with traditional media is that it teaches you like for instance, life drawing is such a foundational skill. It's.

**Alex Tully (Student)** 4:39
Mm-hmm.
Mm-hmm.

**Toby** 4:51
Very difficult. You know, it involves a lot of attention to detail, being able to translate what you see in front of you down on the page and capture information quickly and reliably and dealing with shortening and things like that.

**Alex Tully (Student)** 4:57
Mm-hmm.
Mm-hmm.

**Toby** 5:08
That these are all kind of foundational skills that I would say is relevant for someone wanting to do any kind of creative practise, whether it be pure Fine Arts or into kind of the more scientific arts. If you like to say.

**Alex Tully (Student)** 5:17
Yeah.
Hmm.

**Toby** 5:25
So I think if you get a basic foundation in that then your creative skills will translate to everything. And it's a case of just getting that initial training and comfort with whatever application is sent your way.

**Alex Tully (Student)** 5:41
Yeah.

**Toby** 5:43
I would say with the benefit of some technology is that you know that there's premade models that you can modify and fit to a particular mould and you know that.

**Alex Tully (Student)** 5:54
Mm-hmm.

**Toby** 5:58
That can eventually become a shortcut that will allow people who aren't so creatively gifted to come in. And I think that will always be, you know, a potential concern for creatives in the fields that are, you know, at the moment, able to monopoly.

**Alex Tully (Student)** 6:05
Yeah.
Mm-hmm.

**Toby** 6:17
Lies, but.
It's still, I think, because of the creative.
Supposed boundary in creating something visual. It is something that I think for some time to continue would still allow people who are more creative to come in and take charge.

**Alex Tully (Student)** 6:37
Mm-hmm.

**Toby** 6:41
But yes, there is.
The degree of progress in different areas in terms of the production of software programmes that help produce the visual outputs sort of quicker than what would be done traditionally, but I'm only really seeing that in the composite sketch.

**Alex Tully (Student)** 6:56
Mm-hmm.

**Toby** 7:04
Process, you know? Instead, they've got the likes of E Fit Pro fit. Evo Fit is another one so.

**Alex Tully (Student)** 7:05
Yeah.
Yeah.

**Toby** 7:16
And of course, typically, certainly in the UK, you would often find that it could be a police officer or a forensic examiner that will be pulled in to do that kind of work. And of course, these people are not doing anything creative in.

**Alex Tully (Student)** 7:19
Yeah.
Yeah.

**Toby** 7:32
Their time of that, so the software gets pulled in.

**Alex Tully (Student)** 7:32
Yeah.
Yeah.

**Toby** 7:39
But in all other instances it's quite niche to people who have a more creative background. You see the difference in the quality of output to someone who's artistically trained and gifted.

**Alex Tully (Student)** 7:46
Yeah.

**Toby** 7:54
To someone that's kind of literally a scientist coming in.

**Alex Tully (Student)** 7:58
Mm-hmm.

**Toby** 7:59
Without any of those creative foundations.

**Alex Tully (Student)** 8:00
Yeah.
Because I spoke to her and Danielle Adair there, She's a reconstructive scientist. And she said the same thing about when she was working with, like, the statics. But she said the same her. It's easier for someone with an art background to learn science, and it is scientists to learn or, but that's like what I'm linking into my dissertation. I'm going not just forensic art, but just in general, how you combine science and art together or like.

**Toby** 8:26
Completely.

**Alex Tully (Student)** 8:36
Art and like digital equipment, cause. Then my degree show stuff I'm using. I'm even on my Gran and I'm using 3D the 3D scanners, But then I'm 3D printing. I've got here actually, so I'm like 3D printing the face and then I pour silicone into it.

**Toby** 8:51
Cool.

**Alex Tully (Student)** 8:54
So I'm like still sculpting the face but just not on the actual human face and then working in with like silicone pigments that repaint on the textures. So, it's actually going really well but.

**Toby** 8:54
Yeah.

**Alex Tully (Student)** 9:10
And that's what I'm trying in my studio work and dissertation. I'm trying to align to make sense, but yeah, it was artists like Heather Dewey-Hagborg. She used DNA. It was the Chelsea Manning 30 portraits.
That's what I've got in my exhibition model, I found that so crazy. From using DNA And you can then create this. So, like all my artists are kind of linking into the cross-section of art and science as well. Not one or the other, like my dissertation.

**Toby** 9:31
Yeah.
Mm-hmm.

**Alex Tully (Student)** 9:44
I'm arguing that like, not one is better, but there are pros and cons in both and how you can combine them as a hybrid. But yeah, it was just a little more. Yeah, you've explained it. There were your thoughts because I also go into like what I hope.

**Toby** 9:49
Please.
Yeah.
Mm-hmm.

**Alex Tully (Student)** 10:01
Like once I'd graduate.
Umm.
Because obviously the I want the forensic art. One was a big thing, but then because it's been taken, I was looking, I was in contact with Caroline, like talking about the medical art one which I'm still really interested in. But yeah, it's just because after speaking with Danielle, but how she came from a.

**Toby** 10:13
Yeah.

**Alex Tully (Student)** 10:24
One and I was reconstructing like faces. It's like when I was in high school, I didn't even

know that was a possibility. So, I'm trying to like to explain how there is so many other ways you can go with a fine art degree and.

**Toby** 10:34
Yeah.

**Alex Tully (Student)** 10:41
But yeah, yeah. Thoughts but yeah.

**Toby** 10:45
Yeah, I mean it's.
And I think actually with time, I mean I know that there can be a little bit of.
You know, competition between the sciences and arts and that, you know, traditionally, scientists have had a very rigid idea about what the arts is and think it's within. I mean, the great thing with the integration of arts and science is that, you know, it just introduces a very set structure.

**Alex Tully (Student)** 10:59
Yeah.
Mm-hmm.

**Toby** 11:16
And actually the level of precision that you need to create a visual. But you know whether it's creating a mobility aid or a prosthetic, or trying to illustrate a procedure, a technical procedure.
Trying to predict a face from remains. All of that requires a precision that is hard to deliver in any other way that without it clearly being visual and.

**Alex Tully (Student)** 11:35
Mm-hmm.
Yeah.

**Toby** 11:50
I think people are starting to kind of break that mould of science as science and art as art and seeing the, the how important it is putting the two together and the fact that.

**Alex Tully (Student)** 12:01
Mm-hmm.

**Toby** 12:06
You know, the science doesn't need to be hard to learn, you know.

**Alex Tully (Student)** 12:11
Mm-hmm.

**Toby** 12:15
And I think.
And I think the ideal situation when it comes to training as well is, you know, potentially having you know, your arts foundation, your arts degree matched with like a single year science-based master's.

**Alex Tully (Student)** 12:29
Mm-hmm.

**Toby** 12:35
Because that also kind of lets people know that, yes, you're you've got your creative foundation, and you've got the scientific know can be kind of packaged into a year.

**Alex Tully (Student)** 12:35
Yeah.
The.

**Toby** 12:51
Yeah.

**Alex Tully (Student)** 12:51
Because then Danielle was saying, she did her fine art, and she did the forensic art but then went and did the dentist. So, there was something to do with dentist, right to then work on face prosthetics and stuff.

**Toby** 13:01

MMM.
Yeah.
Yeah.

**Alex Tully (Student)** 13:08
Yeah, it was more. Yeah. When you said it there, I was wanting to know what? Because she's trying to argue that if you did a fine art degree, then you did like the forensic or a medical art mass or something with science based that you wouldn't then need to go and do.

**Toby** 13:21
Yeah.

**Alex Tully (Student)** 13:24
Another just science based like masters, she took a few years to do that but.
I mean, I don't think I would do another like I think I would probably stick to the medical forensic group and then, but yeah, I mean it's. Yeah.

**Toby** 13:40
Yeah.
And actually it can be fluid too, because I actually know a friend's artist over in Louisiana who all of his life. He's been a fine artist.

**Alex Tully (Student)** 13:47
Mm-hmm.

**Toby** 14:02
Painter, sculptor, and he worked on off as a fine art lecturer. He actually was working a long time in the fishing industry because that was.

**Alex Tully (Student)** 14:15
No.
Yeah.

**Toby** 14:19
But he eventually saw an advertisement within the anthropology, the forensic Anthropology department there, saying they really need someone with a creative ability to help with facial estimates.

**Alex Tully (Student)** 14:33
Mm-hmm.

**Toby** 14:35
And they just wanted someone that was creatively capable of portrait images, and he applied for the job. And immediately he was set in a team of it's like, 233 forensic anthropologists. Himself as the artist, he gets given the instructions. I mean, it's all the same protocols. So, he got a foundation and the protocols he has to apply. The forensic anthropologist would advise him on what to do and cross check anything if he needs that support.

**Alex Tully (Student)** 14:55
Mm-hmm.

**Toby** 15:07
And he actually had the fortune of learning on the job and was well, has enough set for some time doing reconstructive work. And it's funny because he, I mean, he was that bit older.

**Alex Tully (Student)** 15:11
Hmm.
Yeah.

**Toby** 15:23
Invariably, entering this this line of work.

**Alex Tully (Student)** 15:27
Hmm.

**Toby** 15:28
And I mean, he saw the computer and it was like, I'm not touching that. And because he was such a good quality sculptor and the portraits, he would produce from that were really kind of, yeah, I mean, they were unmistakable. And in terms of.

**Alex Tully (Student)** 15:33
Yeah.
Mm-hmm.

**Toby** 15:49
You know, recognition aside, because we've always got the limitations of the science supporting it. But you know, he produced.

**Alex Tully (Student)** 15:53
No.
Mm-hmm.

**Toby** 15:59
Busts that could be photographed and put into the paper and people will, you know, not knock it in any way or, you know, they would be convinced by it.

**Alex Tully (Student)** 16:08
Yeah.

**Toby** 16:12
So it shows that you know there's someone that's still very much working in their traditional practise because he's more attuned to working with traditional mediums. He's more convinced by the accuracy he can achieve and to be honest that that's probably true or someone that's really familiar with them.

**Alex Tully (Student)** 16:30
Hmm.

**Toby** 16:31
Traditional modelling mediums and there's ways of like cutting into the clay and doing things to just check if you're uncertain of anything, yeah, he's a great example of someone that's actually just entered late in life.

**Alex Tully (Student)** 16:38
Yeah.

**Toby** 16:49
With no scientific training whatsoever and there being an opening made for him to work

amongst a team of scientists who are strictly scientists and not really attuned to the creative things.

**Alex Tully (Student)** 16:52
Yeah.
Mm-hmm.
Would there be a lot of collaboration or is it normally they one person kind of set on?

**Toby** 17:14
Yeah.

**Alex Tully (Student)** 17:21
Figuring it I mean like I know there's a whole department of other people, but for like a forensic artist, is it just like a one person or multiple?

**Toby** 17:30
Typically, yes, it would be. It would be one person, I mean also.

**Alex Tully (Student)** 17:32
Mm-hmm.
Play song.

**Toby** 17:39
You might forensic art is broken down in terms of the different practises with Trent c, so I know for instance a former lecturer at Dundee, Greg Mahoney, he works at Boston Police Department.

**Alex Tully (Student)** 17:46
Yeah.
Yeah.

**Toby** 17:56
And he was specifically very specifically a composite artist, so he would go interview witnesses and develop sketch portraits, and it will be working with Sketch, no software.

**Alex Tully (Student)** 18:03

Yeah.
No.

**Toby** 18:12
So I believe in his department there were other composite artists, but probably not too many. So, it's not something that was regularly demanded on and often he would do a combination of composites as well as collecting fingerprints.

**Alex Tully (Student)** 18:15
Yeah.

**Toby** 18:29
Or taking fingerprints from various people for different reasons. So, there's been other departments like, I know, Texas Police Department had one forensic artist which they did recognise as a friend to Carter's, and she would do a whole variety of different.

**Alex Tully (Student)** 18:36
No.
Yeah.
Yeah.

**Toby** 18:47
Things. Her name is Karen Taylor. I think she's retired, but her position was actually probably one of the favourable ones because she got to do interviews with witnesses, got to do reconstructions, faces.

**Alex Tully (Student)** 18:51
Yeah.
Yeah.
Yeah.

**Toby** 19:03
Postmortem depictions age progressions, the whole variety.

**Alex Tully (Student)** 19:05
Yeah.

**Toby** 19:10
So it and in terms of like the UKI mean, a lot of the graduates that I see from the course, they go into like a biometrics kind of department. So, they're working more image comparison.

**Alex Tully (Student)** 19:18
Yeah.
Mm-hmm.
Yeah.

**Toby** 19:27
So in that instance, there isn't really any creative artistic skills being utilised, but because artists have liked a very good eye for detail, they're very good at studying images. And then of course, once you've got the foundation of anatomy and you know how.

**Alex Tully (Student)** 19:34
Yeah.
Yeah.
Yeah.

**Toby** 19:47
How humans vary in certain situations, and certainly over time, you can then incorporate all of that knowledge, which is academic knowledge, but something that is supported well by a creative eye.

**Alex Tully (Student)** 19:48
Yeah.
Mm-hmm.
Yeah.

**Toby** 20:04
So often you know that there's been people go into sort of departments set on image comparison and biometrics. Another one in the Metropolitan Police is a.
The digital I don't know how they describe themselves. I need to look them up. There's a

department dedicated to generating digital images to support investigations, and they do like age progressions, postmortem depictions.

**Alex Tully (Student)** 20:29
Yeah.

**Toby** 20:35
I don't know if they do so much in the way of facial estimates. It gets to be much of A call for that. Typically, the universities tend to absorb those. But yeah, that's another kind of set and that's.

**Alex Tully (Student)** 20:36
Yeah.
Mm-hmm.
Yeah.

**Toby** 20:51
That's used in the UK.

**Alex Tully (Student)** 20:52
Mm-hmm.

**Toby** 20:55
And I know further afield in my former experience in South Africa, where the demand for forensic intelligence is arguably that bit higher than here.

**Alex Tully (Student)** 21:02
Yeah.

**Toby** 21:11
They had a set department Victim identification centre, and they were completely committed to identification of deceased persons and there will be facial predictions of recently deceased persons that just had, you know, basic postmortem taphonomy showing on the face decomposed.

**Alex Tully (Student)** 21:19

Mm-hmm.
Yeah.
Yes.

**Toby** 21:30
Closing just slightly so it was still possible to modify image photographic image, but then also doing full reconstructions of faces from skeletal remains or even super superimposing a skull of an unknown person with.

**Alex Tully (Student)** 21:33
Mm-hmm.

**Toby** 21:49
Missing person images to see if the shape of the skull aligns with graphs, just as a process of elimination. Really. If they are then it should be informed with DNA whether it's the same person or not, but that.

**Alex Tully (Student)** 21:55
Oh yeah.
Mm-hmm.

**Toby** 22:08
Can be a helpful means of just reducing narrowing the search so they were completely committed that, but then there was another department for criminal records and identification, and they were committed to image comparison.

**Toby** 22:27
There was a team close to them that was committed to generating composite images and I think they might have used a blend of sketch and software.

**Toby** 22:43
Umm.
Yeah. So
I don't know if so, much about age progression. I don't recall seeing it too much in South

Africa, but it was just kind of interesting how they had very set departments with people with these recognised creative skills that were being used.

**Alex Tully (Student)** 22:59
Yeah.
Yeah.

**Toby** 23:03
And certainly the two guys that I knew working in the victim Identification Centre, I mean both of them were very much from a creative background. The senior was really a fine artist at heart and in his own time. And so, his paintings.

**Alex Tully (Student)** 23:14
But yeah.

**Toby** 23:22
Umm.
Yeah.
But in another side of things is of course archaeology and of course, one thing that comes through is power of reconstruction and visualisation of past lives.

**Alex Tully (Student)** 23:42
Yeah.

**Toby** 23:43
Through creative mediums, people just get absorbed by that kind of imagery. And of course, if you walk into a museum, what are you most likely to look at the poster with all the text writing about the people of the past or the actual?

**Toby** 23:58
And you know, typically the visuals just help invite people to take more interest also from an ethical perspective is helping people remember that these are human beings that we're, you know, studying and reflecting on and.

**Alex Tully (Student)** 24:03
Hmm.
Yeah.

**Toby** 24:15
People have a much greater appreciation to the lives and lifestyles when presented with visuals, and that again is the strength of the artist in in bringing that to the exhibition.

**Alex Tully (Student)** 24:19
Yeah.
Yeah.

**Toby** 24:33
Delivery of any kind of historic information.

**Alex Tully (Student)** 24:37
Because my exhibition dissertation. So, it's like an interactive one. So, the whole idea is that there would be like an unresolved case study in the middle and like I picked like 10 artists with every like, different technique and if they.
Combined like a hybrid like working together of all their methods that it would actually help solve it. But the viewers and the audience come in to actually interact with it. So, I'm looking at that as well.

**Toby** 25:02
Yeah.

**Alex Tully (Student)** 25:11
There's another question there. Oh, yeah. So, for my studio work, because it was through the age progression, I was wondering like your thoughts and how you would figure out someone with the age progression in a case because I'm kind of working that in my studio work. But obviously like I'm just doing meeting on my ground.

**Toby** 25:25
Sure.

**Alex Tully (Student)** 25:31
But like.
Working with the paint and the sculptures to try and show it because we all look so similar in a way, but I just wanted your thoughts, yeah.

**Toby** 25:41
Yeah, yeah. So, age progression is quite a challenging subject because you know our environment plays a massive part in how we and you know, if you were to do an age progression of.
A minor, a child. Our ability to estimate how that child will mature into an adult is significantly weaker than with an adult, where it's more superficial skin changes it anticipates.

**Alex Tully (Student)** 25:59
Yeah.
Yeah.
Yeah.
Mm-hmm.

**Toby** 26:17
Well, with a child, the whole skull anatomy is growing and changing in proportions. And often you know the ideal situation. If you have a missing child is that we get the images of both the mother and Father's family.

**Alex Tully (Student)** 26:24
Yeah.
Yeah.
Yeah.

**Toby** 26:37
Any siblings, any kind of close genetic relatives and those photos, ideally presenting the relatives at the same age of the child when they went missing to the age that they're believed to be now. So, the child's been missing for five years and.

**Alex Tully (Student)** 26:37
Yeah.

Mm-hmm.
Aye.
Yeah.

**Toby** 26:56
They went missing at the age of 10 on images of the parents when they were aged 10 and then age 15 and then what we would hope to do is kind of look and detect features that seem to.

**Alex Tully (Student)** 27:00
Mm-hmm.
Yeah, yeah.

**Toby** 27:14
Present a similar pattern appearance to the relatives, and then it's kind of.
An assumed concept that OK, this child's showing a trajectory of.

**Alex Tully (Student)** 27:22
Yeah.

**Toby** 27:30
Developing features consistent with their mum or their gramme, or actually they're looking very much like their older brother. Yeah. So, it's kind of weighing in on this kind of pattern of inheritance and how features relate.

**Alex Tully (Student)** 27:31
Yeah.
Yeah.
Yeah.
Mm-hmm.

**Toby** 27:48
You know, there's of course instances where we just don't have that information. It could be because they're addicted or the family never had photos and then we would rely on also with adults, we would rely on our understanding of population trends in ageing.

**Alex Tully (Student)** 27:52
Yeah.
Aye.
Yeah.
Yeah.

**Toby** 28:06
So there's fairly kind of generic studies done looking at population ageing, say across a European population between males and females.

**Alex Tully (Student)** 28:12
Yeah.
Yeah.
Hmm.

**Toby** 28:17
But again, that kind of intelligence is really variable in different regions of the world. So, I would say, oh, there's a lot of good studies in Europe. I think there's also a good one. There's also a pretty good one in South Africa.

**Alex Tully (Student)** 28:34
Yeah.

**Toby** 28:36
It's very specific and Asia must have had. I can't think of studies because it's been mostly Europeans come in, but it can mean that there's, like, gaps in the intelligence depending on regions of the world. And has the science actually gone in there and done anything?

**Alex Tully (Student)** 28:50
Yeah.
No.

**Toby** 28:54
To actually help stand what are the trends in facial growth and development? Because there can be population differences that exist. But.

**Alex Tully (Student)** 28:55
Yeah.

**Toby** 29:11
Yeah. So that's typically what happens. But another key thing, and this is probably. Something that that tends to happen more with adults typically or late to teens is, you know, the influence of the environment. You know, have they been exposed to drugs or are they dependent on education, that they're not getting any more?

**Toby** 29:36
What level of stress are they experiencing? They are sleeping properly and one thing that could be quite tricky with like missing person images that you project out to the media. I mean you must always have the original the last.
Photograph of the actual missing person as a true reference, and then you the estimated image to give the people an idea of how they've aged over time. But one thing is if you're relying on the general public for recognition.

**Alex Tully (Student)** 29:58
Yeah.

**Toby** 30:12
Generally, we're not very good with on faces when, like often when we're not familiar with someone, we will first recognise them by their kind of peripheral details. So, hairstyle.

**Alex Tully (Student)** 30:26
OK.

**Toby** 30:28
And kind of what they're wearing. But typically, hairstyle plays a big part and that external features, but when you're more familiar with someone, you can actually identify the face from just internal details. The eyes, nose, mouth.

**Alex Tully (Student)** 30:30
Yeah.

**Toby** 30:46
So in instances one might have changed their appearance, so you might have gone from someone with long hair to suddenly shaving it all off, putting on glasses or anything that can knock the regular familiar appearance of an individual and.

**Alex Tully (Student)** 30:48
Yeah.
Yeah.

**Toby** 31:05
You know, that's something that the general public might struggle with, so it can be quiet, I think, quite common to, you know, have people call in saying they might have seen someone that resembles, but it ends up not really being the case.

**Alex Tully (Student)** 31:13
And.
Yes.

**Toby** 31:21
Either that, or they completely missed the actual person, so that that is one of the complications within terms of facial recognition, yeah.

**Alex Tully (Student)** 31:28
Yeah.
Cause I'm also like OK, because I'm doing like the generations, I am looking at how your skin ages over time, but obviously there's three different people in it. But the whole idea as it's kind of one person ageing cause like.

**Toby** 31:40
Yeah.
Yeah.

**Alex Tully (Student)** 31:47
We're like testing out like on AI, like ageing me or like my mum like and we're comparing

when you like, look at me to my Gran like it's all weird how similar we look and then we're looking at older pictures of.

**Toby** 31:50
Yes.
Hmm.
In.

**Alex Tully (Student)** 32:05
My mum at my age there and like I'm look, I look the exact same to what she did at my age. So, it's weird like seeing it all. All of us look so similar with our facial features. But yeah, it was kind of.
I want to work into more like about the skin ageing over time as well, but I don't. Yeah, but that's the whole my art side is kind of the three centres and like painting it as realistic as possible so.

**Toby** 32:25
Yeah.
Hmm.

**Alex Tully (Student)** 32:36
I was looking at like the uncanny theory like Uncanny Valley theory, and it was like how? How you can make it something so realistic and it's kind of was off putting because it looks like a real head. So that's kind of where I'm going for my degree show like the three heads and the line and then.

**Toby** 32:47
Sure.

**Alex Tully (Student)** 32:55
Create some. I want to create something else in the other side of the wall that's the same scan, but not as realistic to kind of show the differences. But yeah, that's just where I am just now.

**Toby** 33:09
Yeah. No, it sounds really good. Yeah. Yeah.

**Alex Tully (Student)** 33:10
Yeah.
Yeah. I mean, I think it's just, I've never painted on silicon. So, it's a whole new thing to me. But yeah, I was like researching for ages like what to use because I normally use oil paint or something. But I got like the silicon pen pigments, but.

**Toby** 33:17
Yeah.
Yeah.

**Alex Tully (Student)** 33:31
It was more just.
The cause you have to mix it with something for it to dry like it's just been a whole process like learning new things about that. But I think it's dried so far, I have this lecture here, I'll show you.

**Toby** 33:39
It's true.
Yeah.

**Alex Tully (Student)** 33:50
Yeah.
So I have like my mom. I was like working on it. So, this is the side that it's so glossy because I had to use like a silicone sealant, but it just glossed it, but I've tried it on this side and it's actually worked out.

**Toby** 34:02
Yeah.
Yeah.
Yeah.

**Alex Tully (Student)** 34:11
Really. Well, so it's just weird like painting onto, like, my mom's face. Like, the more and more I do it, like, it's kind of creepy because it does look like, yeah.

**Toby** 34:13

Yes.
I could totally see coming through, yeah.

**Alex Tully (Student)** 34:26
So I because I was at small. I linked back to my dissertation because I'm using digital and traditional techniques because the whole idea that I was going to like to add in here and that. But I actually like how the 3D scanners picked up it so.

**Toby** 34:33
Hmm.
Yeah, yeah.

**Alex Tully (Student)** 34:43
Yeah, I'm going to keep in, like, you can't probably see on the camera, but the actual skin textures like lines like the 3D print. So, I'm like trying to combine them both or not. So, you can see it like from far away, it looks like a real face. And when you like look close up, you can still see the 3D print.

**Toby** 34:50
Yeah.

**Alex Tully (Student)** 35:02
Different details, but yeah, that's just what I've got so far, but it'll be good when I do all of us like my grand scan looks really cool with all the wrinkles, so hopefully that turns out.

**Toby** 35:08
That's great, yeah.
Yeah.

**Alex Tully (Student)** 35:20
Yeah.

**Toby** 35:22
Looking into the future, so you know what to anticipate.

**Alex Tully (Student)** 35:22

Yeah, I know, I know, but yeah. But it's just creepy because that's the way we all like we still you can still see similar features in all of us and.

**Alex Tully (Student)** 35:39
Even like my grand, she's got an identical twin, and they there's it's creepy, like seeing them now. You just see them, the same person. Like they've not changed at all. But yeah, that's you've answered everything.

**Toby** 35:46
Yeah.

**Alex Tully (Student)** 35:55
I needed but I was really thanking you for helping out as well. Yeah, I just saw my dissertation, but yeah.

**Toby** 35:56
Yeah.
Yeah, it's, it's brilliant. I look forward to seeing your degree show.

**Alex Tully (Student)** 36:09
Yeah, I know. It's weird. Like, literally when I came to art. So, I was just painting like, I didn't change from that. And then we did. We got there select the module on 3rd year. So, I picked the portraiture one and I was like, I'm going to have to try something. There's. I did the 3D scans that you let me use for the first time.

**Toby** 36:20
Yeah.
Hmm.

**Alex Tully (Student)** 36:28
And that's when I knew I was like, oh, no, I want to work more with sculpture. But trying to keep it as realistic as possible. So that's why I've used silicone with paint this semester for a degree show. So, because last year I just did one colour, but now that I'm working silicone because it’s kind of.
Looks as much like it is real life skin as well. So, it's been really interesting to experiment with all that, but yeah. And now it's weird. I can't believe I'm going to graduate next year and it's just like thinking about what I.

**Toby** 36:50
Yeah, yeah.
Yeah.

**Alex Tully (Student)** 37:02
Like what I want to do with this and yeah.

**Toby** 37:07
Yeah. Well, I mean also there's been people who have trained in the medical arts that then have transferred over to forensic practise as well.

**Alex Tully (Student)** 37:10
Oh.
Right. Yeah, yeah.

**Toby** 37:20
You know, it's not impossible. Yeah, yeah.

**Alex Tully (Student)** 37:25
Yeah, because Caroline, like I met, met her, and she kind of was going over. I didn't realise how many opportunities there was with doing a medical one as well, and I think it would still be really interesting to me, so I think.

**Toby** 37:38
Hmm.

**Alex Tully (Student)** 37:40
I would want to apply for it, maybe next year or something and see what I can do with my art degree in that. But yeah, really interesting but.

**Toby** 37:43
Yeah.
Yeah.
Yeah, yeah.
And actually, like all those skills that you're developing with, you know, painting, learning to

paint the silicon, I mean, that's pretty much how they're working with prosthetics still particularly so, yeah.

**Alex Tully (Student)** 37:59
Yeah.
Oh.
Yeah. Yeah. I think for statics like something down that line, I would be really interested in like learning how to paint on. This has been really, really interesting to me, just like still using my art skill, but like honest.

**Toby** 38:15
None.

**Alex Tully (Student)** 38:24
Sculpture as well, but I've it's been it's been challenging as realistic as possible, but I mean that's just a pester, but I'll be doing my actual ones starting next semester. But yeah, I'm really interested in.

**Toby** 38:26
Yeah.

**Alex Tully (Student)** 38:40
Doing that and making it unrealistic. Yeah. Well, but thank you so much for doing this. It's helped a lot. And I can then add it to my dissertation as well. But yeah, thank you. Oh, my mum also wanted to say.

**Toby** 38:43
Yeah. Yeah, that's a project more.
Oh, catch up.
Yeah.

**Alex Tully (Student)** 39:01
So when this morning, say hi for me so Fast, Pass it on. But yeah, if I have any more questions, I might e-mail you if that's OK. But so far, I think it's fine now.

**Toby** 39:05

Yeah.
Yeah.
Actually, I was just thinking with your mum and her legal backgrounds. I mean one thing. So, I'm starting to work a little bit with Sri Forensics, which is based on I'm working remotely. I'm still in Dundee. Really. But.

**Alex Tully (Student)** 39:16
Yeah.
Yeah.
Yeah.
Oh.
Yeah.

**Toby** 39:30
They create a lot of visuals to support kind of course, court case demo presentations, any kind of criminal instance that's occurred or any kind of autopsy images that they want to kind of tailor.

**Alex Tully (Student)** 39:36
Yeah.

**Toby** 39:50
So that a jury can understand it better, I mean that they've been heavily involved in creating visuals purely for that legal practise as well. And Ray, who is the CEO for that company, he was originally trained in the Fine Arts and then medical illustration.

**Alex Tully (Student)** 39:55
Yeah.
Oh, OK, yeah.

**Toby** 40:09
Yeah. And then fully immersed into the forensic practise, it's.

**Alex Tully (Student)** 40:13
Yeah. See, that is what I mean. Like, I didn't know anything like that would be possible. That's really cool. Yeah. I think that's definitely. Yeah. I definitely want to do the medical masters and then, I mean, I know. Like what?

**Toby** 40:17
What?
Yeah. So

**Alex Tully (Student)** 40:28
Everyone said there is so many paths that I could take in, yeah.

**Toby** 40:31
Yeah. And actually, to show the small world, Ray Evans, who's the CEO, actually I think he was one of the instructors for Caroline Erlin.

**Alex Tully (Student)** 40:37
Yeah.
Mm-hmm.
OK.

**Toby** 40:44
Yeah. So, they actually all come from the same.
I mean, they were all learning at Manchester University and then when Caroline Erlin and Caroline Wilkinson, who founded the Forensic Art programme they came up to Dundee and then separated.

**Alex Tully (Student)** 40:52
Mm-hmm.
It.

**Toby** 41:05
Medical forensic art, but both came from exactly the same background of medical illustration. Fundamentally, so Caroline Erlin can do facial reconstruction as well. I mean, it's been such a long time that she wouldn't happily do it anymore for forensic purposes.

**Alex Tully (Student)** 41:07
All right.
Yeah.
Mm-hmm.

**Toby** 41:24
But she has more training and yeah, and, you know, we can keep in touch, and I think I know with Saint Andrews, we're going to introduce like a summer school training programme on facial approximation. This is working with.

**Alex Tully (Student)** 41:25
Yeah.

**Toby** 41:42
Archaeologists essentially, but it's going to be open to everyone. That's just going to have more of an archaeology theme to it of doing exactly all the same instructions. If it was forensic. But yeah, if there's anything that opens up where you can develop some of the skills and get certified.

**Alex Tully (Student)** 41:48
Yeah.
Oh.
Umm.

**Toby** 42:01
Let you know.

**Alex Tully (Student)** 42:02
Thank you. That means a lot. Yeah, definitely. That seems really interesting.

**Toby** 42:04
Yeah.
Cool. Yeah. All right. I'll take care and good luck with everything. It looks amazing.

**Alex Tully (Student)** 42:07
Well, thank you. Well, bye.

**Alex Tully (Student)** s

## (Appendix B – Teams Meeting – Transcript – Danielle Adair)

18 November 2025, 18:29pm

19m 30s

**Alex Tully (Student)** started transcription

**Alex Tully (Student) 0:03**
I know from your experience, how you came from a fine art degree. And now you're, working with science as well. So, I feel not everyone knows about it. I didn't really when I first started university I had an idea. I wanted to go down the route of forensic art or medical art, but.

**Danielle** 0:10
Yeah, no problem.

**Alex Tully (Student) 0:21**
I never looked into it as much, but now in my last year, I've been going in the direction and I'm hoping to apply for the medical art masters next year. So yeah, it was just to ask you how you're experience and your journey through, if that's OK.

**Danielle** 0:24
Mm-hmm.
Yeah, nice for you.
Yeah, no problem. So, like I did my fine art degree in Cardiff and like I really loved it. And I did a lot of sculpture and a lot of portraiture and a lot of abstract stuff and all of that. And whenever I came out of that, I got my own studio back home and I was working for like two or three years to fund to do my master's degree.

**Alex Tully (Student)** 0:39
Yeah.
Mm-hmm.
Mm-hmm.

**Danielle** 0:57
I knew like deep down that I wanted to go into forensic art because I knew I could help people with it. Like it's like using that skill to then translate and help people. But whenever I

was in the forensic art, it was about like creating a facial reconstruction of what a person would look like from the dead.

**Alex Tully (Student) 1:03**
Mm-hmm.
Hmm.

**Danielle** 1:15
And it was really, really interesting. I really enjoyed it. However, like my background from that, I knew I wanted to work with the living like as much as it was really, really interesting and really dynamic. And I knew I wanted to reconstruct people's faces for the living. So, I was told quite early on I would need a dental degree.

**Alex Tully (Student) 1:23**
Yeah.

**Danielle** 1:36
And we're trying to like, I'm actually quite active at the moment to try and make sure that the dental isn't required for that because it's so important that art like artists is seen in the NHS as like really standalone people. And I spoke to Caroline Ireland about making it.

**Alex Tully (Student)** 1:51
Umm.

**Danielle** 1:54
Like almost like another form of practise to see a bit more reconstructive science. So I went, did my dental in Birmingham. I did a dental technology degree. So that's making like dentures and crowns and bridges. So, it's like micro sculpture essentially.

**Danielle** 2:11
So I did. I wasn't a dentist. I was a dental technologist. So, I worked in, like, private dentures and all that. So, it is quite still, very sculptural. And I really, really enjoyed it because whenever I worked in private dentures, it was like doing all the like people wanted their teeth to look like how they were when.

**Alex Tully (Student)** 2:20
OK.

**Danielle** 2:30
And they didn't lose them. So, like, crooked and all that. So, it was really interesting to be able to do that and do all the staining. I love that. So then whenever I did my dental, I work in a dental hospital which, like, is a community service as well for people that I didn't believe private practise was for me.

**Alex Tully (Student)** 2:33
Yeah. Thinking. Yeah.
Yeah.
Mm-hmm.

**Danielle** 2:48
And then after that I found my place as an STP. So, it's a part of the scientific training programme and I worked for three years with Kings College London and Manchester Metropolitan to get my second Master's degree in forensic art. So that's what I do now. So, I sculpt like.
Eyes, ears, noses, shins, nipples, everything for people that lose parts of them to cancer trauma. I do a lot with trauma as well, like so for example. It's a bit like a jigsaw puzzle. Like someone will come in and we'll do the virtual surgical planning. We'll also 3D print any of the cutting guides to reconstruct someone's job.

**Danielle** 3:28
And all of that, but yeah, so it's kind of very dynamic sculpting.

**Alex Tully (Student) 3:32**
Yeah. No, that's so interesting because right now. But I'm working on my studio sculptures and my dissertation, and they combine that. They're both the same. So right now, I'm creating silicone sculptures.

**Danielle** 3:39
Yeah.

Mm-hmm.
Yeah.

**Alex Tully (Student)** 3:47
Of me, my mum and Gran, and I'm doing my own interpretation of age progression, so I used the silicone because it was as closest to real life skin as I could get. So I went to Tobias, who ran the forensic art masters, and let me use the

**Danielle** 3:51
Nice.
Mm-hmm.
Mm-hmm.

**Alex Tully (Student)** 4:07
Scanners there. So, I was really lucky because it comes a lot more, clearer than it does in DJCAD. So, I'm really lucky to make them as realistic as possible. So, like the viewers like oh.

**Danielle** 4:07
Yeah.
Yeah.
Mm-hmm.
Yeah.

**Alex Tully (Student) 4:24**
Actually it's like a real-life face and then this week I've been like playing about with doing like translucent sculptures. But as I was mainly painting my first like 2 1/2 years of university and then I did.

**Danielle** 4:26
Mm-hmm.
Mm-hmm.
Yeah.

**Alex Tully (Student)** 4:39
A portraiture module and I started experimenting with 3D scans and now I am continuing

doing it and it's worked a lot better for me because I can bring in my painting technique and style onto the portrait. So yeah, there's been like working on that.

**Danielle** 4:44
Thanks.
Mm-hmm.
Yeah. Thanks.

**Alex Tully (Student)** 4:58
It's just been a whole new process because I've been using silicone pigments instead of oil paint, so it's a whole, I don't know. I never knew how it all worked and I was struggling with having it to dry, but I've just been researching a lot like that was the one thing I just couldn't get my head around because.

**Danielle** 5:04
Yeah.
None.

**Alex Tully (Student)** 5:15
The warehouse I ordered the silicone from said I had to use dowsil. I think it's called, but it just went to gloss the whole sculpture, so I've just been mixing my silicone's part A&B. So, I've just been mixing a little bit with that and white spirit.

**Danielle** 5:20
OK.

**Alex Tully (Student)** 5:32
With a pigment and it seems to be working fine, but I'm kind of yeah, my whole idea is to kind of show my age progression to me, my mum and grand are generations because we all look so similar. Like when you look back at pictures of my mum when she's my age, we look the exact same so.

**Danielle** 5:32
Mm-hmm.
Yeah.
Mm-hmm.

**Alex Tully (Student)** 5:50
It's nice trying to get the viewer to question if it's the same person aging or if it's not because we do look so alike, so that's kind of where I'm at and my dissertations on traditional versus digital techniques and how that affects the future of forensic art so.

**Danielle** 5:57
Yeah, next.
Mm-hmm.

**Alex Tully (Student)** 6:11
You got to pick an exhibition, dissertation, or there's a standard one. So, my exhibition, when I get to basically make up my ideal exhibition and I'm doing a forensic case study that's still not being solved. And I pick any artist. So, it could be fine.

**Danielle** 6:27
Mm-hmm

**Alex Tully (Student)** 6:29
Like background or a forensic artist or a digital artist, and how their methods may actually benefit, combining multiple artists to solve a case. So, it's an interactive exhibition. And so that's where I was wondering, like I wanted to get.

**Danielle** 6:38
Mm-hmm.

**Alex Tully (Student)** 6:45
People's opinions of art and science should combine because I think I mean it is, but not everyone's aware of it and then kind of want to voice it more to like the younger generation because even with like phones and technology like.

**Danielle** 6:49
Yes.
It.

**Alex Tully (Student)** 7:02
It's like the traditional side is kind of getting lost in my opinion, so I'm just looking at that so but yeah.

**Danielle** 7:05
Mm-hmm.
Yeah. So, like with mine like me. So obviously we do like a lot of 3D like mirroring. For example, if a patient doesn't have an ear will mirror, they're posing ear to that ear and like it's very good the forensic side like if someone doesn't have a nose and then also the fact that.

**Alex Tully (Student)** 7:17
Mm-hmm.

**Danielle** 7:24
They might not have a scan before they got their nose removed from cancer. Then I can use the forensic anthropology like to actually predict what their nose was like. So, I am using it every day, but it doesn't. It comes as like a different way of using. I'm very lucky that I did do the forensic art because it was very hands on, but it helped me get.

**Alex Tully (Student)** 7:28
Mm-hmm.
Yeah.
Mm-hmm.

**Danielle** 7:44
To where I am in terms of like medical software stuff that I do every day now. So, it's yeah, it's really, it's really hard. Have you spoke to another actually she was here last week. It would have been good if you spoke to her. Viviana Conte, have you contacted her? So, she. She's like one of the girls I went to forensic art with.

**Alex Tully (Student)** 7:48
Mm-hmm.
No, no.

**Danielle** 8:03
She's just came back from Peru. She's done, like an excavation out there. She's doing her PhD

with Face lab at the moment, you know, with Caroline Reed. But I'll if you want her details, I can give you her details because she's very hands on when it comes to, like, all of that stuff.

**Alex Tully (Student) 8:04**
MMM.
Mm-hmm.
Yeah.
If that's OK, yeah, that would be great. Thank you.

**Danielle** 8:20
She's she stayed in the field of forensics, whereas I went in the medical way, which is like I did. I wanted to go into medical art, but then whenever and the medical art was really interesting. But for me, I'm such a hands-on person and head and neck was always my specialty. Even though now I'm doing like.

**Alex Tully (Student)** 8:26
Yeah, yeah.
Yeah.

**Danielle** 8:39
I'm doing like nipple tattooing and everything now so I'm like getting trained in all of the different things to do that, but yeah.

**Alex Tully (Student)** 8:45
Yeah, I think that's where because for Dundee, the forensic art has been taken off with the whole job losses and stuff. So, I'm like this medical art, one still interesting to me, but it's just kind of.

**Danielle** 8:51
Mm-hmm.

**Alex Tully (Student)** 9:00
Figuring out what I yeah.

**Danielle** 9:02

You could still translate it. That's the thing. Like you can still use all of the stuff, translate it into forensics for example. Like, there's a lot of people that do so.

**Alex Tully (Student)** 9:08
Mm-hmm.
Yeah, I mean I'm still in contact with Tobias who ran the forensic cart one. So, he would, he said he would let me know. But just for now, I still want to apply to the medical arts. It would benefit me in so many ways once I graduate. But.

**Danielle** 9:16
Yeah.

**Alex Tully (Student)** 9:28
And yeah, I'm just honestly, when I was in high school, I never really, would have thought how if I came from a fine art background that I would have these opportunities and go on and like, even with forensic or I didn't realise you could apply from a fine art degree, I always thought it would be a science based.

**Danielle** 9:39
Yeah.

**Alex Tully (Student)** 9:48
Which is amazing to know that you could do that. But yeah, I'm glad that I have the opportunity, I'm not just painting. It's fine to paint that. I don't feel like I'm getting. Anything out of it is almost so incorporating forensic and medical art in somewhat a format with my own art, and I really do like, but I have more.

**Danielle** 10:12
Mm-hmm.
Any of them.
Oh.

**Alex Tully (Student)** 10:35
With my head sculpture. I am looking at how to make it as realistic as possible so.
I'm trying to think it's more how you find like when you're creating like you know people with patients who have like lost a bit like a bit of the face to cancer and stuff. How you find it is to make it as realistic as possible, like the challenges and what you go through like to do it.

**Danielle** 10:59
Mm-hmm.
So yeah, so you get, you get challenging cases, a lot of the time like I've got a patient at the moment. So, I've got like an opposing eye. So, it's a full orbital prosthesis. So, it's silicon and the eye unit. So, we hand traditionally hand paint the eyes, we do everything. And the silicones also can paint like.

**Alex Tully (Student)** 11:17
Yeah.
Mm-hmm.

**Danielle** 11:26
We scan the colour of the patient's face. However, I never trust that because sometimes it's very Caucasian orientated. So, whenever I have someone that has a bit more like olive tones and stuff, I don't trust the scanner like I know I can mix it by eye a lot better but.

**Alex Tully (Student)** 11:31
Yeah.
Play song.
MMM.

**Danielle** 11:43
I've got a patient at the moment. He's got a flap, so basically all of this was removed like his zygoma everything. But he had his thigh put up here, so obviously I can't get the protrusion of the eye, which is quite annoying. So, like, no matter how flat I'm going to make that, it's still going to sit out more than his other eye. It's very difficult.

**Alex Tully (Student)** 11:55
Yeah.
Yeah.

**Danielle** 12:03
Like, but it's just kind of.
It swings a roundabout. Sometimes you get like a really good like depth with like their contour and what they have and what they've been removed with. But yeah, like I just, I work with the patient. I make sure that I know what they want.

**Alex Tully (Student)** 12:12
Yeah.
Mm-hmm.

**Danielle** 12:23
It's just, it's just a very difficult, I suppose it's not difficult that you just kind of you just carve. So, what I do like, I'll still hand traditionally carve with the patient, I'll carve roughly what I think they have or a paint roughly and then they'll come in and then I hand paint and sculpt with them. So, like whenever I'm painting like.

**Alex Tully (Student)** 12:24
Yes.
Mm-hmm.

**Danielle** 12:42
And do my extrinsic pigments. So, I'll do my intrinsic with them and pack my mould physically with the patient and make a point of doing that. So, then I know all the colours I'm placing in my mould is the exact same as the patient and then I'll pack that. Then I'll paint my extrinsic pigments onto that after sometimes just to get a bit more definition.

**Alex Tully (Student)** 12:53
Yeah.

**Danielle** 13:01
Sometimes my silicone will decide display, which is a nightmare, but yeah, I'll. I'll try and find so like obviously like with realism as well. It's about translucencies. Like that's one of the things I found like so like this is like some like, so this is an ear. But you can tell I don't know if you can see it. I can send you if you see the translucent.

**Alex Tully (Student)** 13:04
Yeah, yeah.
Mm-hmm.
Yeah, yeah, yeah.

**Danielle** 13:21
So whenever you're bouncing, you're wanting to get that realism and translucency. So, I

always put it to the sun to make sure I get that with all of, like, my ears and stuff, because I think like, if it's really like opaque, it's all that titanium. Like, if you're putting, you just be really careful if you're going to use, like, whites with your silicon because sometimes.

**Alex Tully (Student)** 13:27
Yeah, that's a good idea.
Thank you.

**Danielle** 13:41
It's good for like the denser areas, but when you're wanting to like have somewhere it's a bit more translucence kind of like that. But fight with it.

**Alex Tully (Student)** 13:44
Yeah.
Yeah. What do you paint on the silicone lip? Is it just the pigments or do you use like a special?

**Danielle** 13:57
So it's called an extrinsic, so it’s basically a silicon-based pigment that I use like it's called extrinsic quick way and it's a medical one. But you can use like I'm sure you can, there's a there's a method of using it with we couldn't use oil paints on patients but there is.

**Alex Tully (Student)** 14:08
Yeah.

**Danielle** 14:17
There's a way that you can use oil paints and then seal them, but I can't. It's like with the steam technique. I'm pretty sure you they use a steamer to seal it, but don't quote me on that, but I know that.

**Alex Tully (Student)** 14:20
Yeah.
Mm-hmm.
OK.
No, that's OK. Yeah, because I'll show you my here.
So I've made like a copy of my mom. So, this is the side that it's so glossy because I mix up. It's like a silicone sealant. They told me to use.

**Danielle** 14:41
Good.
Oh, she's lovely. Nice.
Right, so you need to steamer like I would. I would recommend getting a face steamer. You're just a normal cheap face steamer. And while you're letting it set, maybe steam. And then like a wee bit of black gauze, because that'll take away that shine.

**Alex Tully (Student)** 14:54
Steve.
Yeah.
And do it. Yeah, because that one side. So, then I did the other side, and I mixed the two parts of the silicone with a bit of white spirit and the pigments, and it seemed to work a lot better. I used like, a hair dryer just so like.

**Danielle** 15:14
Yeah.
Mm-hmm.

**Alex Tully (Student)** 15:18
For each layer and it seemed to work OK. The only thing is it's just like the fluff, but I don't think there's a way I can really.
It's just I've been putting in a box, and it's been fine so far.

**Danielle** 15:29
What about like what about like, you know this stuff? I know it's going to sound really strange because it's not going on like our patient like satin powder.

**Alex Tully (Student)** 15:34
Mm-hmm.
Yeah. Yeah, I've been seeing that a lot, actually. Yeah. I didn't know how, Matt. It would make it, but I could always try and see.

**Danielle** 15:37
Like.
Like if you get.
Yeah.

Yeah, like you can use like. I know I've got my makeup bag right beside me, but this is like the SFX stuff. You can get that really cheap. It's called set it up but just takes the shine off certain areas.

**Alex Tully (Student)** 15:48
Yes. Oh yeah.
Yeah.
Yeah, I might try that and see how it works, because this is just a tester anyways, just to see what works. But yeah, I'm going to show how I can combine digital and traditional art together, so I use the 3D print you can see with the hair outline.

**Danielle** 16:01
Yeah.
Mm-hmm. Yeah. No. Yeah, it looks great.

**Alex Tully (Student)** 16:14
Which thank you. So, I was going to actually like, sew hair and eyebrows, but then I felt because I was painting it, I wanted the face to be as realistic. And I almost thought if I added it, it would just look less. Yeah. So, I've actually kept the 3D mould like shape.

**Danielle** 16:28
It look artificial. Yeah, yeah.
Yeah, that's beautiful where it is.

**Alex Tully (Student)** 16:33
And then I just thank you. So, it's worked so far. I tended that whilst I'm like the actual skin, whilst I poured it into the 3D mould, but right now I've got a 3D print, but it's like a translucent making just now in the print making. But just to see how that works, because I kind of want to.

**Danielle** 16:42
Mm-hmm.

**Alex Tully (Student)** 16:53
Have like ideally in my degree, she like meaning on the ground in order with light shining onto it all the faces and then work with like almost you know like translucent clear sculptures

to see the fact of that. But yeah, it was just I think I figured out now how to paint onto it was just.

**Danielle** 16:59
Mm-hmm.
Yeah.
Mm-hmm.

**Alex Tully (Student)** 17:12
It's like at first, I was like, why is it going so shiny but?

**Danielle** 17:14
No, it's just it's just because silicone does that. Give me a second, I'll double check. So, I've had AI went to a course in pull and it was showing me how to do the traditional way of steaming. If I can find it on me. I know that sounds ridiculous, but I will, I will try and find anything I have on silicon. I've got a couple of different.

**Alex Tully (Student)** 17:17
Yeah.
Hmm.
OK. Yeah. Thank you.
Thank you. Yeah, because I've been working with sculpture like the Sculpture Department, but they've never really come across someone wanting to do silicon sculptures and then painting on it as realistic as.

**Danielle** 17:33
Things on it.
Yeah.

**Alex Tully (Student)** 17:47
Because last year I just did the 3D printing and I spray painted it so that was fine. Like it was easy and it wasn't silicon, whereas now because I've never painted on it, I'm just like watching everything I can. And what is going on but.

**Danielle** 17:53

Yeah.
Hmm.
Silicon has it like, even with the experience I've had with silicon, silicon has a way of deciding to be really unpredictable. Sometimes it won't set for me sometimes like I had a blow in the nose today. And I'm like, oh, God, it just it just decides it doesn't want to do what it wants to do sometimes. So, you're like.

**Alex Tully (Student)** 18:07
MMM.
Yeah.
Yeah, yeah, yeah.

**Danielle** 18:18
I'm just trying to see if I've got this presentation because I have there's one and it was really good and it was about just the silicon stuff, but I'm just trying to double check where it would be.

**Alex Tully (Student)** 18:21
Thank you.
Mm-hmm.

**Danielle** 18:33
But yeah, I will triple check, right? If we will. Yeah, it'll be. Oh, it's silicon. Silicon technology, is it that one we have to learn? No, it's not that one. That's about all the silicon like composition, which is fun to learn.

**Alex Tully (Student)** 18:38
That's OK.
Yeah.

**Danielle** 18:53
It's all the bonding elements and stuff. I'll look for it like I'm pretty sure it's in here. But like, even if you got, like an idea of it, like it might be beneficial.

**Alex Tully (Student)** 18:57
Thank you.

Yeah.
MMM.

**Danielle** 19:07
Yeah.

**Alex Tully (Student)** 19:08
I had a few other questions like other artists.
Yeah.

**Alex Tully (Student)** stopped transcription

**Alex Tully (Student) 0:03**
No, it's OK. And it was to ask you, any artist whilst you were studying fine art or after that you've come across that maybe either as combined art and science or any to do with forensic or medical that inspired you.

**Danielle** 0:21
Yeah, I'm sure I do. I'm sure I have loads in my brain somewhere, like I always. I'll still go. Always go back to like my favourite, like sculptors. Like so at my one of my favourite sculptors of all time worked in wax, Berlinda de Bruyckere.

**Alex Tully (Student)** 0:26
Yeah.
Yeah.

**Danielle** 0:36
She's Belgium, but she does like really to interest in, like, visceral sculptures. But the way she like, it's like trees. And it's very like.
Or described like it's very abstract, but when you look at the detail and the veins and the vascularization, she does and the wax, it's really, really interesting. But yeah, there's loads. I'm like, Oh my goodness, hard eye like.

**Alex Tully (Student) 1:06**
It's OK. I put you in the song, yeah.

**Danielle** 1:10
Yeah, that's one of my ultimate favourites, But yeah, I've I'm sure there's loads.

**Alex Tully (Student)** 1:15
I feel like I've also like kind of explained it, but do you do you think that maybe with your job that you do now or with the forensics that it's a good idea to have traditional digital combined? Yeah.

**Danielle** 1:31
Yeah. Because for me, like as a computer still can't paint an eye like I'm currently like I'm in. I've done a study like I won an award for. I was quite grateful for recently for like an eye study. It wasn't the one I did in Dundee. I've done another eye study, but this one was about printing the eyes.

**Alex Tully (Student)** 1:31
Yeah.
Would be.
Mm-hmm.

**Danielle** 1:50
So what it was like a visual perception study where people come in and they would order what like I did, printed eyes versus hand, traditional painted eyes. And it was quite interesting to see how people would like, like score. But. And I think it is getting there like when it comes to like 3D printing and stuff.

**Alex Tully (Student)** 1:50
OK.
Yeah.

**Danielle** 2:10
But traditional does lend itself a lot nicer, I think, especially with like sculpting and carving like you can 3D print stuff. But 3D printing silicon is never going to be there because you need to put thixotropic agent in it. The THEXOTROPIC agent would make it not slump. However, the silicon if you're.

**Alex Tully (Student)** 2:15
Yeah.

**Danielle** 2:30
The Internet, especially when you're doing layers and layers, layers. This layer will set. This bit won't, so then it's not having the same silicon bonding that needed, especially for like facial reconstruction and stuff like that. But yeah, so you still need to make your moulds regardless of how you make them.

**Alex Tully (Student)** 2:34
Hmm.
Yeah, that's kind of. I'm not talking all about that, but I'm trying to explain how I think that should be more of like a hybrid that they should balance each other out. And getting rid of one and all the effects. So even though my exhibition isn't a real thing and it's not. Actually happening, I get to showcase my opinions and how bringing together contemporary artists like fine artists in a forensic case would actually benefit. Maybe solving cases more, yeah.

**Danielle** 3:15
Well, it's true. Well, like the one thing I would say is whenever you're doing stuff digitally, you're wanting to almost mirror the opposing edge or you're mirroring the other side. But if you look at the forensic details, there's like there's cases that have been like people had ear like, so everyone's ears are individual, they're both different.

**Alex Tully (Student)** 3:18
Yeah.
Mm-hmm.

**Danielle** 3:34
There has been a case where they had to like dust, like the person that was burgling the house or whatever they the ear was pressed against the glass and they carbon and then basically if they find who that person was because an ear is essentially the same as a fingerprint, it's identifiable.

**Alex Tully (Student)** 3:44
Yeah.

Yeah.
Me.

**Danielle** 3:52
So, like if you're Murr in the opposing side, it's going to be false looking. There's all that falsity. Like when you're from my, from my point of view, like, you need to put it into a perspective that not everyone's face is symmetrical, like, when I'm carving a nose, not everyone's nostrils the same. There's no point in making it too murdered.

**Alex Tully (Student)** 4:08
Yeah.

**Danielle** 4:13
So yeah, I don't know because then it looks false.

**Alex Tully (Student)** 4:13
Yeah. No. Yeah, yeah, yeah. Perfect. No, I was mainly all my questions. It was just sort of go through your journey and how, you know, combine our insights together. That's like something I want to.
Doing the future once I graduate and like, I mean, I spoke to Caroline, who's from the medical, and she was going through all the job opportunities. So, when my mum told me about you and I was just like, that's crazy now. Like I never thought of being able to do something like that.

**Danielle** 4:40
Yeah.
Yeah, like I think for me, like the problem was that I had to go back and do the dental technology and that was really sold a strain. So, I did speak to Caroline about that, and they are trying to the impf, which I'm a part of now, Council. So, it's the Institute of Macro facial Technologists and it's basically reconstructive scientists.

**Alex Tully (Student)** 4:52
Yeah.
I mean.

**Danielle** 5:04
In the UK, we're all like trying to get a part like we're, I feel like we're taking a lot of

scientists that don't know how to traditionally carve or traditionally paint and their skills in that sense, yes, they're very good in terms of anatomical, but anatomical can be taught, whereas like artistic skills, sometimes.

**Alex Tully (Student)** 5:05
Mean.
Yeah.

**Danielle** 5:23
You can have a way of being like it's it. You need a specials type of person to really get that detail in, like they'll watch me extrinsically paint all the veins and stuff on to a patient and they'll be like, oh, how did you do that? Now, like I'll have to explain it to people there because they don't. They don't have an eye for that.

**Alex Tully (Student)** 5:32
Mm-hmm.

**Danielle** 5:43
Yeah. So, it's one of those things. I think artists will always achieve, like so science can be taught if you like. But with art like, I think it's kind of fed into you essentially like it's a part of your structure as an artist.

**Alex Tully (Student)** 5:43
Yeah, yeah.
Mm-hmm.
Yeah.

**Danielle** 5:59
But to help in another profession is incredible, really.

**Alex Tully (Student)** 6:03
Yeah, I know it's well. But yeah, and that was everything. But I just want to thank you again for helping me. It's really.

**Danielle** 6:09
Don't be silly. If you need any like any information like regards to like what I'm doing or like

anything like that, just let me know. Like I know silicon is one of those things that tests your patients in every single sense.

**Alex Tully (Student)** 6:40
It's my like I only just started working with it like this semester and so, but like to be fair I am happy with how it's turned out like it was just like that thing I was like, why is this not drying? And like every lecture he has not worked with it so.

**Danielle** 6:43
It's so difficult.

**Alex Tully (Student)** 6:56
They're trying to give me as much advice as possible, but I just like started looking online and just it was just a trial and error, but I figured it out now and like I will be starting my actual degree show stuff when I go back next semester like I have all my 3D prints edited and.

**Danielle** 7:05
Mm-hmm.
Nice.

**Alex Tully (Student)** 7:14
Printed to pour the silicon in. And so yeah, but I want to say thank you again and I'll have in contact if I have any more questions, but if?

**Danielle** 7:15
Yeah.
Don't be silly. Yeah. If you have any questions, even if it's just to do with silicon or processing or anything like that, just send me pictures and stuff and we can work it out.

**Alex Tully (Student)** 7:28
Yeah, yeah. If you. Yeah. Yeah. If you don't mind trying to see about the steamer, if that's possible. But yeah.

**Danielle** 7:36

Yeah. No, I'm going to. I'll have a look now and I'll try and find out. Like, because I know it's on one of my lectures I've had about how they extrinsically and then the steam helps. Then they use like a gauze on top of it, then that mats it. I know that much but that's done in Pool.

**Alex Tully (Student)** 7:41
Yeah.
Yeah, yeah. Before I figure, I was wondering when you like, tame on the silicone, are you using different like materials like sponges and brushes and stuff or airbrush?

**Danielle** 8:02
There's. I've got one really scrappy brush that's like my one go to brush that I've had since God knows how long and everyone's like, how do you do the details of this brush? And it's like the rattiest brush ever, but because it's ratty. It means, like, So what I do, I don't.

**Alex Tully (Student)** 8:05
Yeah.
Yeah.

**Danielle** 8:19
When it comes to like my extrinsic, it's very water like it's very loose. So, like I've got a lot of translucence and it's almost like watercolour. But for me, I build it up like almost like watercolour, because then you get all of these different blotchiness and stuff. You get all of that kind of going on.

**Alex Tully (Student)** 8:25
Mm-hmm.
Mm-hmm.
Yeah, I noticed that even when I poured the silicone into the sculpture, so I did it on multiple layers and you could see the different like intensities almost of the tent when I put it in. So yeah, I think my problem when I first did the 1/2 of the face, I did it too thick and then.

**Danielle** 8:39
Yeah.
Mm-hmm.

**Alex Tully (Student)** 8:57
I like did a thick layer of that dough so and that's why it's just made out it cannot separate the

paint almost like blurry because before when I was a long process, I completely didn't think that I had to have some sort of.

**Danielle** 9:06
OK. Yeah.

**Alex Tully (Student)** 9:14
Like material looks sealant for it to dry. So, I just put the silicone pigments on its own, but they don't dry without something else, so it looked a lot better before when I just did the pigment. Then when I added those so.

**Danielle** 9:17
Mm-hmm.
Yeah.

**Alex Tully (Student) 9:29**
It just like slurred it everywhere. So now I know I can. I need to do thinner like layers and slower because I was just so impatient and I just like black the paint on and then it just like, yeah.

**Danielle** 9:35
Yeah, yeah.
Yeah. Your kind of its. Yeah. I think like for skin like, it's one of those you just really translucent, really. Like, try and keep it as light as possible and then just come back to it with fresh eyes, especially like if you're just doing it like that. That's the only way I could say really, but.

**Alex Tully (Student)** 9:49
Yeah.
Yeah.
Mm-hmm.
Yeah. No. Well, thank you again for this, I think.

**Danielle** 9:57
Yeah.

**Alex Tully (Student)** 10:05
Yeah, yeah.

**Danielle** 10:05
And it might not be the same silicon and stuff but might give you a bit of a translation of how you could use it.

**Alex Tully (Student)** 10:08
That's OK. Yeah. Yeah, that would be great. Thank you. Thank you for having time. Perfect. Yeah. Yeah. I'll send you photos of what I do as well, and I'll show you. Yeah. Perfect.

**Danielle** 10:11
Cool. No worries. Well, good luck with everything. And if you need anything, just let me know.
Yeah, I know 100%. I'd love to see it. And if you need any, like anything, just let me know. cause, I'm on. I'm in Glasgow anyway. But like, if you just need, like, any advice on things.

**Alex Tully (Student)** 10:27
Yeah.

**Alex Tully (Student)** stopped transcription