

Have Traditional Medias Evolved into Digital?

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Introduction

Throughout the years we have seen traditional techniques evolve and turn into Digital brush techniques which have transformed the original into its next stage of evolution. To confirm this theory I will be looking at the history of a traditional technique from its beginning form to its now new digital form. This would mean I will be looking at the history of Digital as well. Whilst doing this I shall be researching one artist for each technique and how the artist used that media and what purpose it was for. This will then lead me to compare two graphic software's that are used frequently today and compare which one would be best to use and why. Once looking into which software is best I'll then compare which one mimics traditional brush strokes well and how to compare to see if they look digitalized or look as if it is been painted. The Traditional media I have decided to research is watercolour as this has been a very popular technique through time, but it has also been used very heavily within the digital community. The Digital Softwares I'll later be looking at too will be Adobe Photoshop and Procreate as both are used on different platforms like Adobe Photoshop is used on PC and Laptops, whereas Procreate is only used on IOS running devices such as iPads and Macbooks.

History of Watercolour

We begin by looking briefly into the history of watercolour and how it has evolved over the years and from what we have today. Watercolour is essentially ground pigments combined with gum arabic which is a form of glue that helps to prevent the paint from flaking when applied to paper. (Helen B. Mules, 2019) This is then left with either a paste-like material which we have today in tubes or when left to dry it would form cake or block colour. Watercolour has developed over the years and we can now get it in a variety of forms which makes this media easy to use when on the go and can be cost-efficient in comparison to other techniques of painting. Some of these forms being pencils, pastels and water brush pens. Throughout the years the use of watercolour has changed many times which I will go into further detail later on, but today we primarily use watercolour for outdoor paintings, quick sketches and the occasional high-quality painting due to it not being a preferred medium as it doesn't appeal to today's style.



Figure 1- A Country House and Park, Thomas Malton II (1748-1804), 1779, watercolour. Museum no. P.8-1951, © Victoria and Albert Museum, London

Watercolour painting goes back to the stone ages where some of the earliest forms of art started, but focusing only on watercolour this was when some of the first watercolour paintings took place as cavemen would paint people and animals with natural pigments and ochre. Over time this technique had become more popular and became more of a custom in Egypt and was popularized with Egyptian art when the paper was first made or as Egyptians would call it “papyrus”. Due to how fragile the earliest form of paper was the images never kept as they would wither away from exposure from the climate surrounds and would only survive when buried as offerings in pyramids and tombs as the dry surroundings kept the materials safe.

Watercolour had changed its use around 4,000 BCE that watercolour was used as a primary technique for decorative art that was used for traditional Chinese art (Neil Collins, 2009). Staying with traditional Chinese art the usage for watercolour painting had become more of an established painting form for Chinese painting in the 4th century CE, this is where they would paint landscapes as this became a popular observation in this time. This was also when the Chinese painting scene had lost interest in the traditional ink painting and traded it for the watercolour process instead.

Watercolour had become a well-known technique throughout Europe and was now commonly used to colour world maps in the middle ages. During this time as well-illuminated manuscripts were also created using this technique. Illuminated manuscripts were types of documents that were used to display religious text during the medieval age and were its most famous forms during this period.

Moving past this, the next usage of watercolour was to create nature studies and mini portraits of wealthy people as this was a luxury item to possess in this periods as it

amplified wealth and power, they were also created for private worship as these items were portable and allowed the individual to continue their practices all around the globe(Neil Collins, 2009).

Well known figures such as Henry VIII had miniature portraits gifted to him as an offering for his hand in marriage by wealthy families to present their daughter beauty. He would have had to also take part in this tradition when presenting himself to other courts in the world. During the 15th century artist in Europe had started to make their own watercolours to suit different painting techniques such as fresco wall painting. Even though this painting method had been around for many years at this time, it's still not a preferred technique and hasn't changed its primary use I was to do quick sketches and botanical illustrations (Laura Monroe,2003). Lucas Horenbout was the son of famous artist Gerard Horenbout, who of which he learnt his skills from as he was also a painter and miniature artist. Miniature portraits can be quite small as some portraits have been four centimetres size which is 1.5 inches and others only slightly bigger. Lucas has become well known in England as he was working for King Henry VIII as he was appointed “kings painter”. He had painted only seven for King Henry VIII when he was in his mid-thirty, these were suggested to be gifts for family members, royal families in others or for his mistresses. Lucas had also painted his many wives and children that he was born. When painting his pieces he would use paper-like forms that were made from pig, goat and calfskin which is called Vellum. This material was rather complicated to make which made it costly to use but also the desired finish to the painting as when processing the skin urine was used, this allowed the pigments stand out more when applied. Knowing how small the painting is Lucas was able to accomplish the finest details such as the strands of beard the men would have or they extraordinary details he would paint the sitter's clothes (Sarah Bryson, 2017).

A newly developed style of watercolour came around 1800 and was introduced as the Romantic era. This style allowed a freer brush stroke when painting and during the 19th century it was in the competition with oil colour due to this newfound style. Artists would have also changed the paper to a textured surface to allow them to capture more of an atmosphere in the painting and allowed a deeper meaning to the pieces. As now in the 21st-century watercolour has reached its golden years, artists have founded societies and academic schools to support the method and further explore its limits. This was also the time artists both amateur and professional would be able to collect and share their information about watercolour and their own take on mark making with the medium. In London, the public and galleries were starting to recognize the beauty of watercolour and wanted to see more of this, so galleries would contact the societies and requested to have exhibitions for their work(Elizabeth E. Barker,2004).

Some of the earliest examples of watercolour have been found on cave surfaces illustrating hunting scenes of large animals such as horses and the great black bull which is now extinct. One of the greater examples that have been found is in the Lascaux Caves in France from the Solutrean-Magdalenian era which is dated back to 17,000 BCE (Neil Collins,2009). There is roughly around 2,000 examples of watercolour paintings in this cave and spreads over 240 meters worth of cave wall. Lascaux Caves have occurred many nicknames from the illustrations on the walls, such as, "Hall of the bulls" the "Axial Gallery" and the "Apse" this totalled to 2,000 images and 900 of those images were of animals whilst others were geometric symbols. In 1948, was when these cave paintings were opened to the public and artists such as Pablo Picasso were amazed as to how we have not learnt much in the sense of skill for watercolour. Unfortunately today we aren't able to see the original art as this was closed in 1983 as the cave structure isn't safe enough for public use and now has

an exact replicas of The Great Hall of Bulls accompanied by a smaller gallery of the other illustrations that opened not too far from the originals in Lascaux Caves.

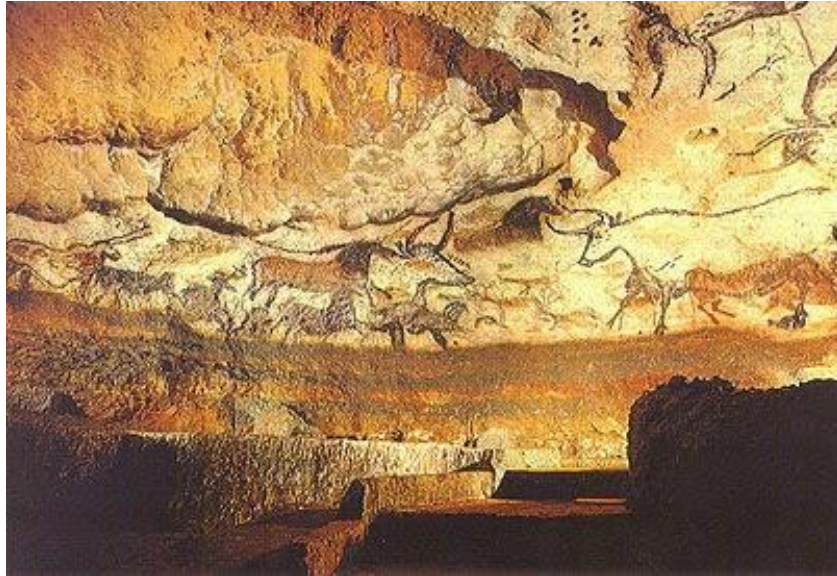


Figure 2 - Lascaux Cave: A section of the "Hall of the Bulls".

History of Digital Art

Digital art is when you create an image that's been either scanned in and edited or solely created on design software, such as Adobe suite or procreate both of which I will compare later on. This software is capable of mimicking traditional techniques by using custom tools which will create the same marks as if it was on paper. "Digital art has itself become an umbrella for a broad range of artistic work"(Digital Art, Christine Paul, 2003, page 7), this quote alone shows how wide of a variety of digital art is as a whole, but as an art movement it's generalized as graphic art, it also can be the next form of evolution for traditional techniques. I do personally feel this technique has become more of a primary skill due to how time-efficient when working within the industry and due to everyone having an electronic device that allows you to do work on the go with no worries of making a mistake.

The first mention of digital art was back in the 1980s when computers engineers had designed a program that would allow you to create simple paint marks on computers, but digital art experimentations started in the 1960s when computers were as their earliest stages and only took five years for the digital creation. The program was called AARON which was written by artist Harold Cohen, that would allow the artist to create abstract drawings and by the '70s they had become more complex. Harold himself would use this to create a large piece of work which would be printed in black and white then added fabric colour dyes for colour by hand, he would also use this to scale larger paintings and murals. This was all before there were inkjet printers but he did later use this as his primary skill. In 1979 the technology had developed further by emitting digital signals and allowed there to be widespread data transfer which maxed the usage of the internet at this time as the internet was still fairly new whereas today we as artist frequently use this feature as the technology has been upgraded to a finer quality for us to promote and design our work (Karina Collins, 2009).

Andy Warhol is another artist that had developed early digital artwork in 1985 and was asked to help promote the computer that he used to design his work on but unfortunately his digital experiments were missing for a long period of time and wasn't until 2014 that they were recovered and then presented on Amiga 1000 computer model in the Warhol Museum (time toast, 2017). Andy Warhol experimented with digital art in the mid-1980s. He created a series of digital artwork using an early computer model which was the Amiga 1000. These digital pieces he created was apart of a marketing campaign to help promote the multimedia capabilities that computers offered. Other than marketing aimed images, Warhol also created personal designs such as Venus, Campbells and Marilyn. These were stored on floppy disks and all were created with basic functions from graphic software. Warhol recreated his

Campbell images doing abstract line illustration. These Images file formats were quite small compared to the file sizes we use today as they were 300 x 200 pixels, this was due to having such a low resolution on the screen as today we have quite advanced screens and technology (Liz Stinson, 2014).



Figure 3 - Andy Warhol using an Amiga 1000

The 1990s was when the internet became more accessible for everyone and this was very useful for artists as this allowed them to source images to create digital collages. 1991 was also when “the thing” was introduced to the web which allowed artists to discuss techniques, art and new media. “The Thing” is equivalent to Instagram and Pinterest as these are popular platforms that we have today that allows artists to showcase their work which gains them more exposure and at the same time allows artists to share techniques. There was also a new feature that allowed you to download images and videos from the internet, so this meant that artists would be able to edit and manipulate their own for the first time instead of having to completely rely on the

original being perfect or having to use dodgy homemade effects that were obvious to the viewers. In the early 2000's the internet and massively grew which meant that digital could blossom into a new art movement as a whole.

“ Art is still constantly evolving, as is the case with digital art.”(Digital Art, Christine Paul, 2003, page 8) Digital art will forever be evolving as the technology we use changes and improves as time moves by. As before digital art became a style we would use programs such as paint for a source of entertainment.

Comparing two Digital programs and Traditional Methods

Today procreate and photoshop are the best digital painting software that is available, so I will be comparing both the advantages and disadvantages they have and which software is able to mimic watercolour brush strokes the best. I will be going over nine main points to compare on both software.

Procreate is a newer software that is available on IOS which is only for Apple products such as pads, iPhones, MacBooks and other Apple products. Only being released in 2014 it is already in competition with Adobe Suite which has been running since 1990. This software is purposely for drawing methods only and not used for anything else such as photo touch-ups or animations. Due to how new the program is, there isn't much downloadable content for the program, but with every update, there is always an upgraded feature or new feature altogether. This is because users are requesting a new feature to be available. There is also a function that allows the artist to create their own brushes and/or edit existing one available. I personally use this program and feel that it's more efficient all round as I'm able to use the program on the go and even export the files into other formats, so if I wished to use other programs or software such

as Photoshop then I'm able to continue so by exporting the file into that format. It's also better quality for money because its a one-off payment which is £9.99 but your always getting an up to date version with no extra cost (Anniko, 2019). So as an artist this would be cost-efficient.

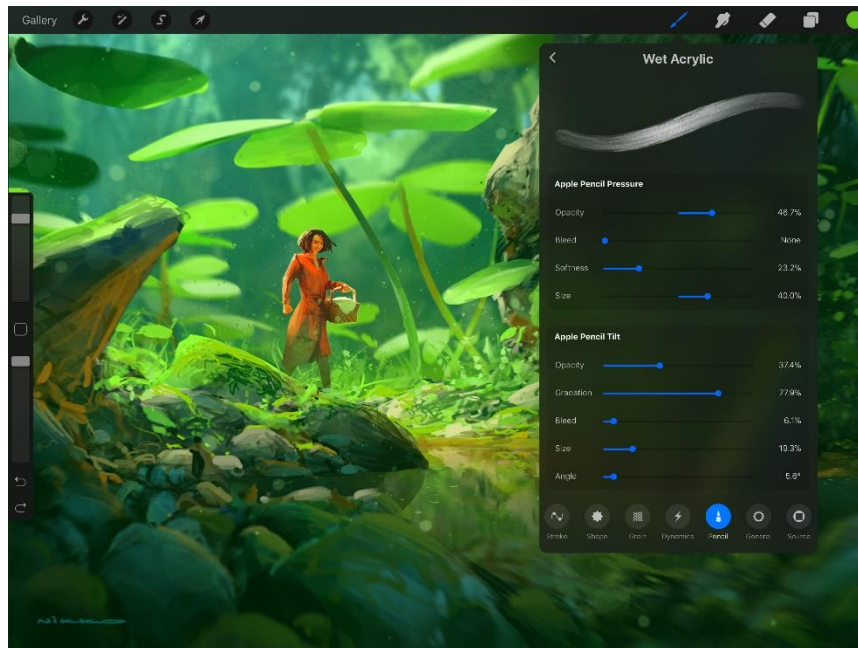


Figure 4 - Procreate Window

Adobe Photoshop is an industry-standard program, this would mean that you would need to have a basic skill or more with photoshop within the digital industry. The original purpose for photoshop was to edit images for photographers, but over the years new tools and features have been added that allow photomanipulation, drawing tools and techniques brushes that mimic traditional mark-making (Gannon Burgett, 2018). This has become a preferred app over Adobe Illustrator and as mentioned before has become a required skill to have within the industry. There are a number of options available for photoshop to have at home, all of which are monthly subscriptions that last for a 12 month period. The cost varies but can cost from £9.98 to £20.99 depending on which monthly package deal you select. These package deals are as a

set which has already been chosen for you, for example, it would be Adobe Photoshop and Adobe Lightroom as the cheapest package. This software primarily used together for photography, not illustrations. I have used this software and feel that it's overly complicated to use as the window face is very cluttered which can be confusing but also you have to down bar a few time to even find a tool sometimes which can be time-consuming. The price for me as well wasn't the best as I could only use it when connected to wifi which means I would be able to use it on the go. Also, I was restricted with my movement as its a pc operated software which meant I couldn't take my work on the go either so I would have to allocate the time of my day sitting in front of a computer which isn't ideal for me (T.E.E.B, 2018).

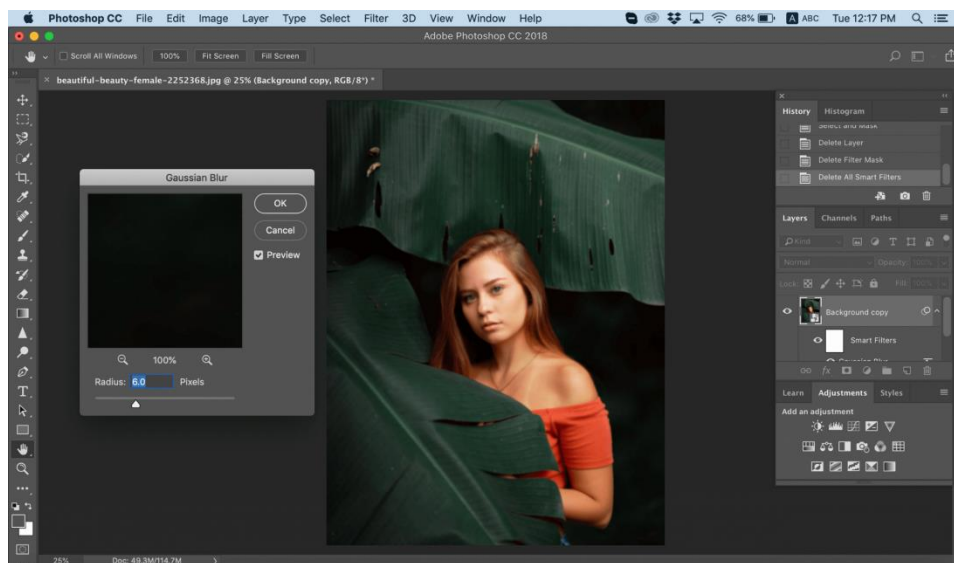


Figure 5 - Adobe Photoshop Window

Price

When Adobe Photoshop was first released you were able to do a one-off purchase cost which was around \$800/£600. This would cover all tool usage and have the routine updates included the which was really ideal and cost-efficient for artists. Over the years though Adobe has changed this to monthly subscription packs which can vary from

\$15/£10 - \$40/£30 a month depending on which package you purchase. There is also one-off payment that covers the year's cost which would be \$350/£250. Both would cover the updates as long as you're within the monthly contracted time. These package deals are already set so you can't customise any bundles to suit you. The cost is more affordable now with the subscription fees, but you may have to purchase two to use certain packs. Whereas Procreate is specialised software for drawing and would only be an one-off payment of £10. The cost is obviously more affordable for artists due to one of the payments, this does include the regular updates the app offers and all the tools are available to use with no extra cost. It's still a fairly new app and could change in the future. If we're to look at a whole price for each software, Procreate would be the cheaper option as you would only need to spend around £500 to have an Ipad and Apple pen to use procreate, whereas Adobe Photoshop you would need to spend £600 plus to have a decent running computer or laptop that would be able to cover the requirements for it to run. It would also take a lot of memory to save the updates and work as a whole so you would either need to expand or update your RAM for your device (Lucas Peinador, 2017)

Industry

Within the industry, it is very common for design companies to use Adobe Photoshop as this is a very reliable program. It can be used on many types of computers and laptops so you'll be able to have a high-quality finish when doing art pieces. It's also because of how long the product has been around as it was first created in 1990 so it has created a very reliable reputation. Whereas Procreate is only available on IOS software, so you'll only be able to use it on Apple products. , can cause inconveniences for people in the industry as they would already have laptops and PCs that are capable,

Adobe Photoshop. Procreate is more of personal luxury to have as your ability to use it wherever you are as its portable. This could be very useful in the industry as it can act as your Digital portfolio as well, but it can be unreliable due to battery life on the products, so it would be simple to use a laptop or PC as this has been a more reliable material to use. (Lucas Peinador, 2017)

Versatility

The original concept for Adobe Photoshop was for editing photos for photographers, but over time it has evolved into mixed media use as you can now use this program to do animations, illustrations and advanced photo manipulation. This is very useful being able to do all these styles in one program, but it can be complicated to as there are so many options to use. Whereas Procreate is specially designed for drawings only and has a more focused audience to target. Procreate is essentially a stripped-down version of Adobe Photoshop and has only taken the useful aspect into further development. I personally prefer to use Procreate as it's a simpler version and the tools are easier to use but it seems like you are doing a traditional media as using procreate you are missing the pencil to paper movement feel (Lucas Peinador, 2017).

Hardware

As mentioned before Adobe Photoshop has specific requirements for it to run at a reasonable speed and keep up with the regular upgrades, you would also need to have extras to work with Photoshop such as graphics tablets to help be more accurate with the tools. There is also a large range of computers and laptops to choose from and can be confusing when trying to select the right model to handle everything as well as being quite expensive. Whereas using Procreate you can choose from a smaller selection of Apple iPad as currently, this is the only server its available, again as

mentioned before it would be a lot cheaper to afford as an all-rounder (Lucas Peinador, 2017).

Innovation

Adobe Suite has become a massive company that has a variety of programs to offer, this would mean that they would have several teams focusing on the next upgrade and searching for bugs that may have occurred due to the latest update. This would mean that consumers of the product may experience problems with the software and can cause long periods of time for these issues to be resolved as this could be a minor issue compared to others the company may face with the other programs. Adobe covers sixteen other software all of which have different functionalities which means they can't just upload the same update for all, they would have to focus on them separately. Whereas Procreate is a singular software that needs less upkeep, unlike Adobe Photoshop. The community for Procreate is also smaller, so if a consumer is experiencing any form of problems when using they would be able to contact them via helplines, Twitter and Facebook to report the issue for it then to be resolved within a rapid time. There are also regular updates for Procreate to ensure that its always running on the new IOS but with some new feature for the consumer to use. This can be more advertising for people as it can allow an artist to explore new avenues that can create a new style of work for them and push them out of their comfort zones rather than using the same tools all the time and producing same if not similar lines of work (Fiji Draws, 2019).

Productivity

Knowing Adobe Photoshop has been around for thirty years people have become more skilled and well versed with this software and has come a custom to the short cuts you

can use instead of searching for tools. Its also become a standard software to use within the Art and Design industry. People would know things more within Adobe Photoshop so when Procreate artist first started to use this software instead there was obviously lessons for them to learn the new tools and etc. Though artists are becoming more accustom to using Procreate and your seeing more people converting to use this instead of Adobe Photoshop. Procreate hasn't yet broken into the industry as companies don't tend to give people iPads or Macbooks, but Apple themselves have started to make contracts where they would supply them with the latest Apple products, so I would think that Procreate would soon become more known within the Art and Design industry (Fiji Draws, 2019).

Horsepower

When using a PC or Laptop the speed of work will always be able to keep up with the level of work you produce due to the horsepower that the device is able to give. This is due to how advanced certain elements within the PC/Laptop, you'd also be able to upgrade parts as you go along if you needed to do so but obviously this would be more of a financial loss as these parts can be expensive. This would be that Adobe Photoshop will be able to handle as many layers you like to work with as there wouldn't be a limit, whereas Procreate you are using an iPad and this can only process so much information at once. When setting your workspace and putting the illustration size details in, procreate will allocate you a limited amount of layers for you to work on before it becomes too complicated and before the device starts to slow down. This is a good feature to have even when using a PC/Laptop because this would give an early indication of how big the file would be, but this does mean that Procreate is a limited program to use so at some point you would have to change to Adobe Photoshop or

another software. Also as some point, you would have to change your device as a whole due to iPads running on IOS and this again has limitations to the lifespan of your device as updates would reach a point where your device would be able to cope and would become slow in general nevermind when using apps (Lucas Peinador, 2017).

Accessibility

All window faces for software are usually cluttered and can be very overwhelming when trying to use them. Adobe Photoshop is, unfortunately, a very cluttered window face and can be very confusing to use if you don't know the ins and outs of the tools. Some tools are hidden by dropdown bars or are within a series of dropdown bars. There is an option where you are able to search for a specific tool and once selected allows the tool or feature to popup on the right-hand side of the window, it also helps to purchase a large monitor when using Adobe Photoshop as this will maximise your view and create a less cluttered screen as it would be more spaced out. Whereas Procreate you use Apple products that are quite small which wouldn't suit Adobe Photoshop, but Procreate is purposely designed for drawing and has a very minimal window face which makes it very easy to work on. It also has all the tools in one area under categories, so if you wanted a textured brush you'd be able to scroll to that section rather than having to search for it or go through a series of drop-down bars. Procreate would be a more artist-friendly app due to how simple it is to use and that not much knowledge or skill with digital art is needed (Fiji Draws, 2019).

Brushes

When using the brush tools in Adobe Photoshop they do tend to have similarities. There can also be difficulties when storing custom brushes or when creating them as there are limits when using them. When applying the tools as well they can be quite

harsh when using them so you would need to either have to do a few touch-ups to the image or use pressure point pens whilst using graphic tablets. There are websites that have custom brushes already made for you by other users so it can save you time instead of creating your own. Whereas in Procreate the brushes have a smoother application and would only need a few touch-ups or none at all when drawing as you're already using a pressure point pen so this would be more natural to use. There is also a better range of media brush tools to use such as Charcoal, Oil paint and watercolour paint. Procreate brush tools also tend to mimic the media's better as they have a better likeness due to the design of the tools. Unfortunately, there aren't many websites yet that have already made custom brushes that you can download yet but within the app, there are functions for you to edit and create brushes as and when needed (Lucas Peinador, 2017).

When using both Adobe Photoshop and Procreate you are able to use brush tools that are able to mimic media brush strokes, ranging from oil paints to charcoal. I have chosen to look at watercolour brushstrokes within these software's to see how they have been mimicked and if they look the same as the traditional use when done digitally. Figure 6, 7 and 8 are examples of what watercolour looks like on paper and on both software. #In figure 6 is the brush marks made with Adobe Photoshop, your ability to see that it's digital due to the smoothness of the stroke but also how it has a fuzzy start and end to the stroke when using it. There are settings within that gives you the choice to have a wet brush effect or have a dry brush effect, so this gives more of a grainy texture than you would when using the media on traditional watercolour paper. Unfortunately you're not able to go over the same stroke and blend the colour when in Adobe Photoshop as this will then lose the likeness and then would look like a blocked colour. The vibrancy of the colours also looks as if you've added a few layers rather

than a single coat as when doing watercolour on paper you would have to add a few layers to get this fuller colour feel. Looking at this as a whole, Adobe Photoshop does do a good job at capturing the essence of watercolour and allows you to digital keep traditional media.

Now looking at figure 7, these were brush strokes were done using Procreate. Again these strokes are smooth which is a clear flaw that will indicate that it's digital rather than the original media itself. There is a similarity between Adobe Photoshop and Procreate brush strokes and that is they both of the vibrancy are darker than what it would have been if it was done traditionally, but with Procreate the brush textures do have a better-finished look than Adobe Photoshop's do as it has a better consistency. It has a smooth start and finishes whereas Adobe Photoshop's has fuzzy edges. The gradient is also better than Adobe Photoshop as you are able to work into the colour and keep the watercolour feel to it. It also has the dry brush and wet brush effect with it too but also has the buffer tool that would be able to blend to colours together in the same way as you would when using watercolour on paper. Comparing this version of brushstroke to Adobe Photoshop, I feel that Procreate has a better range available that mimics the media better because it has fewer flaws when applying within the program. It also has a better-textured option for watercolour rather than it being flat colours like Adobe Photoshop colour is for this brush tool.

Now after comparing the two digital brushstrokes, figure 8 is what watercolour looks like when being applied traditionally on watercolour paper. You can see that when the watercolour has been applied that the paint is a mixture of shades due to the way it's been left to dry, this is because it hasn't been painted evenly as it's only a swatch sample but even when painting you would tend to get a darker shade around the area

you've painted as this tends to be the place where water would hold and most of the pigment from the colour would stay there unless you purposely go over this area to blend the darker areas out. The Vibrancy of the colours are also much brighter and can be applied lightly to create a pastel light colour. After looking at all three as a whole I do feel that the digital version of watercolour isn't far from perfecting its likeness and making it look as if it was done traditionally.

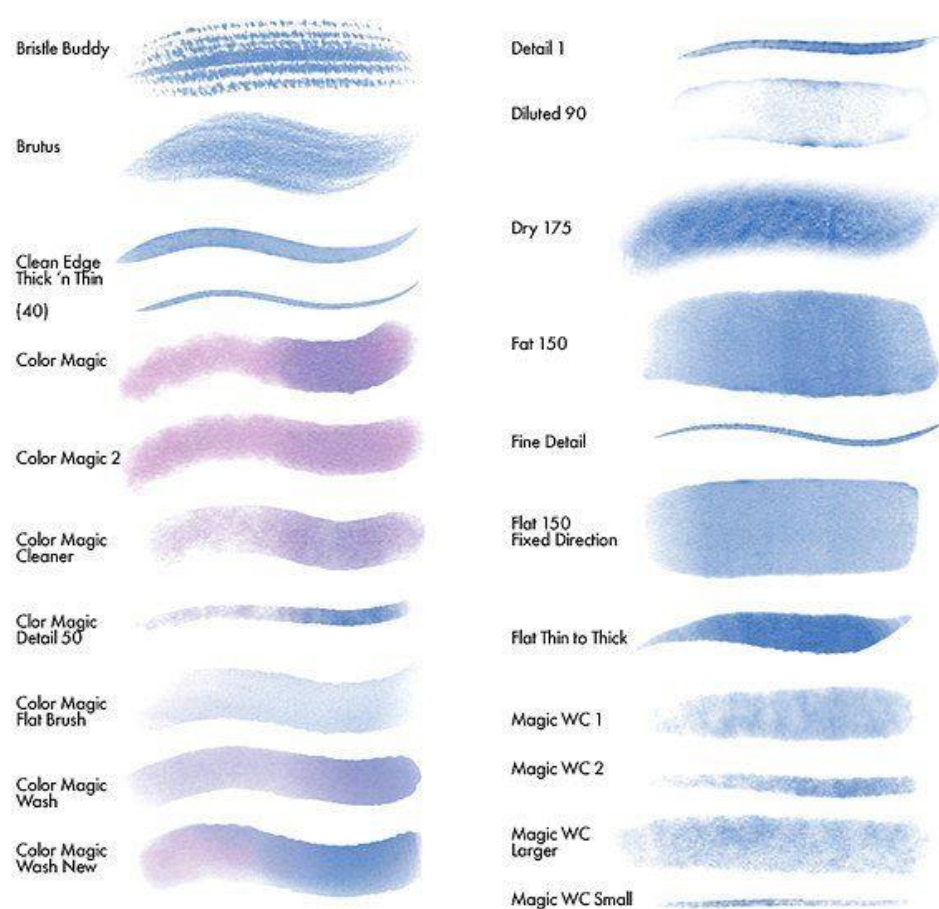


Figure 6 - Adobe Photoshop Watercolour brush marks



Figure 7 - Procreate Watercolour brush marks



Figure 8 - Traditional Watercolour brush marks

As a point system, photoshop would win due to how long it's been around and the advancements it already has made. But as a personal opinion, I prefer to procreate due to how simple the window face is and knowing its a software purposely designed for drawing unlike Adobe Photoshop as it was originally created for photo manipulation. If traditional artist thought wanted to try digital painting the research would indicate artists to use procreate due to the cheapness of the product but also a more accessible option as well rather than learning all the different options that Adobe Photoshop offers, but this all would depend on the artist's personal preferences.

Conclusion

To answer my question "Have traditional medias evolved into digital art successful?" then the answer would be yes. Traditional media have successfully evolved and as still needs a few ticking to prefect this next step in evolution as my research has stated when looking at watercolour as my traditional media. During my research, I had learnt many new things about both watercolour and digital art and found interesting facts about the techniques and artists that have used them as well. If I were to look over this subject again, then I would look at two traditional media such as oil painting as well as watercolour as both paints have different consistency and textures when painted on paper. This would widen my research and possibly backed my question more than just looking at one media. I would also look at more software that we have available because there are so many out there today that each has or adds a desired tool or quality to the final outcome.

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