

The Trials and Tribulations of Technological Advances in Graphic Design

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BA (Hons) Graphic Design

Total Word Count: 6090

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Submitted in partial fulfilment of the requirements for the degree of

BA (Hons) University of Wales Trinity Saint David Swansea

09/12/2019

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SUMMARY OF TOPIC

Graphic designers have witnessed many phases over the years, but where has this led us creatively in our modern-day? Perhaps the message is becoming less important than the actual method of design and the reasons why could explain the tension and relationship between the digital age and creativity.

INTRODUCTION

Graphic Design has been a key communication tool throughout history, it's intent always to express a message to an audience. The methods and styles of communication have been drastically changing with the times to achieve this. This assignment will investigate the changes design has taken throughout the years and explore the possibilities and changes graphic design could face at the hands of technological advancements, and question how far technology could take us. It has already helped us in so many ways but in the hands of those with ill intent, it could have incredibly detrimental effects. It could be proposed that we must learn how to use technology effectively and moderate its misuse.

Graphic designers have witnessed many phases over the years, but where has this led us creatively in our modern-day? Perhaps the message is becoming less important than the actual method of design and the reasons why could explain the tension and relationship between the digital age and creativity.

I have chosen this topic as it is in my own interests and field of study, it is important to understand the journey of graphic design as a profession and also to learn about technological advances in society. It is vital that as technology develops we are able to recognise that it can be both incredibly beneficial but also gain the ability to take a step back and recognise when it becomes problematic.

CHAPTER 1: MODERNISM

In the early to mid 1900's during the Modernist era, graphic design stepped away from the patriotism and carnage inflicted by the state of the world, especially due to the Second World War. Modernist ideals were all about expressing a utopian way of design, everything was true to its form, nothing was out of place and everything was structured. The modernist era yearned to repair what the War had destroyed, healing the world through the basis of art and design which is why the idea of design was stripped down and rebuilt. (Victoria and Albert Museum, 2019)

Internationalism refers to the idea that art should be universally recognised on an international basis. Truth to materials refers to the notion that materials used should be truthfully represented; no material should represent another. For example, a wooden chair would not be disguised as a steel chair. If a steel chair is wanting to be represented, steel should be the material used. (Akrofi, 2012)

Design became clean and rational, and there was a strong emphasis on white space, geometric shapes and bold sans serif typefaces, including Futura and Franklin Gothic. This was a movement that made a loud statement and was not afraid to stand up for its beliefs.



Fig 1: *Posters of the Avantgarde*

Fig. 1 is a perfect example of the movement, created by Jan Tschichold, it was a response to promote Die Neue Typographie - The New Typography, which was concerned with form and function in design. Following strict rules in regard to grid structure and composition, Modernism focused on form and function, rather than appearance and aesthetics.

Before the digital age of design, before designers were able to showcase their entire library of work with just a click of a mouse, graphic designers weren't even known as such. Prior to the introduction of the Phototypesetter into the publishing industry in the 1960's and 1970's every piece of design was hand made and handled by an entire team and it was a very time consuming and expensive process. (Odling-Smee, 2002) As the role of a graphic designer emerged as a profession, the trend was mostly strict composition and form with linear structures following the roles of printers and typesetters leading to the commercial requirements from publishing companies. During this era, design was largely about production. Dubbed Fordism, after Henry Ford in the 40's - 60's following the flow of economic production, this generation of design was built on mass consumption, less so on mass creativity. (Creative Bloq, 2013)

Mid-century modern design primarily focused on design functionality and efficiency. Joseph Muller-Brockman had a reputation for implementing grid systems and minimalism in his work, he truly believed that graphic design should be purged of irrelevant detail. He sought to express his belief in what came to be known as the Swiss Style, cutting design down to the structured fundamentals, revealing the beauty and simplicity in his work and in the Swiss Style in general.

In 1981, Muller-Brockman published a book titled *Grid Systems in Graphic Design*, in which he talks about the structured and logical way in which graphic designers should work. He writes about a system designers should follow, the 'correct' way to layout a design and type. Design was now intended to be functional and clean according to Muller-Brockman and many other modernist designers. This was highly influential as many educational establishments who teach design

would be referring to this book and learning from his ideals, influencing this generation of Modernist designers.

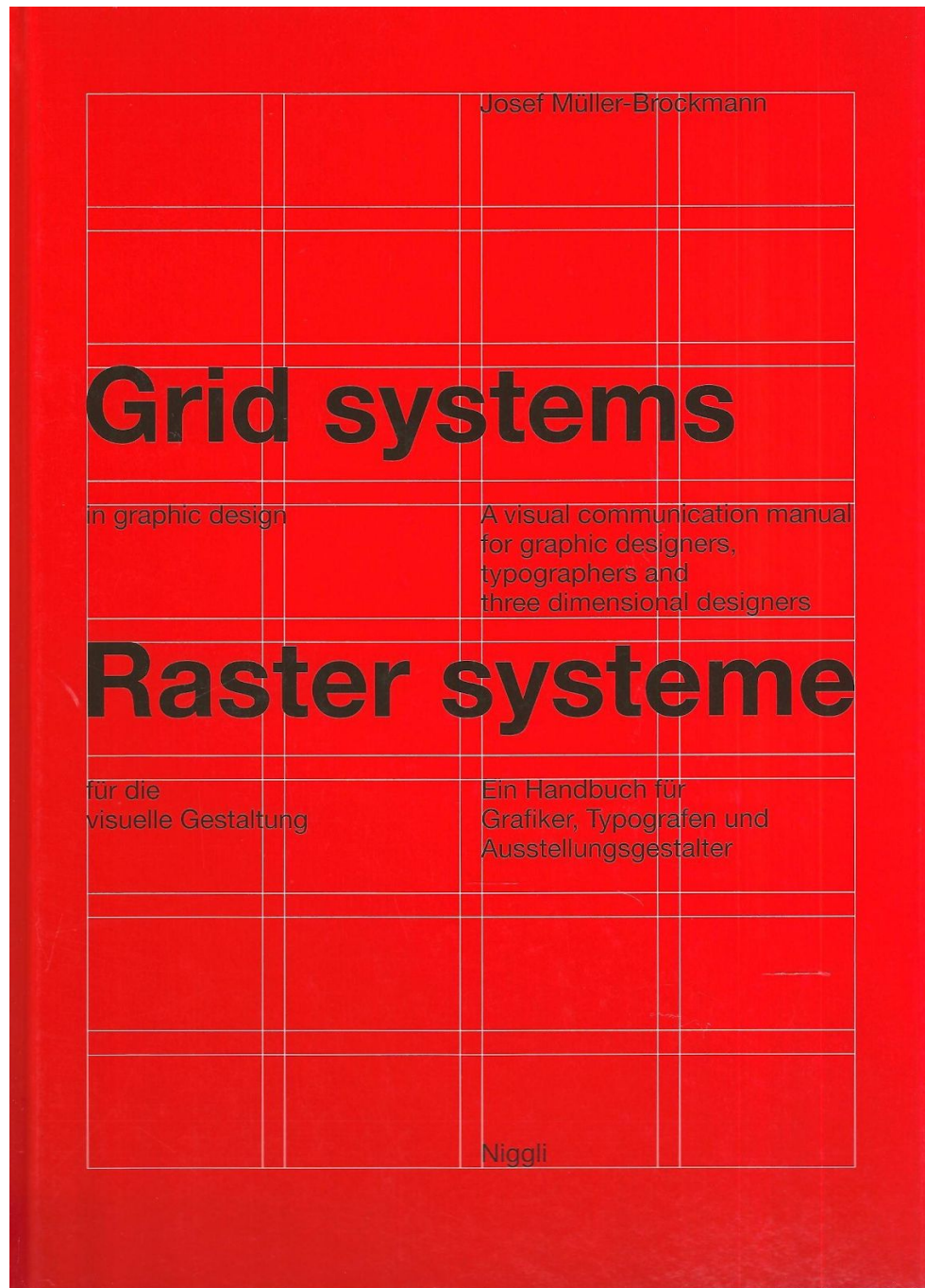


Fig: 2: *Grid Systems in Graphic Design*



Fig.3: *Beethoven's Poster*

Kunstgewerbemuseum Zürich
Ausstellung

der Film

10. Januar bis 30. April 1960

Offen: Montag 14-18, 20-22
Dienstag-Freitag 10-12, 14-18, 20-22
Samstag-Sonntag 10-12, 14-17

Kunstgewerbemuseum Zürich

Fig 4: *Der Film*

Paul Rand argued that art and design should be linked directly, both of which use visual forms to communicate and he believed designers should take inspiration from fine art and made a point to distance himself from functionalist design. He trusted in the principles of presentation when it came to displaying work to a client. He believed that design should always be presented in a manner which communicates a story to the client, removing anything that was unnecessary. While his style was more artistic than pure modernism and often tended toward a warmer, whittier style, he too broke down design to its fundamentals, his work simply displayed what the design intended to communicate, broken down into the raw elements of design principles.



Fig. 5: *Logo for IBM*

However, while this era of design was reinvented for the rebuilding of current societies at this time, it did influence a very corporate outlook within graphic design and a lot of design became repetitive and predictable, adopting this simplicity as a new style.

CHAPTER 2: POSTMODERNISM

Is the complexity of digital publishing and digital design lost because the machine is doing all the work? According to Lucille Tenazas, yes it is; *“It’s the layering and the complexity of these hierarchies that I think is lost now frankly, because it is so superficial, the machine is doing all the work for you.”* (*Graphic Means: A History of Graphic Design Production*, 2017)

This raises the idea that everyone can be a designer today if they have a MacBook and Adobe account. The ease of use of the facilities and programmes to design with has unleashed a plethora of both great and awful design into the world. Even though this is beneficial for those who are unable to receive proper education and training in design, this also means the job of the designer can all be achieved by a piece of software. No longer are designers required to take intensive courses and training in the physical elements of letterpress or cutting and pasting and no more are designers in a niche profession. It is a lot harder now for good designers to gain recognition due to the sheer mass of ‘designer’ profiles on the internet today.

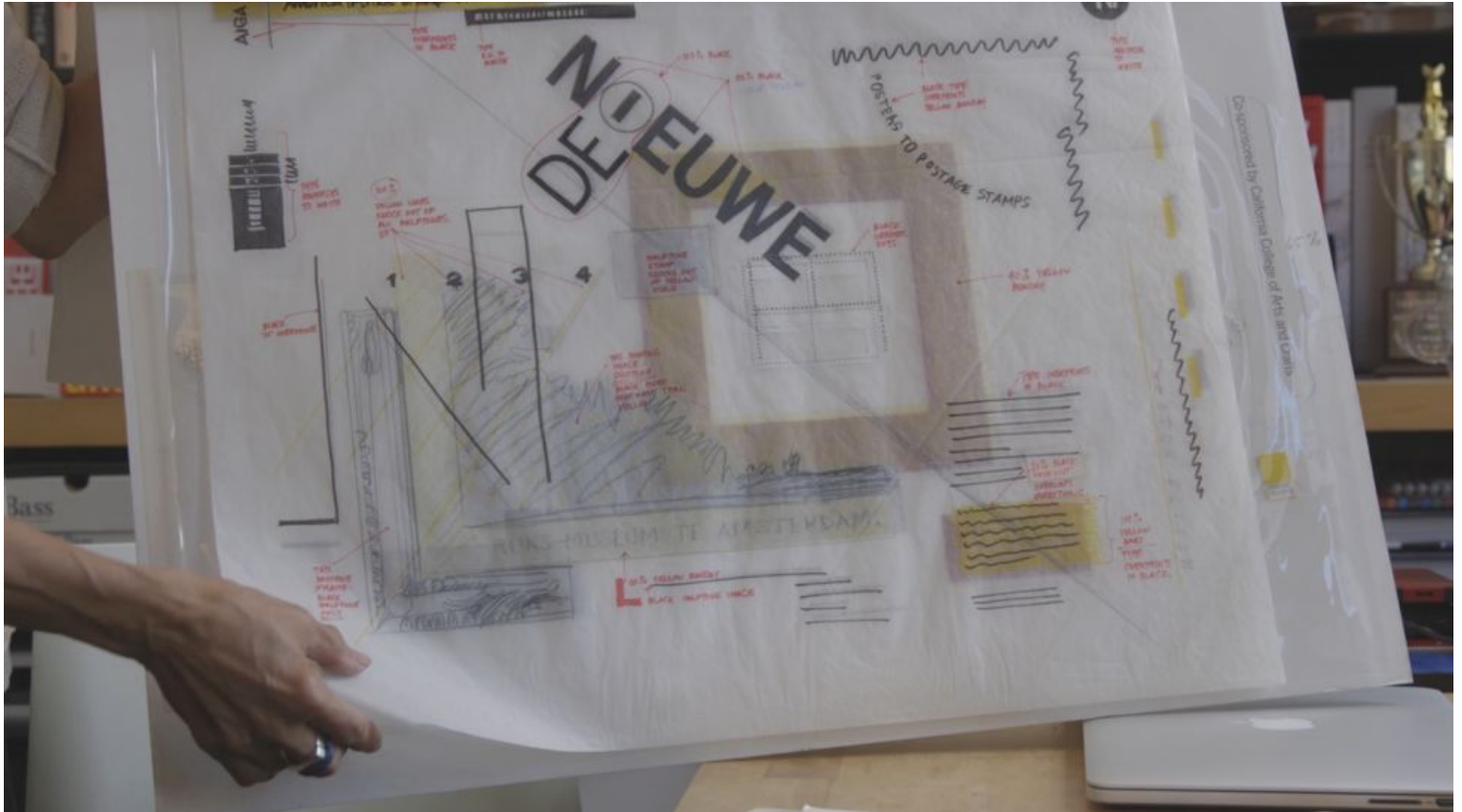


Fig. 6: *Graphic Means: A History of Graphic Design Production*

With the introduction of the Macintosh into the designers' studio in 1984, there were now far fewer rules in place. Graphic Design would become reinvented by this new technology. Many designers welcomed the changes and delved into the opportunity to experiment with the complexity and potential of these new machines.

This era saw a direct split between late modernists and postmodernists. The majority of postmodernists paved the way to the next new graphic design, they wanted to question and challenge the existing principles of design and make major changes in the way graphic design

was being made and received by its clients and audience. However, the late modernists wanted to stick to the old ways, they were set on continuing with the systematic method of design and the implementation of grid systems, simply displaying the message or information to its audience. Therefore a direct split in design could be seen at the beginning of the 21st century with a shift in favour of the new styles and methods of design beginning to be evident. It was fresh, new and exciting at the time, shifting well away from the laboured ideals of tradition and rules.

April Greiman was one of the first designers to completely embrace the technological shift that impacted design, in an interview with Eye On Design she revealed:

When she commissioned me to do an issue of Design Quarterly, I could have easily done a magazine that was a full retrospective of work that had already been published, which would have been a completely boring thing for me to do, but good for my ego. Instead, I said, "I'm going to tackle something new and learn a new piece of software, use my video equipment, and just try some things. (Greiman, 2019)

She was completely bored with the predictability of graphic design at the time, tired of the emphasis of form over content and the lack of flair. She was one of the designers who played a huge part in the style of 'New Wave' design. When most designers were afraid of the new digital technologies, Greiman fully embraced it, using the glitches and mistakes the computer would make to her full advantage, considering the example of her cover design for *WET Magazine* as pictured in Fig. 7, she combined a number of methods such as collage and video imagery.



Fig. 7: WET Magazine

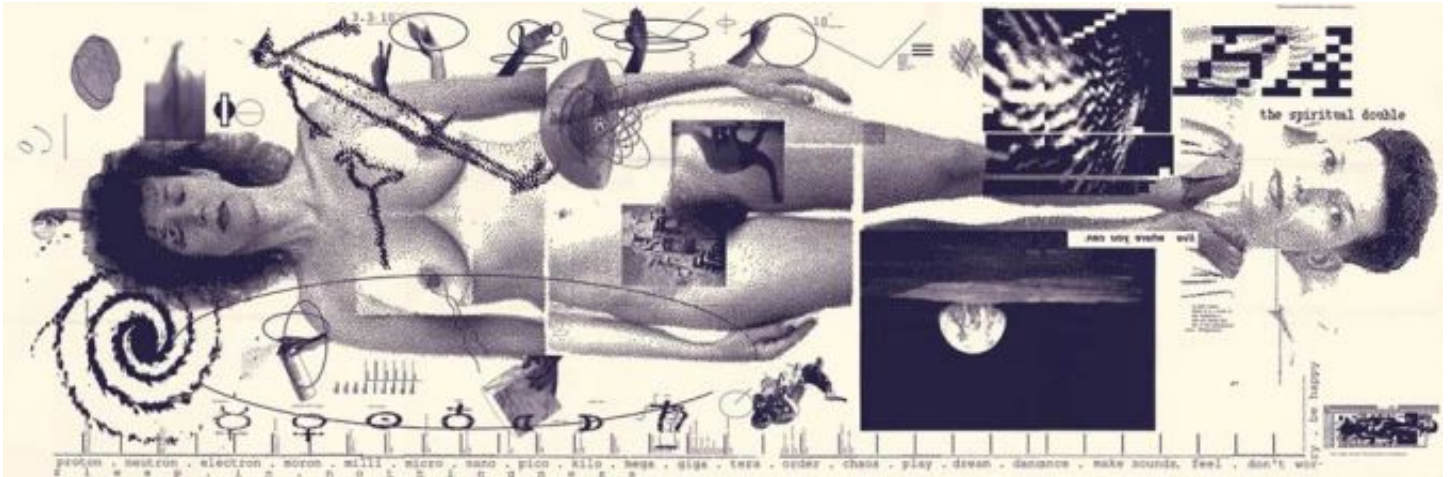


Fig. 8: *Does It Make Sense*

Fig. 8 shows one of the earliest contributions by Greiman of computer-generated design, Greiman composed the image using the traditional technique of paste-up but created the content digitally, using digital photographs of her body and drawing using Macdraw, she intended to express to the world the creative direction this technology could take. Her style was very self-expressive and artistic. While many designers of this time believed her work to be debatable, she found success in this 'New Wave' of design, owing to her genuine curiosity, ability to embrace change and to openly have fun with it. Her work is in complete contrast to Modernist designers such as Joseph Muller-Brockman in her intense use of layering techniques and complete lack of structure, but it is still design, she still communicates her message about digital design and exactly what she can do and it goes against everything Muller-Brockman believed in regard to design needing structure and form to be effective.

In 1987, Why Not Associates was founded by Andy Altman, David Ellis and Howard Greenhalgh all graduates of the Royal College of Art in London, formed on the beliefs of creating work that questioned professional boundaries and strayed away from the more established design companies throughout London, they sought to define themselves and separate from the mainstream design at the time (Beazley, 2004). Their entire philosophy was built on being playful and dynamic and they were encouraged to explore all possibilities of design to separate them from the predictability and form of typical design. They managed to define themselves and built upon a reputable commercial clientele. Why Not Associates goes to prove that creating design that is expressive and enjoyable can also be incredibly desirable to a wide audience and big-name clients such as the likes of Nike and Next.

In 1990, Why Not Associates were commissioned by Next Directory clothing company to create a catalogue for their Spring collection. The group really put their own experimental and dynamic style into the catalogue. Typically a catalogue, especially of this time, would be incredibly linear and restrictive, making it easy to read and navigate, but Why Not Associates completely went against the rules, the results are unique and break the boundaries of a typical clothing catalogue. During this era, it is clear to see that a rebellious form of graphic design is taking over and spreading into the commercial industry due to new, young design companies questioning the rules and formulas of their predecessors.

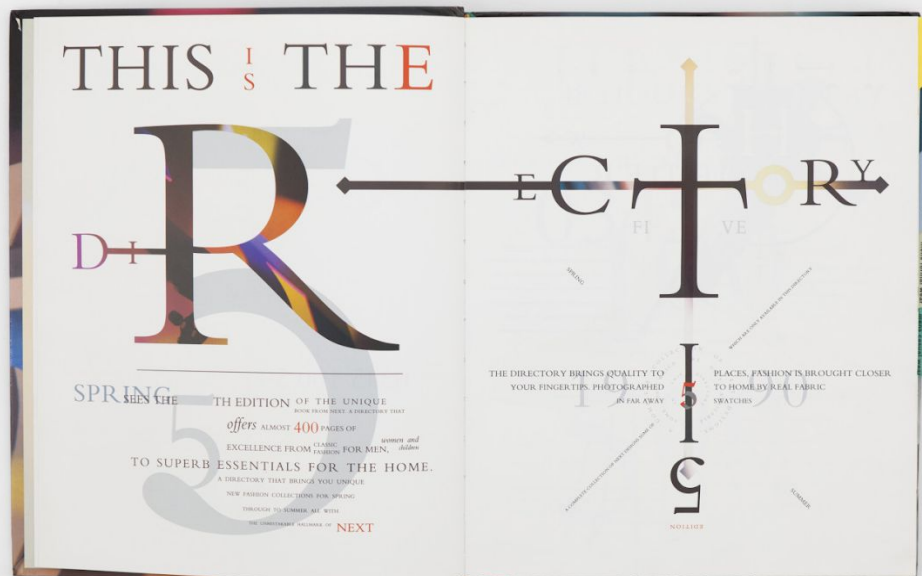


Fig. 9: Next Directory



Fig. 10: *Next Directory*

They explained that the typography of the book was: “aiming towards multiple meanings rather than fixed readings, to provoke the reader into becoming an active participant in the construction of the message” (Beazle, 2004, p.226).

This explanation really expressed what postmodern graphic design aimed to do. The audience should be able to interact with the work, there should be a relationship between the design and

the audience. Instead of design that focuses on the manipulation of the audience in some way creating more of a barrier so the relationship is broken.

Another compelling campaign they were involved with was for Smirnoff. At the time it was unusual for typography to be the main focal point of an advertising campaign, typically the product itself or the central focus of the selling point would be the main centrepiece, but Why Not Associates once again did something radically different. They embraced their individuality and latched onto the popularity of Smirnoff. It's clear from the bold solid type that they felt confident they didn't need to showcase more than the name as the brand already had such a reputation so they were free to express this fact through their typography really making an impactful statement. To create the design they photographed the physical typography construction with projections of designs creating an incredible effect reflected on the lettering, the outcome is so outlandish and the technique was such an interactive, fun way to approach a design brief, thus making the outcome approachable and interactive to the audience. The typography displayed appears to have it's own personality as well as serving a function.



Fig. 11: *Smirnoff* 1989 - 1990



Fig. 12: *Smirnoff* 1989 - 1990

Well known American graphic designer David Carson is a perfect example of a mainstream designer who is known for the complete abolishment of grid structures and isn't afraid to express himself with his creativity, he is a huge influence to many designers of this century and like Greiman, his style and beliefs are a stark contrast to the likes of Joseph Muller Brockman, and go even further into experimental territory than Why Not Associates.

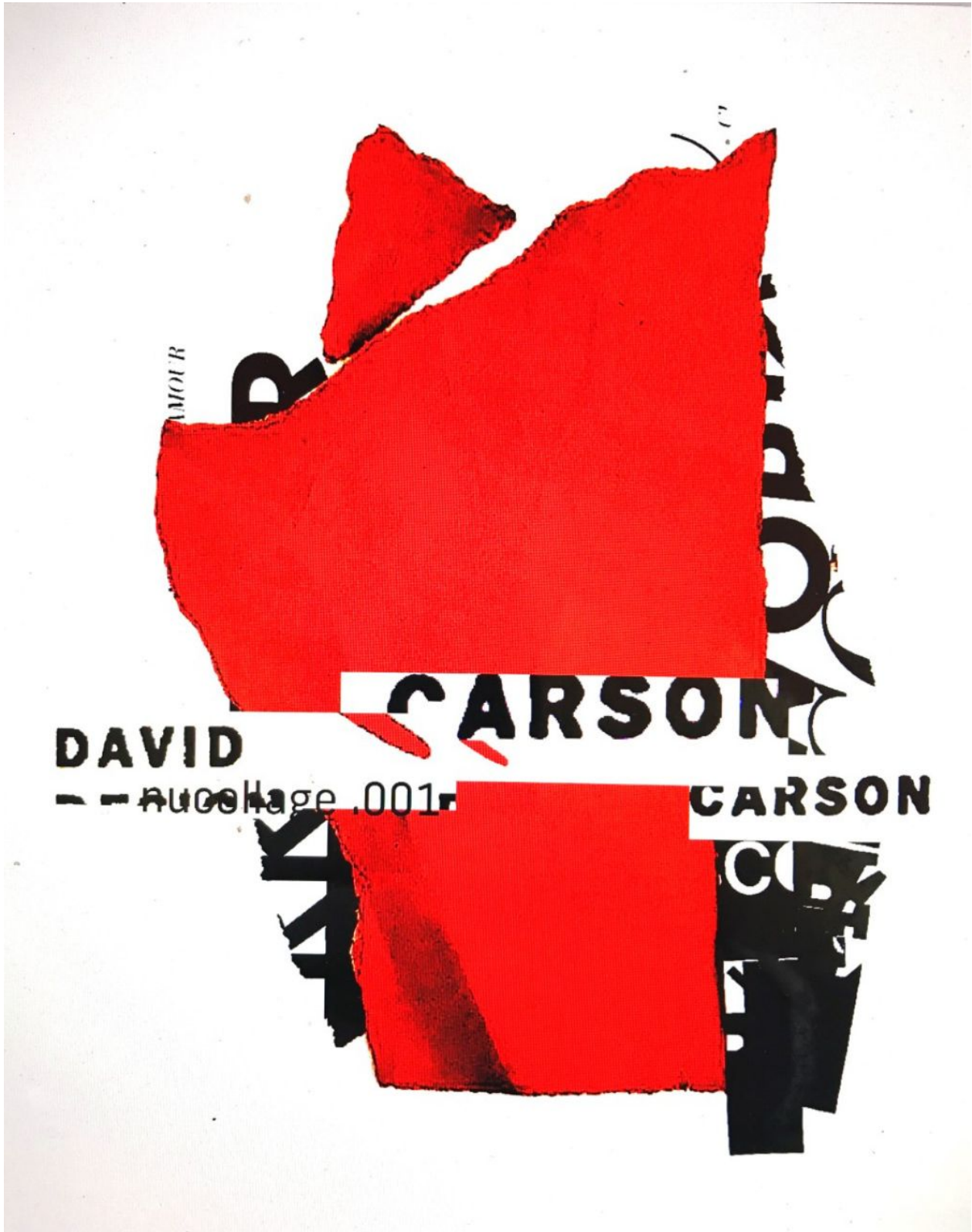


Fig. 13: *Nucollage*

The cover for his book is a perfect summary of his style and creative vibe. Just by looking at the cover you can immediately tell he doesn't believe in rules, it's almost a mockery of the strict ideals of the Swiss Style, he imitates the dynamics using the same simple colour palette and typography weights but puts his own spin on it with layering and stylising the type with wavy scan line effects and taking away chunks. He also takes the idea of the geometric shapes that were incorporated into Swiss design and makes it appear ripped and grungy. This piece is almost a testimony communicating exactly who he is and what his style stands for which is expression and creativity, a direct contrast to the beliefs of designers invested in grid structures and strict design rules, he is the 'anti grid icon'.

It could be observed with a stretch of the imagination that Carson may possibly have taken inspiration from the cover of Joseph Muller-Brockmans book *Grid Systems* featured in Fig. 2. Carson's book could appear to be a collaged and pieced together version of Muller-Brockmann's cover, using seemingly identical shades of red and same font styles but reconstructed in his own experimental way. It is currently unknown whether this is actually the case and whether Carson *is* using some form of complex satire in this situation but it could be a possibility, especially taking into consideration both covers similarities and the directly contrasting beliefs both designers have towards design rules. This could be a very complex and humorous way of expressing this message and communicating the contents of the book to its audience who would be familiar with the context of design styles and likely familiar with Muller-Brockman and his teachings.

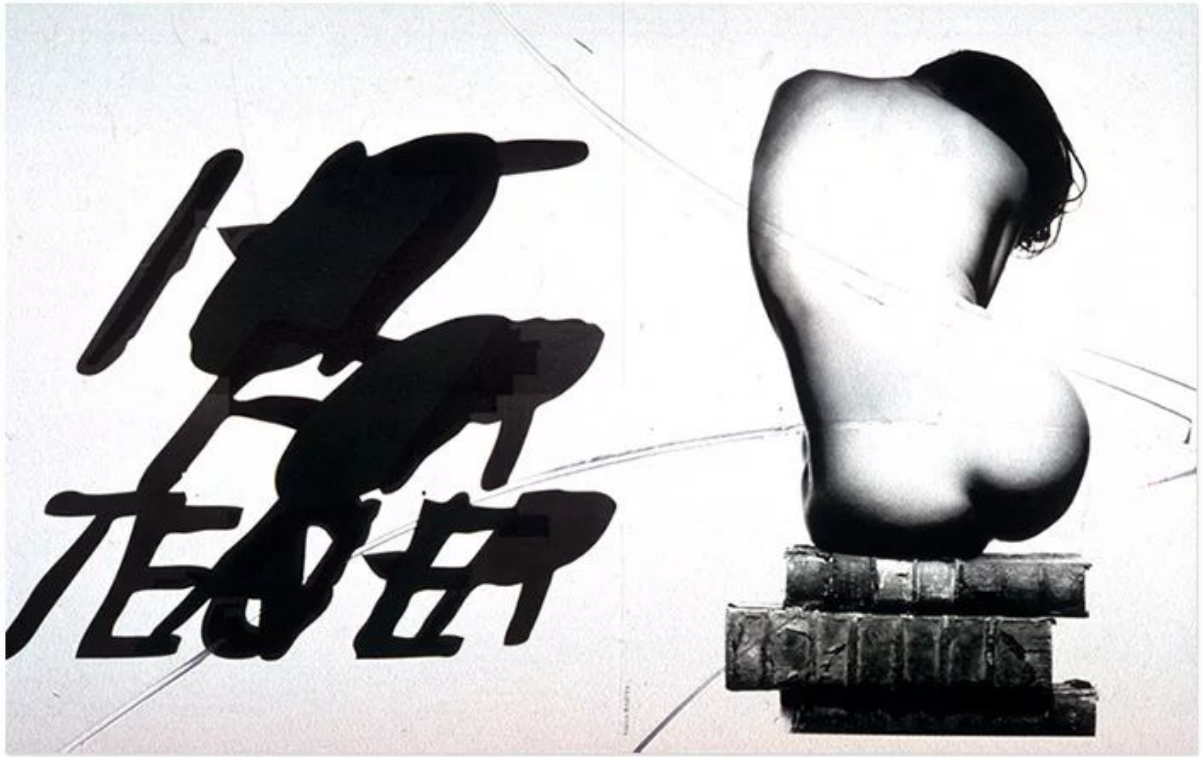


Fig. 14: *Ray Gun*

Fig. 14 is a page taken from magazine *Ray Gun* designed by David Carson. Carson is a perfect example of a well-known designer who, like Greiman, embraces the use of hands-on design mixing these techniques with digital design.

When asked in an interview by DesignBoom how Carson would describe his approach to design, he responded; “experimental, intuitive and personal. I have no formal training, which I’m sure helped a lot as I never learned all the things I’m not supposed to do, I just did what made sense to me.” He continued:

Since I knew nothing about grids, formulas, schools of thought, etc. I just did what felt right. my starting point was and is, always to first read the brief, article or whatever it is I’m given. that sends me off in a direction design-wise. I try to reinforce visually what’s written, spoken or sung. I want the work to connect with people on an emotional level, which is where I feel it’s most effective and lasting. (Carson, 2014).

I believe this perfectly explains why his approach to graphic design is so free and interesting, he doesn’t follow rules taught by most designers which makes him fresh and his style stands out from other designers of this era.

While the development of new digital technology meant designers were able to implement a new method of creativity and construction, one of the negative aspects of this powerful new technology was that clients recognised the greatly increased speed at which changes and additions could now be made and this became an added pressure for the designer.

The problem comes when the clients come into this equation, because clients think ‘Aha, this can be done overnight/I can ask for something and it can be back to me the same day’. So I

think that's created a sort of culture of panic and endless deadlines, and that's not good because if you eliminate all thinking time design really, really suffers. (Graphic Means: A History of Graphic Design Production, 2017)

So despite this new-found creative freedom, designers were also beginning to be treated more robotically and were perhaps trapped by technology. This is where designers are struggling, being treated as a machine that knows how to operate the correct software instead of a creative individual that craves the freedom to design expressively.

Following the design trends and styles, a real shift in the current methods of design has surfaced with the extremes of rational modernism and emotional postmodernism both having been fully explored, in our modern-day, designers are actually now working with combinations of technology and traditional methods to create designs, instead of relying upon style trends. The more progressive contemporary graphic design is now centred upon the method by which the designer creates their work. Could designers be fighting back or could clients be recognising that in fact the best work is produced when more creative freedom is granted and that there is still a place for the older ways of working that had been cast aside in favour of newer alternatives?

CHAPTER 3: OLD IS THE NEW NEW

Has the typography experiment played itself out? It has become evident that the typographic experiment had ceased to be experimental by the start of the millenium. Rather much of what is currently produced reflects a continuation of other experimental strategies and processes. (Triggs, 2003, p.16)

With the rapid growth of the internet, this fact had become increasingly more evident, it is increasingly difficult to be original and fresh in a world where there is no longer a sense of originality. However, the line that separates the physical designers and 'digital' designers is becoming more distorted as time progresses and this is genuinely creating a new look.

Furthermore, the idea that everything has already been done takes a real toll on the current designer, especially due to the fact that the internet and social media plays such a huge part in their job, it's easy to get lost in the sea of competition and styles.

As discussed in chapter 2, design trends came and went to a point where every style and technique had been fully explored and exploited. It is harder to replicate the look of, for example, letterpress type on a computer, it is far more effective to do it manually, achieving the incredibly organic and unique imprint on your letterpressed type that nobody else in the world could replicate exactly, and which technology can never truly replicate satisfactorily.

Currently, there is a real fascination in modern-day graphic design to return to these traditional methods of design. Graphic designers are working hand in hand with both modern digitalisation

methods and traditional hand made graphic design methods. It seems that the focus is on *how* the current wave of design is being made.

The opening sequence for the show *Stranger Things* was created by a team in the studio Imaginary Forces. They were inspired by the style of opening title sequences from the 80's, specifically *ALIEN*, to really fit into the theme of the show, but they also referred to 'old school' horror paperback books that used sledgehammer typography, such as Steven King's *Carrie* and G N. Smith's *Killer Crabs*.

For the title sequence, they used the font ITC Benguiat, made in 1978 by Ed Benguiat. The font was used a lot in the 80's so instantly fits with the style they are aiming for right off the bat. To actually create the title sequence the design team referred back to the way title sequences were made before animation software. They wanted an organic piece with the imperfections, flickers and gritty texture of the traditional style which really set the tone of the show and fits perfectly for the 1980's time period in which it is set.

Since nobody in Los Angeles still used the technique 'film out', they had to replicate the technique. They did this optically, frame by frame using a kodalith;

Which is basically a black piece of film with a transparent area where the letters would be and shoot light through that. You're basically mimicking what film does with the light passing through the film. (Dougherty, 2017)

Explained Michelle Dougherty of Imaginary Forced studios in an interview with Art of the Title.

They then used these filmed letters to animate the title digitally and even went as far as adding more imperfections to the sequence. The title is a hybrid mix of digital and physical mediums. This is a perfect example of how modern-day graphic design really embraces the multimedia mix of traditional and digital design methods. Designers are using these methods because of the organic results. Graphic designers love to experiment and create and it would seem that they no longer feel satisfied by purely looking at a screen, and indulging in the newest software.



Fig. 15: *Stranger Things* Title Sequence



Fig. 16: *Stranger Things* Title Sequence

The logo for the 2019 movie *Joker* was designed by Chad Danieleley and was made using woodblock letterpress with a style possibly nodding to the Dada era of graphic design.

Typography is such a key part to a franchise, especially in the movie industry where, the typography choices can make or break people's decisions on whether they are convinced they want to invest their time and money into going to see the movie.

The logo for *Joker* really reflects the tone of the movie. By using woodblock typography the audience already knows this movie will be gritty, we can see all the imperfections in the type from the woodblock implying it's going to be a dark story, furthermore setting the scene for the personality of the *Joker* himself. We can quickly deduce just from the logo that this movie will be delving into his state of mind. The gashes, ink spots and grain in the type could serve as a symbol for the unpredictability in his personality.

Using a handmade form of type really gives the title essence and fits with the era in which the movie is set. You can genuinely tell the difference between digital woodblock effects and actual woodblock and Danieleley commented that he did not digitalise the type in any way, he simply scanned it in as a PNG. He even stated the 'K' was dropped on the floor, which explains the gash and why the alignment of the characters are imperfect, some positioned higher and slightly slanted showcasing the organic nature and uniqueness of the type and of the movie itself. (Carter, 2019)

In a world where we are surrounded by computer-aided design and perfection, to see that designers are using traditional based techniques within modern media goes to show that as designers and consumers we are enticed by physical, mechanical design, finding it so much more appealing and natural.

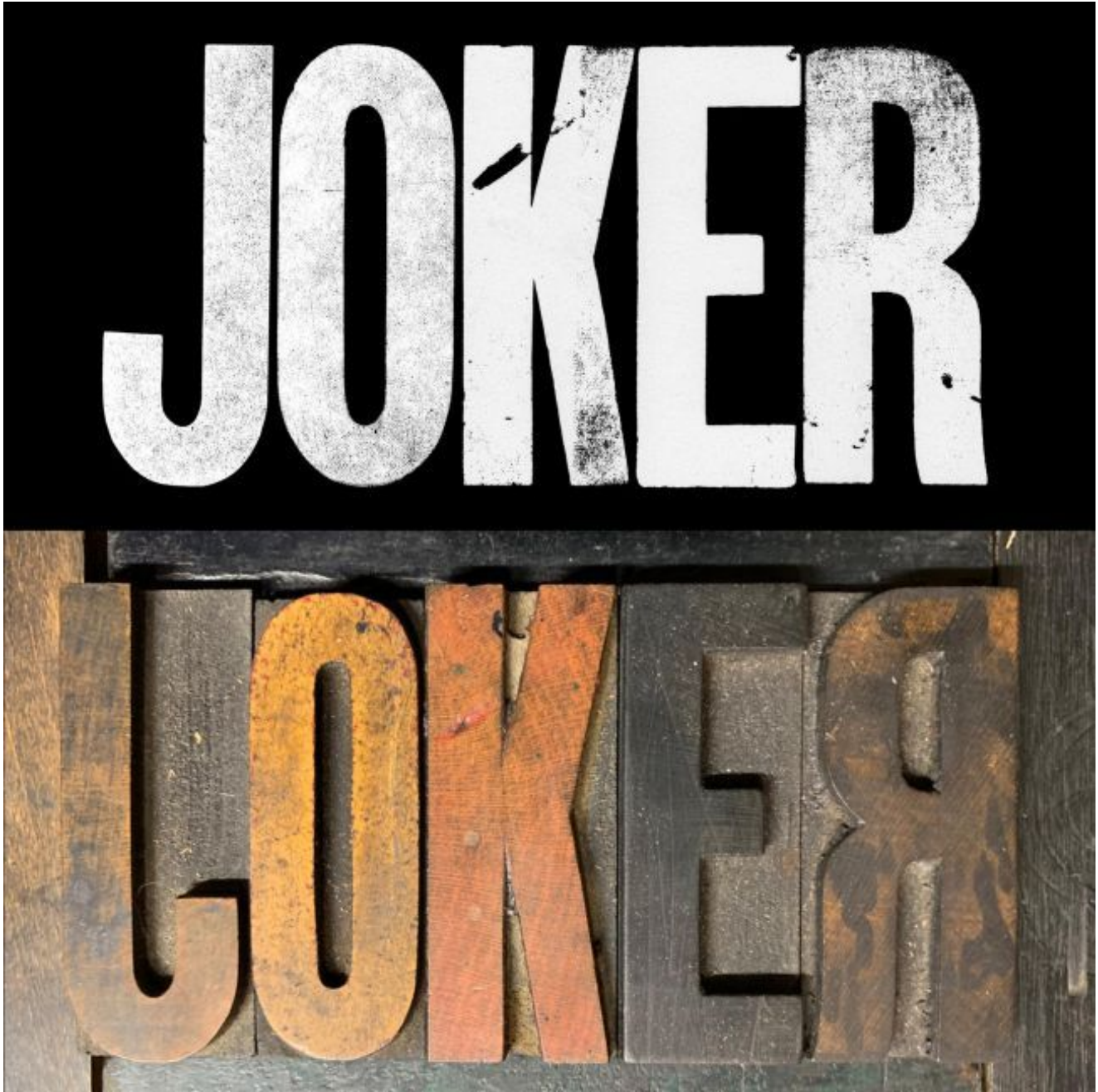


Fig. 17: *Joker Logo Origin Story*

CHAPTER 4: THE FUTURE OF DESIGN

There is no denying technology is advancing quicker than we can keep up with and it can help humanity in so many ways, but in what direction will this take the role of the graphic designer and graphic design itself in the future? It will either become a handy tool to use alongside our creative intelligence and abilities to craft, or technology may, in fact, become a hindrance and we may have to raise the question of if we will even need graphic designers in the future. As AI technology improves we can see it being used in very positive ways, however, there are already a number of accounts of it also being exploited and abused in the creative industry.

Currently, anybody needing a logo or brand identity, whether they have design experience or not are able to conjure one up with just a few clicks. Companies such as Wix and Vistaprint now have the technology to allow their users to generate logos in minutes using templates, no designer needed. This service is becoming threatening for professional graphic designers as it could be the beginning of the end. If making a brand identity is getting easier for the average clientele it will be harder and harder to compete with these online builders due to the efficiency and cost effectiveness. Sometimes they are even free to use. Perhaps graphic designers will no longer be needed for their own job roles if these methods become successful. Wix boast about how easy it is to use this service, combined with the ability to make your own web page also this takes away opportunities for people genuinely passionate about design who may have trained for years to perfect a style and build a design foundation. It will be even harder to compete with the likes of an

online builder who can do this job instead. According to statistics gathered from Website Builder Expert in 2019, currently over 100 million people across 190 countries use Wix as a service and they are rated 4.7 stars out of 5 (Website Builder Expert, 2019).

The professionalism and creativity of a designer was once so valuable but it seems in today's technological age this value is being weighed against efficiency and working pace rather than creative ideas, returning to the ideals of predictable, functional design.

A campaign launched in 2017 by Nutella, branded 'Nutella Unica' employed an algorithm - Computer-Aided Design (CAD), to follow a set of instructions and design seven million unique labels for its packaging. The campaign aimed to express uniqueness and they marketed that each jar is as unique as each individual customer. The campaign worked and they completely sold out within a month. Despite the company wanting to showcase a form of uniqueness to their product, does using an AI actually conflict with this idea? While it is amazing to see the millions of patterns and designs there is a lack of artistic flair and personality. Despite the company wanting to express individuality, art is one of the purest forms of self expressionism and individuality and using a computer to express this idea arguably contradicts that concept.

According to the advertising agency Ogilvy & Mather in an interview with E&T; "A computer program was provided with a database of bright, bold patterns and colours that were judged brand appropriate. The software then combined the patterns and colours to generate seven million different designs to print on jars of Nutella sold in Italy" (Ogilvy & Mather, 2017).



Fig. 19: *Nutella Unica*



Fig. 20: *Nutella Unica*



Fig. 21: *Nutella Unica*



Fig. 22: *Nutella Unica*



Fig. 23: *Nutella Unica*

While it would be impossible for a human graphic designer or even a team of designers to complete this task without it taking a number of months, a computer was able to generate millions of designs in minutes so it does take a real weight off a designer by handing the workload over to someone capable of programming an AI to generate these designs. But could this be another sign that spells the end of the graphic designer altogether? If a computer can generate millions of designs efficiently, instantly and cost-efficiently, and the target audience like them, surely this will appeal to many potential clients.

Typically a platform used for people to express themselves, Youtube gives everybody the chance to create any kind of content they want and to share their passions. However, a group of people saw a way to exploit this platform. Youtube kids was an easy way to generate views as young children aren't critical or entirely aware of the content they consume. In 2014 a conspiracy dubbed Elsgate slithered its way into child-friendly content.

A group of people found out that they could programme an AI to automatically generate 'child-friendly' animations by using open source intelligence, this AI would pick out popular words and phrases around the internet and generate animated videos. These videos gathered huge numbers of views and were incredibly cheap and low effort to make, drawing in incredibly young children with bright colours and familiar characters such as Elsa from Frozen or Spiderman. However, the content would be genuinely horrific and shocking, sometimes featuring Elsa presented in a very sexual way or Peppa Pig killing people with high pitched screaming and loud mechanical noises such as drilling. "You have kids, maybe four years old, bombarded all day long in some cases, with these videos of chopping people's fingers off and burning people and defecating on people." (Brandom, 2017)

There is absolutely no creativity involved in these videos and there is absolutely no worth to them. Elsgate went undetected for a long time because an event like this was never seen before, parents were giving their toddlers a device to watch endless hours of Youtube content, falling down the algorithm rabbit hole. The event was incredibly dangerous because toddlers are defined by what they observe and during these early stages of life everything they consume visually

reflects their perception of the world. “What is occurring here is clearly automated. Stock animations, audio tracks, and lists of keywords being assembled in their thousands to produce an endless stream of videos.” (Bridle, 2017).

Elsagate depicts a complete misuse of technology and open source intelligence for complete financial gains and highlights the dark side of the digital age begging the question of how we need to seriously consider and assess our use of technology and it’s dangers going forward, we need to accept responsibility for these changes and accept that they can also have a negative impact on our society. While this case does not impact the graphic design industry it is an example of how digital advancements can negatively impact the creative industry as Youtube is a platform where creators generate their income while also using it as a creative space.

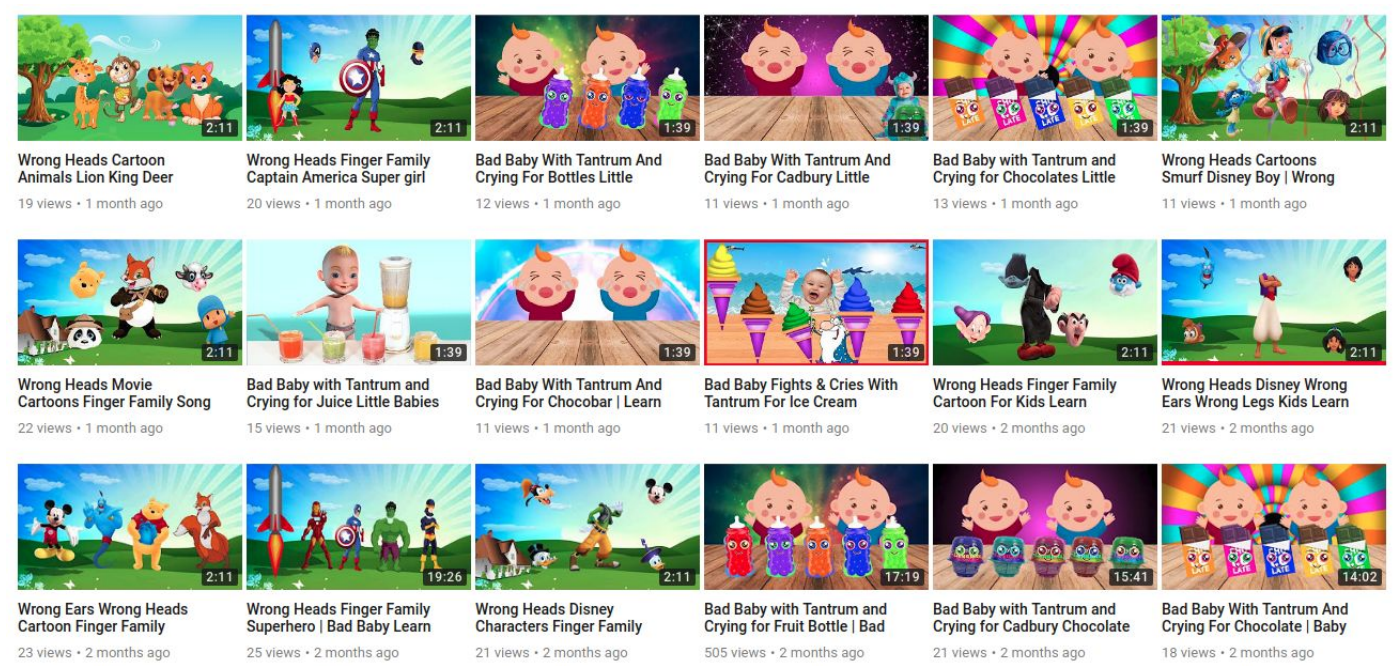


Fig. 18: *Something is wrong on the internet*

Technology is now so advanced it is able to be programmed to replicate the creativity of a designer. In Japan, robots have been working alongside humans for over 40 years, due to their rapid advances in technology and how much the Japanese have actively embraced these technological advances into their lives. It is not uncommon for robots to be taking on a huge number of everyday roles, even serving as hotel receptionists. This is all thanks to the company Kawasaki Robots who began the production of industrial robots and now there are even robots in the home, acting as another member of the family, doing dishes, telling children bedtime stories, etc (Kawasaki Robotics, 2019). All over the world, robotics are used to help out mankind, they complete repetitive tasks, factory work or are tasked with jobs too dangerous to humans such as bomb disposal and now, there are even robots that design and create.

Ai-Da is a humanoid artificial intelligence robot who paints original pieces of art. Below she is pictured exhibiting her work in the University of Oxford UK.



Fig. 24: *Ai-Da*

She was invented by gallery director Aidan Meller and her AI software was developed by scientists at Oxford University. She is able to draw, paint and sculpt, her cameras analyse the person or thing she is drawing and creates a virtual path, the information then produces coordinates to plot out where to draw using her mechanical arm. (Block, 2019)

The exhibition questions our relationship with technology and the natural world by presenting how AI and new technologies can be simultaneously a progressive, disruptive and destructive force within our society. said the gallery (Block, 2019).



Fig. 25: *The Accordance zone featured white spheres that rolled around in distinct ways*

Further evidence of creative artificial intelligence is the SONY Affinity in Autonomy exhibition. The exhibition was inspired by their first consumer robotics, Aibo the Robot Dog which was released in 1999. (Aouf, 2019). The exhibition features spheres of different sizes, and while these spheres do not resemble an actual artist, the spheres are an art piece themselves, programmed to move around as if they all have their own personalities. Some spheres roll away when approached and some roll towards a person, sometimes a few of the orbs would group together and others

seemed to like being alone. The exhibition aimed to question how the visitors felt about the robots, whether they thought the robots were actually alive and had their own emotions.

CONCLUSION

There is absolutely no doubt that technology is the major influence in the evolution of design. With these new tools and techniques graphic designers are able to perfect and adapt their craft in many ways. However, while this technology can prove to be incredibly useful and open the doors to many more opportunities, it could also spell the end of many possibilities also, as has been seen in the past with the introduction of the Macintosh computer when, instantly, typesetters were no longer needed, and now in today's culture with the introduction of online templates such as Wix, we are starting to see a creative shift, both figuratively and literally. We are in a world where robots are able to take on the role of an artist, and an engineer is able to programme an artificial intelligence computer to design millions of unique designs in a cost-effective and efficient manner which a graphic designer could never compete with.

Creatives will always need to adapt to the changing times. There is a looming threat that technology could replace many job roles and creatives will no longer be needed. However, I believe the charm of the personalisation and soul of human creativity cannot be generated by a computer. Possibly it can be replicated closely, but the feeling and emotion behind the design would be entirely different. Also, as seen in throughout history, the role of the graphic designer has changed so drastically, there is always a way to adapt and overcome these changes, as seen currently where designers seem to be reverting back to traditional, mechanical methods of design instead of relying on entirely digital design, bringing us in a full circle.

So maybe the question isn't whether robots will replace *designers* in the distant future, but whether robots will actually replace humans. They are almost so advanced that they will soon be able to build in places without any gravity such as on Mars. Soon we could be living in a 'WALL-Esque' world, after humans inevitably destroy the planet, necessitating in the remaining few members of humanity to live aboard a spaceship, overweight and confined to a hovering chair while AI and robots do everything for us.



Fig. 26: WALL-E

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