## THE PAST, PRESENT, AND FUTURE OF ART AND DESIGN: AN EXPLORATION

Miranda Barnes April 10, 2024 There is no future of design without an understanding of our past. Creating new visuals without knowledge of history and cyclical trends leads to shallow design. These cyclical trends can be found in art, design, music, fashion, media, pop culture—really any creative medium— and they all affect how we as humans view and react to the world. Clients are largely not aware of what goes into good design, and are often happy with what we create even if it has no deep thought behind it (which is why much of this type of design exists in our field), but the work that falls into this shallow category will not become well-known or stand the test of time.

However, the ever-present development of new technologies means we must also keep up with the current age, continuing to constantly learn the new tools and methods that arrive on the scene. There have been many technological paradigm shifts in human history, ranging from small changes that nudge us in a new direction, to things that require a complete restructuring of how we view the world. Oftentimes these shifts influence the art and design world, spurring entire movements based around our reactions to the new technology. The industrial revolution (which lasted from about 1760–1830) includes several examples of these technologies, with other examples being the inventions of the printing press, camera, electricity, computers, internet, and mobile phones, and the most recent example: the development of AI technology.

Many design movements have come and gone throughout history—all echoes of and responses to each other. It stands to reason then that this cycle of movements will continue. Studying these patterns in our history and synthesizing them with the tools and ideologies of the present is the key both to making meaningful design, and to ensuring those designs are not only relevant now, but also have a place in our future.

Perhaps the most obvious example of a technological paradigm shift is the arts and crafts movement of the 1800s, which was reacting to the industrial revolution. William Morris, a wellknown father figure of the movement, was influenced by John Ruskin's writings in the second volume of his book *The Stones of Venice*, specifically the chapter "On the Nature of Gothic."<sup>1</sup> He founded his firm Morris & Company in 1861, focusing on quality craftsmanship and manufacturing. Morris & Co. exemplified the key values of the arts and crafts movement, namely a return to medieval design, traditional techniques, natural materials, patterns inspired by nature, and quality craftsmanship done by skilled artisans. William Morris and other proponents of arts and crafts opposed mass production because it resulted in "shoddy typography, inferior paper and poor presswork" in the printing industry,<sup>2</sup> and "over-ornamentation and often poor quality, but also beautiful; designed with meaning behind them. Meaningful design, made by an individual craftsman rather than a factory machine, was a large part of what made these goods better than the mass-produced ones which featured pretty, but shallow, design. Morris explains his frustration with shallow design in "The Arts and Crafts of Today," from 1889:

Indeed I begin by saying that it was natural and reasonable for man to ornament his mere useful wares & not to be content with mere utilitarianism; but of course I assumed that the ornament was real, that it did not miss its mark, and become no ornament. For this is what makeshift art means, and that is indeed a waste of labour.

Try to understand what I mean: you want a ewer and a basin, say: you go into a shop and buy one; you probably will not buy a merely white one; you will scarcely see a merely white set. Well, you look at several, and one interests you about as much as another: that is, not at all; and at last in mere weariness you say, "Well, that will do"; and you have your crockery with a scrawl of fern leaves and convolvulus over it which is its

<sup>&</sup>lt;sup>1</sup> "Arts and Crafts Movement," 2003, In *The Thames & Hudson Dictionary of Art Terms*, by Edward Lucie-Smith, 2nd ed. Thames & Hudson,

https://search.credoreference.com/articles/Qm9va0FydGljbGU6MTcxMDkzNQ==?aid=96195.

<sup>&</sup>lt;sup>2</sup> "Arts and Crafts Movement," 2012, In *The Thames & Hudson Dictionary of Graphic Design and Designers*, by Alan Livingston and Isabella Livingston, 3rd ed. Thames & Hudson, https://search.credoreference.com/articles/Qm9va0FydGljbGU6MTIzMzA1NQ==?aid=96195.

<sup>&</sup>lt;sup>3</sup> Miller, Judith, ed. 2003, "Arts and Crafts & Art Nouveau," In *Miller's Antiques Encyclopedia*, 2nd ed. Mitchell Beazley, https://search.credoreference.com/articles/Qm9va0FydGljbGU6MTcyNDYxNQ==?aid=96195.

'ornament'. The said ornament gives you no pleasure, still less any idea; it only gives you an impression (a mighty dull one) of bedroom.<sup>4</sup>

In this excerpt Morris explains how even when mass-produced products are decorated, it tends to be just some pretty design slapped on without thought behind it. In contrast, arts and crafts works such as the artifacts Morris produced were decorated in a meaningful way that would bring life to the room. The movement had a core "belief that the decoration of household objects should be an integral part of their design, rather than a superfluous addition."<sup>5</sup> This is not a new belief, either:

Archeologist Elizabeth Wayland Barber points out that Iron Age ruins show that, at times when people live at the brink of survival, elaborate ornamentation in clothing remains. This is because, she argues, work devoted to producing symbolic advantages, like the embroidering of protective motifs, prayers, talismans, into fabric, was as important as the work that would produce material advantages, like warmth.<sup>6</sup>

Arts and crafts proponents took inspiration from medieval aesthetics, recognizing this power of decoration, and applied it to their current day.

The arts and crafts movement's values were not just aesthetic, but also intertwined with social movements. Morris himself was a politically active socialist, and John Ruskin didn't just praise the craft aesthetic, he also critiqued industrialization in general. The industrial revolution was a time of productivity above all else—leading to not only poor quality products, but a poor quality of life for the working class. This meant that the ideals of the arts and crafts movement included an appreciation for high-quality, meaningfully and beautifully decorated artifacts, but also the belief that these artifacts should be accessible to the working class. Unfortunately, this second aspect was harder to implement when artisan goods couldn't compete with the lower

<sup>&</sup>lt;sup>4</sup> Mary Greensted, An Anthology of the Arts and Crafts Movement: Writings by Ashbee, Lethaby, Gimson and Their Contemporaries (Lund Humphries Publishers, 2005), 22.

<sup>&</sup>lt;sup>5</sup> Miller, "Arts and Crafts & Art Nouveau."

<sup>&</sup>lt;sup>6</sup> Sofi Thanhauser, Worn: A People's History of Clothing (New York: Vintage, 2022), 341.

prices of mass-produced (albeit poorly made) items. These financial issues were made worse by the outbreak of World War I, and ultimately led to the decline of the movement. Although the working class largely did not gain access to finely crafted goods as Morris and his peers hoped, more people were made aware of the importance of those goods, and the movement was not in vain. Despite its shortcomings, it remains influential, and its ideals are still relevant today. We're still dealing with the pressure to be productive despite a large (and growing) wealth gap, and most people are still only able to afford poor quality mass-produced products, so it makes sense that arts and crafts ideals are seeing somewhat of a resurgence today. "Craft is also inherently political because it is collective, and because it is slow. Scholars have argued that the communal nature of 'craftivism' makes it an antidote to alienation within an information society."<sup>7</sup> This movement as a reaction to the technological paradigm shift of its day, as well as its more recent revival, is one example of a cyclical pattern: when technology advances, art and design becomes less about utility and more about beauty, emotion, nostalgia, creativity, and deeper meaning.

Today, we are smack dab in the middle of another technological paradigm shift that is affecting all areas of life, including art and design. Although AI research has existed for several decades, and the concept of AI even longer, in recent years the field has had some major breakthroughs that have catapulted AI as a topic to the forefront of societal discussion. At first it may seem like nothing like this has ever happened before, but AI is only the latest new technology taking the world by storm and forcing us to reconsider our collective values and what society should look like. Regardless, it is an extremely controversial topic, especially in the field of art and design, given the potential for it to "take" creative jobs that have thus far been done by humans. As with other technological paradigm shifts, a lot of the anti-AI opinions in this

<sup>&</sup>lt;sup>7</sup> Thanhauser, Worn, 332.

discussion are fueled by fear. The general category of fears around AI—those of the science fiction variety (i.e., the fear of computers becoming too smart and "taking over the world") are almost certainly not something we need to be worried about; they are generally caused by a lack of understanding of how AI works. But there are plenty more questions around the ethical use of AI that have not yet been fully addressed.

For one, the cultural biases that have appeared in (for instance) face-recognition software, due to the AI being trained on biased data, drawn from our biased world.

Biases in AI training data reflect biases in our society, but the spread of real-world AI systems trained on biased data can magnify these biases and do real damage. Face recognition systems, for example, are increasingly being deployed as a "secure" way to identify people in credit-card transactions, airport screening, and security cameras, and it may only be a matter of time before they are used to verify identity in voting systems, among other applications. Even small differences in accuracy between racial groups can have damaging repercussions in civil rights and access to vital services.<sup>8</sup>

Even if humans are employed to comb through training data sets, this takes a great amount of effort, and humans have subconscious biases that we might miss, so the data still won't be completely unbiased. Not to mention there's the question of who should be doing this combing.

Another problem is that AI is hard to trust because it seems to come to conclusions without us knowing exactly how it arrived at that answer. "If we don't understand how AI systems work, we can't really trust them or predict the circumstances under which they will make errors."<sup>9</sup> Even though we can't know what other humans are thinking, you can at least assume they have had similar experiences and "the same basic background knowledge, beliefs, and values that you do in perceiving, describing, and making decisions about the world."<sup>9</sup> Researchers have also studied how AI systems can be fooled to produce the wrong result, and

<sup>&</sup>lt;sup>8</sup> Melanie Mitchell, *Artificial Intelligence: A Guide for Thinking Humans* (New York: Farrar, Straus and Giroux, 2019), 107.

<sup>&</sup>lt;sup>9</sup> Mitchell, Artificial Intelligence, 109.

they discovered that it's unfortunately quite easy. By changing a few pixels in an arrangement, an imperceptible change to humans, a team of researchers was able to fool several AI image recognition networks into misclassifying images with a high confidence level. This is worrisome for the amount of faith we can place in those AI systems, but it also tells us that we can't be sure the networks are actually learning what we want them to, or in the way we want them to. It seems that common sense may not just be necessary for intelligence, but for morals and trustworthiness too.

Finally, the main concern many people have about AI is that many jobs will become automated, and it will be harder for humans to make a living because of it. The current method of machine learning consists of training the AI on an extremely large data set, then testing its ability to generalize to other data outside the training set. These data sets are pulled from the only source large enough—the internet. The big companies that we all use, such as Google, Amazon, and Facebook, use our images, video, and text to train their AI systems, often without our knowledge and without compensation.<sup>10</sup> Computer scientist Jaron Lanier says that this is the main problem, not the AI tools themselves, in the question of whether there will still be enough jobs in the future:

Yes, I think in 20 or 30 years, robots will be driving the trucks, and the cabs, and mining the minerals, and yet every bit of data that drives those robots will come from real people ... doing the work, and so as long as we remember where the real value comes [from], that run the advanced machines we're building, we'll still have employment for people. ... We can have a better and better economy with a stronger middle class. The only thing standing in the way is this fantasy that the machines are self-standing intelligent weird alien species or something, when nothing could be further from the truth.<sup>11</sup>

<sup>&</sup>lt;sup>10</sup> Mitchell, Artificial Intelligence, 99.

<sup>&</sup>lt;sup>11</sup> TVO Today, "Jaron Lanier: Who Owns the Future?," *YouTube*, July 12, 2013, https://www.youtube.com/watch?v=XdEuII9cv-U&ab\_channel=TVOToday.

When new technology comes along, it replaces jobs with ones that are faster, cleaner, and easier, but we should still get paid for that new job. For example, a truck driver still gets paid the same way a stable hand would have before trucks existed, even though driving is easier than working with horses. Lanier argues that providing data to these companies is the new version of this; that even though providing data to companies (who use that data to train AI and automate tasks) is an easy job, people should still get paid for it, because it contributes to society being able to function. Currently, these companies have power because the data they use doesn't cost anything. If that were to change, it could help redistribute that power and bring back the middle class.

AI researcher Andrew Ng is quoted as saying "AI is the new electricity."<sup>12</sup> As in, electricity was once new but is now so seamlessly integrated into our lives that we don't even notice it's there. The hope is that AI will one day be just as seamless and helpful. Although this newest technological paradigm shift does mirror those of the past, such as electricity, we must also take into consideration that in the case of electricity, we largely understood how it worked before it became commercialized. With AI, we're basically learning and commercializing at the same time. Some would argue this is necessary, since AI can provide many benefits to us, so we shouldn't wait to implement it.<sup>13</sup> But others say we should be more cautious due to the potential problems with the technology. Either way, it seems the best course of action is to implement regulations—but they must be formed through cooperation between the government, private companies, and AI researchers, and not be left solely up to one of the three.<sup>14</sup> As with previous

<sup>&</sup>lt;sup>12</sup> Mitchell, Artificial Intelligence, 120.

<sup>&</sup>lt;sup>13</sup> Mitchell, Artificial Intelligence, 120–121.

<sup>&</sup>lt;sup>14</sup> Mitchell, Artificial Intelligence, 125.

technological paradigm shifts, despite initial fears, society must learn how to adjust to the new technology and develop new social norms and guidelines around it.

There is a bright side for creatives worried about their job security. Although AI is currently able to create visual art, it is not able to be creative, and it won't be until it's able to achieve a human level of intelligence—a vastly underestimated feat. Human intelligence is extremely complex; it is layers upon layers of experiences and emotions that all combine to create the ability to use common sense, abstraction, and analogies, all things that AI researchers have made very little progress in recreating. The current method of machine learning on large data sets is considered "supervised" training, which allows AI to be specialized for specific tasks (such as playing chess or replicating the musical styles of famous composers), but AI has never come at all close to the kind of general intelligence and common sense a human has. To be human-level intelligent, it would have to learn unsupervised—the way a human child learns. But this has remained out of reach for us thus far. The main reason for this lapse in AI's abilities is that creating human-level general intelligence will almost certainly require us to reverse-engineer the brain (and then figure out how to replicate it with computers and math). The problem with this method is we still have very little idea how the brain actually works, which makes it hard to reverse-engineer. For example, AI "vision," or object recognition, was a field we struggled to make progress in—until discoveries were made by Hubel and Wiesel in the 1950s and 60s about the method our brain uses to process images.<sup>15</sup> Once we knew more about the brain's visual system, we were able to develop AI that can process images in a similar way. Until we understand more about how our brains integrate narrow intelligences into a general intelligence, to form what we know as "common sense," it's unlikely that we'll be able to recreate general

<sup>&</sup>lt;sup>15</sup> Mitchell, Artificial Intelligence, 72.

intelligence in AI, and therefore, it won't be able to be creative anytime soon. Additionally, experts have argued that creativity depends not just on having a general intelligence, but on having emotions and experiences, effectively consciousness. AI probably won't be able to be creative in an original way (without simply replicating human creativity) unless it has a consciousness of its own, in which case it would be so complex that it might as well be considered human.

With each technological paradigm shift, including the one currently underway, there is a resistance to it. This resistance is based on several factors, including the fear of job loss, or becoming obsolete, fear of a new technology not well understood, and questions about the place the new technology should have in society, such as what it can and can't do and how it can be used in an ethical way. Along with this resistance comes the idea that the past was better, and we should go back to how things used to be—also known as nostalgia. Nostalgia is extremely present (and powerful) in society, and completely inextricable from our daily lives. Whether it's 2024, 1983, 1440, or 200 B.C., society will change, technology will advance, and there will always be a portion of people wishing it didn't. Nostalgia can cloud people's judgement and make them more susceptible to doing or feeling certain things, which can be used for good or for bad. It's the reason for the success of countless works of art and media, including graphic design. And nostalgia has always been important, but it can only become more so the further we march into the future. An essay by Fredric Jameson, "Postmodernism and Consumer Society," published in the 1980s, explains how nostalgia informs media even when it's not overtly a historical piece:

I presume we can agree that [*Star Wars*] is not a historical film about our own intergalactic past. Let me put it somewhat differently: one of the most important cultural experiences of the generations that grew up from the 1930s to the 1950s was the Saturday afternoon serial of the Buck Rogers type – alien villains, true American heroes, heroines

in distress, the death ray or the doomsday box, and the cliffhanger at the end whose miraculous resolution was to be witnessed next Saturday afternoon. *Star Wars* reinvents this experience in the form of a pastiche: that is, there is no longer any point to a parody of such serials since they are long extinct. *Star Wars*, far from being a pointless satire of such now dead forms, satisfies a deep (might I even say repressed?) longing to experience them again: it is a complex object in which on some first level children and adolescents can take the adventures straight, while the adult public is able to gratify a deeper and more properly nostalgic desire to return to that older period and to live its strange old aesthetic artifacts through once again.<sup>16</sup>

Design can use nostalgia in the same subtle way as Star Wars does in this example-not by being

literally historical, but by using themes and elements that remind viewers of their past. In fact,

the most effective works of graphic design are ones that do exactly that; for example, in the next

excerpt, Jameson references the use of an art deco typeface to trigger nostalgia in the viewer. He

then goes on to address the effect this ever-present nostalgia has on our postmodern society:

Now *Body Heat* is technically not a nostalgia film, since it takes place in a contemporary setting, in a little Florida village near Miami. On the other hand, this technical contemporaneity is most ambiguous indeed: the credits – always our first cue – are lettered and scripted in a 1930s Art-Deco style which cannot but trigger nostalgic reactions. ... The spectator begins to wonder why this story, which could have been situated anywhere, is set in a small Florida town, in spite of its contemporary reference. One begins to realize after a while that the small town setting has a crucial strategic function: it allows the film to do without most of the signals and references which we might associate with the contemporary world, with consumer society – the appliances and artifacts, the high rises, the object world of late capitalism. Technically, then, its objects (its cars, for instance) are 1980s products, but everything in the film conspires to blur that immediate contemporary reference and to make it possible to receive this too as a nostalgia work – as a narrative set in some indefinable nostalgic past, an eternal 1930s, say, beyond history. It seems to me exceedingly symptomatic to find the very style of nostalgia films invading and colonizing even those movies today which have contemporary settings: as though, for some reason, we were unable today to focus our own present, as though we have become incapable of achieving aesthetic representations of our own current experience. But if that is so, then it is a terrible indictment of consumer capitalism itself – or, at the very least, an alarming and pathological symptom of a society that has become incapable of dealing with time and history.<sup>17</sup>

<sup>&</sup>lt;sup>16</sup> E. A. Kaplan, *Postmodernism and Its Discontents: Theories, Practices* (London; New York: Verso, 1988), 18–19.

<sup>&</sup>lt;sup>17</sup> Kaplan, *Postmodernism*, 19–20.

This necessary and prevalent use of nostalgia is indeed a logical side effect of living in a postmodern, late capitalist society (which we have been since the 80s—hence this essay's continued relevance). With technology advancing faster than ever, so too has our fondness for the past increased like never before. In this age, the rise of AI has been coupled with a recognition of the importance of traditional handcrafts, such as the ones practiced in the arts and crafts movement. This is both a revival of those original techniques, as well as of the arts and crafts movement itself, and of every other time in history that handcrafts have experienced a high point in the cycles of popularity; forming a metaphorical nesting doll with layers upon layers of emotionally charged history going further back than we can remember. All art and design movements are built this way—on top of and intertwining with each other; never new, just shifting slightly and adding another knot to our tangled past.

Even the field of AI research has had its cycles of appearing and disappearing, commonly called "AI spring" and "AI winter,"<sup>18</sup> based on how much excitement (and therefore funding) society has for it. While these cycles are inevitable, and we should certainly remember that they tend to come and go, it remains true that both fields—traditional skills and futuristic technology—won't (and shouldn't) completely disappear, but must inevitably coexist. Technology does have the ability to greatly improve our lives, and the answer to society's problems is not getting rid of it, but rather making it work for us in a positive and healthy way. Similarly, our history (including the study and practice of traditional handcrafts) must not and cannot be forgotten, because it connects us both to the past and present, and to each other. For example, take fiber arts, like knitting, crochet, and sewing. We now have countless ways of creating clothes and artifacts without having to make them ourselves, but these fiber arts are still

<sup>&</sup>lt;sup>18</sup> Mitchell, Artificial Intelligence, 33.

thriving techniques that millions of people know how to do. Why? Because it's nostalgic; because it helps us slow down and be in tune with our surroundings, because it satisfies our innate desire as humans to work with our hands, and because learning crafts like these is a way to connect with others and pass down knowledge from generation to generation. Just as there will never again be a world without modern technology, there won't ever be one that doesn't keep traditional techniques alive.

We can see many similarities between our present-day issues and paradigm shifts of the past. We know that art and design movements are based on responding to societal factors, including the movements preceding them. The arts and crafts movement took place in a time where productivity is prized, there was a large wealth gap between the working and upper classes, and most people owned goods that were mass-produced in poor quality, because they couldn't afford beautifully crafted goods made by skilled artisans. All of these qualities can still be observed in modern day, so it makes sense that the ideals of the arts and crafts movement are seeing a revival—that is, anti-industrialization, anti-capitalism, ethically sourced goods, nostalgia, and a sense that a peaceful day-to-day life is more important than speed and productivity. However, modern capitalist ideals of constant growth and success, and of boldly blazing a trail into the future, have not gone away. These opposing views are currently creating friction in our society. And although it may seem like merely one factor of the controversy, I argue that AI lies in the center of everything.

Suppose we have two camps—nostalgic arts and crafts people, and future-focused modernists. Currently, the modernists are the AI proponents, because they believe it will lead to a more productive world, one that may even be productive enough to solve all our great societal challenges. They believe AI will lead us into the future and allow us to accomplish things at greater speed and accuracy than ever before. Contrary to this camp is the nostalgia of arts and crafts. These are the people that believe going back to our roots is the way to go; if we return to old-fashioned, simplistic ideals, we will be able to slow down and live life meaningfully, purposefully, rather than careening into the future at a breakneck pace, with no time to catch your breath or do anything other than work. As it stands, arts and crafts people are generally anti-AI, at least in part because it's a symbol of the future, and because it threatens to overtake the humanistic ideals they hold so dear. But it's also because AI is currently being propelled by the speed- and productivity-focused modernists. Not only is this the camp that opposes their ideals, but they want to use AI to advance those ideals faster than they can be stopped. I believe this is the real, more subconscious reason that many people oppose AI—it's a symbol of futurism, but it's a future in which we are left behind. A future in which our current mode of working long hours and being too tired to enjoy life only becomes more prevalent, in which we only seek relief from short-term dopamine hits like TV and social media because we have no time for more meaningful connection.

But there is a different way: AI doesn't have to be a tool to take our creative jobs and accelerate us exponentially into destruction. It has the potential to make things easier for us, by eliminating tedious or time-consuming tasks, or by making our existing jobs more efficient. AI is not going away, and the arts and crafts camp that wants it (along with the rest of modern society) to disappear so we can all go back to sewing and farming are out of luck. But instead of letting AI be a method to ever-increase our speed, we can use it to make our lives more meaningful and possibly even more creative.

Here we return to another example from history—the invention of the camera. This is not often discussed as a technological paradigm shift, but in fact it lends itself very well to the AI

argument in an art and design context. Pre-camera, the primary purpose of art was not creativity, but documentation, and sometimes storytelling. Artists would need to acquire patrons to sponsor them, and most times that meant they had to paint what the patron wanted (often a portrait). Even if the artist wasn't working for a patron, starting in the 16th century art was categorized into a hierarchy of genres, with history paintings at the top, then portraiture, landscapes, and finally still life. History paintings were a form of storytelling, and the other three were all documentation. After the French revolution, the hierarchy of genres imposed by the state-sponsored art academy of France began to shift. History paintings had been preferred by "the rich, the royal, and the religious," while post-revolution patrons, newly rich and increasing their demand for artistic images, "preferred portraiture, landscape, and still life - the very genres that were soon to be within the technical range of photography."<sup>19</sup> Additionally, "the shift of populations from the countryside to the cities accentuated the desire for observable personal identity, fueling the market for photographic portraits.... In this milieu of unstable social identity, photography offered sitters a chance to fix an outward appearance for all time."<sup>20</sup> All these factors made sure society was primed for the rise of photography. When the only way to record images was to recreate them as art, artists who had honed their skills enough to be able to create realistic representations of the world and its people were renowned, but in 1839, along comes the daguerreotype, and suddenly there's a new method of documentation available, one with much greater speed and accuracy than ever before. Sound familiar?

Since its beginning photography has had ties to a modernist view of the world that valued logic, science, and nature: "The idea of photography was the yearning in Western culture for a

<sup>&</sup>lt;sup>19</sup> Mary W. Marien, *Photography and its Critics: A Cultural History, 1839-1900* (Cambridge: Cambridge University Press, 1997), 44.

<sup>&</sup>lt;sup>20</sup> Mary W. Marien, *Photography: A Cultural History* (Upper Saddle River: Prentice Hall, 2011), 28.

means of representation free from omission, distortion, style, murky subjectivity, or outside interference. The idea of photography betokened the wish for a universal language conceived by nature and therefore appropriate to genuine human progress as well as to scientific pursuits."<sup>21</sup> This is why photography was so attractive; never before was there an art tool that allowed such accuracy, and in a time where unbiased, accurate representation was valued, the technique took off.

But not everyone liked this aspect of photography. The reactions of the public to the new method were polarized: "Both photography and the photographer were concurrently regarded as attractive and dangerous. The photographer could be either a person of genius or a charlatan. The photograph could be educational, or it could belittle painting."<sup>22</sup> One critical view of photography is as follows:

Because the photograph was commonly conceived as nature delineating nature, some found it lacking in imagination. The *New Yorker*'s anonymous commentator was convinced that ... "Painters need not despair; their labours will be as much in request as ever, but in a higher field: the finer qualities of taste and invention will be called into action more powerfully: and the mechanical process will be only abridged and rendered more perfect."<sup>23</sup>

Another critic of photography was John Ruskin—the very same Ruskin who influenced the ideas of the arts and crafts movement. He welcomed photography in 1845, calling it a blessing, but contradicted himself less than a year later, finding it "a matter of serious concern."<sup>24</sup> It makes sense for Ruskin to be against photography, since the arts and crafts movement blamed mass production for the detriment of society. "Criticism of photography's mechanical simplicity

<sup>&</sup>lt;sup>21</sup> Marien, *Photography and its Critics*, 5.

<sup>&</sup>lt;sup>22</sup> Marien, *Photography and its Critics*, 102.

<sup>&</sup>lt;sup>23</sup> Marien, *Photography*, 28.

<sup>&</sup>lt;sup>24</sup> Marien, *Photography*, 75.

merged easily with passionate contemporary reproach of the damaging social effects inherent in mass culture. ... 'fake materials, fake luxury, fake pride.''<sup>25</sup> Photography was seen by some as just another way for mass production to infiltrate and poison every facet of life, including art.

Photography, for Ruskin, was so wedded to minute appearances that it could not express the personality and soul of the artist. His was a new twist on an old theme: after an October 1839 exhibition of daguerreotypes ... in St. Petersburg, Russia, one reviewer reported that ... "mathematical verisimilitude and lifeless precision do not do justice to a portrait, for which one needs expression and life; these can only be conveyed by the animating strength of talent and thought of an individual—no machine can do this."<sup>25</sup>

As the camera became more popular, many artists were (understandably) apprehensive. Here was a new medium that threatened to take their jobs, to do the work they've spent their lives honing skills for. At the birth of photography in 1839, painter Paul Delaroche famously announced his grim prediction of the future of art: "From today, painting is dead." He was one of photography's critics who feared its ability to take documentative artists' jobs. But other critics, such as the *New Yorker* commentator and the Russian reviewer, knew that the mediums are fundamentally different, and painting would still have a place in the future of art. When photography first became widespread, it's easy to imagine getting nervous because of its popularity, but looking back we can clearly observe the cycles of logic- and science-focused thinking versus emotionand humanity-focused thinking as they ebb and flow, and we can see that like the mediums of photography and painting, both worldviews will always be present and necessary.

Delaroche wasn't completely wrong; some documentative artists did lose work due to the camera. For example, the painters who practiced faithful reproduction in response to the public's demand for it were "unceremoniously ousted by the technicians," and those artists "gloomily prophesied the death of painting."<sup>26</sup> But art as a field didn't just survive the camera—it thrived.

<sup>&</sup>lt;sup>25</sup> Marien, *Photography*, 75.

<sup>&</sup>lt;sup>26</sup> Volker Kahmen, Art History of Photography (New York: Penguin Putnam, 1974), 17.

Once a new medium of documentation was available (one that didn't require training for decades), portraiture, landscapes, and still lives became more accessible to the unskilled public, while painting's purpose evolved into making things no one had seen before. What used to be just a way of visual description or storytelling was suddenly freed to express stories and images no camera could generate. As Walter Benjamin puts it, "When Impressionism, which developed the use of chromatic elements in painting, gave way to Cubism, painting had created a further domain into which photography, initially, could not follow."<sup>27</sup>

After the invention of the camera, there were several new art movements dedicated to using art as an expression of creativity—first, impressionism, which was groundbreaking because it was the first time artists departed from realistic representation in favor of spontaneity and the creation of an atmosphere, something you couldn't capture just painting realistically. Soon after was expressionism, which used the same techniques to represent abstract concepts through the medium of real-life subjects. Van Gogh is possibly the most famous example of an artist using expressionistic strokes and nonrealistic colors to express emotion, such as in *Starry Night*, in which he depicts a landscape, but charges it with such emotional strokes and colors that it becomes a representation of much more than its subject. Then came symbolism, when artists finally began to depict the imaginary rather than only what they could see in front of them. And then, with the turn of the century, artists began to experiment with abstraction, challenging what art can and should be. "Beginning in the 19<sup>th</sup> century, each successive modernist movement had challenged artistic conventions with ever-greater intensity. This relentless questioning of the status quo gave rise to the notion of an artistic *avant-garde*."<sup>28</sup> Some examples of these "avant-

<sup>&</sup>lt;sup>27</sup> Kahmen, Art History of Photography, 18.

<sup>&</sup>lt;sup>28</sup> Helen Gardner and Fred S. Kleiner, *Gardner's Art Through the Ages: A Global History* (Boston: Cengage Learning, 2017), 378.

garde" movements are fauvism, cubism, futurism, dada, surrealism, and de Stijl. All these, and the other movements going all the way back to impressionism, were certainly influenced by many societal factors other than the camera, but they only became possible after the camera eliminated the necessity of art as documentation. It was the turning point that freed the art world and allowed it to explode with creativity, and now we take for granted that art's primary purpose is creative expression. It's easy to forget that this wasn't always the case.

As photography began to evolve, artists also learned how to use it better. Henry Peach Robinson wrote extensively about the relationship between photography and art, and believed that in order for photographers to resist ignoring content and meaning in favor of the flashy gimmicks made possible by new technology, they should still have a comprehensive art education and fully understand composition in a painting context before turning to photography as a medium.<sup>29</sup> Designers of today are still taught with this method—before even starting to learn the Adobe programs, we learn the basics of art, and our design work is better because of it.

Artists also eventually learned ways to incorporate photography into their process, not as the sole medium, but as one of several used to create the final work. One such artist is John Baldessari, who wondered in the early 1960s, "Why am I just using photography for a reference? Do I have to translate photography into painting to make it art?"<sup>30</sup> In answer to this question, Baldessari started playing with our instincts and assumptions around photography, such as by using photos that came from movies, which allowed him to connect to society's collective unconscious. In the following quote, he explains the thought process behind his famous works, which are photos with parts blocked out (often people's faces).

<sup>&</sup>lt;sup>29</sup> Marien, *Photography and its Critics*, 103.

<sup>&</sup>lt;sup>30</sup> Marvin Heiferman, *Photography Changes Everything* (New York: Aperture, 2012), 154.

If you look at a photograph of people in a room, you're going to look at their faces first. You're not going to look at a book that's on a table. What I try to do is make you look at the book on the table. ... People used to think I was anti-painting. I wasn't. I've just always thought that art should be more than painting. My goal has always been to attack conventions of seeing. The work is about seeing the world askew.<sup>31</sup>

Baldessari and other multimedia artists who work with photography show us that not only can photography take care of documentation, allowing artists to be more creative, it can also combine with painting and other traditional methods to be part of the creative process.

In this story of the camera's effect on the art world, there lies a positive prediction for the future. We know it's not possible for AI to go away and make the arts and crafts camp happy, but the future doesn't have to mean ever-increasing productivity and speed either. Instead, perhaps the world of design will go the way of the art world. Sure, AI may take some jobs—hopefully at least the tedious editing jobs usually left to undergrad interns. But even if AI begins to be a prominent medium for making graphic design, it could mean we as human designers are freed to be more creative than ever before. Right now, designers primarily rely on clients the way artists relied on sponsors, so much of the design world is based around making money. Perhaps if AI gets better at making functional design (such as branding and advertising), we'll no longer have to do it, or it will become a faster process. Then human designers will have the time and money needed to focus on making more creative, emotional design, with deeper significance. AI could be the technology that allows us to make design purely as a means of creative expression. It's certainly a more positive outlook than the other options.

And in terms of job loss? AI has (or will soon gain) the ability to take the jobs that require skill, but not the jobs that require creativity. As Adobe research scientist Aaron Hertzmann puts it, "Technologies do not create art; they are tools for artists. This is not a fringe

<sup>&</sup>lt;sup>31</sup> Heiferman, *Photography Changes Everything*, 155–156.

viewpoint; it reflects mainstream understanding of both art and computer science. There is a long tradition of computer-driven procedural art, and all of it is ultimately made by people, even when they use software branded as AI."<sup>32</sup> With the development of new tools such as AI, technical ability may become less important, but "AI artists" are still science fiction. Human designers are still the artists in this equation, and we won't become obsolete just yet, but we will undoubtedly be pushed to focus more on big ideas rather than pretty images. This reflects more or less exactly the story of the camera, and how it pushed artists to create more imaginative work. As it was then, so it is now: meaningful design will be more important than ever because it makes use of our human intelligence—our common sense, ability to form abstractions and analogies, and our emotions and experiences. The future of design relies on us making creative decisions that make the best use of that valuable human intelligence; cultivating a deeper understanding of our past as well as our present through the study of art and design history, and using this knowledge to synthesize the past, present, and future into meaningful, influential, and relevant designs that stand the test of time.

<sup>&</sup>lt;sup>32</sup> Aaron Hertzmann, "Computers Do Not Make Art, People Do," *Communications of the ACM*, May 1, 2020, https://cacm.acm.org/opinion/computers-do-not-make-art-people-do/.

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