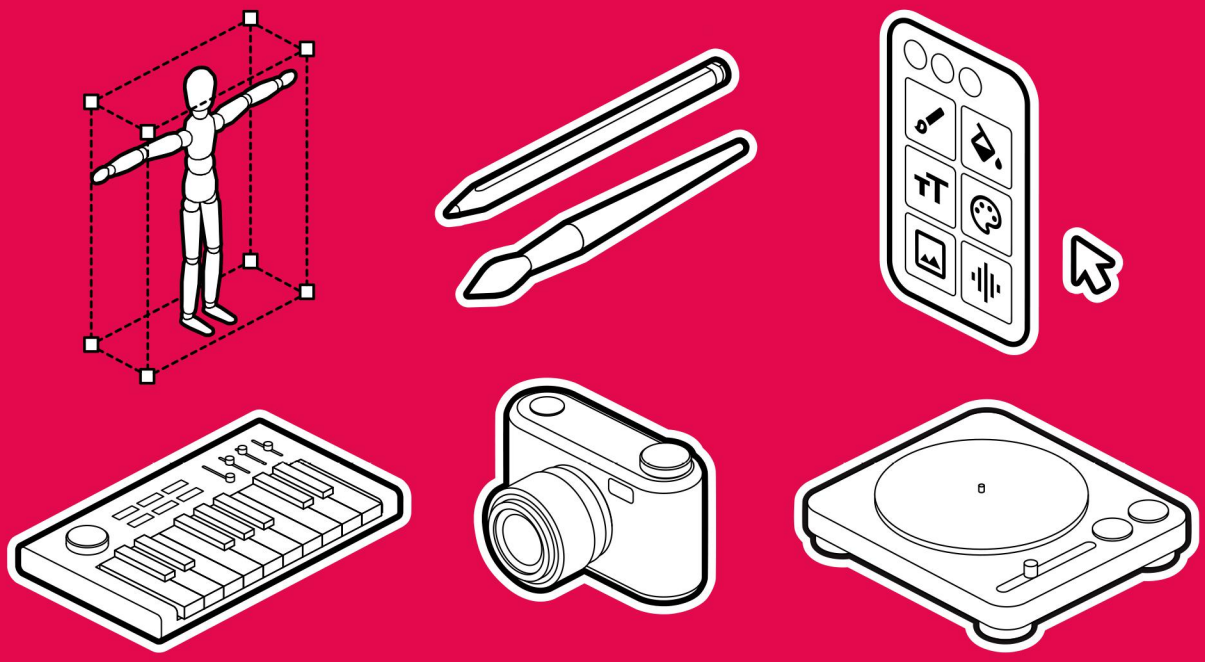
DESIGNING CREATIVE TOOLS

Revealing Principles Behind Tools That Shape Art, Culture and Imagination



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ISBN 978-90-636-9776-1

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BISPUBLISHERS

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Foreword

There's an old saying that necessity is the mother of invention. That is perhaps nowhere more evident than in the way creative people use tools in their work. As a self-taught artist, I was never taught the correct tools to use and consequently tended to learn through guesswork, experimentation, and by accident. Many artists have evolved styles based on the tools they have had easy access to. I don't know which painter was the first to paint directly using the palette knife — a tool intended for mixing paint and cleaning the palette — but it has certainly become a familiar alternative to the brush for quickly applying larger areas of flat colour to the canvas.

Similarly, when starting out, I couldn't afford to keep buying new brushes, and this felt like a big disadvantage. As it was the small, delicate ones that would wear out most quickly, I ended up having to use the clumsier, larger, or worn ones, which made reproducing fine detail much harder. This actually turned out to have benefits, as it forced me to innovate, find alternative ways of suggesting forms, and adopt a looser, less representational style. It also meant the painting process was much quicker.

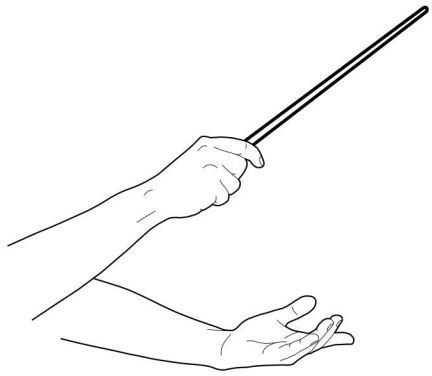
The 19th-century innovation of collapsible paint tubes was primarily a way of speeding up the painter's process by removing the need to mix pigments into workable colours manually. It also had the unanticipated advantage of freeing artists to take their work out of the studio for the first time, providing the means to depict landscapes in the open air; Impressionism was born as a result. This pattern of tool design shifts leading to creative liberation is a constant in art history. The invention of the camera was a major disruptor, freeing painters from the responsibility of recording literal appearances and allowing them to express new stories. Once those constraints were gone, artists experimented with abstracted lines and surreal worlds. Similarly, Warhol took to commercial screen printing to mass-produce his art, showing how creative people often repurpose tools from other fields to find original paths.

I've always learned more from talking to artists across different disciplines about their tools. That's how I discovered that lighting is a key tool for portraiture: learning to sculpt with light from cinematographers showed me how tools can influence and change the way you think about what you're trying to achieve. That's what a good tool can do: it doesn't just make your job easier, it increases your understanding of the craft and the different ways you can affect the outcome.

Beyond traditional methods, staying curious about new ways of doing things provides a sense of wonder vital for creative growth. The excitement that comes with discovering a new tool is one of the best feelings, opening up fresh worlds of possibility. These breakthroughs do not just offer convenience; they fundamentally alter our perspective and understanding. Yet, despite modern options, there is something in us that likes engaging physically to have an effect. We are hardwired to make things, finding a unique satisfaction in physical interaction. As humans, we feel a deep contentment in objects that remain after the work is done. The tools we use are part of our evolution, and a drive to create with them is exactly why we have evolved as a species.

— Jonathan Yeo, February 2026

► *HM King Charles III by Jonathan Yeo*
Oil On Canvas (2024)



Introduction

Although the exact definition of culture has been the subject of much discussion since the inception of anthropology, most agree that it is not a monolithic concept. In the 1950s, American anthropologist and philosopher David Bidney and English evolutionary biologist Julian Huxley popularised a segmentation of culture into *artefacts* (the material things people make), *sociofacts* (social structures such as families and governments), and *mentifacts* (the ideas, values, and beliefs that we share).[1] While many would argue that culture, considered as a whole, is emergent rather than a deliberate project, artefacts, sociofacts, and mentifacts are all products of what we create — consciously or not. Everyday objects, works of art, houses, and temples are all created by humans, directly or indirectly. Folklore, social structures, and governments are also created. The ideas in our minds are constructed, generally using the language we speak and often building on the ideas of others that have reached us through education, poetry, and shared stories.

However, to be fully understood, these cannot be considered in isolation, as an interplay exists between them. Typically, the artefacts we create reflect our mentifacts and sociofacts. This is evident throughout the long history of religious architecture, from the stone pillars of Neolithic Göbekli Tepe to the Egyptian pyramids and Gothic cathedrals. Our sociofacts also reflect our mentifacts. Political systems, for instance, are often preceded by philosophical ideas — good and bad. For this to happen, there is always an *object*, a *system*, or a *method* sitting at the centre of the creation process: intuitions become theories when articulated using agreed-upon argumentative structures; a group of like-minded individuals becomes a political party when publishing a manifesto or a

programme; an idea becomes a design when traced on paper using a pencil. These are, in effect, tools and among the various artefacts, mentifacts, and sociofacts of human culture, they may play the most important role, as they determine the creation of everything else.

Tools can be material or immaterial, simple or incredibly complex, familiar or specialised, hardly noticeable or obviously in the way. They enable the creation of things that were simply not possible to be created before they existed. The hand axe enabled the built habitat; the camera, the capture on paper of what we see; 3D printing, the materialisation of impossible geometries. However, tools determine what we create, not only by what they enable but, also, by the restrictions they impose. The chisel led to the idea of finding a shape within a block of stone through a process in which actions are subtractive, which, in turn, seems to have inspired[2] Aristotle's concept of potentiality.* Perspective compelled painters to adopt a single viewpoint and adhere to projection rules, rather than the freedom of symbolic representation, leading to more consistent representations of depth from the Renaissance onward. The fixed-key system on the harpsichord, and later the piano, restricted composition to specific pitches and harmonies now associated with Western music history, from the classical fugue to the endlessly reused four chords of most pop music hits.

But what remains perhaps the biggest, and yet least tangible, influence of tools is how they inspire us. The metaphor, for instance — by suggesting one thing, that may be too abstract, can be understood through the description of another, more familiar one — inspired both the conceptualisation of complex ideas by philosophers and the design of the user interfaces through which we use our computers and smartphones. As for physical tools, archaeologists have found ample evidence in most human societies of 'mill songs' — ritual work songs inspired by the characteristic sounds and rhythms of grinding tools, likely to be one of the earliest forms of shared musical experiences. Fast-forward to the 1980s: the popularisation of the rhythmic grid on drum machines such as the Roland TR-808 inspired the precise, repetitive patterns — well-suited to these machines — that are now common across almost all popular electronic music genres, including techno and house. Finally, one needs only to listen to an artist speak about the materials or physicality of their tools to understand that humans form a bond with them that runs deeper than a *strictly work relationship*.

The proposition that tools dictate what we create may be taken as a form of technological determinism, or, put simply, a denial of human creative agency. This misconception stems from a common confusion between tools and technology, leading to arguments built on shaky foundations and reasoning that is fundamentally flawed. Technology is the practical application of scientific knowledge. As such, it may appear to evolve in one direction and at a somewhat predictable pace, as proposed by Moore's Law†[3] — in fact, more of an observation focused on one very specific area of technological development, and one whose relevance today is best approached with caution. A tool, on the other hand, is a specialised object designed to facilitate a task. While the development of

* The latent possibility within an object to achieve a specific end (telos) or state of being. Aristotle distinguishes between 'natural' potential — which realizes itself given the right conditions — and 'accidental' change, which occurs outside a thing's inherent purpose.

† In 1965, Gordon Moore, the co-founder of Fairchild Semiconductor and Intel, observed that the number of transistors in an integrated circuit doubled approximately every two years, shaping the way many commentators and decision-makers have predicted the future of the computer industry in the last decades.

technology expands the horizons of what is physically achievable, the design of tools proceeds from individual, granular, and often divergent decisions on how to apply this potential. Hence, focusing on the tool does not remove the human from the equation; rather, it considers the human twice: when we use the tool and, before that, when we *design* it.

In 2001, British painter David Hockney published a book intended to reveal the secret of the great masters, including their alleged use of optical aids to create better perspectives and light rendition.[4] It drew vigorous criticism, its most ardent opponents pointing to a lack of evidence.[5] Whether or not he was right is, in some regards, less interesting than what it would have meant to the art world, a sentiment famously summarised by American cultural critic Susan Sontag the same year: 'If David Hockney's thesis is correct, it would be like finding out that all the great lovers of history have been using Viagra.'[6]

Interestingly, nobody seems to have a problem with painters using brushes — rather than their bare hands, as their predecessors did. To some critics, Van Gogh's adventurous use of pigments makes him 'the greatest colourist ever,' even if that means we can no longer see his work in the colours he intended.[7] Yet, the very idea that a painter may have used a lens for a quick outline, or a small mirror to check a colour, seems sufficient to render them unworthy of their status as an artist.

But what are pigments, paintbrushes, lenses, and mirrors if not one and the same thing: tools to achieve a creative end? Most would agree that artists are more than the sum of their know-how, tricks, and techniques, including those mediated by the use of tools. However, if we refuse to acknowledge, discuss, and understand the role of the tool in the creative process, we risk ascribing to it a greater role than it warrants, blinded by reasoning akin to a tautology: 'tools cannot be too important, otherwise they would become too important.'

'focusing on the tool . . . considers the human twice: when we use the tool and, before that, when we design it.'

What the David Hockney story shows is that without a critical examination of the tools, we are forced to draw a line between what is acceptable and what is not. Brushes and pigments, one imagines, are old and *traditional* enough that they get a pass. Lenses and mirrors, deemed too *high-tech*, do not. But where to draw the line? How old does a tool need to be to be considered *traditional*? The recurring theme of the *technological* supposedly opposed to the *traditional* shows a deeply rooted fear.

Already in 1958, French philosopher Gilbert Simondon, in his essay *On the Mode of Existence of Technical Objects*, declared, 'Culture has become a system of defence designed to safeguard man from technics. This is the result of the assumption that technical objects contain no human reality.'[8] This is not to say that this fear has no foundation. In fact, one only needs to compare the two ends of the spectrum to understand the dilemma we are faced with today: How can we reconcile ourselves with the idea that an image generation chatbot and a paintbrush are both *tools*, when generating a painting with a prompt has so little in common with *actually* painting it, stroke by stroke, on canvas?

Examining tools does not imply that all tools are equal; rather, quite the opposite: it is only by acknowledging tools as bearers of unique properties that we can understand how they affect the creative process and avoid the pitfalls of extreme relativism. Examining tools is an

attempt to answer why we find the use of some tools more virtuous than others; why some seem to magnify creative abilities while others feel like cheating and leave the user with a sense of emptiness. Examining tools involves drawing lessons from all of that — lessons that can inform the design of new tools, which, ideally, will allow for the further enrichment of our culture.

Why This Book, This Way

With writing comes organising ideas and, at times, building theories. When a theme has been largely unexplored, there may also be value in presenting knowledge in a manner that allows the reader to form their own analysis and pick insights the authors may have overlooked, had they processed the raw material through their own lens. This is why nearly a quarter of the words in this book are from practitioners, even though the questions are from the authors, which certainly provides direction for the interviews. Moreover, half of this book is a curated list of iconic tools, each of which balances factual information with design analysis. Beyond the obvious illustrative purpose of that chapter, it felt crucial to show the incredible diversity of creative tools in a format where Photoshop, renowned for image retouching, can sit right next to a Fender guitar, which revolutionised modern music, a few pages away from the Singer Model 15, a sewing machine that democratised fashion at the turn of the 20th century.

This will allow readers to form new associations by presenting an alternative narrative to the dominant ideas that make it easier to associate Photoshop with other software applications, such as a web browser, even though their functions are fundamentally different — one intended to *create*, the other to *consume*. This book posits that years of thinking through *technological proximity* have led designers to apply design principles originally developed for mass consumerism to creative tools, thereby failing to propose a divergent voice in the process. This may carry dire consequences for tomorrow: the automation of tools, the commodification of creation, and ultimately the flattening of culture — all driven by economic imperatives.

Creative Tools?

Finding the right title required much thought. Indeed, to cover everything from paint tubes to cameras, musical instruments, and software applications, it had to convey a sense of diversity. But why *tools* and not *instruments*, *devices*, or simply *products*?

If, at first glance, the term *tool* may seem plain, its neutrality is its greatest asset. By comparison, *instrument* is only really used in a creative context with music. Similarly, a *device* is typically a small connected machine, such as a smartphone or smartwatch — not a fitting description for a piano or a paint tube. Speaking of machines, musical instruments with some form of automation have been referred to as *machines* in the past: *drum machines* come to mind. Yet, a *machine* is more likely to be understood as large and industrial; furthermore, not everything in this book is *technically* a machine.

This leads us to the ever-approachable term *product*, which resonates with most designers and could have been chosen for convenience. However, as further developed in Chapter 1, the very definition of *product* insists on the object as a produced entity rather than its role.

The very definition of *tool* is linked to the idea of creation — or destruction. It is straightforward and honest, notably in its uncompromising role of function. Even Adobe, which admittedly has sufficient communication staff to brainstorm such questions, consistently returns to *creative tools* when referring to its applications. There

would be something to be said about choosing *creative tools* over *creation tools*. After all, it is not the tools themselves that are creative! But *creation* carries a heavy, almost industrial, and sometimes even theological weight. As for the most unusual gerund *creating tools*, beyond the tongue-in-cheek wordplay for the cover, it would have been a nightmare to disambiguate throughout the book.

Ultimately, a quick search confirms that *creative tools* is the most commonly used expression, a cruel irony in a context where many fear that artificial intelligence (AI) is placing human creation in jeopardy. At the very least, it forces us to contemplate what may be one of the most important questions ahead of us: what if tools, not humans, were to become the ones being creative? As a meagre consolation, it seems that, for as long as we speak of *tools*, their role will be confined to that of intermediaries between human intentions and tangible outcomes. Let's just hope that no one ever has to write a book about *creative entities*.

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Users, Creators, and Artists

'Time was when the mystery and wonder of handicrafts were well acknowledged by the world, when imagination and fancy mingled with all things made by man; and in those days all handicraftsmen were artists, as we should now call them.'

— William Morris, 1882[9]

To avoid overreliance on the term *user*, those who use creative tools are often referred to as *creators* in this book; this should be understood in the widest and most inclusive sense. Hence, the term *creator* encompasses all humans who create, whether they are celebrated artists, emerging designers, experienced craftspeople, amateur enthusiasts, or anything in between. To be clear, this is certainly *not* a reference to *content creators*, even if social media companies are trying hard to pre-empt the term *creator* to mean just that — as illustrated by the 2021 Meta rebrand event, where Mark Zuckerberg and his management team mentioned 'creator' and 'creators' almost 50 times,[10] more than once every other minute. Yet, it is clear from the presentation that their definition of the term 'creator' is much narrower than its standard usage in English. Specifically, they refer to the individuals whom they hope will build digital assets and businesses in their ecosystem. For maximum clarity, *content creator* is used in this book only to refer to people who create content such as videos, images, and writing for the internet, usually monetised through advertising. This book does not dispute that content creation is a form of creation; simply that reducing creation to content creation is, in the long run, dangerous.

Finally, the terms *artists*, *designers*, *writers*, *painters*, and *musicians* are used occasionally to add life to the text, never to differentiate them from other creators.

'what if tools, not humans, were to become the ones being creative?

. . . reducing creation to content creation is, in the long run, dangerous.'

[1] Stephen Mitchell, 'Continuity: Folklore's Problem Child?', in Folklore in Old Norse — Old Norse in *Folklore*, ed. Daniel Sävborg and Karen Bek-Pedersen (Tartu: University of Tartu Press, 2014), 47.

[2] S. Marc Cohen and C. D. C. Reeve, 'Aristotle's Metaphysics', in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta and Uri Nodelman, Spring 2025 ed. (Metaphysics Research Lab, Stanford University, 2025), plato.stanford.edu/archives/spr2025/entries/aristotle-metaphysics/, sec. 12.

[3] Gordon Moore, 'Cramming More Components onto Integrated Circuits', *Electronics* 38, no. 8 (April 19, 1965).

[4] David Hockney, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters* (New York: Viking Studio, 2001).

[5] Sven Dupré, 'Introduction. The Hockney-Falco Thesis: Constraints and Opportunities', *Early Science and Medicine* 10, no. 2 (2005): 125–36.

[6] Paul Lieberman, 'Artistic Fact or Optical Delusion?', *Los Angeles Times*, December 3, 2001, latimes.com/archives/la-xpm-2001-dec-03-mn-10977-story.html.

[7] Jonathan Jones, 'Van Gogh's True Colours Were Originally Even Brighter', *The Guardian*, May 2, 2013, theguardian.com/artanddesign/jonathanjonesblog/2013/may/02/van-gogh-original-colours-brighter.

[8] Gilbert Simondon, *On the Mode of Existence of Technical Objects*, trans. Ninian Mellamphy (Paris: Aubier, Editions Montaigne, 1958; repr., University of Western Ontario, 1980), 1.

[9] William Morris, *Hopes and Fears for Art* (Cambridge: University Press, John Wilson and Son, 1882), 9–10.

[10] Meta (Facebook) 'Connect 2021 Metaverse Event Transcript', *Rev*, October 28, 2021, rev.com/transcripts/meta-facebook-connect-2021-metaverse-event-transcript, accessed January 19, 2026.

1 | Creative Tools & Design

Creation knows no boundaries and encompasses a vast array of human activities, from imagining fictional worlds and mythical fables to reproducing the beauty of nature and attempting to capture the very meaning of our life on Earth. Whether an object or a performance, the work created will likely outlive the creator, and a lifetime could be spent discovering the work of others.

American author Randall Munroe, famous for providing 'serious scientific answers to absurd hypothetical questions,'[1] estimates that the date after which there were simply too many books to be able to read them all in a lifetime happened around 1500 — if we consider only those written in English.[2] At today's publishing rate, a lifetime would not be nearly enough to read a small percentage of the 200,000 books published each year — in the UK alone.[3] Obviously, books are only one example of the many things humans create: there are also movies, plays, paintings, songs, video games, dress patterns, sculptures, websites, choreographies, light shows, murals, podcasts, photographs, toys, collages, installations, remixes, designs of furniture, buildings, logos, and the list goes on.

Creation is diverse — as diverse, in fact, as our ideas of what may be created. Yet this is not, on its own, what makes it uniquely interesting; rather, the reason *why* we create does. To fully appreciate that, we first need to examine other human activities.

Communication happens in order to share information, ideas, and feelings; studies and training are needed to learn, acquire skills, and become better at what we do; work is a way to earn a living, be useful to society, and change the world; going to the gym is a way to maintain

good health and stay in good shape; consuming allows us to relax, have fun, or just find pleasure. In *Creativity*, Hungarian-American psychologist Mihály Csíkszentmihályi proposes that most human activities are *exotelic*, a Greek term for what is externally motivated.[4] In his own words: 'We do them not because we enjoy them but in order to get at some later goal.'[5] He points out that only two forms of human activities differ from the rest in that regard: competitive sport and creation. He describes those as *autotelic* activities and goes on explaining that an autotelic activity is 'something that is an end in itself.'[6] But then, what about people who create because they've been asked to do so? Certainly, designers cannot have a career without clients, and fine artists often work on a commission basis. And what about those who create in order to be famous or — at least — acknowledged?

Working for a client, producing a new album for a record label, or finishing a design project to earn a university degree is not mutually exclusive with loving what one does. In fact, most great artists, designers, and craftspeople are likely first and foremost motivated by the act of creation itself; they *then* use external goals as socially acceptable excuses to pursue their passion. In that respect, it may sometimes be easier to be a professional than a hobbyist, for it provides a remarkably effective cover story for how one chooses to spend their time.

Still, the direction creation has taken in recent years seems less romantic than the vision proposed by Csíkszentmihályi: after all, isn't the whole 'content creator' phenomenon a *firework* of the *exotelic* and the ultimate proof that creation is turning into something entirely motivated by the most prosaic considerations?

Perhaps it is — or maybe we are mistaking consequences for causes: we may already be witnessing the nefarious effects of having failed to consider creation as a distinct human activity, in a context of rapid technological change that has fuelled the equally rapid evolution of creative tools. In many cases, this occurred without any notable intervention from the very people who should have been leading conversations or — at least — asking questions: designers.

The Problem with Design

To fully appreciate the lack of attention given to creative tools in design, one first needs to consider the underlying structure of any disciplinary discourse: language.

Of all the titles in the design industry, *product designer* is amongst the most common, and at a superficial level, *product* sounds vague enough to allow us to imagine a vast array of possibilities. In fact, there are product designers who design furniture, product designers who design everyday objects, and, increasingly, product designers who design non-physical things, such as web and mobile applications.

But the term *product* is not as neutral as it may seem. The definition of a product is 'something produced'[*7] or, said differently, the end link of a chain rather than a connecting one. Of course, nothing prevents something produced from being used to produce something else — tools, for one, have to be produced, at some point. Yet, calling everything a *product* already assumes a stance where we view the designed object not for what it might enable, but as the end result of a creative process understood solely as existing within the boundaries of the designer's work.

It is even more telling to consider the term ascribed to the people for whom things are

[*] The online Cambridge Dictionary defines 'product' as 'something that is made to be sold, usually something that is produced by an industrial process or, less commonly, something that is grown or obtained through farming'.

designed: *users* — literally those who use. In fact, there is no easy alternative to the verb *using*,* which, stemming from Old French, remains a close synonym of *consuming*.

In effect, before the designer even begins work, it is not only the object of design which is denied its potential to exist beyond its status as a product; the interaction it may mediate is, by default, defined as consumption.

Outside the design studio, this is echoed in the expression *consumer electronics*, used as an umbrella term for all objects that incorporate some form of electronics. Today, it can refer to almost anything and, in fact, some of the biggest manufacturers of creative tools announce their new releases at CES (the Consumer Electronics Show). It could be argued that this is a legacy name and that nobody truly pays attention to the meaning of acronyms. Yet it perpetuates a symbolic equivalence between, on the one hand, refrigerators, games consoles, and anything designed precisely for consumption, and, on the other, creative tools. Furthermore, this symbolic equivalence is reinforced by a shared design language and, often, similar technological architectures. After all, is a professional digital drawing tablet, such as a Wacom Cintiq, that different-looking from a tablet used to watch videos? Is a security camera not using an image sensor like a photography camera? And what about the laptop? Some may use theirs to play video games, others to type a report or design a logo, and some may do all of the above.

This raises the larger question of the digitisation and hybridisation of all things,† both of which have hindered the construction of a design discourse specific to creative tools, at a time when design, in its entirety, had to be rethought.

With the generalisation of electronics and computing across nearly all objects, new questions have emerged, gradually reshaping what it means to design. At the centre of such questions is the behaviour of objects and specifically how humans interact with them. Interaction design, which seeks to address these questions, has been one of the most important additions to the design corpus since the late 1980s. The core idea is to shift the designer's focus from the object itself to the space that separates it from the person using it — the space where interactions occur. Although developed primarily for software, this idea has long extended to physical interactive objects as well.

In his book *Designing Interactions*, British designer William Grant 'Bill' Moggridge provided an extensive overview of the field at the turn of the millennium.[8] Widely acclaimed upon publication, it remains, two decades later, one of the most influential books on interaction design. Not only does it provide a history of how interaction design emerged, but it also features 40 interviews with design practitioners, engineers, and entrepreneurs, organised around case studies such as the development of the first Apple iPod. As for the author himself, he designed the first laptop computer and co-founded IDEO, one of the most successful design consultancies of the last 40 years.

Perhaps due to the young age of the ideas it promoted at the time of writing,‡ *Designing*

* Despite efforts to remain consistent with the argument by avoiding these terms, the continued necessity of employing 'users', 'using', and 'products' for the sake of clarity throughout this book is a testament to how deeply ingrained they are in the English design vocabulary.

† Sometimes described as technological convergence: the process by which previously distinct technologies — such as telephony, computing, and media — merge, driven by standardisation and digitisation.

‡ *Designing Interactions* was first published in 2006.

Interactions did not clearly distinguish creation from other activities that the devices and software it studied tended to.* And there was a certain logic to that: what transpired from the book's very structure was the building of knowledge through the recording and analysis of field experience. Its goal, it appears, was to outline principles that could apply widely, rather than risking to fragment a nascent discipline that was yet to find its place among more established ones, such as industrial design or architecture.†

However, there might have been another reason for not acknowledging creation as a distinct activity that would have called for a different design approach: as stated earlier, interaction design was born from the rise of the personal computer and software — as objects of design. Yet what distinguishes computers from most tools humans had designed before is their open-ended nature, which leaves activity-specific tasks to software applications. This is why the term *platforms* is so often used, a concept that has gained popularity, not least because of the huge business opportunities modelled on it.‡ For most people, the introduction of the personal computer, as a platform, came with the suggestion that they could move from using a myriad of tools such as typing machines, cameras, and musical instruments, all of which were specialised, to using a single multifunctional one. Today's computers and smartphones can be used effectively for both creating and consuming.

The consequences of this de facto hybridisation of tools that support a wide spectrum of human activities are wide-ranging and far-reaching. With multifunctionality came multitasking, and it is therefore not entirely surprising that the pioneers of interaction design preferred to ignore the specifics of segmented activities — which may have looked like an unnecessary legacy of the past — to focus on more universal principles. One such principle was proposed by David Liddle, one of the designers of the Xerox Star, the first personal computer. Interviewed in *Designing Interactions*, he explained that how technology — and in fact any product — is used follows three phases of development and adoption, named after what he described as three distinct markets: enthusiasts, who, beyond a product, want to explore new technologies for the sake of it; professionals, who seek utility and the maximisation of productivity; and consumers, who seek lifestyle fit and automation for effortless integration into their daily lives.[9]

This is an interesting theory that follows an indisputable market-scale logic and, 20 years on, appears to have proven correct in the author's field. Apple, with the Apple II in 1977, the Apple Macintosh in 1984, the Apple iPhone in 2007, and the Apple Watch in 2015, exemplifies the shift from enthusiasts to professionals and eventually consumers.§[10] But is that really the

* While interviews like Cordell Ratzlaff's explicitly contrasted 'creating content' with consumption, and others noted the dual role of MacPaint as both tool and toy or The Sims as a game centred on creation, the book generally integrated these into a continuum of interaction rather than treating creation as a singular, isolated category.

† By way of comparison, De Architectura by the Roman architect Marcus Vitruvius Pollio — generally regarded as the first known work on design theory in the Western world — was likely written between 30 and 20 BCE.

‡ The profit share generated by third party software applications running on the Apple iPhone and directly benefiting Apple — as provider of the platform — is probably one of the most studied and commented business cases of the last two decades.

§ This is not achieved solely through the introduction of new products. In *Designing Interactions*, Cordell Ratzlaff — another interviewee who led the Human Interface Group at Apple from 1990 to 1999 — noted the transition underway at the time, stating that 'the whole application/document model was developed for people who were creating content' and contrasting it with what he saw as a shift towards pure content consumption.

What do a prehistoric flute, a Leica camera, a Singer sewing machine, Technics turntables, and Photoshop have in common? Designing Creative Tools explores how physical and digital tools shape the creative act and the cultures that form around them.

Opening with a foreword by renowned British portraitist Jonathan Yeo, the book addresses all inventors and designers building the next generation of hardware, software, and interfaces, as well as the musicians, photographers, and artists who use them.

Through the stories of 50 iconic tools and interviews with experienced practitioners, you will discover new ways to think about tools, as AI and automated content creation force a reexamination of creativity.

With a clear framework and design principles specific to creative practice, the book explains how tools work, how they guide their users and how they can be reimagined. The striking imagery celebrates the remarkable tools that spark creativity, making the book a visual pleasure as well as a source of inspiration.

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