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# FUN INC.

## WHY GAMES ARE THE 21ST CENTURY'S MOST SERIOUS BUSINESS

**TOM CHATFIELD**

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# About the Book

Economically, culturally, societally and even technologically, video gaming is altering the world around us. *Fun Inc.* explains why the business of gaming is as fascinating as it is controversial.

# About the Author

Tom Chatfield is one of the UK's most prominent young commentators on digital culture. A speaker at forums including TED Global, authors@Google, the House of Commons, the RSA, the World Congress on IT, and the Labour and Conservative party conferences, he's also a contributor to publications including the *Observer*, *Sunday Times*, *Independent*, *Wired*, *New Statesman* and *TLS*, and a senior editor and lead writer at *Prospect* magazine.

Tom completed a doctorate at St John's College, Oxford, before moving to London to work as a full-time writer and editor. He has done puzzle design and creative consultancy for a number of online games and media companies, including Mind Candy, Grex, Red Glasses and Intervox, and is currently working on a project with award-winning British games company Preloaded. He speaks regularly on technology and digital culture in the national and international media.

# Fun Inc.

Why games are the twenty-first century’s most serious business

Tom Chatfield

For Mum, Dad and my wife, Cat

# Preface

In April 2008, my friend Jon flew from North Carolina to visit me in England. Jon manages a store in a small town in Gaston County, just outside Charlotte, and this was the first time he'd travelled outside America; he'd had to get his first ever passport for the trip. It was also the first time we'd met face to face, although we'd known each other for almost two years.

Jon and I met in *World of Warcraft*, a game that my wife and I have played ever since it launched in 2004. The three of us started out helping each other with in-game tasks. Then, as we got to know each other better, we moved on to talking through microphones and headsets while playing. We swapped emails, linked up on Facebook, discussed books and films, and pieced together the details of our very different lives. Jon was smart, in his early twenties and had dropped out of college due to funding difficulties; my wife and I were working long hours in medicine and publishing, and *World of Warcraft* offered us a sociable, absorbing evening "out," away from the pressures of daily life.

We often think of video games – and of digital culture in general – as a substitute for worldly encounters, and a troubling one at that. Yet our appetite for the digital has grown hand in hand with an increasing recognition of the value of the live and the interpersonal; and, above all, of the importance of the social aspects of technology. More than anything else, it is these sociable, interpersonal forces that are driving forward the next stages of the digital revolution. Jon was the first gaming friend of mine to visit

us in London, but not the last: since his stay, several others have made the journey across the Atlantic, while my wife and I have travelled up and down America's east coast visiting and staying with people we first got to know through video games.

This book was first published in January 2010, and largely written and researched during 2009. As I write these words, in October 2010, video games are still less than half a century old. Over the two years since I began writing this book, around a hundred million new people have begun to explore this youngest and most dynamic of our media; and yet decades of evolution and expansion remain ahead.

The great momentum of the current movement in games comes thanks not to the triumphs of big-budget blockbusters (although these have played their part) but to the interconnected explosion of casual, mobile and sociable games. Wherever technology takes us, one of our most fundamental impulses is to play; and in the form of smart mobile devices, linked via social networks, technology is rapidly taking us all into a place this book is dedicated to exploring: a world where the boundaries between work, leisure, play, profit and personal relations are ever more blurred.

This is a shamelessly partisan book about video games, and I make no apologies for that. Alongside my work over the last decade teaching literature, working as an arts and books editor, and speaking and writing about the frontiers of digital culture, my experience of games has been a hugely enriching part of my life. This is something I hope to share and explore. And I believe it is something the world is increasingly ready to embrace.

Across all media, from literature to music to film, the visual and intellectual language of gaming is gaining ground as an integral part of global culture. The lessons games can teach – from engagement and reward structures

to visualisation technologies, motion-responsive interfaces and sociological analytics – are beginning to be taken seriously across business, education, government and art alike.

Controversies have always proliferated around the world of video games, and seem likely to continue to do so, about violence and censorship; but also about the more nebulous fields of addiction, security, transparency, intellectual property and personal identity. This book, I hope, offers a firm grounding in the debates surrounding these, and a guide to where the genuine controversies lie in a field plagued with hysteria, ignorance and unjustifiable generalisations alongside justifiable fears.

This isn't, however, a book about why games are 'good' any more than it can be a repudiation of why they are not 'bad.' As anyone who loves games will concede, 90 per cent of the titles out there are simply not good enough. In everything from their artistic merit to their playability, design and execution, they could be better. Sometimes they are awful, objectionable, banal, or simply not enjoyable. This is to be expected. Contrary to the popular myth of electronic entertainments as implacable engines of manipulation, it is very difficult indeed to make a decent video game, let alone an excellent one. It does no damage to literature or to cinema to say that most books and films are flawed, limited, or trivial. The same is true of games. This is the nature of any medium, and of excellence.

Wanting video games to be better is a central part of loving them. But the anatomy and criticism of games is a task for a different book to this one. Indeed, it's a task already being undertaken with considerable sophistication and relish both online and in print. What I hope to achieve is something simpler and more fundamental: to explore why video games are worth taking seriously in the first place; to suggest the nature and range of the discussions it is worth having around them; and to show how these

discussions may help us to understand our culture's increasing augmentation and amplification by technology.

If there is an underlying message here, it is of continuity, not transformation. To face the future hopefully, together with its technology, we must remember that humans themselves are much the same as we ever were. It is only our possibilities of being and action that have changed: we are more stimulated, more distracted, more interconnected, more challenged, more able to learn, more able to lose ourselves than ever before.

In a field defined by constant innovation, the contents of this book are already some distance from the cutting edge. Appropriately enough for a book about games, almost every number you read about will, in the last twelve months, have gone up. I'm not too worried about this. By far the most interesting things about both video games and people are those that will not transform in the space of twelve months, twelve years, or even half a century. The reasons that games exert so deep and broad an appeal are ancient, and if we're to have any hope of understanding the future more than a year at a time, we must take the long perspective.

Looking at the transformations the coming decade is certain to bring, one word in particular seems in urgent need of retirement: "gamers," that segment of the population who know and play video games. For there is fast becoming no "us" or "them" when it comes to games. In 2009, the National Gamers Survey reported that 83% of the US population played video games, including 72% of men and women over 50. In the UK, the figure was 73%, including over 90% of those under twenty. Whatever your opinion on video games, they will soon be universal. Within another generation they will have their place in every home and every pocket, as inevitable as a computer or mobile phone. This is neither a dreadful nor a marvellous fact: it is simply an aspect of the world we must learn to live with and understand as best we can.

We need to take this word “gamers” and throw it away, together with all those other generalizations that open up no debate and that mask the future under vague hopes and wild fears. For we need to talk seriously about the world as it is: about how to get the best out of its media, where the worst really lies, and what the games we play can tell us about ourselves and our future. The news is assuredly not all good. But we cannot afford not to listen.

CHAPTER 1

# The Fun Instinct

I WAS BORN in 1980, in England, just outside London. And this meant that my childhood was full of something that simply didn't exist for anyone born just a couple of decades before me: video games.

My first gaming experience came when I was seven, in the form of a BBC Micro Model B. Affectionately known as a 'Beeb', and manufactured by Acorn Computers between 1981 and 1986, it looked like the lovechild of a toaster and an obese typewriter: a weightily off-white chunk of plastic that beeped alarmingly and shouted 'Mistake' at you in bald bright type if you dared approach it unprepared. It could display just eight colours on its minuscule monitor, while its 32-kilobyte memory would be put to shame by most modern watches. Yet this machine – in combination with the 400 closely typed pages of its ring-bound manual – was my one-way ticket to the information age.

There were plenty of primitive graphical games to be played on the Beeb but, as I soon discovered, it was quite a different kind of play that was first to captivate me: games which consisted entirely of words. Sometimes called 'adventure' games, you had to make your way around a host of fictional universes by typing compass directions and basic instructions ('pick up the torch', 'look at the elvish sword') and by reading a series of second-person descriptions ('you are in a maze of twisty little passages, all

alike’). Today, it all sounds impossibly crude. Yet once I began to play my way through a text adventure, I found within minutes that the machine’s technological limitations had melted away, and in their place came the dizzy excitement of walking into a story. As the pioneering text games company Infocom puts it, its products had ‘the best graphics in the world’. Why draw a travesty of a castle in blocky pixels when it was possible to describe the most glorious building imaginable in a couple of sentences? Video games, I began to realise, were much more than mere toys: they were a way of exploring, and attempting to create, whole other worlds.

Video games also represented my first taste of a modernity that definitively excluded adults: a realm of private codes, toy universes and bleeping music that seemed several thousand miles away from books, television and school. To play the best games was to be transported dizzyingly away from the mundane to become the hero of a favourite adventure or an explorer on another planet. But it was also to engage with technology, logic, narrative, design and creative collaboration. My friends and I spent many hours designing and critiquing games, anxious to achieve the perfect balance, the most thrilling narrative, the most cunning puzzle.

In many ways, the miraculously intense and sustained kind of fun that video games offered relied on the absence of actual consequences or responsibilities. They were, as our parents would occasionally note, childish, not just in their subject-matter, but in their ecstatic unreality. Yet there was also something about even these early games that felt far more significant and more serious than anything else we had ever called a ‘game’: a sense similar to the vertigo that the best books and stories could inspire, of finding the world spun around in new and unexpected ways.

Looking back, it’s clear that video games were not just a portal to other worlds: they were also a window through which we were glimpsing a part of the world’s future. Today, three decades on, the upper limits of virtual worlds continue to retreat before our eyes. Companies can now create online games that can be accessed by many millions of players and that require hundreds of artists and technicians to collaborate in their creation, and still we have only begun to scratch the surface of what can be achieved. My generation has grown into adulthood, yet we have not set aside our computers and our consoles; instead, we have brought them with us.

It was words that first drew me to video games, and words that first gave me a taste of their power. While it might seem incongruous to have written a book about an electronic medium, the kind of sustained analysis that the written word offers is still the most important tool we have for making sense of our own experience. Media can compete for our time and attention while remaining mutually enriching; far from being at opposite poles, I believe books and games are both compatible and complementary, being the two great ‘active’ media of our time. It’s not for nothing that the internet is, among other things, a supreme arena of exchange for the written word in all its forms.

This book is about the astonishing leaps that the last few decades have seen in the automation, incorporation, refinement and extension of the deep human sense that – for want of a better word – we call fun. Games have a history as old as civilisation itself; computers and the internet have existed for barely the blink of an eye. And yet the latter has been colonised and shaped so thoroughly by the former that it’s becoming increasingly hard to tell where the serious business of play ends and the playful business of work begins.

Video games are just one subset of the grand category of games: structured activities carried out for pleasure, according to certain written or unwritten rules. Games are as old as civilisation itself and are found in all cultures. Evidence survives of competitive game-playing from as early as 2600 BC, while archaeologists have found game ‘boards’ that were apparently scratched onto the backs of statues by bored Assyrian guards in the eighth century BC. Humans have been playing games for at least as long as we have been reading, writing and perhaps even speaking – and this latest great resurgence of gameplaying has deep roots in both our cultural and our biological history.

The urge to play is universal, not just in human cultures but among higher animals. From ants to birds to monkeys, playful rituals such as mock-fighting allow animals to test, improve and even celebrate their being in the world. It is only humans, however, that play games in the strict sense. A play-fight between primates may obey the most elaborate kind of unwritten rules, but only humans are able to codify their games independently of themselves. We are rule-making (and rule-seeking) creatures, and our love of order extends to play.

The modern world’s attitude towards games is itself an odd mixture of the dismissive and the deeply committed. In the case of sports, at no point in history has any activity commanded as much attention as sporting endeavour. The 2010 football World Cup was, thanks to the reach of modern media, was watched at some point by over three billion people. At the time of writing, this was the single greatest collective experience in human history. Similarly, for all its compromises, the modern Olympics is perhaps the greatest human festival of internationalism in history.

And yet games are rigidly separated in the minds of most people from the serious business of work and living. The entire industry of contemporary leisure thrives on this separation between work and play. You work, and you

spend a significant proportion of your income on leisure, but the two are mutually exclusive; each invokes its own rigid, and seemingly incompatible set of conventions. Work entails a degree of self-sacrifice, dedication, effort and, hopefully, the satisfaction that comes from earning your keep. Games, meanwhile, are about escaping into a mindset where pleasure rules: the whole point is that there is nothing resting on the outcome of the game beyond the value you personally choose to attach to it.

Work, then, seems to be about rules, restrictions and necessities, whereas a game is about pleasure, freedom and escape from urgent need. Nevertheless, all games can also be thought of as little more than an exceptionally rigid set of rules and ideas. Consider the popular board game, Pictionary, in which players compete to draw recognisable versions of as many objects as they can for other people to guess. Within the box of a Pictionary set you'll find a board, playing pieces, a die, a timer, some paper, some cards with lists of items on, and some pencils. Apart from the board and the cards – which are just a way of measuring progress and providing a list of things to draw – these are everyday items. By packing them up in a box with a set of instructions, however, they are transformed into nothing less than a formal declaration of the desire to play. The purchase of these objects is a kind of licence, buying a space and a time outside the ordinary run of things within which the avowed intent is pleasure.

During a game of Pictionary, the players' main activity is drawing on scraps of paper. It's something they could have done pretty much any time, had they had the inclination. What is it, then, that makes the game? In one sense, the game is born of a consensus: the learning and obeying of a simple set of rules. This consensus allows both competition and collaboration; it allows the measurement of better and worse performances, of more and less achievement. It allows players the satisfaction of showing off their skills,

and of achieving something measurable. Since 2001 there has even been such a thing as the World Championship of Pictionary: create a challenge, and there will always be people whose greatest pleasure is demonstrably being the best. Create a game at which there is little or no skill, or opportunity for distinction, and the result will soon be boredom.

Yet part of the charm of a game like Pictionary is that it is about more than simply crushing your opponents. The drawing component of the game is at least as much about self-expression and incidental delight as it is about competing – an excuse for a controlled few moments of disinhibition. To play it is as much to be creative and sociable as it is to compare skills and achievements. It is a team game, whose greatest satisfactions involve successful communication and interactions above and beyond the raw mechanics of the game itself.

The end product is a complex and powerful set of human motivators: achievement, competition, collaboration, learning and improvement, communication and self-expression. And what makes them a ‘game’, as opposed to something more serious, is the avowedly non-functional context they are framed in – the box, the label, the time set aside for pleasure rather than labour.

Of course, playing a video game doesn’t require consensus or rule-learning in the way that something like football, chess or Pictionary does. You’re not strolling on to a patch of grass holding a ball or unpacking a box full of pencils and paper. You are, rather, being presented with a miniature but complete world whose rules are an integral part of its structure – something that has been elaborately crafted down to its tiniest detail. If it’s well designed, you can no more disobey those rules than you can cheat at football by floating across the pitch in defiance of gravity.

With a football or a pack of cards, there are hundreds of games you can theoretically play. In a video game, you can

only do what the game allows you to. The world of the game itself embodies its rules, and your job is to puzzle them out. Like the real world, video games are arenas into which you're dropped and left to deduce a method of success for yourself. You can progress only by gaining experience; and the skills that this experience taps into are some of the most fundamental human motivations there are.

Within the increasingly distinguished field of video games studies, perhaps the most influential person to have discussed these fundamental motivations is the designer and author Raph Koster. Koster has, among other things, worked as lead designer on *Ultima Online* (1997), the world's first commercially successful massively multiplayer online game (MMO), and as creative director on another MMO milestone, *Star Wars Galaxies* (2003), based on the *Star Wars* universe. He's also the author of an influential book, *A Theory of Fun for Game Design* (2004), that was one of the first to set out in precise terms the special relationship between people's minds and the games they play:

*Games are something special and unique. They are concentrated chunks ready for our brains to chew on. Since they are abstracted and iconic, they are readily absorbed. Since they are formal systems, they exclude distracting external details. Usually, our brains have to do hard work to turn messy reality into something as clear as a game is*.

Learning, Koster explains, is something humans find extraordinarily satisfying, because the ability to learn certain kinds of lessons is perhaps our most vital trait in evolutionary terms. Uniquely, we have become able to learn as both individuals and as a species; we learn as individuals, but we also pass on our knowledge from generation to generation.

In the thousands upon thousands of years during which modern man has evolved, the desire and ability to learn –

and the aptitude for solving all manner of spatial, hierarchical, conceptual and relational problems – has ensured both our survival and, over time, our dominance of the earth. It should come as little surprise, then, that the mastery of certain kinds of learning challenge thrills us like little else.

Seen in these terms, video games emerge as an extraordinary kind of reverse-engineering. Our brains were moulded over hundreds of thousands of years by the necessity of surviving in the world. And yet, today, the brains that we developed as a result of this are now busily creating other unreal worlds designed expressly to satisfy them.

The word ‘fun’, here, can itself be misleading. Why use a word with such a ring of simplicity, even of childishness, in such a complex context? ‘It’s the word we are stuck with,’ Koster responds when I put this question to him. ‘There isn’t even consensus across the European languages as to what exactly to call this vague, general feeling that in English is called fun. As a concept, it varies radically from language to language.’ And yet – like humour, another vital area of human sentiment whose very nature defies analysis – we are all able to recognise fun when we experience it. It is a slippery, vital notion that speaks of something mysterious in all of us: the desire to draw not only physical and immediate gratifications from the world, but to make a game of our being.

What of video games in particular? ‘First,’ Koster notes, ‘you have to look at games in general, and how they differ from other media. What games do that no other medium does is provide experiential learning, which is fundamentally an iterative experience; you do it again and again, learning a bit more each time. What video games do very differently from, say, board games is that they provide a model with a very rapid simulation.’ And that means what, exactly? ‘When you poke and prod at them, you can

get feedback extremely quickly, and often at a fundamental visceral level. Or, their model can be slow to respond but be extremely complex – far more complex than what you could manage with counters on a board.'

Of course, 'visceral' thrills are often thought of as the most fundamental components of our pleasure-seeking: speed, jaw-dropping sounds and images, thudding violence, adrenaline-pumping action, sex. Modern video games are certainly able to offer these in abundance. They grab our attention, they make headlines, they offer short-term gratification. And yet the visceral is ultimately beside the point. Even in the most stunning-looking, ultra-violent video game imaginable, there will rapidly come a point at which players realise that what makes the experience of playing meaningful is something more symbolic than literal. Even the most intense initial excitement will soon give way to boredom unless there is something else there that is, in Koster's term, sufficiently 'chewy'.

As an example of the 'something else' that can lift a video game beyond mere novelty into the realm of serious fun, Koster cites 'a game called *M.U.L.E.* by Dani Bunten Berry as my favourite game of all time. It is a classic multiplayer video game of planetary colonization and economics, played on eight-bit computers in the early 1980s. I love it so much I have it running on my phone.' *M.U.L.E.* is also a game that lacks anything even remotely resembling a visceral thrill. Originally written for the Atari 400 home computer in 1983, it's a turn-based strategy game for up to four players in which each side must manage a space colony, balancing the harvesting of energy, food, metal ore and valuable minerals with the buying and selling of these resources to each other or to a central 'store'.

Visually, it's considerably less sophisticated than the display on a modern mobile phone. The game's title refers to the machines that players must build and use in their

harvesting activities, Multiple Use Labor Elements (that is, M.U.L.E.s). And that, apart from periodic random indignities such as assault by space pirates, is that. Except, as Koster notes, beneath the simple rules lies something entrancingly complex. ‘The thing that makes this game so fascinating to play to this day is the amazingly simple way in which it creates so many emergent behaviours. It is a game where competition and cooperation exist on a razor’s edge. You want to be the most successful colonist, but if you are too cut-throat then the colony as a whole will fail. You have to specialize to get ahead, but that makes you dependent on the other players for survival.’

This notion of ‘emergent behaviours’ is a central one in video game theory. Essentially, it describes what happens when a complex system arises out of a simple set of interactions. It’s a concept common in science and philosophy: the universe itself can be thought of as the miraculously complex product of small a number of basic rules. Similarly, in the miniature universes of the best video games, it’s the ability of simple, well-worked rules with to yield an exponentially emerging complexity that most seems to tick our evolutionary boxes.

From the simplest of parameters, then, video games conjure engagements that echo the evolving, multi-factorial complexities humanity has been engaging with for millennia. And yet, as the next chapter explores, their own brief history itself represents an evolution of incredible rapidity and scope.

CHAPTER 2

# Technology and magic

'ANY SUFFICIENTLY ADVANCED technology is indistinguishable from magic' wrote the science fiction novelist Arthur C Clarke in 1973, giving the computer age one of its most memorable maxims. Had Clarke, who died in 2008, lived just a year longer, he would have been able to see a piece of technology being demonstrated at a 2009 Expo in Los Angeles that looked, to many in the audience, very close to magic indeed.

The machine, perched on a black conical stand, looked like nothing so much as an oversized television remote control. It was a tracking box, and it combined the functions of a video camera, depth sensor, multi-array microphone and custom processor – meaning that it was able to follow the movements of up to four people standing in front of it while also recognising each individual's face and voice. It did this by constructing a visual map of each person, based on forty-eight points identified on their bodies according to shape and skeletal structure. This also meant that it could, as was demonstrated, continue to follow people's movements and differentiate between them even when they walked in front of one another. 'Use your own gear,' a demonstration video boasted, showing a woman using the sensor to try out clothes onscreen on a virtual reproduction of her body, followed by a boy holding

up his skateboard so that its appearance could be scanned in and reproduced on a virtual counterpart.

The tracking box is known today as ‘Kinect’, and it represents some of the most sophisticated hardware and software ever created in the field of motion capture and wireless control. Kinect is also a device built primarily for play. Specifically, it is an add-on for Microsoft’s Xbox 360 games console, and is due to be released in November 2010 into the mass market. The Kinect project, Steven Spielberg declared after the Los Angeles demonstration, represents ‘a wave of change, the ripples of which will reach far beyond video games’. He was probably right: the potential of such a system for transforming the way people interact with technology within their own homes is immense. Already, there’s talk of social networking involving full-body projections, of *Minority Report*-style virtual screens, of integration with true three-dimensional displays, virtual reality applications and much else besides. The device itself is likely to retail at a little over £100, offering an affordability that’s almost as startling as its capabilities.

While it may mean a wave of change for the world at large, the kind of advance that the Kinect project represents has long been the exception rather than the rule for the video games industry. Since its birth, video gaming has been a business devoted to miracles. As Arthur C Clarke also wrote, ‘The only way of finding the limits of the possible is by going beyond them into the im possible.’ Video games represent a perpetual pressure on these limits: since the very beginning, they have been one of the most astounding engines the world possesses for creative and technological change.

In 1961, the Massachusetts Institute of Technology purchased one of the most advanced computing machines on the planet, a PDP-1 (Programmed Data Processor*)*.

MIT's model cost over $100,000 and was the size of a small telephone booth – impressively compact by the standards of the day. At a time when the world contained only a few thousand computers, most of which still filled entire rooms, this unit with a primitive keyboard and monitor display was about as personal as computing got.

The PDP-1 was, like every early computer, dauntingly difficult to approach. Programming it was a task intended to be undertaken only by experts working in the higher realms of logic and computational maths. It was the province of an intellectual elite, and it remained so right up to the point at which a small group of science fiction-obsessed students decided that there had to be more that a machine this powerful could do than simply crunch patterns of numbers. There had to be, they reasoned, a way of showing anyone who cared to find out just how great its potential truly was.

The leader of this group was Stephen 'Slug' Russell and, as he later described it, they formulated three criteria for an 'ultimate' program: something that would reveal the true potential of the machine sitting in their university. The program should 'demonstrate as many of the computer's resources as possible, and tax those resources to the limit'. It should 'be interesting, which means every run should be different'. And, most important of all, 'It should involve the onlooker in a pleasurable and active way.'

The future of computing, they had intuited, lay not just in the calculational prowess of ever more powerful machines, but in the far more uncertain field of human-machine interactions. Russell and his friends had worked out, in other words, that just about the most interesting and impressive thing it was possible to do with a computer was to create a game within it.

One year and 200 hours of programming later, the world's first true computer game was born. There had been primitive demonstration 'games' on earlier machines