Bi-weekly Random Bits from the Internet

2015-07-18

(CAN I PUT A LSTM AND REIENFORCE LEARN HOW TO PLAY SUPER MARIO BROS?)

We Germans don't want a German Europe

P2, Wolfgang Schäuble, The Guardian Jul 19, 2013

Master of Play

P6, Nick Paumgarten, The New Yorker Dec 20, 2010 Issue

Iwata Asks: New Super Mario Bros. Wii

P25, Satoru Iwata, Iwata Asks Dec 01, 2009

We Germans don't want a German Europe

Wolfgang Schäuble, The Guardian Jul 19, 2013

Where do we in Europe stand today? Three years after the start of the first assistance programme for Greece, and about three months after we agreed on a programme for Cyprus, the picture is mixed. On the plus side, there are many encouraging signs from the crisis-hit countries in the eurozone. Labour markets and social security systems are being reformed; public administration, legal structures and tax regimes are being modernised. These efforts are already bearing fruit. There is more competitiveness. Economic imbalances are shrinking. Investor confidence is returning.

Institutional improvements in Europe have increased the likelihood of sound budgets in future years. We have introduced more binding fiscal rules, brakes on national debt and a robust crisis-resolution mechanism that gives us time to pursue the necessary reforms. The next step is the banking union, which will further reduce risk, both for the financial sector itself and for taxpayers. Our efforts to regulate financial markets will ensure that those who make high-risk investment decisions are liable for any ensuing losses. In other words, we are restoring the link between opportunity and risk.

But there is also a negative side. There is widespread uncertainty among people in our countries. Young people in parts of Europe face a dearth of opportunity. People are losing their jobs because their country is undergoing a profound economic transition. And too often public discourse about the crisis is dominated by mutual recriminations and populist commentary. National clichés and prejudices, which we believed to be long overcome, are rearing their ugly heads again.

This debate is full of contradictions, not least where Germany's role in tackling the crisis is concerned. There is little consensus in Europe, either about what Germany is doing or about what it should be doing. Some commentators even claim that the notorious "German question" is back. It has been said that Germany is "too strong" to fit in, but also that it is "too weak" to lead the continent. Germany has been simultaneously accused of wanting to reshape Europe in its own image and of refusing to show any leadership. And even those calling for more German leadership seem to be doing so for contradictory reasons. Some want Germany to drop its resistance to debt-financed stimuli, claiming that this would help us to overcome the crisis. Others want even more fiscal solidity in exchange for Germany's solidarity.

The views on Germany's actual policies are no less contradictory. For example, voic-

es outside the country have called for Germany to relax its "draconian" austerity policies while, in Germany, the government has been accused of not saving nearly enough, or even at all. As is so often the case, the truth is somewhere in between. We are working to achieve a reasonable degree of consolidation, to build confidence and thus to lay the foundations for sustainable growth in Germany and in Europe as a whole.

The idea that Europe should be – or even can be – led by a single country is wide of the mark. Germany's restraint does not just reflect the burden of its history. The truth is that the unique political structure that is Europe does not lend itself to a leader–follower dynamic. Europe signifies the equal coexistence of its member states. At the same time, however, Germany does feel a special responsibility towards the mutually agreed strategy for resolving the crisis in the eurozone. We are taking on this leadership responsibility in a spirit of partnership, especially with our French friends. Like the other countries in the eurozone, both big and small, we know how fundamentally important it is to co-ordinate our efforts closely if we want to overcome the crisis.

From the very beginning of the crisis we Europeans have pursued a joint strategy. This strategy aims to achieve the overdue consolidation of public budgets. But even more, it aims to overcome economic imbalances by improving the competitiveness of all eurozone countries. This is why the adjustment plans for countries that are receiving financial support call for fundamental structural reforms that aim to put them back on track towards long-term growth and thus secure sustainable prosperity for all. Sound public finances create confidence.

But sound public finances are not enough to ensure sustainable growth. In addition, we need to reform and modernise our labour markets, our welfare state, and our legal and tax systems. We have to make sure that all citizens of Europe enjoy working and living conditions that are not based on artificial growth bubbles.

These reforms will not take effect overnight. We Germans know this better than anyone. Ten years ago Germany was the "sick man of Europe". We had to tread a long and painful path to become today's engine of growth and anchor of stability in Europe. We too had extremely high levels of unemployment, even long after we started to adopt urgently necessary reforms. But without these reforms there can be no sustainable growth. Stimulus programmes based on even more government debt will only shift higher burdens on to our children and grandchildren, and will have no lasting benefits.

To create new jobs in Europe, we need businesses that offer innovative and attrac-

tive products that people want to buy. European companies can do this only if governments create the right conditions to help companies to achieve success in our increasingly globalised world. That applies not just to German businesses, but to French, British, Polish, Italian, Spanish, Portuguese and Greek companies as well.

The idea that Germans want to play a special role in Europe is a misunderstanding. We do not want a German Europe. We are not asking others to be like us. This accusation makes no more sense than the national stereotypes that lurk behind such statements. The Germans are joyless capitalists infused with the Protestant work ethic? In fact, some economically successful German regions are traditionally Catholic. The Italians are all about dolce far niente (delicious idleness)? The industrial regions in northern Italy would not be the only ones to bristle at that. All of northern Europe is market-driven? The Nordic welfare states, with their emphasis on social solidarity and income redistribution, certainly do not fit this caricature.

Those who nurture such stereotypes should look at recent surveys that show a clear majority of people – not just in northern Europe, but also in the south – in favour of combating the crisis through reforms, public spending cuts and debt reduction.

The Germans themselves are the last people who would want to put up with a German Europe. We want to put Germany at the service of the European community's economic recovery – without weakening Germany itself. That would not be in anybody's interests. We want a Europe that is strong and competitive, a Europe where we plan our budgets sensibly, and where we do not pile up more and more debt.

The key task is to create conditions that are conducive to successful economic activity, in the context of global competition and demographic trends that pose a challenge for the whole of Europe. None of these things are German ideas. They are the tenets of forward-looking policies.

Sound fiscal policies and a good economic environment are the only ways to gain the confidence of investors, businesses and consumers and thus achieve sustainable growth. All international studies confirm this, as do the European Central Bank, the European commission, the OECD and the International Monetary Fund – organisations headed, incidentally, by an Italian, a Portuguese, a Mexican and a Frenchwoman respectively.

And the policies of European governments are geared towards these objectives. Those European countries currently grappling with complex adjustment processes deserve our highest appreciation for the way they are reforming their labour markets and social security systems, modernising their administrative structures, le-

gal systems and tax systems, and consolidating their budgets. We should have the deepest respect for the efforts they are making. Our reward – everyone's reward – will be a strong and competitive Europe.

Master of Play

Nick Paumgarten, The New Yorker Dec 20, 2010 Issue

When Shigeru Miyamoto was a child, he didn't really have any toys, so he made his own, out of wood and string. He put on performances with homemade puppets and made cartoon flip-books. He pretended that there were magical realms hidden behind the sliding shoji screens in his family's little house. There was no television. His parents were of modest means but hardly poor. This was in the late nineteen-fifties and early nineteen-sixties, in the rural village of Sonobe, about thirty miles northwest of Kyoto, in a river valley surrounded by wooded mountains. As he got older, he wandered farther afield, on foot or by bike. He explored a bamboo forest behind the town's ancient Shinto shrine and bushwhacked through the cedars and pines on a small mountain near the junior high school. One day, when he was seven or eight, he came across a hole in the ground. He peered inside and saw nothing but darkness. He came back the next day with a lantern and shimmied through the hole and found himself in a small cavern. He could see that passageways led to other chambers. Over the summer, he kept returning to the cave to marvel at the dance of the shadows on the walls.

Miyamoto has told variations on the cave story a few times over the years, in order to emphasize the extent to which he was surrounded by nature, as a child, and also to claim his youthful explorations as a source of his aptitude and enthusiasm for inventing and designing video games. The cave has become a misty but indispensable part of his legend, to Miyamoto what the cherry tree was to George Washington, or what LSD is to Steve Jobs. It is also a prototype, an analogue, and an apology—an illuminating and propitious way to consider his games, or, for that matter, anyone else's. It flatters a vacant-eyed kid with a joystick (to say nothing of the grownups who have bought it for him or sold it to him) to think of himself, spiritually, as an intrepid spelunker. The cave, certainly, is an occasion for easy irony: the man who has perhaps done more than any other person to entice generations of children to spend their playtime indoors, in front of a video screen, happened to develop his peculiar talent while playing outdoors, at whatever amusements or mischief he could muster. Of course, no one in the first wave of video-game designers could have learned the craft by playing video games, since video games didn't exist until people like Miyamoto invented them. Still, there may be no starker example of the conversion of primitive improvisations into structured, commodified, and stationary technological simulation than that of Miyamoto, the rural explorer turned ludic mastermind.

In his games, Miyamoto has always tried to re-create his childhood wonderment, if not always the actual experiences that gave rise to it, since the experiences themselves may be harder to come by in a paved and partitioned world. "I can still recall the kind of sensation I had when I was in a small river, and I was searching with my hands beneath a rock, and something hit my finger, and I noticed it was a fish," he told me one day. "That's something that I just can't express in words. It's such an unusual situation. I wish that children nowadays could have similar experiences, but it's not very easy."

Fishermen have a saying, in reference to the addictive sensation of a fish hitting your line: "The tug is the drug." Gamers, as video-game players are known, thrill to "the pull," that mysterious ability that good games have of making you want to play them, and keep playing them. The pull used to extract quarters from your pockets. Then it became a force that pinned you to a couch. Later, it got your entire family to shadowbox in the living room. Whatever the interface, a great game invites and rewards obsession, and Miyamoto's games are widely considered to be among the greatest. He has been called the father of modern video games. The best known, and most influential, is Super Mario Bros., which débuted a quarter of a century ago and, depending on your point of view, created an industry or resuscitated a comatose one. It spawned dozens of sequels and spinoffs. Miyamoto has designed or overseen the development of many other blockbusters, among them the Legend of

Zelda series, Star Fox, and Pikmin. Their success, in both commercial and cultural terms, suggests that he has a peerless feel for the pull, that he is a master of play—of its components and poetics—in the way that Walt Disney, to whom he is often compared, was of sentiment and wonder. Certainly, in Mario, the squat Italian plumber who bops around the Mushroom Kingdom in a quest to rescue Princess Toadstool, Miyamoto created a folk hero—gaming's first—with as great a reach as Mickey Mouse's.

What he hasn't created is a company in his own name, or a vast fortune to go along with it. He is a salaryman. Miyamoto's business card says that he is the senior managing director and the general manager of the entertainment-analysis and -development division at Nintendo Company Ltd., the video-game giant. What it does not say is that he is Nintendo's guiding spirit, its meal ticket, and its playful public face. Miyamoto has said that his main job at Nintendo is ningen kougaku—human engineering. He has been at the company since 1977 and has worked for no other. (He prizes Nintendo's financial and creative support for his work: "There's a big difference between the money you receive personally from the company and the money you can use in your job.") He has never been the company's (or his own) boss, but it is not unreasonable to imagine that Nintendo might not exist without him. He designed the games and invented the franchises that caused people to buy the consoles. He also helped design the consoles.

In the gaming world, the creators of the games are not always widely known, much less venerated; the structure of the business, in which engineers and artists do their work for hire, and in which, increasingly, they do it in greater numbers, owing to the more complex technology of the games, consigns them to relative anonymity. Part of it, too, is that games are typically considered to be commercial products, rather than creative works; consider the fact that game titles, unlike the names of, say, movies or songs, appear in most newspapers and magazines, including this one, un-italicized and without quotes. There aren't very many video-game auteurs, but Miyamoto is one.

The original Super Mario Bros. was the best-selling video game of all time, until Wii Sports surpassed it, two years ago—and Miyamoto was one of the leaders of the team that came up with the Wii. The Super Mario Bros. franchise has sold more than two hundred and forty million units, and that's not including Mario Kart, Mario Party, and other offshoots, which have sold tens of millions more. Yet it is for the nature of his games, rather than for their commercial success, that Miyamoto is so widely revered. In a poll last year of nine thousand video-game developers, who were asked to name their "ultimate development hero," Miyamoto was the runaway winner. "At the end of the day, most of the designers out there now grew up playing

his games," Will Wright, the creator of the Sims and Spore, and the developer who came in third in that poll, told me. "He approaches the games playfully, which seems kind of obvious, but most people don't. And he approaches things from the players' point of view, which is part of his magic."

Securing an audience with Miyamoto in Japan is a little like trying to rescue Princess Toadstool. You must pass through a series of stages and contend with various obstacles and delights. The Japanese, by and large, aren't accustomed to the way of an American reporter; it is unusual for them even to invite friends over for dinner, to say nothing of a gaijin with a tape recorder and a notebook. (An old Japan hand warned me, "Japanese people don't generally ask questions directly about one another.") The corporate ethos in Japan, and especially at Nintendo, is self-effacing; the humility that has kept Miyamoto at the company for three decades, rather than in, say, Silicon Valley, seeking his billions, also governs the apportionment of credit. Miyamoto has been a superstar in the gaming world for more than two decades, but neither he nor the company seems inclined to exploit his stardom. They contend that the development of a game or a game console is a collaborative effort—that it is indecorous to single out any one contributor, to the exclusion of the others. Miyamoto is also guarded about his private life. The fact that anyone would be curious about it baffles him.

The first time I saw Miyamoto in person was in Los Angeles last June, at the E3 Expo, the video-game industry's annual American convention. It's a huge affair, befitting a sixty-billion-dollar global industry. Nintendo, for its presentation, rented out the Nokia Theatre and filled it with nearly four thousand gaming enthusiasts, journalists, and executives. Early in the program, Miyamoto appeared on a giant video screen to demonstrate Legend of Zelda: Skyward Sword, the fourteenth installment in the Zelda series, which he created in 1986, and which involves the adventures of an avatar named Link, who roams a fantasy world in an attempt to rescue a princess, Zelda. Miyamoto's explanation of how to deploy the controls was dubbed with an English translation. (His father was an English teacher, and Miyamoto understands some English, but he can't speak it well, and he insists on doing interviews and public appearances in Japanese.) With a zap, Miyamoto's image suddenly disappeared from the video screen and reappeared below it on a scrim of white curtain, and then Miyamoto himself burst out through the curtain and onto the stage, to riotous applause. Grinning broadly, dressed in a white Zelda T-shirt, an untucked and unbuttoned dress shirt, and jeans, he wielded the Wii's two controllers—the Wii Remote and the Nunchuk—as a sword and a shield. At fifty-eight, he is trim and agile, with a boyish mop of black hair and an easy smile. In public, Miyamoto often strikes a lighthearted crouching pose, a proto-Wii stance that seems to owe a little to the gunslingers of the first video game he ever played, Western Gun,

and a little to Yosemite Sam.

As Nintendo's creative taskmaster, Miyamoto had a hand in most facets of the development and design of the Wii, introduced in 2006. Internally code-named Revolution, it was the first wireless motion-capture gaming console; sensors allow players to dictate the movements of their onscreen avatars. The simplicity and dynamism of the controller, which Miyamoto conceived and helped design, attracted several new constituencies of what are called "casual" (as opposed to "hard-core") gamers to video games—the Wii Bowlers and Guitar Heroes to whom the name Zelda may have still summoned up Mrs. Fitzgerald. (Miyamoto, in fact, named his Zelda for her.) "Our goal was to come up with a machine that moms would want," he has said. The Wii has less processing power and graphic sophistication than rival machines from Sony and Microsoft, but it has outsold them by a wide margin, owing to its ease, sociability, and accessibility, and also perhaps to the misconception that, say, Wii Tennis is a form of exercise.

Wright told me, "Miyamoto starts from the kinesthetics of the controller. What is this thing going to feel like in my hands? Will I feel like I'm instinctively connected to this world? As opposed to, I've got sixteen buttons, and I'm trying to figure out which button does the super-thrust power-up, in which case it's very cerebral, kind of like learning to play the piano. Rather than, you know, just picking up a shovel and starting to dig. He's had an amazing impact not just on software and games but on the hardware as well."

At E3, Miyamoto said a few words in English but then went on in Japanese—a translator stood beside him—as he turned toward the giant video screen and demonstrated the new Zelda game. He guided Link through a landscape of cheerful menace, slashing at quasi-comical enemies. "Let's take a look at these mushrooms," the translator said, without affect. "Here we see the Deku Babas, popped up here." Onscreen, giant carnivorous flytrap plants bobbed and weaved, and Miyamoto vanquished them with swipes of his sword. "You can let loose sword beams," the translator went on. "If you look at the Bokoblins, you'll notice that they are protecting themselves with their swords and they're trying to block my attacks." The Bokoblins, ratty sword-wielding soldiers, made an alluring squashing sound when Miyamoto killed them.

The sincerity with which everyone considered the Bokoblins or the Deku Babas, amid the pomp of a corporate showcase, was bewildering; it brought to mind some combination of Dungeons & Dragons and the N.F.L. draft. I am not a gamer. I took a few whacks at Super Mario, when it came out, in the mid-eighties, but mostly my video-game experience predated the Nintendo invasion and the unabating craze for

home systems. I played arcade games, and I played them poorly; my quarters never went far. I usually wound up watching friends play, muttering over their shoulders in vain attempts to persuade them to play street hockey or Nerf football instead. The games were Space Invaders, Asteroids, Missile Command, Pac-Man, Robotron, Tempest, Centipede, Defender, Joust, and Galaga, which I did become passably proficient at and which, if I see it now, in a pizzeria or an airport, still inspires me to hunt for change. There was also Donkey Kong, which was unlike any of these others: it had a sense of humor, a narrative context, and beguilingly goofy graphics.

Although I missed out on all of it—not only on the brothers Mario and the Nintendo games but on Call of Duty, World of Warcraft, SimCity, and Halo—I saw legions get sucked in, and so I formed the not uncommon opinion that video games, like motorcycles or heroin, were irresistibly seductive and profoundly insidious. I had decided to avoid them completely, and, when I had kids, to keep them away from video games as best I could. This I have mostly done, but for the purpose of this assignment I've had a loaner at home—a Wii, with all the fixin's. It will be hard for us to bid it goodbye.

Nintendo has been in the business of play since 1889. Its founder, Fusajiro Yamauchi, made playing cards, or karuta. Well into the next century, the company's main product was hanafuda—cards made from crushed mulberry bark and lavishly illustrated with symbols such as animals and flowers— which replaced the painted seashells that the Japanese had traditionally used and which became widespread in Japan for gambling. As it happens, fortune and luck are intrinsic to the company's name. Made up of the three kanji characters nin, ten, and do, the name has been said to mean "Leave luck to heaven," or "Work hard, but in the end it is in heaven's hands," as the journalist David Sheff rendered it, in his 1993 portrait of the company, "Game Over: How Nintendo Zapped an American Industry, Captured Your Dollars, and Enslaved Your Children." (Sheff decided to write the book, which in spite of the title is generally admiring, after watching his young son Nic get hooked on Super Mario; Nic's addiction, years later, to methamphetamine became fodder for another book.)

In 1949, Yamauchi's headstrong and debonair great-grandson Hiroshi Yamauchi, aged twenty-two, took over Nintendo and began restlessly casting about for ways to extend its reach. He secured a licensing agreement with the Walt Disney Company and scored a big hit with American-style playing cards adorned with the image of Mickey Mouse. Other entrepreneurial gambits—instant rice, a taxi fleet—fared poorly. In the mid-nineteen-sixties, Yamauchi hired an engineer named Gunpei Yokoi and a crew of young tinkerers to think about making toys and games, and their experiments helped foster a culture of whimsy and risk amid Nintendo's rigid cor-

porate structure. As one of them told Sheff, years later, "Here were these very serious men thinking about the content of play."

The very serious men turned out a succession of silly gizmos. There was the Ultra Hand, a device with a gripping hand at the end of it; the Love Tester, a primitive electronic contrivance that purported to measure the level of ardor between a boy and a girl; the Beam Gun, which used a ray of light to hit simulated targets. (Nintendo converted abandoned bowling alleys into "shooting ranges," where you could fire at simulations of clay pigeons.) Across the ocean, a company called Atari, based in California, had created Pong, the first hit video game. Pong, originally an arcade game, was turned into a home version in 1975. Inspired by Atari, and by the craze for a new arcade game called Space Invaders, Yamauchi, who told Sheff that he had never played a video game, led Nintendo into the arcade business, and also pushed for the development of a home console like Atari's, an apparatus that would come to be called the Family Computer, or Famicom.

In 1976, Miyamoto, then age twenty-four, was a recent art-college graduate, with a degree in industrial design and an enduring fascination with the Japanese comic strips called manga. He liked to draw and paint, make toys, and play bluegrass on the banjo and the guitar, and wasn't sure how any of this was going to translate into earning a living. He had a vague idea that he'd create some kind of mass-market object. His father got him an interview with Yamauchi, through a mutual friend. Miyamoto showed the company some toys he'd made, two wooden clothes hangers for kids in the shape of crows and elephants. Yamauchi hired him to be an apprentice in the planning department.

What Miyamoto became, however, was Nintendo's first artist. He started out by designing the console for a car-racing game, and then by conceiving the look of the attackers for a knockoff of Space Invaders called Space Fever. His breakthrough came after an arcade game called Radar Scope, which Nintendo had hoped would be a hit in America, failed, leaving the company with an inventory in the United States of two thousand unsold Radar Scope cabinets. Yamauchi tapped Miyamoto to design a new game to replace Radar Scope in those cabinets.

The game he came up with was Donkey Kong. He had in mind a scenario based on Popeye, but Nintendo was unable to secure the rights, so he invented a new set of characters. The hero, the player's avatar, was a carpenter named Jumpman. (Miyamoto had initially called him Mr. Video, with the intention of using him in every game, much in the way that, he said, Hitchcock appears in many of his own films.) Jumpman's pet gorilla had kidnapped his girlfriend, Pauline, and escaped with her to the top of a construction site. The object of the game was to climb up through

the girders while dodging the gorilla's projectiles, and then vanquish the gorilla and rescue the girl. The goal, in other words, was to get to the end of the game, not just to pile up points. ("Donkey" was the word Miyamoto found in a Japanese-English dictionary for "stubborn" or "goofy." "Kong" was a word for gorilla.) Prior to Donkey Kong, games had been developed by engineers and programmers with little or no regard for narrative or graphical playfulness. Donkey Kong, which débuted in 1981, had a story, a sense of humor, funny music (which Miyamoto helped write), and an ingenious game logic. It had four distinct screens, like a manga panel. This was also a new and soon-to-be-ubiquitous genre: what Miyamoto has called a running/jump-ing/climbing game, otherwise known as a platform game. At first, the Nintendo executives in America thought that Donkey Kong, as both a name and a game, was doomed. Looking for a better name for Jumpman, they settled on Mario, because of his resemblance to their landlord. To their surprise, the game was a huge hit.

Mario, of course, went on to bigger things. When Nintendo released the Famicom in the United States, in 1985 (it was rechristened the Nintendo Entertainment System, or N.E.S.), Super Mario Bros. was the game that sold the machine and in turn laid claim to the eyes, and the thumbs, of the world. The market for home games had crashed, and several companies went under or got out. Super Mario represent-ed a re-start. Again, the object was the rescue of a maiden, who has been kidnapped by Bowser, or King Koopa, an evil turtle. Mario, now a plumber, and joined by a lanky brother named Luigi, bounced through the Mushroom Kingdom, dodging or bopping enemies in the form of turtles, beetles, and squid, while seeking out mag-ic mushrooms, coins, and hidden stars. When you set down these elements in ink, they sound ridiculous, but there is something in this scenario that is utterly and peerlessly captivating. There were eight worlds, with four levels each, which meant that you had to pass through thirty-two stages to get to the princess. You travelled through these worlds left to right, on what's called a side-scrolling screen. It wasn't the first side-scroll game, but it was the most charming and complex. What's more, the complexity was subtle. Yokoi, Miyamoto's mentor, and the inventor of the Game Boy device, had urged him to simplify his approach. The game had just fifteen or twenty dynamics in it—how the mushrooms work, how the blocks react when you hit them—yet they combined in such a way to produce a seemingly limitless array of experiences and moves, and to provide opportunities for an alternative, idiosyn-cratic style of play, which brings to mind nothing so much as chess. Will Wright cited the theory of emergence—the idea that complex systems arise out of the inter-action of several simple things. "The hardware wasn't much better than Atari's," he said. "The polish and the depth of the games were. Super Mario was so approach-able, so simple, so addictive, and yet so deep." The game's musical score, an entranc-ing suite by the Nintendo composer Koji Kondo, may be to one generation what "In-A-Gadda-Da-Vida" was to another.

Jamin Brophy-Warren, who publishes a video-game arts and culture magazine called Kill Screen, told me that there is something in the amplitude and dynamic of Mario's jumps—just enough supernatural lift yet also just enough gravitational resistance—that makes the act of performing that jump, over and over, deeply satisfying. He also cited the archetypal quality of Mario's task, that vague feeling of longing and disappointment which undergirds his desperate and recurring quest for the girl. "It's a story of desire," Brophy-Warren said.

There are generally two approaches to thinking about games: narratology and ludology. The first emphasizes story, the second play. The next time I played Super Mario, on the Wii (you can order all the vintage games), I found myself in a narratological mode. Mario reminded me of K. and his pursuit of the barmaid Frieda, in Kafka's "The Castle," and of the kind of lost-loved-one dreams that "The Castle" both mimics and instigates. But then a Koopa Troopa got me, and I had the distinct thrill of starting over with the press of a button—quarters hoarded now only for parking meters. If the game was anything, it was unpretentious, and it was better to approach it that way. As Wright had said, "When you play his games, you feel like you're a kid and you're out in the back yard playing in the dirt."

A year after the début of Super Mario Bros., Nintendo released Miyamoto's Legend of Zelda. Unlike Mario, which was linear, Zelda let you venture in all directions, exploring worlds within worlds, with an array of choice and depth never seen before in a video game. The ingenuity of the coding made the game's imaginary world, called Hyrule, seem boundless. The game was hard to figure out: more puzzle than plaything.

Hyrule, of course, was in many ways based on Miyamoto's childhood adventures. Miyamoto told Sheff not only about the cave but about dares among his friends to make forays into neighbors' basements and yards, or about a neighbor's bulldog that would charge him each time he passed by, jerking on its chain, or about getting stuck high in a tree or wondering what was at the bottom of manholes. He filled his games with his childlike interpretation of the world as a carnival of quirky perils and hidden delights. Hyrule, he once said, is "a miniature garden that you can put into a drawer and revisit anytime you like."

Nintendo is insistent that it's in the entertainment business, presumably because entertainment implies accessibility and ease—greater commercial reach. The term "entertainment" also suggests passivity, and so Nintendo's emphasis on it does a disservice to video games—the good ones, anyway. You take in entertainment but take part in play. One you watch, the other you do. You might say that video games

are both diminished and enriched by the fact that we have to play them in order to enjoy them. "Many video games ask for a lot in order to be played, so it is not surprising that some people do not play video games," the Danish ludologist Jesper Juul has written. "Video games ask for much more than other art forms."

Entertainment can put on airs; it might, over time, turn into something else, like art, literature, or a department at Brown. Novels, as we're often told, were once deemed frivolous, much in the way that video games are now. "Video games are bad for you?" Miyamoto once said. "That's what they said about rock and roll!" Certainly, video games have their highbrow evangelists and critical apologists, who may consider them to be cultural artifacts, coded texts, mythopoetic fictions, or political paradigms. In this respect, they may have more in common with opera than with hopscotch or cribbage. And yet they are first and foremost games, and games, regardless of how much we may love them, are by definition trivial and superfluous. For whatever reason, everyone deems some games worthier or more virtuous than others (except for those outliers who have no interest in any kind of game at all). You may think that bridge is noble, and that blackjack is dumb; that football is courageous, while squash is for wimps, or else that football is idiotic and squash refined. Often, the judgments have to do with ancillary benefits: Athletics enhance fitness and character but take time away from your studies or the festival of foreign films. Chess stimulates the mind but can crimp your love life. Video games, no matter how many people love them, rarely fare well in these matchups. The best analogue for their combined disreputability and ubiquity may be masturbation.

And yet the success of this "casual revolution," as Juul has called the spread of easier, more accessible video games, like the Finnish sensation Angry Birds, has engendered the idea that games should be more widely integrated into everything we do— that we are insufficiently engaged unless we are passing simultaneously through a real world and a simulated one. The answer is more games, not less, according to Jane McGonigal, a game designer and the author of the forthcoming book "Reality Is Broken: Why Games Make Us Better and How They Can Change the World." Her dream, as she put it in a speech last spring, is "to make it as easy to save the world in real life as it is to save the world in online games." We try harder when we play. "In game worlds, I believe that many of us become the best version of ourselves," she went on.

The Dutch cultural historian Johan Huizinga, in his classic 1938 study "Homo Ludens" ("Man the Player"), argued that play was one of the essential components of culture—that it in fact predates culture, because even animals play. His definition of play is instructive. One, play is free—it must be voluntary. Prisoners of war forced to play Russian roulette are not at play. Two, it is separate; it takes place outside

the realm of ordinary life and is unserious, in terms of its consequences. A game of chess has no bearing on your survival (unless the opponent is Death). Three, it is unproductive; nothing comes of it—nothing of material value, anyway. Plastic trophies, plush stuffed animals, and bragging rights cannot be monetized. Four, it follows an established set of parameters and rules, and requires some artificial boundary of time and space. Tennis requires lines and a net and the agreement of its participants to abide by the conceit that those boundaries matter. Five, it is uncertain; the outcome is unknown, and uncertainty can create opportunities for discretion and improvisation. In Hyrule, you may or may not get past the Deku Babas, and you can slay them with your own particular panache.

The French intellectual Roger Caillois, in a 1958 response to Huizinga entitled "Man, Play and Games," called play "an occasion of pure waste: waste of time, energy, ingenuity, skill, and often of money." Therein lies its utility, as a simulation that exists outside regular life. Caillois divides play into four categories: agon (competition), alea (chance), mimicry (simulation), and ilinx (vertigo). Super Mario has all four. You are competing against the game, trying to predict the seemingly random flurry of impediments it sets in your way, and pretending to be a bouncy Italian plumber in a realm of mushrooms and bricks. As for vertigo, what Caillois has in mind is the surrender of stability and the embrace of panic, such as you might experience while skiing. Mario's dizzying rate of passage through whatever world he's in—the onslaught of enemies and options—confers a kind of vertigo on the gaming experience. Like skiing, it requires a certain degree of mastery, a countervailing ability to contend with the panic and reassert a measure of stability. In short, the game requires participation, and so you can call it play.

Caillois also introduces the idea that games range along a continuum between two modes: ludus, "the taste for gratuitous difficulty," and paidia, "the power of improvisation and joy." A crossword puzzle is ludus. Kill the Carrier is paidia (unless you're the carrier). Super Mario and Zelda seem to be perched right between the two.

Months after seeing Miyamoto in Los Angeles, I was invited to meet with him in Japan. This stage was tricky. The convolutions of the Japanese transit system—various private and public railways stacked atop one another, each with its own fare regimen—were like the early subterranean screens of a Super Mario game. Repetition improved performance; the efficient conversion of yen coins into ticket stubs and the confident stride to the proper track gave rise, like the successful navigation through Mario's sewers and the ingestion of Fire Flowers and Starmen, to a pleasurable sense of competence and grace.

Miyamoto recognizes that there is pleasure in difficulty but also in ease, in mastery,

in performing a familiar act with aplomb, whether that be catching a baseball, dancing a tango, doing Sudoku, or steering Mario through the Mushroom Kingdom, jumping on Goombas and Koopa Troopas. His games strike this magical balance between the excitement that comes from facing new problems and the swagger from facing down old ones. The consequent sensation of confidence is useful, in dealing with a game's more challenging stages, but also a worthy aim in itself. "A lot of the so-called 'action games' are not made that way," Miyamoto told me. "All the time, players are forced to do their utmost. If they are challenged to the limit, is it really fun for them?" In his own games, Miyamoto said, "You are constantly providing the players with a new challenge, but at the same time providing them with some stages or some occasions where they can simply, repeatedly, do something again and again. And that itself can be a joy."

Our conversation took place at Nintendo's headquarters, in an industrial neighborhood south of Kyoto's central train station. Across the street was an electrical switching station and, beyond that, an elevated segment of superhighway, still under construction, ending abruptly in the air. The Nintendo building is a giant white cube, seven stories tall, surrounded by a plaza of white cobblestone and beyond that a white brick wall. From the upper floors, a programmer could see, in the distance, the pagoda roof of the main hall of Tofuku-ji, an eight-hundred-year-old Zen temple, rising over the trees at the edge of town. The Nintendo building is just ten years old, but, for video-game fans, who sometimes wait outside the gates for a glimpse of Miyamoto, it is already something like the Kaaba, in Mecca. He generally does not consent to autograph requests, for fear of being inundated. He is more often recognized, or at least approached, by foreign tourists than by Japanese, occasionally while he is out walking his dog. His first thought is that the tourists are looking for directions. To preserve his anonymity, he makes it a point not to appear on Japanese TV programs.

The front lobby was vast and unadorned. A young assistant led me down the hall and into a conference room and instructed me to sit facing the door: traditionally a seat of honor for a guest. Someone had arranged some Super Mario plush toys on a windowsill. I had repeatedly asked for, and been denied, a tour of the offices or any opportunity to see Miyamoto outside this room. When I asked the assistant who'd shown me to the conference room where Miyamoto was, he replied, "Mr. Miyamoto is the person who is very difficult to find. In Nintendo, everyone wants to find him." Five of the building's seven floors are occupied by game developers, half of them artists and half of them engineers.

Miyamoto appeared a moment later, accompanied by Yasuhiro Minagawa, a Nintendo spokesman who would act as Miyamoto's translator. Amid small talk about a

recent heat wave in Japan, Minagawa, tall and tousled, said, "I use the term 'murderous.' " Miyamoto, dressed in a striped button-down shirt and black pants, regarded me with a wide smile. Up close, I could see that he had freckles and a few gray hairs. His upper lip sticks out a bit, like that of a character in a Matt Groening comic strip. He was carrying a beat-up and bulging old leather diary with a painted, hand-tooled relief of a horse on its cover. A friend had made it for him. It was where he jotted down thoughts and ideas. He said he was very busy: there was a deadline looming for the release of a new handheld device with a 3-D display that requires no 3-D glasses. Also, it was the twenty-fifth anniversary of the release of Super Mario, and he was judging a competition in which thousands of players had used a Nintendo program to make and submit their own Mario animations. Miyamoto himself was to narrow these down to fifty finalists.

As Minagawa translated each of my questions, Miyamoto often buried his face in his hands or rubbed his eyes and frowned, as though Minagawa had misheard me and, instead of asking Miyamoto to parse the differences between entertainment and play, was telling him he'd gone broke. But it became clear, once he began talking, animatedly, with extravagant hand gestures and giggles of delight, that the apparent anguish was merely an expression of deep thought, a counterpoint to his ebullience in answering. Miyamoto spoke in paragraphs, with Minagawa taking notes on sheets of paper, which he tossed aside as we went. (Minagawa's translations were necessarily hasty. In places, I have cleaned up his English.)

I mentioned the quote in David Sheff's book about the very serious men who devised the company's early games, and asked Miyamoto what he and these serious men understood.

"It's about enjoying something," he said. "I used to draw cartoons. I'd just show them to some of my friends, expecting that they were going to appreciate them, that they were going to enjoy reading them. And I haven't changed a bit about that. When I'm making video games today, I want people to be entertained. I am always thinking, How are people going to enjoy playing the games we are making today? And as long as I can enjoy something other people can enjoy it, too.

"Nowadays, my main focus is on trying to find some new, unprecedented experiences that people can get deeply into, deeply absorbed in. But some of my job involves something completely different—when there is a game that is not yet interesting, I have to think about how I can change it or adjust it so that people can be entertained." In fixing games, he relies on his taste and intuition. And then he asks family and friends to play them. Nintendo doesn't use focus groups. "I always remind myself, when it comes to a game I'm developing, that I am the perfect, skillful

player. I can manipulate all this controller stuff. So sometimes I ask the younger game creators to try playing the games they are making by switching their left and right hands. In that way, they can understand how inexperienced the first-timer is.

"What we demand in development is sharing the common feeling." Minagawa interjected that Miyamoto had used the term kyokan: "Kyo is the sharing and kan is the emotional feeling."

"Suppose someone is talking about his children," Miyamoto continued. "If I am a father, I can understand personally what he's talking about. We have kyokan." The term kyokan was used by the primatologist Masao Kawai to describe his empathic approach to studying monkeys; Kawai would befriend them and insinuate himself into their lives, so that he could better observe their behavior. Miyamoto said he wants the game players and the developers to have kyokan: for the players to feel about the game what the developers felt themselves. The developers are the primatologists, the players the monkeys.

One method for achieving understanding is the doling out of information, about what to do when, in just the right doses. "We always use the term 'difficulty' when we talk about gameplay," he said. "If a game is too difficult, people may not want to play it again. With the appropriate level of difficulty, people may feel like challenging it again and again. As they repeat it, the amount of information they can acquire naturally increases. . . . I always try to be conscious about that kind of gradual improvement.

"Sometimes the test players complain that there are too many enemies in one stage. And when I approach the designer of that scene with that kind of complaint sometimes he or she says, 'Oh, maybe they couldn't find the stars at the beginning. As soon as they find out that the star makes you invincible, it's more joy.' And the developer insists that hiding the star in the beginning is going to be great. But if game players don't understand this, and they can't find the star, then the game doesn't make sense at all."

He compared the craft of luring players forward in a game to writing a good detective novel. "To what extent are you going to hide the secrets?" he said. "In order for a mystery or a joke to work, we have to provide the necessary amount of information. Not too much, not too little, but the perfect balance, so that in the end people can feel, How come I didn't realize that? The difficulty with video games, unlike movies or novels, where the authors themselves can lead the audience to the end, is that in games it's the players who have to find their own road to the end."

Earlier, Miyamoto, a bluegrass fanatic, had suggested that learning to play a game is like learning to play a musical instrument. "Take the guitar," he said. "Some people, when they stumble over how to accurately place their fingers in an F chord, they actually give it up. But once you learn how to play an F chord you become more deeply absorbed in playing the guitar." The F chord, as he sees it, is a kind of bridge between indifference and pleasure. "If the bridge is too easy to pass by, it's called 'entertainment.' If it's rather difficult, it can be called 'hobby.' "

Miyamoto often listens to music on his way to work. (He used to walk or ride a bicycle, but now Nintendo makes him drive, for his safety and its peace of mind.) "If I find that a certain musical phrase is very nice, probably the first thing I am going to do in my office is I am going to pick up the guitar and try to imitate that phrase until I can get it right," he said. He uses a program on a Nintendo DSi handheld device to slow down the phrases, to unpack and understand them.

This urge to improve is a key ingredient in the formula, if there is one, for what keeps people playing a game. Miyamoto has become an aficionado of absorption. He has observed, for example, that some of his friends at his swimming club—he swims to stay in shape—have become obsessed with their technique and its contribution to speed and faster times. He also has friends who collect various things, and he studies the seriousness with which they tend to their collections.

He also studies himself. Miyamoto is the closest thing there is to an autobiographical game creator. His experience with his family's pet Shetland sheepdog, and, more to the point, with other dog owners, gave him the idea for Nintendogs, a popular game in which you create a simulation of a pet and look after it on the DSi. And Pikmin, a game featuring tiny creatures that have stalks protruding from their heads and that live and travel in pods called Onions, arose out of his time puttering in the garden. When he turned forty, he decided to give up cigarettes and pachinko and get in shape. He took up swimming and jogging, and began weighing himself every day on a digital scale. He hung graphs of the data, down to the gram, on the bathroom wall. "Once the graphs I'd recorded started to pile up, I started to feel a strange fondness for them—regardless of whether I was gaining weight or losing weight," he said a few years ago, in a Q. & A. with Nintendo's president, Satoru Iwata. All this became, for his wife and his daughter, a source of curiosity and amusement, and an idea occurred to him. "This could be a nice trigger for conversation," he told me. "If I could make it into a game, it could probably help isolated fathers get more association with their daughters." He brought the notion to the team of designers developing games for the Wii. They were skeptical, but eventually they came out with Wii Fit, a fitness game, which has since sold thirty-seven million copies worldwide. It suits his view, and the industry's, that introducing an element of play to a

transaction or a task can get people to do things they might not normally do. In the commercial sphere, this is called "gamification," or, more gratingly, "funware": make something a game, in a supermarket or on a social network, and Homo ludens will play it. "It's a shame if we narrowly limit the definition of video games," he said.

This tendency for his personal fixations to become platinum-selling video games has given rise to an obsession, among gamers, with whatever Miyamoto says he's up to. When I asked him, to that end, what he did for pleasure these days, he said, "I like changing the interiors of the house, or sometimes even the exterior of the house. Sometimes I'm called the Sunday carpenter. Even at midnight or at some early hour in the morning, I will change the location of the sofa in the living room. That's me. Something tells me that by changing it my life is going to be more enjoyable. At least it's going to give me some fresh feeling." (Rearranging the furniture: this game came along years ago, and it was called the Sims.) In terms of non-video games, he prefers games of luck, in which a weaker player has a chance of winning, such as hanafuda, to games of skill, like go and shogi. "I'm not as good at so-called 'strategic games' at all."

The Japanese word for play is asobi. In "Homo Ludens," in a chapter summarizing various languages' expression of the "play-concept," Johan Huizinga notes that asobi can mean "play in general, recreation, relaxation, amusement, passing the time or pastime, a trip or jaunt, dissipation, gambling, idling, lying idle, being unemployed." The opposite of asobi might be majime, which can mean "seriousness, sobriety, gravity, honesty, solemnity, stateliness; also quietness, decency, 'good form.' It is related to the word which we render by 'face' in the well-known Chinese expression 'to lose face.'"

"Anything that is impractical can be play," Miyamoto said. "It's doing something other than what is necessary to continue living as an animal." As to its purpose, he said, "When it comes to other animals, they play to prepare themselves for hunting. If you ask me why human beings play, well, I just don't know. It must be just for pleasure. We generate chemicals in our brain so that we can have some pleasure, and by now we've come to understand that pleasure makes you happier, and being happier makes you healthier."

The games Nintendo has been making have become less isolating and more social. The Wii was designed, in some respects, to bring gaming out of the basement and into the living room—to make it more acceptable to parents, many of them retired gamers themselves, and to reach more eyeballs and thumbs. "I became more conscious about the environment in which people play the video games, especially after we had our first child," Miyamoto said. (He has a son, twenty-five, who works at an

advertising agency, and a daughter, twenty-three, who is studying zoology.) His children played video games, although on sunny days he made them go outside to play. "I don't think I ever talked about doing homework first. But, if there was any rule, it was that inside our house the video games—hardware, software—they are my property, so that when the children want to play they have to borrow them from me. So, for example, when I said, 'It's time for you to stop. Otherwise you cannot play again at all'—I think it worked!"

He doesn't have much time anymore to play other games. He noted, with what seemed to be some annoyance, that the long pregame movie sequences that come with most games—prologues that establish the narrative and the scene and that involve no gameplay at all—take what little time he has actually to play. (As it happens, Donkey Kong was among the first games to have a pregame sequence.) To find out what's out there, he prefers to interview Nintendo's developers and employees about their experiences playing games. When I asked him which game developers he admired, he named only one, Will Wright. "It's becoming increasingly difficult to tell, from the looks and the play of the games, who has created the software," he said.

Unlike most of the better-known game designers, Miyamoto doesn't have a particular niche. His games have spanned many genres. He's also been at the forefront of three major phases: the side-scrolling game; the free-roaming 3-D game, like Super Mario 64 and Legend of Zelda: Ocarina of Time, to which Grand Theft Auto and its ilk owe their existence; and, with the Wii, the motion-capture game, now the prevailing paradigm. (Consider Kinect, the new Microsoft toy.) The only big shift he missed, perhaps, is the push toward hyperrealistic graphics.

"I recognize that there are certain types of games for which the photorealistic graphics are suited," he said. "But what I don't like is that any and all games are supposed to be photorealistic." He prefers to direct his team's efforts and resources toward the quality of the gameplay—the choices and challenges inherent in the game, also known as the game mechanics. Mario, his most famous creation, owes his appearance to the technological limitations of the first Donkey Kong game. The primitive graphics—there were hardly enough pixels to approximate a human form—compelled Miyamoto to give Mario white gloves and red overalls (so that you could see his arms swing), a big bushy mustache and a red hat (to hide the fact that the engineers couldn't yet do mouths or hair that moved), and a big head (to exaggerate his collisions). Form has always followed functionality. The problem now, if you want to call it one, is the degree of functionality.

What impressed him most about the early manga artists of his youth, aside from

the fact that they created a genre "from nothing at all," was how they later subverted it. "When they became much older, they started to destroy the style they themselves had created," he said. For example, they began to ignore the cartoon-panel framework or combine multiple narratives or else use the manga form to explore macroeconomics or their own private thoughts. "When I started working for the company, I thought that someday I would like to do the same. I wanted to destroy the styles that we ourselves created. I don't think we can do so completely, but I think that in the way that we are making video games today we might be getting closer to my idea of destroying the original style." He went on, "Because we ourselves have created the original format or style of video games, we understand why we had to do it at the time. Because we understand that, we can also understand why some of them must be kept intact and why some of them we can destroy."

Miyamoto fans have made pilgrimages to some of the larger limestone caves near Sonobe. These have electric lights and permanent stairways and are open to tourists. He told me that although he'd visited these caves, they weren't the ones he'd talked about exploring as a boy. His were smaller, more hidden. A few years ago, he was in Sonobe and went to look for them. He found that houses and roads had replaced a lot of his old terrain, and that someone, presumably out of concern for safety, had blocked off the entrances to his caves.

Two days after my meeting with Miyamoto, I went to Sonobe to have a look around. I took a taxi. The driver, like Mario, wore white gloves. He spoke no English. It was a bright, mild autumn day; in the hills outside the city, the foliage was beginning to turn. We got off the highway in Sonobe, which seemed both rural and light-industrial in a way that reminded me of Nyack. The houses were small and close together, with handsome roofs of ceramic tile. We stopped alongside the Sonobe River, where Miyamoto, as a boy, had caught fish with his hands, and I descended the bank and stared at the riffles for a while until I realized, with a start, that there were six or seven giant carp in a pool right by my feet. Then we stopped at the Shinto shrine, at the foot of one of Miyamoto's mountains; a quick reconnaissance of the bamboo forest that abutted it turned up nothing but garbage—an instant-ramen wrapper, a gym sock. Next up was Komugi Mountain, atop which, Miyamoto had told me, I would find the ruins of Sonobe Castle, the epicenter of his childhood explorations. We parked near a collection of municipal buildings, including a new pagoda-style "international center" that had been modelled on the castle. We walked past a drained swimming pool and a little park decorated with statues of stone monkeys and lions to a paved lane that appeared to wind its way to the top of Komugi Mountain, which, it turned out, was hardly a mountain at all; it had an elevation of just a few hundred feet. It was thinly forested, with a sign every hundred yards or so describing the flora in Japanese. The driver and I stared helplessly at the signs; I

was reminded of those moments in Zelda when you push a button on the Wii Remote and are provided with hints about what to do next. The button, in this case, was defective. Sunlight slanted through the trees; the hollows were full of ferns and mushrooms. Near the top, a path broke off and led to a flat open plot, where the castle should have been, but, save for an old stone wall, there were no ruins to be seen. A set of austere monoliths dominated the site. There was also a small nursery surrounded by a fence.

On a whim, I went down the backside of the hill. It was steeper here, and more thickly wooded, and the earth underfoot was gravelly and slick. I had to hold on to branches to keep from sliding. About twenty yards down, I came across a hole in the ground. Someone had slid some logs into it lengthwise, to narrow the entrance. Leaves had packed in around them, like mortar. Three logs had been lashed together and planted in the earth as a crude little fence. For a probe, I found a branch nearby, but it hit nothing. Holding my cell phone, I stuck my arm in, but the phone's display illuminated only roots and dirt. The opening, if you'd cleared out the stuff blocking it, would have had room for the frame of a boy with a lantern.

I wandered around in the brush for a while longer but found no other open holes. Visible below, in the valley, was a running track, a soccer pitch, and a giant dirt lot, where you could hear the shouts and screams of children at play. I bushwhacked back to the cab, and we drove around to where the sounds had been coming from: a schoolyard. I stood at the edge of it for a spell and watched a bunch of boys, aged nine or so, play a frenzied and unruly game of kickball. On one side of the yard, a group of girls were playing something else. One at a time, they dashed in and out of the brush at the foot of Komugi Mountain. The object, it seemed, was to venture in deeper, or stay in longer, than the girl before.

Iwata Asks: New Super Mario Bros. Wii

Satoru Iwata, Iwata Asks Dec 01, 2009

Mario Couldn't Jump At First

IWATA

In this interview, we're going to talk about New Super Mario Bros. Wii, but rather than diving straight into a discussion of the new title, I'd like to begin by talking about Mario's roots. There will of course be a lot of readers who know all about this, but I think there are also people who are completely in the dark about how Mario began.

MIYAMOTO

Yes, you're right.

IWATA

Shall we begin by talking about the period of Mario's initial conception, when he was known as "Jumpman"?

MIYAMOTO

Sure. Now, this is something I've been asked about in hundreds of interviews, so I'll make it quick! (laughs) In the Pac-Man era, there were a number of games that were really popular in the video game arcades. Nintendo had released titles such as Sheriff but none of them quite achieved the level of popularity where you could call them hits.

IWATA

This is back when Nintendo had yet to release the Nintendo Entertainment System and while the company had made a number of arcade machines, we were still unable to come up with a hit game.

MIYAMOTO

That's right. So it was at this point that the President of Nintendo at the time, Yamauchi-san, told us: "Make games that sell more!"

IWATA

"Make games that sell more!" That's some task he set you! (laughs)

MIYAMOTO

It was some task indeed! (laughs) So we decided to research what made hit titles so popular. Well, when I say "research", I just mean playing the games! (laughs)

IWATA

Playing in the name of research! (laughs)

MIYAMOTO

As you can imagine, I was a big fan of games. What's more, while now there are lots of people at Nintendo who are highly skilled video game players, at the time I was one of the best.

IWATA

People would gather round to watch when you were playing in the arcade, wouldn't they?

MIYAMOTO

Before I knew it, there'd be a crowd of people around me!

IWATA

There was even a time when I had people gathered around me, you know!

MIYAMOTO

At the time, dot-eating games predominated, Pac-Man being the most well known…

IWATA

Yes, in arcades at the time you'd find a number of different types of games based around eating dots.

MIYAMOTO

Right. At the same time, you were also seeing the emergence of side-scrolling games where your character would run along. As I was originally an industrial designer, I would analyze those games while I played them, trying to figure out what it was about the way the games were put together that made them enjoyable and made people want to play them again.

IWATA

So you wanted to know what it was that made players insert another 100 yen coin once the game was over and have another go?

MIYAMOTO

Right. And basically, I concluded that this was born of the players being mad at themselves. So I would try to analyze how the game made players feel that way. It was when I was mulling over these issues that a more senior colleague, Gunpei Yokoi, was good enough to explain a lot of things to me. I don't want to get bogged down in too much detail about the intricacies of game design, so I'll skip over this. Anyway, up until that point, I had been working as a graphic and packaging designer for games developed by other people...

IWATA

So you were drawing pixilated images and creating the pictures used on arcade machines...

MIYAMOTO

I was involved in making games for arcades, but the kind of ideas I was suggesting weren't really getting picked up on... But then I was lucky enough to be entrusted with the entire development of a software title...

IWATA

So that was the big turning point in your development as a game designer?

MIYAMOTO

Right. And it was then that, having rigorously analyzed what exactly made people want to play one more time, I sketched out ideas for five games. At this point, Nintendo was the licensee for Popeye.

IWATA

Yes, the company was releasing Popeye playing cards and Popeye Game & Watch titles.

MIYAMOTO

That's why at first I asked if I could make a game using Popeye. The basic concept of Popeye is that there is the hero and his rival who he manages to turn the tables on with the aid of spinach.

IWATA

When you put it like that, it's the same as Pac-Man, isn't it? (laughs)

MIYAMOTO

Yes, it's identical to Pac-Man! (laughs) So I sketched out a few ideas for games using Popeye. At that point, Yokoi-san was good enough to bring these ideas to the President's attention and in the end one of the ideas received official approval. Yokoi-san thought that designers would become necessary members of development teams in order to make games in the future. And that's how Donkey Kong came about.

IWATA

But originally it was going to be a Popeye game.

MIYAMOTO

That's right. But while I can't recall exactly why it was, we were unable to use Popeye in that title. It really felt like the ladder had been pulled out from under us, so to speak.

IWATA

So even though you were making a game about climbing ladders, you had the ladder pulled out from beneath you before you even got started! (laughs)

MIYAMOTO

Great gag! You deserve a standing ovation for that one! (laughs) Anyway, at the time we were at a loss as to how to proceed. Then we thought: "Why not come up with our own original character?"

IWATA

So basically Donkey Kong and Mario came about once the ladder had been pulled out from beneath you.

MIYAMOTO

Exactly.

IWATA

Miyamoto-san, you really do lead a charmed life!

MIYAMOTO

It was a really lucky break! So next we began to flesh out the idea for a game based on the concept we had come up with. Now, a fun game should always be easy to understand — you should be able to take one look at it and know what you have to do straight away. It should be so well constructed that you can tell at a glance what your goal is and, even if you don't succeed, you'll blame yourself rather than the game. Moreover, the people standing around watching the game have also got to be able to enjoy it. These were the kind of issues I discussed with Yokoi-san.

IWATA

So you were analyzing what made games fun to play.

MIYAMOTO

Yes, we were. Let's say, for example, that there's one action in the game that the player can perform easily. Then let's add another simple action. These actions may be simple in themselves, but when the player is required to do them both at the same time, it becomes a whole lot more tricky.

IWATA

So while those two actions might be easy to pull off on their own, when you try to do them simultaneously, it gets more difficult. And it's precisely because you think it should be easy to do that you get mad at yourself when you don't quite manage it, right?

MIYAMOTO

Precisely. So let's say we make a number of uneven, overlapping slopes…

IWATA

Where you have to climb ladders and jump and so on.

MIYAMOTO

So you're aiming to get safely to the goal using short cuts while constantly trying to predict the route that the barrels rolling towards you are going to take. It's easy to climb higher and higher. It's also easy to avoid the rolling barrels. But it's when you try to do those two things at the same time that it becomes challenging. What's more, you're also thinking about how to take the shortest possible route, so it gets even more difficult. We thought that we could work with that concept. It was at that point when we tried to make the screen scroll and were told: "That board doesn't scroll!" (laughs)

IWATA

The "board" that you just mentioned is the circuit board inside the arcade game cabinet. At that time, there was a fair amount of individuality, shall we say, in each machine and, depending on the specific type of hardware, there were different limitations imposed. When you began work on Donkey Kong, the cabinet, which you were supposed to use, included a board, which wouldn't allow games to scroll.

MIYAMOTO

As we wanted the game to be played on at least four connected screens, we simply referred to that as "scrolling". (laughs)

IWATA

So the fact that Donkey Kong is played over four screens stems from your original desire to make it scroll?

MIYAMOTO

Yes, that's right. The technical supervisor at the time asked us what on earth we were thinking: "One screen is plenty for a regular game! But you're making four separate screens! You might as well ask us to make four different games!"

IWATA

But you were dead set on doing it that way.

MIYAMOTO

Yes, I was. I also recall that the cabinet we were making the game for had one joystick and one button, but initially I intended it to be controlled using only the joystick.

IWATA

So what you're saying is that if that cabinet hadn't happened to have a button, Mario wouldn't have jumped? You can't imagine Mario now without thinking of him jumping! (laughs)

MIYAMOTO

Well, that might have been the case. Originally it was a game where you had to escape from a maze. To allow players to jump and avoid dangers would have spoiled the strategic element of the game. But then we thought: "If you had a barrel rolling towards you, what would you do?"

IWATA

Naturally, you'd jump over it! (laughs)

MIYAMOTO

Of course you'd jump over it! (laughs) So we decided to use the button to allow players to jump and when we made a prototype to try it out, it worked really well. I think that if we hadn't allowed Mario to jump, it would have most likely proved to

be a horrendously difficult game to play.

IWATA

You'd have had to focus on avoiding the barrels while climbing up through the maze. That would have required a huge amount of grit and determination.

MIYAMOTO

Also, if we'd made it so you'd been able to jump by pressing up on the joystick, the name "jump button" would never have come about! On the 2nd stage, we had vertical lifts and we were concerned as to how the player would be able to get on them. But if Mario jumped…

IWATA

Then getting on and off them would be a breeze! (laughs)

MIYAMOTO

It was then that we decided to go with jumping, which worked out for the best.

IWATA

By allowing Mario to jump, you were able to solve multiple issues at the same time.

MIYAMOTO

We were also able to make use of that spare button! (laughs) So that's the story of how Mario became able to jump.

The Reason Mario Wears Overalls

IWATA

Mario's trademarks are his moustache, his hat and his overalls. Why did you decide to give him this look? I have no doubt you've spoken about this many times before, but I'd like to take this opportunity to ask you to tell us about it one more time.

MIYAMOTO

Certainly. The original Mario was a 16 X 16 pixilated image. At that time, when games made overseas used human characters, they were always rendered with life-like proportions.
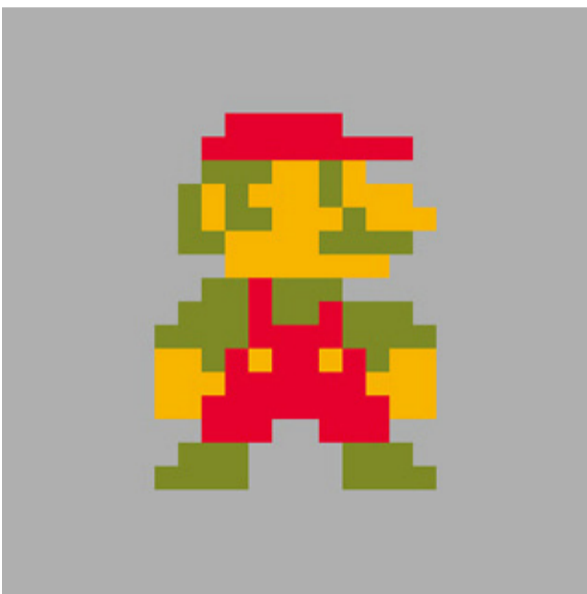
IWATA

It felt as if the developers weren't happy unless they'd drawn a figure that was eight-heads tall.

MIYAMOTO

Or sometimes it would be six-heads tall. But actually, the number of pixels we were able to use was so limited that, if we did that, we'd only have had a couple of pixels for the face.

IWATA

With two pixels, you wouldn't even have been able to draw eyes. You'd basically have ended up with a matchstick figure. In early video games from overseas, that kind of figure often featured.

MIYAMOTO

And as they just didn't resemble human figures, I was absolutely convinced that they'd been designed by people who couldn't draw!

IWATA

(laughs)

MIYAMOTO

I thought it was most likely that it was the programmer who was drawing these figures. But I thought: "I know how to draw!" I mean, I'm not saying I can draw as well as an artist, but I was confident that I was better at drawing than a programmer. That's why I started by saying: "Right, let's draw something that actually looks like a person's face!" So I drew the eyes, the nose, the mouth and...

IWATA

There's absolutely no way that you would have had enough pixels, right?

MIYAMOTO

Right, there weren't enough. Before you know it, you've used up 8 X 8 pixels. But if you draw a nose then a moustache, you don't really know if it's a mouth or a moustache, and it saves pixels.

IWATA

So if you draw a moustache, you don't have to draw a mouth.

MIYAMOTO

You don't have to draw a mouth, which makes a big difference. You only need one pixel for the chin and if you draw two vertical pixels, you've got eyes that hopefully look quite cute. (laughs) Also, because you can't fully draw hair, by making him wear a hat, you can reduce the hair to only a couple of pixels.

IWATA

So you made Mario wear a hat in order to keep the number of pixels you were using

down?

MIYAMOTO

Well, if you have hair, it also presents problems to animate it. And if you draw a hat, you can have the eyes directly beneath it.

IWATA

And with that the face is complete.

MIYAMOTO

But when you come to draw the body using the remaining pixels, there's a limit to what you can do. Furthermore, because we wanted him to run properly, we needed to animate him and we were only able to use three different frames for this. When Mario is running he moves his arms, but in order to make that movement easier to see, I thought it would be best to make his arms and his body different colors. So I wondered whether there was a type of outfit that was like that...

IWATA

And that's how you came up with overalls! (laughs)

MIYAMOTO

Right! Overalls were the only option! So that's how we ended up giving Mario overalls. Fortunately, the game was set on a construction site so we thought we had no other option but to make him a carpenter! (laughs)

IWATA

There's a sense of inevitability about all of this! (laughs)

MIYAMOTO

Then we gave Mario a pair of white gloves, in order to make his movements easier to spot when he jumped.

IWATA

So the entire design was a case of form being dictated by function. You can really see that your specialist field, industrial design, is evident in the final result. Then, because he jumped up and down, he became known as "Jumpman", right?

MIYAMOTO

Well, I called him "Mr. Video". My plan was to use the same character in every video game I made.

IWATA

So you had that plan right from the start? Why did you intend to use him in every video game you made?

MIYAMOTO

Well, I thought the way Hitchcock cropped up in all the films he directed was really cool! (laughs)

IWATA

(laughs)

MIYAMOTO

Or take manga artists like Osamu Tezuka and Fujio Akatsuka who have the same character popping up in a variety of different works. I think I was probably influenced by that at the time.

IWATA

If you were considering using the character in a number of titles, you must have been satisfied with the way Mario had turned out.

MIYAMOTO

I felt that I had come up with a pretty solid character, which is why I thought: "Right, I'll keep using him from now on!" That's why I decided a solid, imposing name like "Mr. Video" would work best. But thinking back, I don't think I should have gone with that name. Someone at Nintendo of America actually came up with the name Mario. If he had been called "Mr. Video," he might have disappeared off

the face of the earth. (laughs)

IWATA

(laughs) So moving on now to the game Mario appeared in after Donkey Kong...

MIYAMOTO

That was Mario Bros.

IWATA

Mario Bros. was a pretty impressive game and with the turtle shells that could be removed, as well as its very distinctive game world, it had elements that would connect it to Super Mario Bros.

MIYAMOTO

That's right. Mario Bros. was also a collaborative effort with Yokoi-san. He proposed that we make a competitive game and development started from there. In Donkey Kong, if Mario fell any distance that was greater than his height, he would be stunned and you'd lose a turn. But this time round, Yokoi-san said: "Why don't we let him jump down from higher places?" I thought that if we did that, it wouldn't be much of a game. But as I pondered it, I thought: "Why shouldn't Mario be able to perform some super-human feats?" Then we made a prototype with Mario running and bouncing around and we realized that this was great fun.

IWATA

So Mario became able to jump to higher places than he could in Donkey Kong.

MIYAMOTO

That's right. But at this point, we hit something of a dead end as we wondered what kind of game it was going to be. It was at this point that Yokoi-san, who is someone who considers problems from first principles, said: "Since we've got all these floors, why don't we make it so that Mario can hit the floors from beneath, and defeat the enemy?" But when we actually tried it we found that it was incredibly easy. Before you knew it, you had no enemies left.

IWATA

So without any risk to yourself, you could defeat your enemies simply by hitting them from below.

MIYAMOTO

And that made it a really cowardly kind of game. So then we made it so that you hit the enemies from below before going up to deliver the decisive blow.

IWATA

So you had to go up to strike the finishing blow.

MIYAMOTO

That's when we thought about what kind of creature could withstand being struck from below and would eventually recover. We racked our brains thinking what we could use…

IWATA

And that's how you came up with the turtle! (laughs)

MIYAMOTO

The turtle was the only solution! (laughs) Strike it from below and it flips over! Leave it for a while and it rights itself!

I Saw A Pipe On The Way Home From The Office

IWATA

So in a perfect example of function dictating form, you came up with the turtle —
and the Koopa Troopa was born! But how did things develop from there?

MIYAMOTO

Well, first we had to draw the turtle. At that time, I took it easy and asked the designer who was assisting me to work on it. And what he came up with was an incredibly realistic turtle! (laughs)

IWATA

That doesn't really fit with Mario's world, does it? (laughs)

MIYAMOTO

So then I drew one myself, all the while saying things like: "I don't suppose there's any turtle with a face this big…" Thinking about it afterwards, it did somewhat resemble a tortoise. Anyway, Hiroka-chan who was doing the sound for the game, and who is now the President of Creatures Inc., …

IWATA

You're talking about Hirokazu Tanaka…

MIYAMOTO

Yes. So while I was speaking to Tanaka-san, we got onto the subject of what the insides of a turtle were like.

IWATA

The insides of a turtle? (laughs)

12   Hirokazu Tanaka worked at Nintendo as a composer and was responsible for the music for many titles including Balloon Fight, Dr. Mario and Mother. He is currently the President of Creatures Inc.

MIYAMOTO

Originally, I wanted to make it easy to see when the turtle was about to get up again. Even if you make the flipped-over turtle shell begin to twitch before it recovers, the player is going to be unsure at which twitch it will turn itself over. We'd get really-ly excited discussing ideas like: "What if when you struck it from below, the turtle flew out of his shell and trotted around for a while before coming back to its shell? Then when it gets back into its shell, it's back on its feet!"

IWATA

Well, Tanaka-san is a really fun guy, after all!

MIYAMOTO

We decided that was a great idea and went ahead with the turtles coming right out of their shells.

IWATA

But turtles aren't just borrowing their shells like hermit crabs, you know! (laughs)

MIYAMOTO

That's just ridiculous! (laughs) No, turtles' spines develop to become shells, so of course real turtles aren't actually able to fly out of their shells. But in the end, while I knew that I was lying to children, I decided: "Look, this way it's easy to understand so we're going to make a creature like this!"

IWATA

So while it looks like a turtle, it's actually not a turtle at all.

MIYAMOTO

It's not a turtle! It's a Koopa Troopa!

IWATA

(laughs)

MIYAMOTO

So in that way, we tended to look at the functionality and design the game with that in mind.

IWATA

The story of how the turtle came about is one very particular example, but Mario Bros. is full of elements that connect it to the New Super Mario Bros. Wii title we will discuss today, with the pipes, the coins to collect and the fact that it had a multi-player mode.

MIYAMOTO

That's right. I think we were able to link its sequels to it very successfully.

IWATA

How did you come up with the idea of having pipes in the first place?

MIYAMOTO

It comes from manga.

IWATA

Manga?

MIYAMOTO

If you read old comic books, there will always be waste ground with pipes lying around.

IWATA

You're right! (laughs)

MIYAMOTO

So the idea that you could get inside pipes when you see them was one that seemed very natural to me. Then when I was making Mario Bros., I realized that if all the turtles that emerged were to fall down to the bottom of the screen, they'd end up

piled up there, which would be no good.

IWATA

The bottom of the screen would become turtle-ridden! (laughs)

MIYAMOTO

That's why I thought that in a closed-off space, we needed the same turtles to come and go. As the left and right of the screen were connected…

IWATA

If Mario went off the right of the screen, he would appear again from the left, wouldn't he?

MIYAMOTO

Right. But even with that in mind, having the top and bottom of the screen connected in the same way would have been somewhat odd. Then, on the way home from the office, I spied a concrete wall in a residential area which had a number of drainage pipes coming out of it. I thought: "I can use those!" (laughs) It's well established that something will emerge from a pipe and then go back into it.

IWATA

So that's how you made it so the Koopa Troopas that come out of the pipe at the top will go back into the pipe at the bottom. Just out of interest, why did you decide to make the pipes green?

MIYAMOTO

What's that?

IWATA

Well, pipes would normally be grey. I don't believe you'll often find green pipes.

MIYAMOTO

Well, that's the first time I've been asked that one! (laughs) I don't really remember

the reason why we made them green, but there weren't that many colors you could use in video games back then.

IWATA

Yes, it was very limited at that time.

MIYAMOTO

Of those colors, blue was very bright and beautiful. Green was also very nice when you used two different tones. Those were the things we considered when designing the look of the game.

IWATA

I see.

MIYAMOTO

So if we were using two tones together, green was the best color to have. We didn't make the pipes green because they had to be the same color as the turtles' shells or anything like that.

IWATA

It just ended up being a good match with the color of the turtles.

MIYAMOTO

Green was just a color that worked well when combining two shades.

IWATA

Right.

MIYAMOTO

That was a bit of a designer's response, wasn't it?

IWATA

(laughs)

MIYAMOTO

During the period that I was working on Donkey Kong, I would often go on ski trips in the winter. I would stare intently out of the coach window at the lights of the other buses and cars and wonder to myself things like: "Which colors are the most beautiful?" So while I was surveying things in that way...

IWATA

Surveying?

MIYAMOTO

Well, there was a time when I aspired to be a designer!

IWATA

(laughs) Well, video game development at that time was essentially a matter of working out how things could be achieved within the limitations imposed by the hardware.

MIYAMOTO

Yes, that's right. It was while coming up with graphics which fit nicely with the technology that I began to think: "You know what? This is a pretty fun job!"

IWATA

I think that because of the nature of the time, one was led to all kinds of weird and wonderful worldviews by all manner of strange routes. Now, I think that we should turn to Super Mario Bros. which will link in with today's discussion of New Super Mario Bros. Wii.

MIYAMOTO

It was from that time that I worked on the games together with Takashi Tezuka-san. I recall there was one time when we wanted a character that would fly up and down but we didn't have enough free space to make a new character.

IWATA

Sure enough, if you added up all the programming and graphical data for Super Mario Bros., you only had 40 kilobytes to work with.

MIYAMOTO

So we were asking ourselves what we could do when we thought: "Why not try giving the turtles wings!" (laughs)

IWATA

So the Koopa Troopas sprouted wings! (laughs)

MIYAMOTO

I thought that there's no chance this will work, but when we actually attached the wings, it looked pretty cute! (laughs) This became the Koopa Paratroopa.

IWATA

Was it Tezuka-san who suggested putting wings on the turtles?

MIYAMOTO

I believe so. On Mario 3, we also put wings on the Goomba and called it the Paragoomba. In those days, we were really able to do whatever we pleased.

Letting Everyone Know It Was A Good Mushroom

IWATA

What were your initial considerations when you began working on Super Mario Bros. for the Famicom?

MIYAMOTO

After Mario Bros., there were a fair few jumping-style games released by various companies and I felt that this kind of jumping game had been our idea.

IWATA

Donkey Kong involved jumping, as did Mario Bros., so you felt that Nintendo were the real originators of this kind of game.

MIYAMOTO

I did. I went as far as thinking that jumping is an original idea and that it should be patented! Anyway, I thought: "Right, I'm not going to let those other games top us!" (laughs) We had done tests where a large character jumped around with the blue sky in the background…

IWATA

Video games at that time usually had a black background.

MIYAMOTO

Video game designers back then wanted to keep that black background as it was less tiring for the players' eyes to see. But I felt like the time had come when people were tiring of that and I thought it might be good to have a primary color background that varies. So we utilized the technical capabilities of the Famicom to the full and decided to make Super Mario Bros. based on the concept of having a large character that would negotiate land, sea and air.

IWATA

The game takes place on land, sea and air, with underground sections as well. Had you decided right from the start that it should be a large character that negotiated

this terrain?

MIYAMOTO

We had broadly decided on this approach. A large character that would run around on the ground…

IWATA

…And swim in the sea.

MIYAMOTO

In terms of the game's structure, the swimming part is Balloon Fight.

IWATA

You're right. That's exactly what it is.

MIYAMOTO

With Balloon Fight launching previously, that system of controls had been tried and tested. For the sky, we had the image of Sun Wukong from Monkey King jumping between clouds.

IWATA

And what was behind the idea of having a large character?

MIYAMOTO

We started off by doing tests to see how it would feel for the player to control a large character, double the size of Mario. As it felt really good, we continued to develop the idea. But then we discovered that it was more satisfying if Mario only increased in size partway through the game, so we decided to make a small Mario as well.

IWATA

By collecting a mushroom, Mario increases in size to become Super Mario. But why a mushroom?

MIYAMOTO

Well, the mushroom… When you think about Wonderland, you think about mushrooms, right? (laughs)

IWATA

(laughs)

MIYAMOTO

Some time ago I was being interviewed and I spoke about Alice in Wonderland. But it seems there was some misunderstanding and it's since been stated that I was influenced by Alice in Wonderland. That isn't the case. It's just that there has always somehow been a relationship between mushrooms and magical realms. That's why I decided that Mario would need a mushroom to become Super Mario.

IWATA

The mushrooms don't just sit there, but actually move. What gave you that idea?

MIYAMOTO

Well, in games you can either have objects following you that move at the same speed as you, objects that follow you but are a little slower than you, or objects following you that are a little faster than you. That speed makes all the difference in terms of how fun it is. We repeatedly did trials and saw the results, and I was adamant that something that you really want is escaping you at a bit slower speed than you would be really fun.

IWATA

You can experience the enjoyment of chasing something.

MIYAMOTO

Right. There was one problem, however. When you play, you encounter a Goomba right at the start and it's shaped like a mushroom.

IWATA

It does look very similar.

MIYAMOTO

So when you hit a box and something that looks like a Goomba pops out…

IWATA

You run away.

MIYAMOTO

Right, you run away. This gave us a real headache. We needed somehow to make sure the player understood that this was something really good. That's why we made the mushroom approach you.

IWATA

Yes, that's right. If you play the game for the first time with no prior knowledge, you're going to run into the first Goomba and lose a turn.

MIYAMOTO

Right, which is why you have to teach the player in a natural way that they need to avoid them by jumping over them.

IWATA

Then when the player tries to jump and avoid them, there are going to be times when they get it wrong and end up stamping on the Goomba. By doing that, they learn in a natural way that by stamping on them, you can defeat them.

MIYAMOTO

As long as you stamp on them, you have nothing to fear from Goombas.

IWATA

But if you avoid the first Goomba and then jump and hit a block above you, a mushroom will spring out and you'll get a shock. But then you'll see that it's going to the

right so you'll think: "I'm safe! Something strange appeared but I'm okay!" But of course when it goes against a pipe up ahead, the mushroom will come back! (laughs)

MIYAMOTO

Right! (laughs)

IWATA

At that point, even if you panic and try to jump out of the way, you'll hit the block above you. Then just at the instant where you accept that you're done for, Mario will suddenly shake and grow bigger! You might not really know what's just happened, but at the very least, you'll realize that you haven't lost the turn.

MIYAMOTO

But you'll wonder why Mario suddenly got larger.

IWATA

You'll try jumping and see that you can jump to higher places and smash through the ceiling, so it'll be clear that you've become more powerful.

MIYAMOTO

It's at that moment that you first realize that the mushroom is a good item.

IWATA

That's the reason why it's designed so that whatever you do, you'll get the mushroom.

MIYAMOTO

Of course it's because we wanted the player to realize that this item was different from a Goomba.

IWATA

When I first realized that this had all been designed with that purpose in mind, I was really taken aback. When you tell people who weren't aware of it that the start

of Super Mario Bros. was designed with this intention, it's rare that they won't be impressed.

MIYAMOTO

Is that right?

IWATA

It's not as if it was me who came up with it, but I've gone around bragging about it to plenty of people! (laughs)

MIYAMOTO

(laughs) It wasn't an idea that was in the original design plan for the game. It's something we thought about as we were making the game. But happily, it turned out for the best…

IWATA

So it's not the case that you can foresee everything before you start. Rather, as you develop the game, you gradually work on things by saying: "Perhaps it would be better like that… Maybe it would work better like this…"

MIYAMOTO

I always endeavour to develop games through a process of trial and error, sometimes taking an objective point of view and sometimes looking at things from the player's perspective.

Allowing Novices To See the Ending Too

IWATA

Up until now, we've spoken about Donkey Kong right through to Super Mario Bros., but if we were to keep going through the history of Super Mario Bros, I don't think we'd ever have enough time to finish the interview! (laughs)

MIYAMOTO

Yes, you're right! (laughs)

IWATA

So let's jump forward in time now to the twentieth anniversary of the release of the Famicom. In 2004, Nintendo put out the NES Classics series, including a return for Super Mario Bros. What impression did you have of this?

MIYAMOTO

At the time, I had a sense that the number of people who had played games once but who didn't any longer was steadily growing. But while I understood this in principle, the reality of the situation hadn't fully struck me. But saying that, of course I'm a gamer and I'm surrounded by people who like games. So then when I heard people talking about this issue at the time the NES Classics series was released, it was really brought home to me: "Ah... So there are this many people out there who remember Mario but who have forgotten all about games!"

IWATA

That's why it meant a lot for us personally to have been involved in the twentieth anniversary of the Famicom followed by the twentieth anniversary of Super Mario.

MIYAMOTO

Yes, I believe that it did. But no matter how far people may drift away from games, their memories of playing Mario are still with them... At that time, Mario had advanced to 3D and we would discuss the fact that there were now two different strands to the Mario series: there was the Mario that had developed in step with consoles as they had become more advanced, and there was also the basic Mario that anyone could play. When I talked about this with Tezuka-san, he said: "Right, if

we make another one, it should be a side-scrolling Mario."

IWATA

And that became New Super Mario Bros. for DS.

MIYAMOTO

Right. But as you'd expect, looking at it from the perspective of those who were in step with technological developments, one could ask: "Why are you making a 2D side-scrolling game now?" And then the counter-argument would be: "We can use 3D polygon graphics, but by making a side-scrolling game, won't we be appealing to a larger number of people?" So we decided to make a Mario that made a fresh start by returning to its core principles. That's why we put "New" in the title.

IWATA

What were you most conscious of when you were working on New Super Mario Bros. for DS?

MIYAMOTO

As it was a Mario game based on its original principles, of course you had to find the goal if you went to the right. It also couldn't be over-long, and you had to get the clear sense that you were becoming more skilled if you played it repeatedly.

IWATA

So "experience points" would build up in your fingers.

MIYAMOTO

Yes, experience would build up. But to release a game for new hardware with only those elements would have been too understated. That's why we decided to put a very flashy element in the game.

IWATA

Are you referring to the giant Mario?

MIYAMOTO

That's right. If you include that enormous Mario, the rest of the game can be as old-fashioned as you like.

IWATA

After actually making the game, do you have any regrets or feelings that you wish you'd done things differently?

MIYAMOTO

If I had to point out one aspect, I'd say that the difficulty level was a little…

IWATA

While you succeeded in coming up with a Mario title that anyone could play, for those players who were seeking a bit more of a challenge, it may have been a touch too easy.

MIYAMOTO

As you can imagine, no matter how hard you try, it just isn't possible to settle on a difficulty level that will satisfy everyone ranging from people who haven't played a game in years right through to players who know all the Mario games inside out. You have to focus it on either one or the other.

IWATA

I like to describe the series of action games that you and your team come up with, most famously Mario, as being "sports tournament games". What I mean is, by pushing yourself harder and harder, you make progress, and then just when you have the goal in sight, you slip up. Then a voice seems to come from above that tells you: "Right! Give it another try!" Then you try again, and fail yet again. But by doing that, and failing again and again, you will steadily build up experience and as a result, when you do succeed, the feeling of satisfaction is incredible. That's why I think they're reminiscent of a sports tournament.

MIYAMOTO

That's why we even discussed releasing an enhanced version of New Super Mario Bros., for those people who wanted to play a Mario that demanded more skills. With

the Wii version of New Super Mario Bros. this time round, its biggest single defining feature lies there. We didn't just want first-time players to enjoy it; we wanted to make a new Mario game that players looking for a stiffer challenge would be able to relish.

IWATA

How did you try to resolve the difficult issue of making a game that was able to please both camps?

MIYAMOTO

Firstly, if you play Mario and just can't manage to finish a level, you feel like crying, don't you?

IWATA

Absolutely! You feel like crying! (laughs)

MIYAMOTO

There's always a basic reason why you can't clear a level: either it's because the game is really difficult, or it's because you don't understand the game properly. For instance, even though you could use a lift and bounce easily to the next stage, you go out of your way to choose a tricky route and that means no matter how many times you try it, you fail.

IWATA

So you've ramped up the difficulty level yourself by not choosing the correct route.

MIYAMOTO

Yes, that's right. It's at times like that when watching a skilled player will make you realize: "So that's what you have to do!" Then you can do it correctly yourself. I thought it would be great if you were able to do that in your own home, which is why we devised the Super Guide.

IWATA

Could you explain what the Super Guide is?

MIYAMOTO

To help you progress through the level, Luigi shows you the correct path.

IWATA

So it's not Mario, it's Luigi. But there are going to be those people who even when they watch the Super Guide will feel like crying, thinking: "But I can't do that!"

MIYAMOTO

That's why the Super Guide won't only show you the correct strategy, it will also allow you to provisionally clear the course. It will present you with the option to skip the course and move on to the next one.

IWATA

So in other words, by using the Super Guide, you could get right through to the end.

MIYAMOTO

Well, since you've purchased it, it's surely better to be able to see the ending.

IWATA

But isn't there a risk that by allowing that, the essence of playing an action game will somehow be lost? I said it a little earlier, but it's precisely by pushing yourself a little harder, and by failing again and again, that the feeling of achievement you get when you succeed grows.

MIYAMOTO

We've included a number of elements in the game with that in mind. Now, I'm sure you've had times when there's been one particular place on a level that you just can't get past, no matter how hard you try.

IWATA

Those are the places that will really have you on the verge of tears!

MIYAMOTO

There are times when even if you watch the Super Guide and understand how you should to do it, you still can't manage it yourself. At times like that, you can use the Super Guide to get past the tough part then play yourself.

IWATA

So partway through the Super Guide, you can take over just like that?

MIYAMOTO

Once it's gone past the tricky part, you can press the Pause Button and change the player back to yourself. The player will be Luigi, but his jumping ability is the same as Mario's.

IWATA

Novices will be happy about this feature.

MIYAMOTO

But while it was my idea to include this feature, as a gamer, I would feel intensely irritated if you were asked, "Do you want to see the Super Guide?," right from the start of the game.

IWATA

You wouldn't be able to allow that? (laughs)

MIYAMOTO

There's no way I could ever allow that!

IWATA

You think "Am I going to view the Super Guide without even playing the game once!?" (laughs)

MIYAMOTO

Exactly! (laughs)

A Medal for Skilled Players

MIYAMOTO

At first, we had the option to view the Super Guide on the first menu screen. But as I couldn't bring myself to allow that, we considered a number of solutions and eventually came up with the idea that after losing three turns, a hint block would appear. If you hit that, then the option to view the Super Guide would be displayed.

IWATA

You made it so that players can view the Super Guide after giving it three tries but not being successful.

MIYAMOTO

At that point, I played that version myself, but that still made me upset!

IWATA

(laughs)

MIYAMOTO

I thought: "Are you making fun of me!?" (laughs) When we had the hint block appearing from the beginning, I just felt like: "I don't need this!"

IWATA

If it appears right from the start, you feel: "This has got nothing to do with me!"

MIYAMOTO

Right. But if you lose the turn three times and it appears...

IWATA

Then you feel really annoyed?

MIYAMOTO

(abruptly) …"Leave me alone!"

IWATA

(laughs) It's fine if it appears when you're on the verge of tears, but if it pops up when you're still brimming with determination to do it, then you feel: "I can do this! I'm going to clear this! What's this thing doing popping up?"

MIYAMOTO

Right!

IWATA

So in the end, getting that timing right is extremely important - how many times should the player be allowed to slip up before the hint block appears?

MIYAMOTO

That caused us a lot of headaches. Should it be five times, or would it be better if it were ten times? I thought that ten times would probably be best, but there were people who thought somewhere in between would be better and they suggested: "How about making it eight times?"

IWATA

So that's just about in the middle.

MIYAMOTO

You start the game with five turns. But you'll pick up a number of 1-Ups once you make a little progress. So we thought that if the player attempts to clear a level over a couple of sessions but can't manage it, surely it's okay to let them move on to the next level. That's why we decided that after losing eight turns, the hint block should appear. But here's the funny thing - when it appears after you slip up eight times, I think: "But I didn't want it to pop up at all!"

IWATA

You have your pride as a gamer, after all! (laughs)

MIYAMOTO

I can't forgive myself! (laughs) That's why I'll try my best to complete the level in seven attempts or less.

IWATA

It's funny that even though you were the one who added the Super Guide feature, you're dead set on not letting it pop up! (laughs)

MIYAMOTO

That's why I wanted something to appear for players who didn't allow the hint block to pop up.

IWATA

Something for players who've done really well?

MIYAMOTO

Right. For those players, there are medals awarded for not bringing up a hint block that are displayed on the title screen.

IWATA

I see.

MIYAMOTO

With that feature, it now means that if you bring up a hint block even once, you'll want to wipe all your save data and start again from scratch.

IWATA

So basically, if you slip up eight times, you start again from zero! (laughs)

MIYAMOTO

Right. You go back to an earlier save game and try again! (laughs) A lot of the staff does that, and it's actually an exciting way to play. If you've been coasting on autopi-

lot up until then, this will make you refocus and give it your all.

IWATA

So you're playing hardball every time! (laughs)

MIYAMOTO

You're playing hardball. That's something that we wouldn't have come up with if we hadn't thought of the Super Guide…

IWATA

What kind of feedback did you get from the hardcore gamers at Mario Club?

MIYAMOTO

They are all extremely skilled gamers so they are never going to actually need the Super Guide. On occasion, someone would say that a certain level was difficult and you'd check their data and see that they'd only slipped up three times.

IWATA

So if they fail three times, it's a difficult one! (laughs)

MIYAMOTO

There are a lot of hardened gamers at Mario Club who are aiming for a perfect performance and this time round you can actually view a Super Skills display from some of these hardest-of-the-hardcore gamers.

IWATA

Tell us more about this Super Skills display.

MIYAMOTO

Well, this is Mario, so naturally there are three Star Coins to be found on each level. Needless to say, if you use the Super Guide, it won't collect them for you or show you how to collect them. That's why you need to get them through your own efforts.

IWATA

So simply by playing using the walkthrough, there are aspects of the game you definitely can't complete. At the same time, really good players will be able to prove that they stand out from the crowd.

MIYAMOTO

By collecting Star Coins relying on their own abilities, skilled players will be able to watch a Hint Movie made up entirely of displays of Super Skills.

IWATA

So there's an example video with the very best play by the hardcore gamers at Mario Club and this will serve to enable skilled players to become even better.

MIYAMOTO

That's the idea. What's more, if you collect all of the Star Coins and fulfill other conditions, you'll be able to play new levels in the ninth world.

IWATA

If the levels are for someone to have gone that far, the ninth world must be tough.

MIYAMOTO

It's not that these levels are all really difficult. We've got a mix of fairly unique levels as well as difficult ones.

IWATA

Am I right in thinking there are fairly unforgiving levels?

MIYAMOTO

Right, they're unforgiving! (laughs) We've constructed the game so that not only Mario novices, but also skilled players, can really get the most out of it. I think that even playing alone, you can thoroughly enjoy the game. But this time we've also got multiplayer action, which means that everytime you play, you'll get the sense that you're playing on a new level.

IWATA

Out of interest, did you intend to include multiplayer modes in the game from the beginning?

MIYAMOTO

Yes, I did.

IWATA

Ever since Mario Bros., you've had your heart set on making a multiplayer Mario game. You've tried each time, but it's never quite come together... Even with Mario 64, it started with Mario and Luigi running around together, didn't it?

MIYAMOTO

That's right. The screen was split and they went into the castle separately. When they meet in the corridor, I was incredibly happy! (laughs) Then there was also the mode where the camera is fixed and we see Mario running away, steadily getting smaller and smaller.

IWATA

Yes, that's right.

MIYAMOTO

That was a remnant of an experiment we did where Mario and Luigi would run away from each other but you could still see them both. But we were unable to pull it off...

IWATA

The idea of having multiplayer mode in Mario is one you've worked on for many years. How were you finally able to realize it this time round?

MIYAMOTO

We owe it all to Wii's processing power. The CPU is much faster than anything

we've worked with before, its graphical capabilities are advanced and it has a large amount of memory.

IWATA

So your longstanding dream has finally been realized on Wii.

MIYAMOTO

Yes, it has.

A Block Floating In Mid-Air Is Unnatural

IWATA

Even if you have a multiplayer mode that lets four people play, there are those players who won't like it as they don't want to hold the other players back.

MIYAMOTO

Those are the times when they should get inside a bubble. When you lose a turn in multiplayer mode, you'll be returned to the level inside a bubble. If you're then at a tricky bit and, for example, your grandmother says "There's no way I can do this!" then all she has to do is press the A Button and she'll be inside a bubble.

IWATA

That way, you can get the skilled players to escort you right through to the end.

MIYAMOTO

That's right. Once you're inside a bubble and floating, you can get carried along without even having to touch the Wii Remote. This means that even people who have never played a Mario game up until now will be able to talk about the final level. They can say things like: "That final boss's third attack was pretty nasty!" (laughs)

IWATA

(laughs) It feels good to have skilled players and those who are not so skilled all joining in together.

MIYAMOTO

Yes, it's a good feeling. It helps everyone to bond. Playing a multiplayer game in that kind of congenial atmosphere can be very pleasant, but at the same time, a four-player Coin Battle can get pretty heated.

IWATA

What precisely is a Coin Battle?

MIYAMOTO

When it's only skilled players going head to head, it basically turns into an all-out battle to wipe out the other players.

IWATA

Well, there are times when nothing beats an all-out battle! (laughs)

MIYAMOTO

It was when I came back from E3 in 2009 that I made the Coin Battle. I thought that an all-out battle should have rules...

IWATA

What kind of rules do you mean?

MIYAMOTO

For each course, victory should be decided by the number of coins that you've collected. With multiplayer modes, I'd say it's more common than not to have everyone enjoying themselves without things really getting serious...

IWATA

So it's a bit like: "Well done everybody for trying so hard!"

MIYAMOTO

Right, that's what it's like! (laughs) But with the Coin Battle, the competition is more in earnest, with one person being clearly able to say: "I'm number one!"

IWATA

Somehow when you play those games against close friends, you can get really worked up, can't you?

MIYAMOTO

You can. The player who collects the most coins wins, so you can basically go about it any way you see fit.

IWATA

So you focus on grabbing as many coins as you can, then if the other players look like they're about to get some, you do your best to obstruct them.

MIYAMOTO

And even if you play that way, you won't know the number of coins you've each collected until the end. So you might think you've really done well this time, but when the final results are announced, everyone will be on tenterhooks.

IWATA

Do you know, I think I can imagine the rowdy atmosphere in the development room when everyone was playing that! (laughs)

MIYAMOTO

Right. In the Coin Battle arena, there's also a section that is a parody of the Mario of old, so everyone also got really excited when they played there.

IWATA

But even allowing for that kind of excitement, I take it that development didn't go completely without a hitch.

MIYAMOTO

You're right. This time around there were several directors on the project and inevitably they weren't all on the same wavelength in terms of their level of understanding of the concept of Mario. That made it necessary for me to go right into the development area and say: "Look, this is how things work in Mario games!" Of course when I say that, it's not objective—it's my own take on things. (laughs)

IWATA

Right.

MIYAMOTO

This time around, there were lots of discussions about judging what was "natural" and "unnatural", from the perspectives of myself and the rest of the team. For instance, if you shoot a fireball underwater, it's going to travel in a straight line, isn't it?

IWATA

That's right.

MIYAMOTO

That's one of the rules that were established in the Famicom era. At that time, the underwater and above ground sections were separate levels. But this time, there are levels where above ground and underwater sections come together in a set. So if a fireball is travelling through the air then continues to travel in the same way through water, it looks somewhat "unnatural". You wonder: "What precisely is that fire made from?"

IWATA

(laughs)

MIYAMOTO

It would be fine if fire that was released underwater continued to fly through the air in the same way. But when fire that's been flying through the air enters the water, it would be "natural" to see it sizzling and giving off foam, wouldn't it?

IWATA

It would.

MIYAMOTO

And if that's not possible then we should make it so that you can't use fire in that area. But looking back over previous titles in the series, the people who made those games believed in the way things worked and didn't question whether or not it was "unnatural". They just thought that doing it that way made it easier to play. From my perspective, when I went to the development area, it really played on my mind that you could still see the consequences of all the lies I had told in the past all over the place.

IWATA

So it's only now that you've become aware of the lies that you told in the past! (laughs)

MIYAMOTO

That's why I would have to explain things by saying: "Actually, that was a lie!"

IWATA

"There were good reasons why I made it that way at the time..." (laughs)

MIYAMOTO

For instance, sometimes there'll be a single block floating in mid-air, right? When I first made that, I thought it was totally outrageous.

IWATA

Even though it was you who was making it! (laughs)

MIYAMOTO

Even when I was working on Donkey Kong, I'd design things properly. I'd make sure that if there was a floor here, then there'd be a pillar somewhere to support it. But when it came to Super Mario Bros., we'd have a single block floating in mid-air: "Just what is this supposed to be hanging from?"

IWATA

(laughs)

MIYAMOTO

That's why when discussion started about making it into a movie, I got really nervous. I thought: "How are they going to film blocks suspended in mid-air?" When we made the game, it would start off with a large number of blocks and Mario would go along smashing those until there was just a single block floating there. We decided that ending up with just one block floating there didn't seem to feel un-

natural, and we made the game with that in mind.

IWATA

But why doesn't it fall? (laughs)

MIYAMOTO

Well, it's actually connected round the back... (laughs)

IWATA

(laughs)

MIYAMOTO

In the new title, Penguin Mario throws ice balls that you can use to freeze enemies into blocks of ice underwater. Now these blocks of ice remain fixed in the same position in the water, which I couldn't help finding strange.

IWATA

It's "unnatural", isn't it? (laughs)

MIYAMOTO

Well, when you freeze something underwater, you'd expect ice to float. Then someone would say: "Isn't it strange that the enemies frozen in mid-air don't drop?" So we made it so that frozen enemies hang in the air before dropping. But then you might think that if you shoot a fireball at them, they should melt. So basically the discussion keeps developing like that, and if we took account of every possible angle, it would end up being a fantastically complicated game. What's called for is judgment of how far we need to go so it feels natural and has rules that are easy to grasp. Now, if I don't do that...

IWATA

...Then no one else is going to be able to decide! (laughs)

MIYAMOTO

Nothing will get decided! Even the directors are all secretly thinking: "Go ahead and make the decision yourself!" (laughs)

IWATA

(laughs)

MIYAMOTO

That's why, even though I was supposed to have been the producer, I ended up acting like a director for that period, writing the specification documents. (laughs) Do you remember when I told you that? "I've been writing specification documents recently. I'm getting pretty important, aren't I?"

IWATA

I remember you saying that! (laughs)

MIYAMOTO

To write those, you need the person who first told the lie...

IWATA

You have to take responsibility for your lies.

MIYAMOTO

So I set things straight so we can make everything "natural".

IWATA

So this is the specification document for what's natural in the world of Mario.

MIYAMOTO

I thought that unless I'm involved in every game in the series in the future, I'm not going to be able to tell everybody all of this. But I suppose I'm happy to be able to continue this...

IWATA

We're counting on you! (laughs)

Capturing That Mario-Esque "Smell"

IWATA

How would you describe New Super Mario Bros. Wii to the people reading this interview?

MIYAMOTO

I'd say that we've come up with a title that everyone, from those who are not all that skilled, right through to those who are highly-skilled, can all enjoy the fundamentals of Mario games. I think it boils down to that.

IWATA

You just said that in quite an off-hand, casual way but achieving that must have been an incredibly difficult task.

MIYAMOTO

My aim was that the Wii version of New Super Mario Bros. should still be selling copies a year after its release, just like the DS version did. I wanted it to become a staple for Wii owners. I put an enormous amount of energy into achieving this.

IWATA

What do you think the difference is between titles that continue to sell even a year after their release and titles that don't?

MIYAMOTO

I think a game has to become just like a trusty tool that people get used to using and always have to hand. Also, it needs to have those elements that people can discover every time and want to tell other people about...

IWATA

It needs to be full of things to discuss.

MIYAMOTO

Right. It's important that the other person knows what you're talking about, and that you're discovering new things. That way, even if you play for a while and then put the game away, when a friend comes round, you'll want to dig it out again and play it again. I also think it's incredibly important that the sensation of playing the game is one you can't forget and that it gives you something that you can't get from other games. I suppose you'd call that the atmosphere of the game, or the "smell"... I think "smell" is getting close to it.

IWATA

"Smell"...?

MIYAMOTO

Well, great movies have their own distinctive "smell", don't you think? And I'm not talking about the smell of the cinema either! (laughs) There'll be a particular "smell" that you get from certain images.

IWATA

You're talking about some kind of unique, distinctive feel...

MIYAMOTO

I think that when something summons forth a lot of emotions, what you feel is perhaps something like a "smell". I wanted to make Mario so that it had its own distinctive "smell" - a Mario-esque "smell". I wanted to create something that stimulated as many of the five senses as it could. If you can do that, then when you get the game out to play from time to time, it really makes you happy. There are those games that you might just give one quick go but don't tend to really stay with you, no matter how exciting they may be.

IWATA

Today you've used the expression "smell". But you often also talk about the particular "feel" of a game.

MIYAMOTO

I do.

IWATA

Where do you think the particular feel of a game comes from? What would you say gives a game that Mario-esque feel?

MIYAMOTO

Well, depending on the game, you might use a joystick or the +Control Pad. In any case, the hardware functionality is identical. However, depending on the game, the actual feel when you press a button differs. That's the important part. It wouldn't be true to say that the controls for Mario have been handed down from generation to generation at the company. In actual fact, we have to redo it for each and every game.

IWATA

But in the end, your own personal sensibilities will be the decisive factor, won't they, Miyamoto-san?

MIYAMOTO

But that isn't something that's entirely reliable or accurate either. With this latest title, I would say things like: "It wasn't like this on Super Mario World!" Then I'd go and play Super Mario World for the first time in ages and realize that things weren't quite as I'd remembered them…

IWATA

(laughs)

MIYAMOTO

I'd say things like: "Wow! The recent titles are really well put together, aren't they!" (laughs)

IWATA

I'm sure you're looking at the past through rose-tinted spectacles! (laughs) That "feel" you're talking about is something that changes in step with the times. It isn't something universal and unchanging.

MIYAMOTO

You're right about that. And add to that the fact that now we can see things in incredibly fine detail. In the old days, you would fill in the detail yourself using your imagination, while nowadays you can actually see all that fine detail… But it's not necessarily the case that, just because something has been made with attention to the fine detail, it's actually always better. If I may make a bold distinction, I'd say that there are times that encoding and simplifying something makes it easier to understand, while there are times that expressing something in very fine detail is more pleasing.

IWATA

That variation is important, isn't it?

MIYAMOTO

The same is true of audio. It's not the case that you can use nothing but sampled sound effects. With Zelda, when we only used a sampled sound effect for the rumbling of rocks, that made it feel incredibly real.

IWATA

You really pay a huge amount of attention to sound effects. Perhaps that's because they can have an impact on the "feel" of the game.

MIYAMOTO

Right. Sound effects are extremely important to me. Take, for instance, Propeller Mario who appears in this title. I thought there was something odd about the sound of the propeller and asked the staff working on the audio side to fix it. But this seemed to cause them a great deal of trouble.

IWATA

They weren't sure how to fix it?

MIYAMOTO

So I explained to them: "Try to make it sound like a beetle flying!"

IWATA

A beetle? (laughs)

MIYAMOTO

So they said: "Thanks for making it so clear! We've got it!" (laughs) So they went and fixed it but, as you can imagine, it was completely different from what I had envisioned. So then I said: "Let's ditch the beetle idea after all…" (laughs)

IWATA

(laughs)

MIYAMOTO

The staff didn't have a clue what to do anymore, so I asked them what the propeller was made from.

IWATA

You asked what raw materials the propeller was made from?

MIYAMOTO

Well, of course a suit with a propeller attached to the helmet isn't something that actually exists in the real world!

IWATA

(laughs)

MIYAMOTO

So I asked them: "How is this powered anyway? Is it an engine or a motor?"

IWATA

That's something that wouldn't have been in the specifications for the game, so I'm sure it's something they hadn't thought about at all, right? (laughs)

MIYAMOTO

They told me that there was no way they could possibly answer that. Then I say: "But if you had to choose one, would you lean towards it being an engine or a motor? Or is it some kind of hybrid?"

IWATA

So you would keep asking them again and again in order to try to get the right sound to fit the image you had!

MIYAMOTO

If you don't settle on a fixed sound, you won't be able to tell the difference when the propeller's turning slowly or quickly.

IWATA

I see.

MIYAMOTO

After asking about it so much, I realized that whatever was powering this propeller would be pretty heavy, so I said: "Don't you think it would be best if Mario's neck was tilting a little?"

IWATA

(laughs)

MIYAMOTO

All kinds of ideas came out it. Things like: "Shouldn't there be some kind of helmet attack?" When you bring things together in a natural way, they will connect and spawn whole new ideas... This is the creativity that comes from letting things take their own course! (laughs)

IWATA

Creativity that comes from letting things take their own course! (laughs) Out of interest, what did you finally settle on for the sound of Propeller Mario?

MIYAMOTO

When you turn a normal propeller with your hand, it makes a kind of "Broom! Broom!" sound, doesn't it? But we thought that there probably wouldn't be any petrol in Propeller Mario's engine. That's why we went for a propeller with a whirring sound.

IWATA

I see.

MIYAMOTO

It's a pretty responsive engine, perhaps a kind of hybrid… Is it a high torque engine that you have to turn by hand? Well, I don't think we've decided on that one yet…

IWATA

(laughs)

The Correct Way to Enjoy An Action Game

MIYAMOTO

There's something I've learned from making this new Mario title multiplayer.

IWATA

And what's that?

MIYAMOTO

I realized that, fundamentally, Mario is a game where if you fail and lose a turn, you'll be sent straight back to the start.

IWATA

Right.

MIYAMOTO

So it's tough. Even if you're just about to get to the boss, you could fall into the lava, get burned and be sent straight back and have to start again from scratch.

IWATA

It's very unforgiving when you fail.

MIYAMOTO

Right. So even if you slip up just before clearing the castle, you'll be sent right back to the starting point. Maybe this is all due to my nasty streak! (laughs) But I think playing at that level of intensity is actually the most enjoyable way to play.

IWATA

You think it's more fun to have to play from the start of the level again?

MIYAMOTO

With platform games, only playing the difficult parts can really take it out of you. It

feels good to play parts that you can breeze through as well.

IWATA

Yes, you're right about that.

MIYAMOTO

That's one of my guiding principles...

IWATA

That's why rather than having lots of checkpoints where you can save your position, it's better to play through the easy part again.

MIYAMOTO

Right. That's more pleasurable for the player. And while you're playing the parts that you're good at again, you'll get even better at the game. In the past, when arcade shooting games would keep getting more and more difficult, the "Continue" system was developed...

IWATA

Insert a 100 yen coin and you can keep on playing...

MIYAMOTO

That was doubtless something the arcade was happy about, as players would keep pumping in 100 yen pieces. But what it actually ended up doing is ensuring that the player would always be playing at the very limit of their abilities. I don't think it feels good to play like that.

IWATA

You're right.

MIYAMOTO

It might be exciting, but it doesn't feel good.

IWATA

So it might be thrilling for the player, but it doesn't give them that sense that: "Hey, I'm really good at this game!"

MIYAMOTO

Precisely!

IWATA

All the player experiences is that feeling that: "I'm still useless at this!"

MIYAMOTO

But once someone makes the assumption that always playing in a high state of nervous excitement is more fun, and they then come to discussing how the gameplay should be balanced, they'll always be trying to ramp up that excitement. But the ideal is actually to make the player feel this kind of nervous excitement in moderation while being able to enjoy playing. However, it is not very easy for us to be able to realize that all the time. So, I think replaying the levels is the correct way to enjoy an action game. That's something that I'm quite particular about.

IWATA

But that won't work when you have four players.

MIYAMOTO

Right, it won't work. In this case, it works out just right because if you have one of the four players who is still alive, you can steadily progress through the game.

IWATA

As you can still make progress even if you lose a turn, when weaker players play together with more skilled ones, they can get them to take them all the way through to the end.

MIYAMOTO

Right. That's why I think we've come up with a well-balanced game that comes

somewhere in between watching the Super Guide and then clearing the level yourself and getting the Super Guide to clear the level for you. That's why I hope that a wide range of users will be able to enjoy the game in a wide variety of different ways.

IWATA

I sense that you're really getting a very strong "feel" from this game.

MIYAMOTO

Of course!

IWATA

It seems that you feel you've been able to achieve a structure for this game that you've long aimed for.

MIYAMOTO

Yes, I have. I've always wanted to make a multiplayer Mario. It's been my dream for many years. I really feel that this time, we've pulled it off.

IWATA

Recently, you have become deeply absorbed in a large number of the games that we've made. But with New Super Mario Bros. Wii, there is clearly something different about the depth and the manner in which you've become absorbed.

MIYAMOTO

Well, I was even writing specification documents! (laughs)

IWATA

(laughs) You've really worked incredibly hard on this one! At the 2009 E3, I spoke about Nintendo wanting to make "games for everyone." It's become commonplace to assume that as games continue to develop, they will steadily become more clearly divided between games for very skilled players and games for beginners. But the motivation behind my speech was my strong belief that in order to further expand the gaming population, it's necessary to make games that everyone can enjoy, re-

gardless of their abilities. Now, perhaps it's because they consider this completely unfeasible, but this isn't something that a lot of other people seem to discuss. But in spite of that, I am very serious when it comes to making games for everyone and this is something, Miyamoto-san, which you and I have been talking about constantly for over a decade. The impression I get is that with Mario, which is in no sense an easy type of game for such a purpose, you have actually gone and done it - you've made a "game for everyone." I'm quite excited to see how this new Mario title will be played. There'll be plenty of players who will feel: "Wow! I can do this!" At the same time, players who are confident in their abilities won't feel that the game is too tame and we'll see them erasing their data and playing from the start to ensure that no hint blocks pop up.

MIYAMOTO

Can I just add something else?

IWATA

Sure, go ahead.

MIYAMOTO

This game is played holding the Wii Remote horizontally so you only use the +Control Pad and the 1 and 2 Buttons to play.

IWATA

It's the same controls as the Famicom days.

MIYAMOTO

But you're going to have to master the "B Button Dash". If you can't do that, you're going to have a hard time. Holding the 1 Button down on the Wii Remote lets you carry around objects and also enables you to do the "B Button Dash". Moreover, the Wii Remote's unique motion-sensitive controls also come into play when you're controlling the game. So if you remember to shake the Wii Remote and to press the 1 Button, the game will be really exciting to play.

IWATA

So in this new title, you can dash using the 1 Button on the Wii Remote. What are

you going to call this?

MIYAMOTO

The "B Button Dash" of course! (laughs)