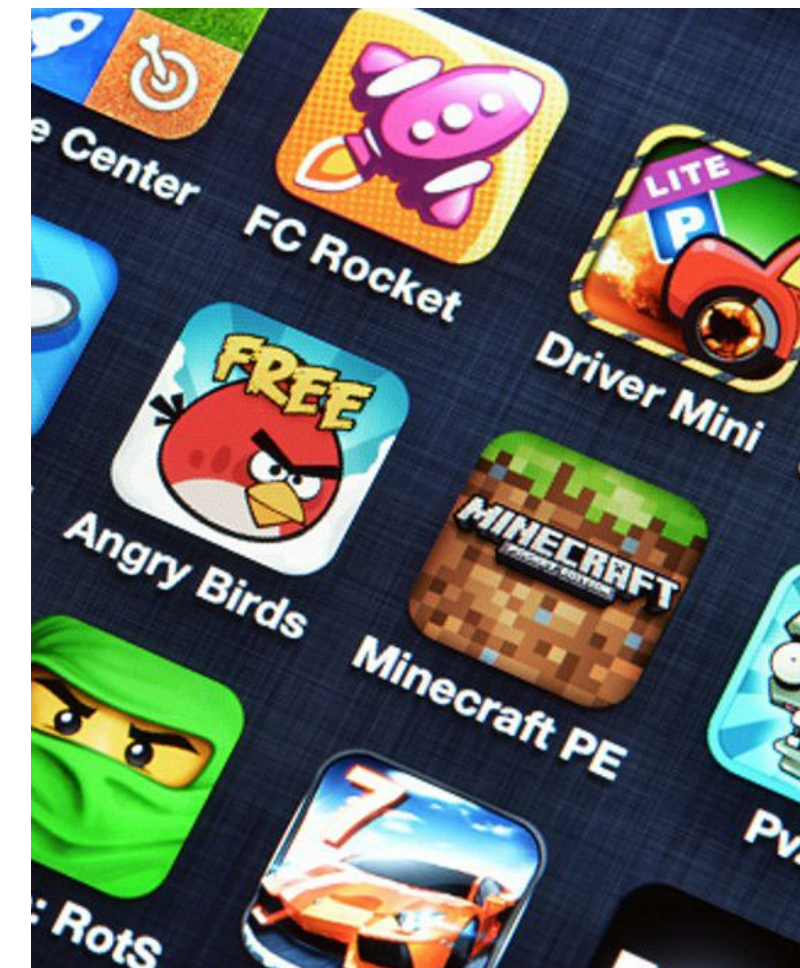


VISUAL LANGUAGE

GAME HISTORY

TODAY'S TOPICS

EARLY HANDHELDS | ADVANCED HANDHELDS | MOBILE GAMING | GACHA



A group of people are shown from the chest down, sitting on a carpeted floor. One person on the left is holding a smartphone, displaying a colorful game. Another person on the right is holding a retro-style video game console with a joystick and four red buttons. The background is slightly blurred, showing other people and a white object on the floor.

PART 1

HISTORY

THE HANDHELD MENACE



EARLY HANDHELDS

1989



TECHNICALLY FIRST

The first handhelds were made by American toy company Mattel, which over 1976–8 released a series of **calculator-like devices that played a single game**: from sports titles like Football, Baseball and Basketball to Missile Attack (the first released), Computer Chess and even a licensed version of Dallas. Needless to say these are extremely simple LED-based machines with tiny displays, and have aged badly, but they were there first.

A conceptual leap forward was Milton Bradley's **Microvision** (1979), the first handheld to resemble a console in that it used interchangeable cartridges. Unfortunately its LCD screen displayed only 16 x 16 pixels (hence the name) and this was one of many technical problems: static would permanently ruin the cartridges and the buttons were easily damaged through general use. Needless to say the Microvision was quickly discontinued. Epoch's **Game Pocket Computer** (1984) was released only in Japan and also used interchangeable cartridges – though this was rendered somewhat pointless by the machine only ever having five games.



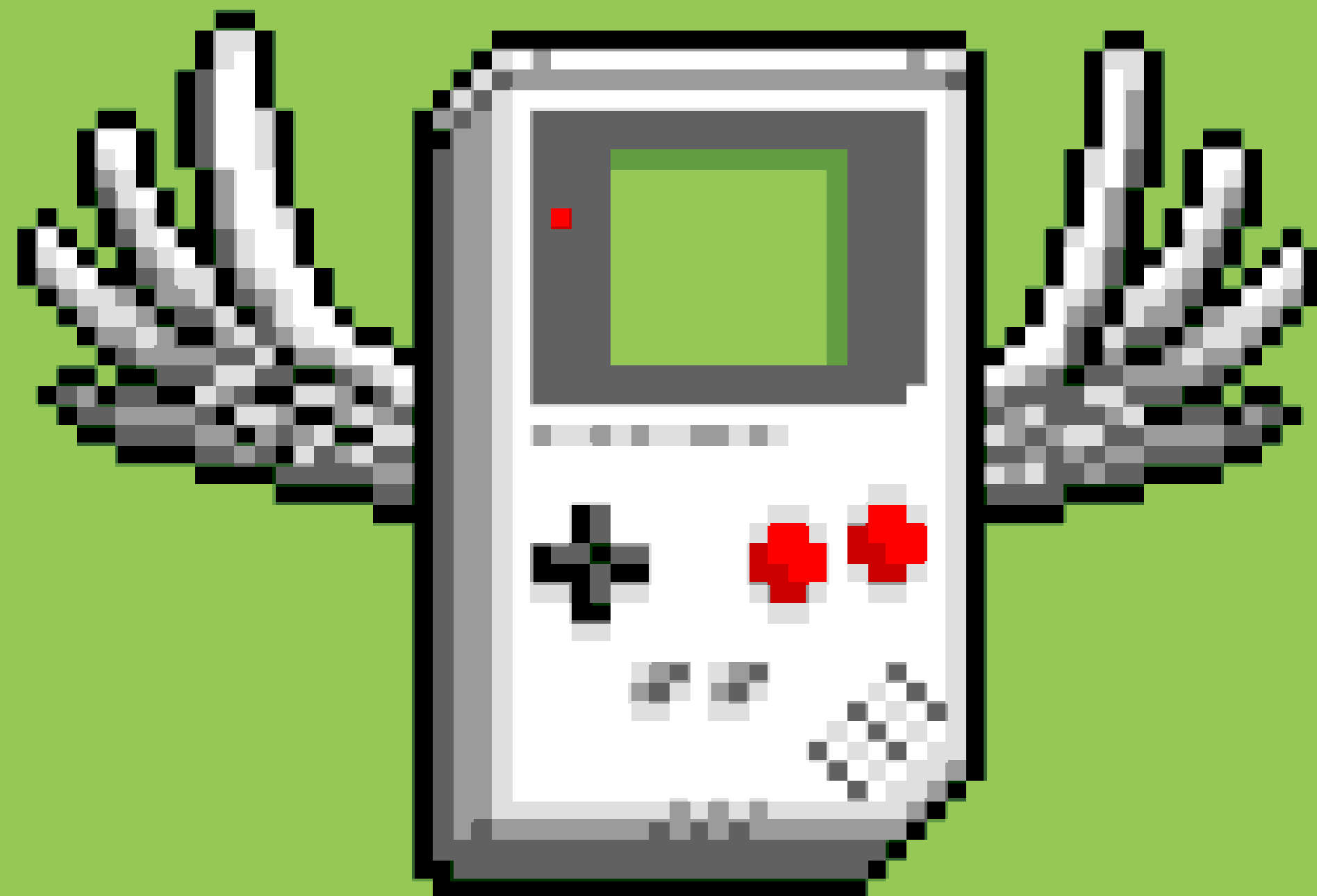
EARLY POCKETS

Despite these commercial failures, Nintendo's Game & Watch series (running from 1980 to 1991) showed there was a large potential market for handheld gaming, and creator Gunpei Yokoi would invent the first great portable console: **the Game Boy** (1989).

This hardware is the purest distillation of Yokoi's design philosophy of 'lateral thinking with withered technology'. The Game Boy had a green monochromatic display, an 8-bit CPU, a mere 8 KB of RAM and a single tiny speaker.

The Game Boy was released in April 1989 in Japan and in October 1989 its **first serious competitor, the Atari Lynx**, arrived on the scene, and by October 1990 there was **Sega's Game Gear** (based on the Master System). Both of the competing consoles offered backlit colour screens, larger than that of the Game Boy, and were designed to be held in a landscape format – superficially, at least, they were much more attractive hardware.

ONCE AGAIN, IT'S ABOUT THE GAMES



But the Game Boy had been designed with purpose: Yokoi's team had intuited that the most important thing with a portable games console was not grunt, but more practical issues such as **battery life**. The Game Boy could be played for upwards of fifteen hours on 4 x AA batteries: but thanks to those backlit LCD colour screens, the Game Gear and Lynx each needed 6 x AA batteries that would last three to five hours. In addition, the **Game Boy was significantly cheaper and smaller than both**.

Despite the competition's superficial advantages and aggressive marketing, the Game Boy absolutely massacred Game Gear and Lynx. While its clever design played an important role, the real weapon Nintendo had (as ever) was **outstanding software**, and its pack-in title for the North American release is an all-time classic: Tetris.



KILLER LIBRARY

The Game Boy also played to Nintendo's traditional strengths with *Super Mario Land* (1989), versions of hits like *Donkey Kong*, and as time went on increasingly sophisticated adaptations of classic franchises. Among these *The Legend of Zelda: Link's Awakening* (1993) is exceptional, somehow squeezing a huge action-RPG every bit as good as its console brethren onto a tiny Game Boy cartridge.

Against this the Game Gear offered titles like *Sonic Chaos* (1993), the excellent action-RPG *Ax Battler: A Legend of Golden Axe* (1991) and several *Shining Force* games. Lynx tended towards arcade ports like *Ms. Pac-Man*, *California Games*, *Paperboy*, *Rampart* and *Qix*. **Both handhelds had good games, but simply couldn't compete with the quality and quantity of Game Boy software** – especially when the latter's sales figures increasingly attracted third parties.

The Lynx would see a hardware revision that addressed some of the issues with the original, and Sega would release the Nomad in 1995 – a portable Mega Drive that didn't have its own games library, but played that console's titles. **Neither made a significant impact**, and the Game Boy's momentum was about to become unstoppable thanks to a game inspired by collecting bugs.



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CATCH 'EM ALL

Pocket Monsters: Red and Pocket Monsters: Green were released in Japan in February 1996, but would take over two years to reach America (September 1998) and three to reach Europe (1999), by which time they were known as Pokémon Red and Pokémon Blue.

These games, and the subsequent sequels, became a marketing phenomenon for Nintendo (as of 2014 the Pokémon games had sold over 250 million copies) to the extent that it established the Pokémon Company to focus on this one series – and of course the lunchboxes, cartoon series and trading cards soon followed.

Pokemon single-handedly turned the Game Boy, which was arguably outdated even at the time of its release, into a must-have just under a decade later. Nintendo would continue producing the handheld, with hardware revisions, until March 2003. By this time it had sold roughly 120 million units.



ADVANCED HANDHELDS

2001

ADVANCED WARFARE

The Game Boy Advance's capabilities were **comparable to the SNES**, and the machine had both a colour screen and a landscape format. Nintendo began to leverage its past with the Game Boy Advance in a big way, meaning **the platform saw many ports of SNES classics**.

Nintendo had dominated the handheld market since 1989, but had surrendered pole position to Sony in the home, and at E3 2003 Sony announced the development of **the PlayStation Portable (PSP)**. The PSP **was the antithesis of Nintendo's technological approach**: an extremely powerful handheld console comparable to the PS2, featuring robust multimedia capabilities, games on optical discs (more storage), an analogue stick and online functions.

But Nintendo hadn't been standing still either, leading to one of the most fascinating hardware face-offs in gaming history. As Hiroshi Yamauchi stepped down as chairman of Nintendo in 2002 and handed the reins to Satoru Iwata, he had made a suggestion about the company's next handheld: 'You ought to do one with two screens.'



TWO SCREENS

The design process for the Nintendo DS ('dual-screen') began in earnest. One of the machine's screens would be used as a display, and the other for intuitive touch controls, allowing not just traditional styles of play but entirely new breeds of game that could appeal to a much wider demographic. Where Sony was chasing processing power, Nintendo began to move in a completely new direction.

When revealed, the DS was greeted with a mixture of cynicism, confusion and some small amount of optimism – in the light of the PSP, few thought Nintendo's comparatively underpowered hardware would stand a chance. But they were diametrically opposed machines, equally good at what they set out to achieve. The DS was marketed worldwide under slogans involving the word 'touch', and a later series of software titles were sold under the banner of '**Touch Generation**'. Nintendo's instincts about reaching a broader market with this interface were absolutely right, with the key pieces of software being Dr Kawashima's Brain Training and Nintendogs in 2005.

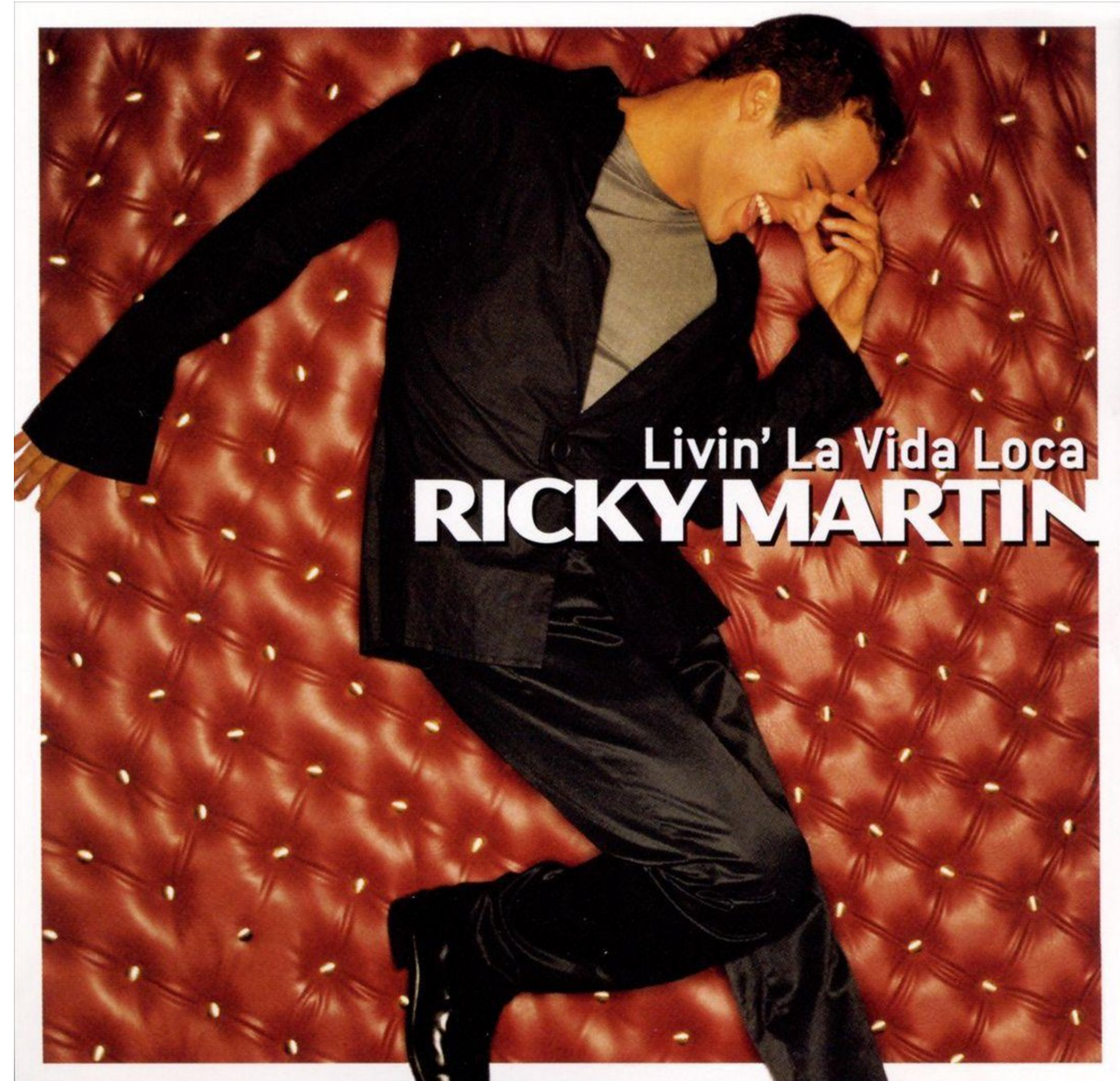


LIVIN' LA VITA LOCA

The PSP was discontinued in 2014, having shifted around eighty million units over its decade on sale. This is an impressive achievement, of course, yet Nintendo's strategy was proved right. The DS is still being produced and currently stands at over 155 million units sold.

In this light it is strange that Sony continued to pursue the same kind of strategy with the PSP's successor, the **PlayStation Vita**. Released in 2011 in Japan, the PS Vita is once again **an absolute powerhouse** with a cosmically beautiful and crisp OLED screen, and among many minor improvements to the PSP's structural design adds a second analogue stick. The major change, and maybe the single concession, is a back-mounted touchpad.

Yet since release Vita has struggled, selling an estimated eight million worldwide (Sony is reticent about exact figures, rarely a good sign). This may be to do with the rise of mobile gaming over the same period, yet Nintendo's successor to the DS, the 3DS, has sold around forty-five million units over a roughly similar timeframe.



SWITCH IT UP

It is clear that the history of handheld games consoles is in a sense a history of Nintendo handhelds. Ever since the Game Boy's debut the company has faced competitors and yet, over roughly twenty-five years, **only the PSP could reasonably be called a success** – and even then, one that took **place in the shadow of Nintendo's greatest triumph, the DS**. The rising importance of mobile gaming presents more of a challenge to Nintendo's handheld future than any other traditional games company – at least in theory. As things stand, and despite all the tablets and smartphones in the world, the 3DS and its many wonderful games just keep on selling.

And then there was the Switch.

[NINTENDO SWITCH REVIEW](#)



CRASH COURSE TIME

‘Handhelds have actually been around since the mid 1970s, and they’ve made some incredible strides within the past few decades from blinking lights to glasses free 3d and even console-equivalent graphics. But even with their early successes their future isn’t so certain. The early market saw the rise of Nintendo, Sony, and Sega, but has since been whittled down to just to Nintendo. And although the Game Boy, and Nintendo DS handhelds have sold incredibly well, mobile gaming seems to be eating away at Nintendo’s market.’

[HANDHELD CONSOLES](#)



MOBILE GAMING

2001



SNAKE

Throughout the history of video games there are figures like Clive Sinclair and Jack Tramiel trying to bring computers to the masses, but the most widespread way to play video games turned out to be nothing to do with consoles, PCs or dedicated handhelds.

The Pew Internet Project's research shows that, as of 2013, 91 per cent of American adults own a mobile phone with 50 per cent of that number using it to download apps. Further to this, 43 per cent own a tablet computer or an e-reader (which have their own app stores). **These devices are now the most popular gaming platforms** around with Google's Android and Apple's iOS the major players.

The **first game** to be released on mobiles was a variant of Tetris, ported to run on 1994's Hagenuk MT-2000, an early phone with an LCD screen. But **the most iconic starting point** has to be Snake.

APP STORE

Simple games were available on mobile phones in the late 1990s and early 2000s, but the **devices** were too basic to run much more than puzzle games and (particularly in Japan) pet simulators, and number pads simply were not a good control method. Added to this there was often **no centralized marketplace** from which to purchase and download titles.

Everything changed with the advent of **smartphones** and, in particular, the launch of the **App Store** in 2008. The iPhone was a powerful device with a full-colour display doubling up as a touchscreen, and its centralized marketplace offered developers a clear route to a huge installed base with a simple licensing agreement. Google's Android operating system lagged slightly behind iOS at first, but now offers a similar ecosystem across an even wider range of devices.



SO ANGRY

The mobile video-games market is stratified in a manner that you don't see with more traditional platforms, simply because of the **lower costs involved and the huge potential audience**. The first genuine phenomenon was Rovio's *Angry Birds* (2009).

Angry Birds had a winning visual style, backed up by amusing sound effects like the pigs laughing at an especially bad shot. But it is a brilliant mobile design because the game is **easy to understand**, each level lasts around a minute or less, and the physics-enabled structures and nuance of aiming the catapult give its **simple objectives depth** – there are **hundreds of levels** in Angry Birds, with the game continuing to be updated for years after release, and the later levels test even the most dedicated of players. It's a mobile game that can be played in **short bursts**, but with an overarching structure that keeps it interesting over much longer periods.



‘FREE’ 2 PLAY

The structure of games is one thing, but these mobile marketplaces have also precipitated an **enormous rise in popularity for the free-to-play (F2P) business model**. This has found a natural home on platforms where consumers are constantly browsing storefronts and unwilling to commit large amounts of money upfront.

Free-to-play is both a blessing and a curse for game design. Its greatest asset is unquestionably that it **opens the gates to an enormous player base** willing to take a chance on something that doesn't cost any money. The downside is that **developers need to make money somehow**, and so F2P games have a reputation for either locking away large chunks of content behind ‘**paywalls**’ or using the dreaded mechanic of timers. Among the biggest successes with this model is developer Supercell's Clash of Clans (2012), a simple strategy game where progress can be speeded-up through purchasable gems, which resulted in 2013 revenues of \$892 million.



99 PROBLEMS

The difficulty with Android and the App Store is the scale. The App Store, for example, had 1.25 million apps available for download in June 2014, with around 60,000 new apps being added every month – note that these are apps and not video games, but the latter are responsible for roughly 80 per cent of App Store revenue (there's no way of breaking the numbers down further).

The great side to such range is that almost every genre is represented on mobile, from text adventures to original hits and even ports of major console releases (for example Bioshock).

The bad side is that **games can sink without a trace, and successful titles are almost instantly cloned** by unscrupulous developers who copy the basics and give their app a very similar title (most recently seen with the success of Dony Nguyen's Flappy Bird which, at the height of its popularity, was seeing sixty clones a day released on the App Store).



BIG AUDIENCE

The increasing power and reach of mobile devices means that mobile gaming may well be the **single largest audience video games will have in the immediate future**. The breadth and depth of content offered already is astonishing, and every month sees new top-quality games (albeit often surrounded by dross). This is to say nothing of the future potential for **educational apps** that incorporate video-game mechanics and structures, **companion apps** that work alongside 'larger' releases like movies or books, and the increasing involvement of the world's biggest publishers. Pocket-sized it may be, but that just means mobile gaming is everywhere.

CRASH COURSE TIME

‘In the mid 2000s, we saw a proliferation of Internet accessible devices and with them gaming would expand to a new audience. We’re going to talk about two types of games that are found on these devices, social and mobile games, which together we’ll call casual games.’

CASUAL GAMING



PART 2

KNOWLEDGE

GACHA & MICROTRANSACTIONS



JAPANESE GACHAS

Japanese game companies have a long and illustrious track record in **innovating new mechanics and designs to keep their player base intrigued, excited and hooked**. Some of these approaches stem from experience companies gleaned from arcade gaming halls and gaming consoles, while others have their roots in Japanese history and culture.

GACHAPON

Gachapon and *gashapon* were originally used by Bandai to refer to their capsule toys dispensed by toy machines. These gachapon are still widely used around Japan to get collectable cute, cool and funky items into the hands of consumers.

Gachas were introduced into the Japanese mobile gaming scene in 2011, and have been a vital part of the games ever since. In games these virtual gachas have different mechanics and mostly contain characters, cards and other items. In some scenarios gachas are event-bound, which means their prizes are only available for a limited time. **The basic mechanic is simple enough: the player pays a specific amount of in-game currency in order to “spin” the gacha, and then receives a random item or character.** Importantly, players only have access to most of the items or characters through the gacha.

As some items and characters are rarer than others, players may have to activate the gacha several times before receiving the item or character they want most.



GACHA & ADDICTION

Gacha mechanic triggers the same excitement and emotions that are stirred by scratching a lottery ticket, **gambling** or opening a present.

Gachas also appeal to the human need to **collect and complete things** that is deeply rooted within every single one of us.

But the addictiveness of gachas has had consequences. There have been several “**gacha scandals**” until 2012, when the Japanese government made *kompugacha* — a type of gacha containing rare items belonging to a series that are only valuable once the collection is complete — illegal. In March 2016 another scandal broke on the scene when a player spent over \$6,000 in one night in order to obtain a special limited-time character in *Granblue Fantasy*. CyberAgent reacted to this by implementing **safeguards** on its gacha, as well as **disclosing the odds of winning** specific rare items and characters in its games.



WESTERN INTEGRATION

Data shows that gachas are spreading to markets in the U.S. and Europe at an accelerated speed – and are featuring prominently among the top grossing games.

Gachas are **an appealing and addictive feature in popular games** inside and outside Japan. But before you implement this feature in your game it's helpful to know how leading companies are doing this – and achieving impressive results. Here's an overview of the different ways top grossing iOS games in the U.S. use gacha mechanics – and monetize with them:





Latest
Expansion



Whispers of the
Old Gods

1 Pack
100

2 Packs
¥360

7 Packs
¥1,200

15 Packs
¥2,400

40 Packs
¥6,000

Contents per pack:

- 5 Whispers of the Old Gods Hearthstone Cards
- At least 1 card will be Rare or better



100

BUY

POKÉMON
194 / 250

EGGS
9 / 9



1.4/5.0 km



1.4/5.0 km



0.0/2.0 km



0.0/2.0 km



0.0/5.0 km



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STORE



250



16,357



309

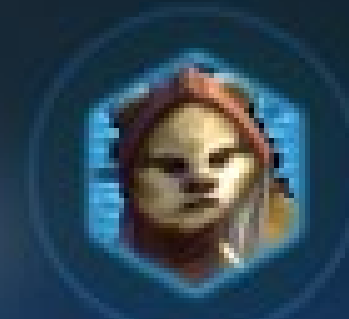


2

Possible Character Shard Sets



12



12



12



12



1



12



12



12



12



1

Possible Characters



1



1



1



1



1

CHROMIUM DATA CARD

Characters and/or Shards

May include a character from Star Wars: The Force Awakens

Use Crystals to receive either a Character or Character Shard set.

BUY

350





MICROTRANSACTIONS

EA: "It's in the game."



Meninist Gaming

@MeninistGaming

Follow

if EA made mario

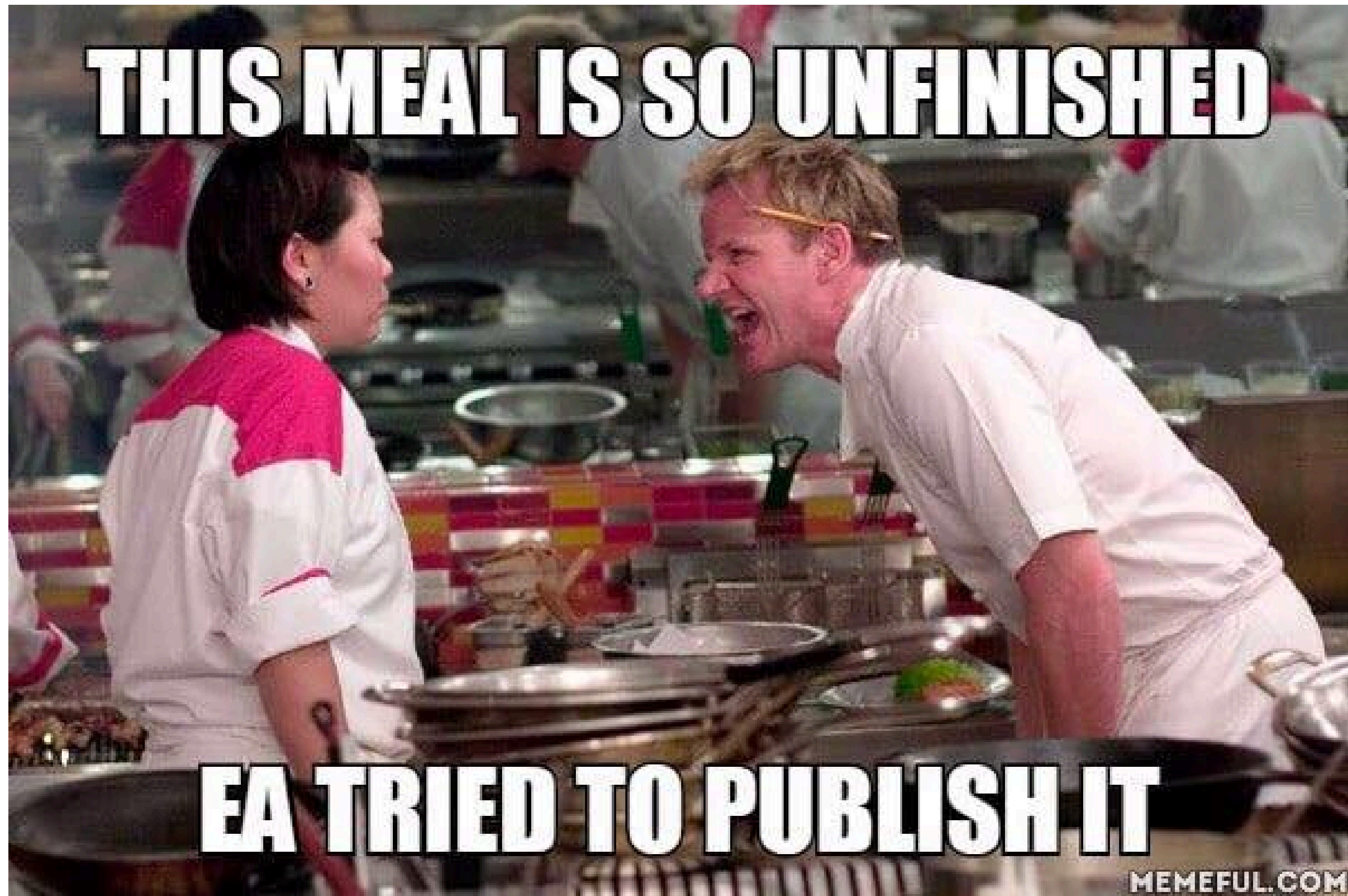


9:05 AM - 14 Nov 2017

508 Retweets 2,229 Likes



20 508 2.2K



Oh look EA made a keyboard for that
new Star Wars game.





MICRO TRANSACTIONS

Microtransactions refer to a business model where **virtual goods**, such as characters, costumes, or weapons, can be purchased online for small sums of real currency. One form of microtransactions are **loot boxes**, a type of unlockable in-game content that contains a randomized selection of items. These loot boxes can either be earned through normal gameplay or can also often be purchased for real money.

The purchasable items in “Battlefront II” are being roundly criticized for providing a dramatically different gameplay experience and provide an **unfair advantage** over players who do not purchase them.



BATTLEFRONT II

In the week before the game's wide release, "Battlefront II" was made available to play for subscribers to the EA Access service. But in order to unlock iconic character Luke Skywalker or Darth Vader, estimates had gamers needing to spend 60,000 in-game credits which could be earned after an estimated 40 hours of gameplay.

While characters like Vader could not be purchased for money, players not willing to invest that amount of time could instead purchase crystals, a separate type of in-game currency than the credits, which could be used to buy loot boxes in the hopes that the boxes would contain the items they want. Crystals ranged in price from \$5 for 500 to \$100 for 12,000 crystals.

Word quickly spread around the internet and upset many people who were anticipating the game's release. **EA responded to the situation on Reddit**, saying that the high unlock requirements were meant to give players a "sense of accomplishment"; the comment quickly became the most downvoted comment in the website's history.

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