

#010

the long good read

#guardiancoffee

Articles algorithmically picked by readers, writers & robots





Introduction

Welcome to the Long Good Read. This is an experimental, almost entirely automated newspaper that uses an algorithm to pick the week's best long-form journalism from the Guardian. The idea was started by developer Dan Catt, print-your own newspaper service Newspaper Club, the design team at Mohawk and the technology editorial team at the Guardian. We've put this together for you to read with your coffee. Enjoy! And please do tell us what you think - what else should we include in our experimental, automatic newspaper?

**@thelonggoodread or
hello@thelonggoodread.com**

Spend time listening to anyone in the media industry, you might think newspapers are dead. In fact it's just pulse of the big media businesses around the newspapers that is growing weaker, with readership and advertising revenues falling and increased competition from new technology just a part of that.

But newspapers themselves are a delightful, tactile, luxurious technology in their own right. The success of Newspaper Club, which lets anyone cheaply print their own newspaper, shows that newspapers have been reclaimed in a way.

Its success is partly down to our curiosity about being able to professionally print in a format that used to be hard for an individual to access, but it is also part of a wider craving for tangible, physical products to compensate for our digital dependency. Our screen lives make much of our life feel overwhelming, yet at the same time we have nothing physical to show for it. And there's a real human pleasure in being able to make and hold something in your hands.

Editorially, we get enormous satisfaction in exploring and playing with new projects. It's not about finding a future for paper, but a future for the stories that deserve telling. Where shall we go next?

Jemima Kiss

Head of technology - editorial

The Guardian

theguardian.com/tech

This newspaper is in beta. It's an experiment in combining the Guardian's readers, writers and robots with Newspaper Club's short-run printing tools, to produce a newspaper that's completely unlike the daily Guardian.

We're only printing 500 copies, and it's just for #guardiancoffee, so it needed to be quick and easy to produce. 'One person, one hour' was the goal, and achieving that required automating as much as possible, while still retaining an editorial eye.

First, the team at the Guardian wrote a small tool to sift through the most popular and interesting long form content, as driven by website analytics, comments and social media.

A selection of these are then imported into Newspaper Club's browser based tool, ARTHR, and they're quickly laid out into templates designed just for this project.

Then, it's onto one of Newspaper Club's printing presses, where it's printed, packed, and delivered straight to #guardiancoffee and into your hands.

Of course, this isn't designed to replace the daily Guardian paper. It's an experiment to see what's possible at the other end of the spectrum, using new technology and techniques to produce a newspaper as quickly as a webpage.

And if you like it, wait a little while and maybe we'll be able to generate one tailored just for you.

Tom Taylor

Co-founder and head of engineering

Newspaper Club

newspaperclub.com/longgoodread



Neelie Kroes, the European commissioner for digital affairs. Photograph: Stephanie Lecocq/EPA

Internet governance too US-centric, says European commission

Neelie Kroes Neelie Kroes, the European commissioner for digital affairs. Photograph: Stephanie Lecocq/EPA

The mass surveillance carried out by the US National Security Agency means that governance of the internet has to be made more international and less dominated by America, the European Union's executive has declared.

Setting out proposals on how the world wide web should function and be regulated, the European commission called for a shift away from the California-based Internet Corporation for Assigned Names and Numbers (Icann), which is subject to US law, is contracted by the US administration and is empowered to supervise how digital traffic operates.

"Recent revelations of large-scale surveillance have called into question the stewardship of the US when it comes to internet governance," said the commission.

"Given the US-centric model of internet gover-

nance currently in place, it is necessary to broker a smooth transition to a more global model while at the same time protecting the underlying values of open multi-stakeholder governance ...

"Large-scale surveillance and intelligence activities have led to a loss of confidence in the internet and its present governance arrangements."

Besides criticising US domination of how the internet and digital traffic are organised, including the allocation and determination of domain names, the Brussels institution also warned against increasing governmental attempts to control the internet, as in China, Russia, Iran and increasingly Turkey, which passed a stringent law last week curbing online freedoms.

"Governments have a crucial role to play, but top-down approaches are not the right answer. We must strengthen the multi-stakeholder model," said Neelie Kroes, the commissioner for digital affairs.

"Our fundamental freedoms and human rights are

not negotiable. They must be protected online."

She spoke out against giving the United Nations the power to organise and supervise the internet or to grant such authority to the International Telecommunications Union, voicing fears that it would confer too much power on governments.

The commission called for a clear timeline for diluting US authority over Icann and making it more "global"; for agreement on "a set of principles of internet governance to safeguard the open and unfragmented nature of the internet"; and a mediation body that would scrutinise conflicts arising from contradictory national jurisdictions over the internet.

Decisions over domain names and IP addresses should also be globalised, Brussels said. "The next two years will be critical in redrawing the global map of internet governance," said Kroes.

Brussels is to take its proposals to an international conference on the issue in Brazil in April. Brazil, angered by the NSA revelations, has been highly critical of the US role in internet governance.

"Nearly every person has an interest in keeping the internet open, whether this is an economic, social or human rights interest," said Marietje Schaake, a Dutch liberal MEP who sits on an international body examining internet governance.

"Governments are trying to bring the internet under national control. States like Russia and China use the argument of increasing cyber-security to increase control over their own population. Organisations such as Icann, which registers domain names worldwide, currently function under US law. That has to change."

Petr Pavlensky: why I nailed my scrotum to Red Square

He has wrapped himself in barbed wire, sewn his lips shut and caused the world to wince with his now-infamous stunt in Moscow. As the Russian authorities circle around Petr Pavlensky, the protest artist explains why he's not afraid

By Shaun Walker

On a snowless but chilly afternoon early in the Moscow winter, a 29-year-old man with a gaunt, emaciated face stepped on to the vast expanse of Red Square. He made his way to a spot on the cobblestones not far from the marble mausoleum housing the waxy corpse of Vladimir Lenin, and began to undress. In less than a minute, he was naked.

A video taken using a handheld camera and posted online moments later shows tourists gawping as he sits on the ground. A police car arrives, and an officer orders the man to get up. But the man cannot get up - because he is attached to the icy cobbles with a single, long nail that is driven through his scrotum and into the stones below.

This was only the third piece of protest art in the oeuvre of St Petersburg native Petr Pavlensky, but he has already made a name for himself as one of the most intriguing figures on the contemporary Russian art scene. Tapping into the instincts that drove Pussy Riot, and their progenitors, the Voina art collective, Pavlensky fuses risque performance with a deep disdain for the current political environment in Russia. Having previously wrapped himself naked in a coil of barbed wire, and sewn his lips together, this third wince-inducing stunt attracted international attention.

In a statement released to coincide with the performance, Pavlensky said his action, titled *Fixation* and timed to coincide with Russia's annual Police Day, was "a metaphor for the apathy, political indifference and fatalism of modern Russian society". Pavlensky had a blanket thrown over him by the confused police officers and was eventually detached from the stones and taken to hospital. He was discharged that evening, and released by the police without charge - only for them to open a case

of "hooliganism motivated by hatred of a particular social, ethnic or religious group" a few days later. It is the same article of the law that was used against Pussy Riot and can carry a jail sentence of several years.

A fortnight later, Pavlensky is at the railway station in St Petersburg, about to take the night train back to the capital, where he has been summoned by police for questioning the next day. There are rumours in the media that he may be arrested. We meet just before midnight, before he boards his train, and it is hard not to notice the rather forlorn canvas rucksack slung over his shoulder. He appears to have surprisingly few possessions with him for someone who could end up spending months behind bars.

"What do you mean?" he says, matter-of-factly. "I've got socks, pants, everything. I'm ready for anything."

He sounds relaxed and confident, although there is a nervous intensity in his eyes. Escaping the long arm of Russian justice by going on the run was never an option for Pavlensky. "I think that would have discredited everything I'd done before, if at the first sign of danger I'd gone into hiding. So I decided to take a position of strength, because there is nothing to be afraid of. You can be afraid if you feel you are guilty of something and I don't. Anything the authorities do against me means discrediting themselves. The more they do with me, the worse they make it for themselves."

He says the same impulse informs his art: "Whenever I do a performance like this, I never leave the place. It's important for me that I stay there. The authorities are in a dead-end situation and don't know what to do. They can't ask the person to leave a square, because he's nailed to the square. And they can't do anything with a man inside barbed wire."

The influential gallery owner and critic Marat Guelman called Pavlensky's act "the artistic equivalent of setting yourself on fire" and said it was a gesture of hopelessness and desperation. "It was a

message to society," he told the *Calvert Journal*. "We all more or less share his position. People have been forced into a corner - the choice is between leaving, going to prison, or joining up with those in power."

But, in Pavlensky's mind, his action was less a helpless cry of anguish than an aggressive statement of defiance. His performances are not only a protest against the system, but also a protest against people's apathy. "When I did the *Carcass* piece with the barbed wire, I was not just saying how wonderful our legal system is - people are inside this wire, which torments them, stops them from moving, and they feel pain from every movement. I was also saying people themselves are this barbed wire and create the wire for themselves."

Pavlensky was born in St Petersburg and studied at art college, which he describes as a "disciplinary institution that aims to make servants out of artists". He left in 2012, without completing the course. He says he has a broad range of artistic influences. "I am very interested in Caravaggio, even though he worked with canvas and oils. He had a very serious life project, though: he made works with the theme of self-harm, where he translates real events on to the bodies of his subjects. He isn't a decorative artist. I am very critical of any decorative art as an idea, the idea of ornamentation and concealment. Everything that does the opposite, that brings things out and reveals how things actually are, this is what interests me."

Pavlensky takes inspiration from a long line of Russian protests, particularly the "Moscow activism" school of the 1990s, and most recently the protest group Voina, who were noted for their outrageous activist art. Voina's performances included staging a mass orgy inside Moscow's biological museum the day before the election of Dmitry Medvedev as president in 2008, under a banner that read: "Fuck for the teddy bear heir."

Later, they painted a giant penis on a St Petersburg bridge, just before it was raised at night for

ships to pass, causing the penis to "erect" and point at the FSB security services building on the embankment. The group won a major art prize for the stunt (the Innovatzia, the equivalent of the Turner prize), though they were also pursued by Russian authorities on criminal charges.

Two of the original Voina artists went on to form the punk collective Pussy Riot, who with their mix of music, art and activism also chose Red Square for one of the first performances, in 2011. Later, they would stage their fateful action in the Cathedral of Christ the Saviour, which would see three of them stand trial for "hooliganism motivated by religious hatred".

Pavlensky says it was during the Pussy Riot trial that he first began to understand the need for a more radical approach to art. "Their trial affected me more than many things in my own life. I started looking at other people and wondering why they were not doing anything. And that is when I had the important realisation that you should not wait for things from other people. You need to do things yourself."

The idea for his most recent performance came when he was briefly held in a cell after the Carcass stunt. A fellow prisoner regaled him with stories of the Gulag, where prisoners had sometimes nailed their scrotums to trees in an act of protest at the inhumane conditions and miserable existence. "I didn't think much of it at first but then, when I began thinking that the whole country is becoming a prison system, that Russia is turning into a big prison and a police state, it seemed perfect."

Some suggested that the act may not have been as gruesome as it seemed, with a piercing having been made prior to the event and the nail simply pushed through, but as we walk along the freezing platform for him to board the Moscow train, Pavlensky insists that he actually drove the nail through that afternoon. "I have the medical report to prove it," he says. "I was careful not to rupture a vein but it was very bloody and sore. They wanted to give me an-

tibiotics and other medications, but I refused."

In the end, Pavlensky was not arrested at his questioning the following day in Moscow, but the charges against him still stand, and he remains under investigation. In late January, officers arrived at the cable channel TV Rain and demanded to be given a recording of an interview Pavlensky had given them, saying they needed to examine it as part of a "psychological-linguistic expert analysis" that was being carried out as part of the case against him.

Despite the real threat of a jail term, Pavlensky does not plan to stop, and says his unusually painful brand of art comes from an imperative impulse towards radicalism: "It was a very important step for me - to understand what happens when a person becomes an artist, when a person becomes stronger

than their indifference and overcomes their inertia. I don't think an artist can exist without this and just be isolated and contemplative. An artist has no right not to take a stand."



Police approach artist Pyotr Pavlensky sitting on the pavestones of Red Square during a protest in front of the Kremlin wall in central Moscow Photograph: STRINGER/RUSSIA/REUTERS

The truth about the Tiger Mother's family

Amy Chua's account of her strict parenting caused uproar. As her latest book promises to be just as controversial, she and her husband defend their beliefs

By Kira Cochrane

Amy Chua has been accused of many things - a cruel approach to parenting, gratuitous use of cultural stereotypes, a talent for sensationalism - but cowardice isn't one of them. She provoked uproar with her 2011 memoir, *Battle Hymn of the Tiger Mother*, charting her unbending rules for raising her daughters, and spent two years dealing with the fallout, including death threats, racial slurs and pitchfork-waving calls for her arrest on child-abuse charges.

She might, therefore, have been expected to take an easier road with her follow-up. Instead, she and her husband, Jed Rubenfeld, have written *The Triple Package*, which is devoted to one of the most inflammatory subjects imaginable - why some cultural groups soar ahead in the US (while others, by implication, fail). The book charts how three specific qualities, which they argue are essential to success, are passed down through the generations, often through the family.

Chua has said she just wants to be liked, that she doesn't aim to be controversial, and in person, if not her work, this is obvious. In the living room of her family's large New York apartment, light streaming through the windows, she is every bit the effusive, encouraging professor, just what you'd expect from someone who has won a teaching award for her work at Yale law school. Rubenfeld, also a Yale law professor and bestselling author (his thriller *The Interpretation of Murder* reached No 1 in the UK), is quite different. Where she is enthusiastic, he is dry and sardonic; where she is clearly keen to ace this interview, he is witty, but much more guarded.

His suspicion isn't surprising. "Jed's so much more sensible and prudent," says Chua. "I kept saying: 'I don't think this book is going to be controversial, because it has so many studies in it ...' But Jed said: 'Amy, it's going to be controversial!'"

"She kept imagining it wouldn't be," says Rubenfeld. "She felt like the last [book] wouldn't be either, so ..." He lets this notion linger a second.

Chua's memoir might have been more nuanced and self-satirising than some critics suggested, but the firestorm it prompted was completely predictable. It began with a list of child-rearing edicts, including the fact that the couple's daughters, Sophia and Lulu, were never allowed to attend a sleepover, get any grade less than an A, fail to come first in any class except gym and drama, and had to play the piano or violin. No exceptions, no excuses. It continued through the time she called Sophia "garbage", and threatened to burn her soft toys. They were pushed to spend so much time practising musical instruments that Rubenfeld once found

Sophia's teeth marks in the piano.

With *The Triple Package*, says Rubenfeld: "I said, the first headlines are going to be that we're racist, and it's ridiculous, because the book is the opposite. Nothing to do with skin colour, groups from every possible skin colour, religious and racial background ... Nothing to do with genetics. But I said, you'll see, they're going to say that, just to be sensational."

Rubenfeld's prediction proved accurate again. The book began generating controversy before it was even published, with an article in the *New York Post* last month calling it "a series of shock-arguments wrapped in self-help tropes and it's meant to do what racist arguments do: scare people."

That article was headlined "Tiger Mom: Some cultural groups are superior," an echo of the *Wall Street Journal* headline that whipped up such a storm around her memoir: "Why Chinese mothers are superior." Much of the anger around Chua derives from this idea that she considers herself and her culture better than all others - in her memoir she played constantly on perceived differences between Chinese and western parents, tapping into deep anxiety and insecurity about a rising China and the slide of the west.

Ideas of superiority are central to her new book too, but she says she hopes after reading *The Triple Package*, people "don't think we're saying some groups are [inherently] better". She points to the book's subtitle, "how three unlikely traits explain the rise and fall of cultural groups in America", and stresses the rise and fall element. The couple are providing "a snapshot of who is doing well right now", she says. "Twenty years from now it could be somebody different ... The big thing for us is - I think we say this - anyone from any background, any ethnicity, can have these qualities. It's just that if you're in certain groups, it's almost like the odds are higher."

Part of the reason for the changing fortunes of some groups, she says, is the immigrant arc, which suggests first-generation immigrants tend to have exceptional drive, a quality passed on to their kids, "but once you get to the third generation, they're exactly the same as other Americans. So it's very dynamic."

As the daughter of Chinese immigrants herself, it was precisely this third generation lapse that Chua was trying to avoid in bringing up her own daughters. In *Battle Hymn ...*, she writes that she was determined "not to raise a soft, entitled child - not to let my family fall".

The Triple Package identifies eight groups that are particularly successful in the US at the moment - Indian, Chinese, Iranian, Lebanese, Nigerian and Cuban groups, along with Mormons and Jewish people. The couple's definition of success has riled some readers, revolving, as it does, around the bald data of income and education levels. "We looked at

the US census, these income measures," says Chua, "so very materialistic senses of success, but we're not saying this is the only way - this doesn't mean happiness, you know?"

Still, for those wishing to be rich and academically successful, the book defines three essential traits that contribute to drive, all passed down at least partly through the family. The first is a superiority complex, the sense that your particular group is exceptional. This belief, "can be religious", they write, "as in the case of Mormons. It can be rooted in a story about the magnificence of your people's history and civilisation, as in the case of Chinese or Persians." They're aware how dangerous this quality can be - ambivalence surrounds all the triple-package qualities. "Group superiority is the stuff of racism, colonialism, imperialism, Nazism," they continue. "Yet every one of America's extremely successful groups fosters a belief in its own superiority."

The second essential quality - insecurity - might seem contradictory, but apparently provides the grit in the oyster. "Everyone is probably insecure in one way or another," they write, "but some groups are more prone to it than others. To be an immigrant is almost by definition to be insecure." They note that the idea of insecurity as a lever of success is anathema in western society, and that, "the greatest anathema of all would be parents working to instil insecurity in their children. Yet insecurity runs deep in every one of America's most successful groups, and these groups not only suffer from insecurity; they tend, consciously or unconsciously, to promote it."

Finally, the third quality is impulse control, which they define as the ability to resist temptation. "Against the background of a relatively permissive America," they write, "some groups decidedly place greater emphasis on impulse control than others." They write that, while there is now a tendency to romanticise childhood, to see it as a time, ideally, of unfettered happiness, "every one of America's most successful groups takes a very different view of childhood and of impulse control in general, inculcating habits of discipline from an early age - at least they did so when they were on the rise."

The book is a strange mix. It seems too simplistic to be taken seriously as an academic theory, too dry to fit into the usual notion of a popular ideas book. Much of the deep uneasiness in reading it comes not from what is said about the eight groups in question, but what is unsaid about the hundreds of others. If impulse control is a key marker of success, for instance, then there is an obvious and ugly implication that other groups are simply undisciplined. It seems likely that many groups share the same roster of qualities as the most successful ones - but undermined by a much more difficult history and a different fabric of discrimination. The couple do acknowledge this in

the book, and in person, but it feels as if this side of the analysis doesn't go deep enough.

At times, the book reads most obviously as a defence of the tiger parenting Chua espoused in her memoir. She says they didn't think of it in this way, but that its message is completely consistent with *Battle Hymn ...*, in that it highlights the positive side of inculcating extreme drive - and the negatives. I ask whether she comes from a triple-package background and she says: "One hundred per cent."

How would she define this?

"This idea of high expectations," she says. "The message that my parents sent was definitely, 'You can be the best student, you are amazing,' but instead of the more western thing, which is, 'and we just want you to feel great about yourself' they're like 'but you haven't done well enough yet!' There were very high expectations, and also a big insecurity, in that when my parents came to the US they literally had nothing. I mean, they couldn't afford heat in Boston, which is colder than London, you know? So it was like, you need to be a good student, because otherwise we may not be able to survive."

When it came to impulse control, she watched her father, a scientist and renowned expert in chaos theory, work until three every morning, "so they didn't even have to tell me. I used to wake up and my dad was always working." (Now in his late 70s, her father is still taking up international fellowships, and flying all around the world giving talks.) People made fun of her accent and her looks while she was growing up. "I was an ugly kid, with glasses and braces, and English was my second language, and I remember people saying, 'Ha, ha, slanty eyes.' And my mother had a very strong sense of ethnic pride, which was, like: 'Why do you care what these kids are making fun of you about? We come from the most ancient civilisation, China invented all these things, we have a high culture, who cares what they think?' So that's what we call this ethnic armour."

Rubinfeld says he couldn't have been raised more differently. His grandparents were Jewish immigrants, and his parents, both brought up in Orthodox families in smalltown Pennsylvania, rebelled against their upbringing, and were much more liberal and permissive with their own children. Still, he also grew up watching his father, a psychotherapist, work until 3am. "I would say that my dad was very much what we describe in the book," he says, "because he was an immigrant's kid, and very driven, and had this insecurity of the kind we're describing."

Rubinfeld jokes that he provided the insecurity portion of the book, before talking more seriously about one of the problems associated with the triple package - they have a whole chapter on the pathologies associated with the three traits. "I know that I am unhappy," he says, "because I always feel like

whatever I've done is not good enough. It doesn't matter what I do - so that's painful, and I worry that I've communicated that to my kids."

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When Chua published *Battle Hymn ...*, critics noted Rubinfeld's absence from the book - an absence he had encouraged. This led to questions about how supportive he was of her parenting techniques, and today he says when she started using them he was shocked. But he clearly respected her approach. "That's not how I was raised, and if I had been a single parent, my kids would probably just be garbage men or something like that. But when I saw her instincts, I was very much in favour of them, because my parents were a little too permissive." I ask in what way, and he says he wishes his parents had made him learn a musical instrument. Instead, he was given a choice, "between violin lessons or tennis lessons, and I picked tennis, but we didn't really follow through with that either". It has to be said, his parents' approach doesn't seem to have worked out too shabbily for him.

He felt very bad for his wife when the memoir was published, "because she was getting dragged through so many ridiculous accusations, and people didn't understand - because, in part, she left this out of her book - how much her kids love her. They didn't understand how much she loves her kids. They didn't know about the four of us in bed watching TV or reading books, how often we just had fun together. I knew Amy could take it, but I felt bad because the kids were being insulted in the media, so I wanted to hack into the accounts of all the people

who were saying that, and go and find them, and do something illegal to them."

Their kids took it all in their stride though. Rubinfeld says he was searching online, "to see what people are saying, and they're like, 'Why are you doing that? We don't care what people are saying!'" Sophia is currently at Harvard and Lulu was recently accepted at Yale.

The member of the family who seems to care most about the backlash is Chua; understandably, given that she was the prime target, but surprisingly, given her image. She says she keeps the hate mail she's received in an email folder entitled "Do not look", and as a new round has started coming in, she has stuck to this rule.

In light of that, it's surprising she's put her head above the parapet with this new book - she can't really have been oblivious to the likely reaction. Although in her memoir and her new book, Chua traces some of the problems with what could be called, almost interchangeably, triple-package or tiger parenting, there is no doubt she is essentially in favour of it. "Self-control, discipline, resilience," she says. "I got that from my parents. I remember once, I got rejected. I was trying to get a professor job, and I applied to, like, 500 places, and I think I got 500 rejections, and I called my dad and said: 'I don't think I can be a professor.' He said: 'Wait, how many rejections did you get?' And I said '500'. And he said: 'You got 500 rejections, and you want to give up? You think that's a LOT?!'" Love her or hate her, she won't give up.



Amy Chua with her husband, Jed Rubinfeld: 'Self-control, discipline, resilience. I got that from my parents.' Photograph: Mike McGregor for the Guardian

'Priceless' bronze statue of Greek god Apollo found in Gaza Strip

● **Hamas officials seize statue after it appears on eBay**

● **Doubt cast on fisherman's claim to have found item in sea**

By Reuters in Gaza

Lost for centuries, a rare bronze statue of the Greek god Apollo has mysteriously resurfaced in the Gaza Strip, only to be seized by police and vanish almost immediately from view.

Word of the remarkable find has caught the imagination of the world of archaeology, but the police cannot say when the life-sized bronze might re-emerge or where it might be put on display.

A local fisherman says he scooped the 500kg (1,100lb) god from the seabed last August, and carried it home on a donkey cart, unaware of the significance of his catch.

Others soon guessed at its importance, and the statue briefly appeared on eBay with a \$500,000 (£300,000) price tag - well below its true value. Police from the Islamist group Hamas, which rules the isolated Palestinian territory, swiftly seized it and say they are investigating the affair.

Archaeologists have not been able to get their hands on the Apollo - to their great frustration - and instead must pore over a few blurred photographs of the intact deity, who is laid out incongruously on a blanket emblazoned with Smurfs.

From what they can tell, it was cast sometime between the 5th and the 1st century BC, making it at least 2,000 years old.

"It's unique. In some ways I would say it is priceless. It's like people asking what is the [value] of the painting La Gioconda [the Mona Lisa] in the Louvre museum," said Jean-Michel de Tarragon, a historian with the French Biblical and Archaeological School of Jerusalem.

"It's very, very rare to find a statue which is not in marble or in stone, but in metal," he told Reuters television.

The apparently pristine condition of the god suggested it was uncovered on land and not in the sea, he said, speculating that the true location of where it was unearthed was not revealed to avoid arguments over ownership.

"This wasn't found on the seashore or in the sea ... it is very clean. No, it was [found] inland and dry," he said, adding that there were no signs of metal disfigurement or barnacles that one normally sees on items plucked from water.

Palestinian fisherman Joudat Ghrab tells a different tale. The 26-year-old father of two said he saw a human-like shape lying in shallow waters some 100 metres offshore, just north of the Egyptian-Gaza border.

At first he thought it was a badly burnt body, but when he dived down to take a closer look he realised it was a statue. He says it took him and his relatives four hours to drag the treasure ashore.

"I felt it was something gifted to me by God," Ghrab told Reuters. "My financial situation is very

difficult and I am waiting for my reward."

His mother was less happy when she saw the naked Apollo carried into the house, demanding that his private parts be covered. "My mother said: 'What a disaster you have brought with you' as she looked at the huge statue," said Ghrab.

The discoloured green-brown figure shows the youthful, athletic god standing upright on two, muscular legs; he has one arm outstretched, with the palm of his hand held up.

He has compact, curly hair, and gazes out seriously at the world, one of his eyes apparently inlaid with a blue stone iris, the other just a vacant black slit.

Ghrab says he cut off one of the fingers to take to a metals expert, thinking it might have been made of gold. Unbeknownst to him, one of his brothers severed another finger for his own checks. This was melted down by a jeweller.

Family members belonging to a Hamas militia soon took charge of the statue, and at some stage the Apollo appeared on eBay, with the seller telling the buyer to come and collect the item from Gaza.

That would have been easier said than done, however, as Gaza is virtually sealed off from the outside world, with both Israel and Egypt imposing rigid controls on access to the impoverished enclave and its 1.8 million inhabitants.

Whether any potential buyers stepped forward is not clear, but when Hamas's civilian authorities found out about the artefact, they ordered the police to seize it.

Officials at Gaza's tourism ministry told Reuters the statue would not be shown to the public until a criminal investigation into who tried to sell it was

completed.

However, Ahmed al-Bursh, the ministry's director of archaeology, said he had seen it and promised that Ghrab would receive a reward once the issue had been resolved.

"It is a precious treasure, an important archaeological discovery," said Bursh. Once the statue has been released by police, his ministry plans to repair it and put it on show in Gaza.

"International institutions have also contacted us and have offered to help with the repair process," he said, adding that a museum in Geneva and the Louvre in Paris wanted to take it on loan.

Like Ghrab, Bursh said the statue had been found at sea. The historian Tarragon said it was vital to know the true location of its discovery.

Some 5,000 years of history lie beneath the sands of the Gaza Strip, which was ruled at various times by ancient Egyptians, Philistines, Romans, Byzantines and crusaders.

Alexander the Great besieged the city and the Roman emperor Hadrian visited. However, local archaeologists have little experience to carry out any scientific digs and many sites remain buried.

Statues such as the Apollo cast would not have been held in isolation, meaning it may prove the tip of an historical iceberg, according to Tarragon.

"A statue at that time was [put] in a complex, in a temple or a palace. If it was in a temple, you should have all the other artefacts of the cult [at the site]," he said, adding that he hoped Hamas appreciated its potential importance.

"There is a feeling that they could find more and more [items] linked to the statue, more and more artefacts, so this is very sensitive," he said.



The bronze statue of the Greek god Apollo is pictured in Gaza. Photograph: Reuters

Sound, light and water waves and how scientists worked out the mathematics

What violins have in common with the sea - the wave principle

By Alok Jha

You're reading these words because light waves are bouncing off the letters on the page and into your eyes. The sounds of the rustling paper or beeps of your computer reach your ear via compression waves travelling through the air. Waves race across the surface of our seas and oceans and earthquakes send waves coursing through the fabric of the Earth.

As different as they all seem, all of these waves have something in common - they are all oscillations that carry energy from one place to another. The physical manifestation of a wave is familiar - a material (water, metal, air etc) deforms back and forth around a fixed point.

Think of the ripples on the surface of a pond when you throw in a stone. Looking from above, circular waves radiate out from the point where the stone hits the water, as the energy of the collision makes water molecules around it move up and down in unison. The resulting wave is called "transverse" because it travels out from the point the stone sank, while the molecules themselves move in the perpendicular direction. A vertical cross-section of the wave would look like a familiar sine curve.

Sound waves are known as "longitudinal" because the medium in which they travel - air, water or whatever else - vibrates in the same direction as the wave itself. Loudspeakers, for example, move air molecules back and forth in the same direction as the vibration of the speaker cone.

In both cases, the water or air molecules remain, largely, in the same place as they started, as the wave travels through the material. They are not shifted, en masse, in the direction of the wave.

The one-dimensional wave equation (pictured) describes how much any material is displaced, over time, as the wave proceeds. The curly "d" symbols scattered through the equation are mathematical functions known as partial differentials, a way to measure the rate of change of a specific property of the system with respect to another.

On the left is the expression for how fast the material is deforming (y) in space (x) at any given instant; on the right is a description for how fast the material is changing in time (t) at that same instant. Also on the right is the velocity of the wave (v). For a wave moving across the surface of a sea, the equation relates how fast a tiny piece of water is physically deforming, at any particular instant, in space (on the left) and time (on the right).

The wave equation had a long genesis, with scientists from many fields circling around its mathematics across the centuries. Among many others, Daniel Bernoulli, Jean le Rond d'Alembert, Leonhard Euler, and Joseph-Louis Lagrange realised that there was a similarity in the maths of how to describe waves in strings, across surfaces and through solids and fluids.

Bernoulli, a Swiss mathematician, began by trying to understand how a violin string made sound. In the 1720s, he worked out the maths of a string as it vibrated by imagining the string was composed of a huge number of tiny masses, all connected with springs. Applying Isaac Newton's laws of motion for the individual masses showed him that the simplest shape for vibrating violin string, fixed at each end, would be the gentle arc of a single sine curve. A violin string (or a string on any instrument, for that matter) vibrates in transverse waves along its length, which creates longitudinal waves in the surrounding air, which our ears interpret as sound.

Some decades later, mathematician Jean Le Rond d'Alembert generalised the string problem to write down the wave equation, in which he found that the acceleration of any segment of the string was proportional to the tension acting on it. The waves created by different tensions of the string produce different notes - think of how the sound from a plucked string can be changed as it is tightened or loosened.

The wave equation started off describing movement of physical stuff but it is much more powerful than that. Mathematically, it can also describe, for example, the movement of heat or electrical potential, by changing "y" from describing the deformation of a substance to the change in the energy of a system.

Not all waves need to travel through a material. By 1864, the physicist James Clerk Maxwell had derived his four famous equations for the interactions of the electric and magnetic fields in a vacuum around charged particles. He noticed that the expressions could be combined to form wave equations featuring the strength of the electric or magnetic fields in the place of "y". And the speed of

these waves (the "v" term in the equation) was equal to the speed of light.

This simple mathematical re-arrangement was one of the most significant discoveries in the history of physics, showing that light must be an electromagnetic wave that travelled in the vacuum.

Electromagnetic waves, then, are transverse oscillations of the electric and magnetic fields. Discovering their wave-like nature led to the prediction that there must be light of different wavelengths, the distance between successive peaks and troughs of the sine curve. It was soon discovered that wavelengths longer than visible light include microwaves, infrared and radio waves; shorter wavelengths include ultraviolet light, X-rays and gamma rays.

The wave equation has also proved useful in understanding one of the strangest, but most important, physical ideas in the past century: quantum mechanics. In this description of the world at the level of atoms and smaller, particles of matter can be described as waves using Erwin Schrödinger's eponymous equation.

His adaptation of the wave equation describes electrons, for example, not as a well-defined object in space but as quantum waves for which it is only possible to describe probabilities for position, momentum or other basic properties. Using the Schrödinger wave equation, interactions between fundamental particles can be modelled as if they were waves that interfere with each other, instead of the classical description of fundamental particles, which has them hitting each other like billiard balls.

Everything that happens in our world, happens because energy moves from one place to another. The wave equation is a mathematical way to describe how that energy flows.

$$\frac{\partial^2 y}{\partial x^2} = \frac{1}{v^2} \frac{\partial^2 y}{\partial t^2}$$

The wave equation. Photograph: Observer

What happens with digital rights management in the real world?

DRM is one of the most salient, and least understood, facts about technology in the contemporary world

By Cory Doctorow

I've been writing about "digital rights management" (DRM) for years in this column, but here I am, about to write about it again. That's because DRM - sometimes called "copy protection software" or "digital restrictions management" - is one of the most salient, and least understood, facts about technology in the contemporary world.

When you get into a discussion about DRM, you often find yourself arguing about whether and when copying and sharing should be allowed. Forget that for now. It's beside the point, for reasons that will shortly be clear. Instead, let's talk about the cold, hard legal, technical, marketplace and normative realities of DRM. Let's talk about what happens with DRM in the real world.

In the real world, "bare" DRM doesn't really do much. Before governments enacted laws making compromising DRM illegal (even if no copyright infringement took place), DRM didn't survive contact with the market for long. That's because technologically, DRM doesn't make any sense. For DRM to work, you have to send a scrambled message (say, a movie) to your customer, then give your customer a program to unscramble it. Anyone who wants to can become your customer simply by downloading your player or buying your device - "anyone" in this case includes the most skilled technical people in the world. From there, your adversary's job is to figure out where in the player you've hidden the key that is used to unscramble the message (the movie, the ebook, song, etc). Once she does that, she can make her own player that unscrambles your files. And unless it's illegal to do this, she can sell her app or device, which will be better than yours, because it will do a bunch of things you don't want it to do: allow your customers to use the media they buy on whatever devices they own, allow them to share the media with friends, to play it in other countries, to sell it on as a used good, and so on.

The only reason to use DRM is because your customers want to do something and you don't want them to do it. If someone else can offer your customers a player that does the stuff you hate and they love, they'll buy it. So your DRM vanishes.

A good analogue to this is inkjet cartridges. Printer companies make a lot more money when you buy your ink from them, because they can mark it up like crazy (millilitre for millilitre, HP ink costs more than vintage Champagne). So they do a bunch of stuff to stop you from refilling your cartridges and putting them in your printer. Nevertheless, you can easily and legally buy cheap, refilled and third-party cartridges for your printer. Same for phone unlocking: obviously phone companies keep you as a customer longer and make more money if you have to throw away your phone when you change carriers, so they try to lock the phone you buy with your plan to their networks. But phone unlocking is legal in the UK, so practically every newsagent and dry

cleaner in my neighbourhood will unlock your phone for a fiver (you can also download free programs from the net to do this if you are willing to trade hassle for money).

The technical and commercial forces that gave us phone unlocking and cartridge refilling are the same forces that would make DRM a total non-starter, except for a pesky law.

Enter the DMCA

Back in 1995, Bill Clinton's copyright tsar Bruce Lehman - a copyright lawyer, late of Microsoft - wrote a white paper proposing a new regulatory framework for the internet. It was bonkers. Under Lehman's plan, every copy of every work would have to be explicitly permitted and a license fee collected. That means that your computer would have to check for permission and pay a tiny royalty when it copied a file from the modem's buffer into memory, and from memory into the graphics card.

Lehman submitted his paper to then-Vice President Al Gore, who was holding hearings on the demilitarisation of the internet - the National Information Infrastructure (NII) or "information superhighway" hearings. To his credit, Al Gore rejected the Lehman plan and sent him packing.

Lehman's next stop was Geneva, where he convinced the UN's World Intellectual Property Organisation (WIPO) to enact key measures from his plan in international treaties (the WIPO Copyright Treaty and WIPO Performances and Phonograms Treaty). Then he got the US Congress to pass a law to comply with the treaty - the Digital Millennium Copyright Act (DMCA) - that snuck much of the stuff that Gore had rejected into US law.

The DMCA is a long and complex instrument, but what I'm talking about here is section 1201: the notorious "anti-circumvention" provisions. They make it illegal to circumvent an "effective means of access control" that restricts a copyrighted work. The companies that make DRM and the courts have interpreted this very broadly, enjoining people from publishing information about vulnerabilities in DRM, from publishing the secret keys hidden in the DRM, from publishing instructions for getting around the DRM - basically, anything that could conceivably give aid and comfort to someone who wanted to do something that the manufacturer or the copyright holder forbade.

Significantly, in 2000, a US appeals court found (in *Universal City Studios, Inc v Reimerdes*) that breaking DRM was illegal, even if you were trying to do something that would otherwise be legal. In other words, if your ebook has a restriction that stops you reading it on Wednesdays, you can't break that restriction, even if it would be otherwise legal to read the book on Wednesdays.

In the USA, the First Amendment of the Constitution gives broad protection to free expression, and prohibits government from making laws that abridge Americans' free speech rights. Here, the

Reimerdes case set another bad precedent: it moved computer code from the realm of protected expression into a kind of grey-zone where it may or may not be protected.

In 1997's *Bernstein v United States*, another US appeals court found that code was protected expression. *Bernstein* was a turning point in the history of computers and the law: it concerned itself with a UC Berkeley mathematician named Daniel Bernstein who challenged the American prohibition on producing cryptographic tools that could scramble messages with such efficiency that the police could not unscramble them. The US National Security Agency (NSA) called such programs "munitions" and severely restricted their use and publication. Bernstein published his encryption programs on the internet, and successfully defended his right to do so by citing the First Amendment. When the appellate court agreed, the NSA's ability to control civilian use of strong cryptography was destroyed. Ever since, our computers have had the power to keep secrets that none may extract except with our permission - that's why the NSA and GCHQ's secret anti-security initiatives, Bullrun and Edgehill, targeted vulnerabilities in operating systems, programs, and hardware. They couldn't defeat the maths (they also tried to subvert the maths, getting the US National Institute for Standards in Technology to adopt a weak algorithm for producing random numbers).

Ever since Reimerdes, it's been clear that DRM isn't the right to prevent piracy: it's the right to make up your own copyright laws. The right to invent things that people aren't allowed to do - even though the law permits it -- and to embed these prohibitions in code that is illegal to violate. *Reimerdes* also showed us that DRM is the right to suppress speech: the right to stop people from uttering code or keys or other expressions if there is some chance that these utterances will interfere with your made-up copyright laws.

Understanding security

The entertainment industry calls DRM "security" software, because it makes them secure from their customers. Security is not a matter of abstract absolutes, it requires a context. You can't be "secure," generally -- you can only be secure from some risk. For example, having food makes you secure from hunger, but puts you at risk from obesity-related illness.

DRM is designed on the presumption that users don't want it, and if they could turn it off, they would. You only need DRM to stop users from doing things they're trying to do and want to do. If the thing the DRM restricts is something no one wants to do anyway, you don't need the DRM. You don't need a lock on a door that no one ever wants to open.

DRM assumes that the computer's owner is its adversary. For DRM to work, there has to be no obvi-

ous way to remove, interrupt or fool it. For DRM to work, it has to reside in a computer whose operating system is designed to obfuscate some of its files and processes: to deliberately hoodwink the computer's owner about what the computer is doing. If you ask your computer to list all the running programs, it has to hide the DRM program from you. If you ask it to show you the files, it has to hide the DRM files from you. Anything less and you, as the computer's owner, would kill the program and delete its associated files at the first sign of trouble.

An increase in the security of the companies you buy your media from means a decrease in your own security. When your computer is designed to treat you as an untrusted party, you are at serious risk: anyone who can put malicious software on your computer has only to take advantage of your computer's intentional capacity to disguise its operation from you in order to make it much harder for you to know when and how you've been compromised.

DRM in the era of mass surveillance

Here's another thing about security: it's a process, not a product (hat tip to Bruce Schneier!). There's no test to know whether a system is secure or not; by definition, all you can do to test a system's security is tell people how it works and ask them to tell you what's wrong with it. Designing a security system without public review is a fool's errand, ensuring that you've designed a system that is secure against people stupider than you, and no one else.

Every security system relies on reports of newly discovered vulnerabilities as a means of continuously improving. The forces that work against security systems - scripts that automate attacks, theoretical advances, easy-to-follow guides that can be readily googled - are always improving so any system that does not benefit from its own continuous improvement becomes less effective over time. That is, the pool of adversaries capable of defeating the system goes up over time, and the energy they must expend to do so goes down over time, unless vulnerabilities are continuously reported and repaired.

Here is where DRM and your security work at cross-purposes. The DMCA's injunction against publishing weaknesses in DRM means that its vulnerabilities remain unpatched for longer than in comparable systems that are not covered by the DMCA. That means that any system with DRM will on average be more dangerous for its users than one without DRM.

The DMCA has spread to other territories, thanks to those WIPO treaties. In the UK, we got DMCA-like laws through the EU Directive. Canada got them through Bill C-11. Pretty much any place that's industrialized and wants to trade with the rest of the world has a prohibition on weakening DRM. Many of these laws - including the DMCA - have provisions that supposedly protect legitimate security research, but in practice, these are so narrow and the penalties for DMCA violations are so terrible that no one tries to

avail themselves of them.

For example, in 2005, Sony-BMG music shipped a DRM called the "Sony Rootkit" on 51m audio CDs. When one of these CDs was inserted into a PC, it automatically and undetectably changed the operating system so that it could no longer see files or programs that started with "\$SYS\$." The rootkit infected millions of computers, including over 200,000 US military and government networks, before its existence became public. However, various large and respected security organisations say they knew about the Sony Rootkit months before the disclosure, but did not publish because they feared punishment under the DMCA. Meanwhile, virus-writers immediately began renaming their programs to begin with \$SYS\$, because these files would be invisible to virus-checkers if they landed on a computer that had been compromised by Sony.

Snowden, DMCA and the Future of Security

The revelations of the NSA whistleblower Edward Snowden have changed the global conversation about privacy and security. According to a Pew study from last autumn, most American Internet users are now attempting to take measures to make their computers more secure and keep their private information more private.

It's hard to overstate how remarkable this is (I devoted an entire column to it in December). For the entire history of the technology industry, there was no appreciable consumer demand for security and privacy. There was no reason to believe that spending money making a product more secure would translate into enough new users to pay for the extra engineering work it entailed.

With the shift in consciousness redounding from the Snowden files, we have, for the first time ever, the potential for commercial success based on claims of security. That's good news indeed - because computer security is never a matter of individual action. It doesn't matter how carefully you handle your email if the people you correspond with are sloppy with their copies of your messages. It's a bit like public health: it's important to make sure you have clean drinking water, but if your neighbours don't pay attention to their water and all get cholera, your own water supply's purity won't keep you safe.

But there can be no real security in a world where it is illegal to tell people when the computers in their lives are putting them in danger. In other words, there can be no real security in a world where the DMCA and its global cousins are still intact.

Party like it's 1997

Which brings us back to *Bernstein*. In 1997, a panel of American federal appeals court judges in the Ninth Circuit decided that code was expressive

speech and that laws prohibiting its publication were unconstitutional. In 2000, the *Reimerdes* court found that this protection did not extend to code that violated the DMCA.

It's been a long time since anyone asked a judge to reconsider the questions raised in *Reimerdes*. In 2000, a judge decided that the issue wasn't about free speech, but rather a fight between companies who "invested huge sums" in movies and people who believed that "information should be available without charge to anyone clever enough to break into the computer systems." The judge was wrong then, and the wrongness has only become more glaring since.

No court case is ever a sure thing, but I believe that there's a good chance that a judge in 2014 might answer the DMCA/free speech question very differently. In 14 years, the case for code as expressive speech has only strengthened, and the dangers of censoring code have only become more apparent.

If I was a canny entrepreneur with a high appetite for risk -- and a reasonable war-chest for litigation - I would be thinking very seriously about how to build a technology that adds legal features to a DRM-enfeebled system (say, iTunes/Netflix/Amazon video), features that all my competitors are too cowardly to contemplate. The potential market for devices that do legal things that people want to do is titanic, and a judgment that went the right way on this would eliminate a serious existential threat to computer security, which, these days, is a synonym for security itself.

And once anti-circumvention is a dead letter in America, it can't survive long in the rest of the world. For one thing, a product like a notional iTunes/Amazon/Netflix video unlocker would leak across national borders very easily, making non-US bans demonstrably pointless. For another, most countries that have anti-circumvention on the books got there due to pressure from the US Trade Representative; if the US drops anti-circumvention, the trading partners it armed-twisted into the same position won't be far behind.

I've talked to some lawyers who are intimate with all the relevant cases and none of them told me it was a lost cause (on the other hand, none of them said it was a sure thing, either). It's a risky proposition, but something must be done. You see, contrary to what the judge in *Reimerdes* said in 2000, this has nothing to do with whether information is free or not - it's all about whether people are free.

Stuart Hall's cultural legacy: Britain under the microscope

Stuart Hall, the so-called 'godfather of multiculturalism' changed Britain for the better even while he showed us the ugly truth about our racist society
By Stuart Jeffries

"The very notion of Great Britain's 'greatness' is bound up with empire," Stuart Hall once wrote. "Euro-scepticism and Little Englander nationalism could hardly survive if people understood whose sugar flowed through English blood and rotted English teeth."

For the Jamaican-born intellectual, who was one of the Windrush generation, - the first large-scale immigration of West Indians to the capital after world war two - that rottenness was unmissable. Hall came to that rotten land with its in-part slave-generated wealth from Kingston in 1951 as a Rhodes scholar to study at Oxford. "Three months at Oxford persuaded me that it was not my home," he told the Guardian in 2012. "I'm not English and I never will be. The life I have lived is one of partial displacement. I came to England as a means of escape, and it was a failure."

A failure? You might well be forgiven for thinking otherwise. Stuart Hall gave up his PhD on Henry James and instead, in 1958, became the founding editor of the New Left Review, which opened a debate about the things that hadn't been broached in complacent British academia in the post-war period - immigration, the politics of identity and multicultural society. He became, with EP Thompson, Ralph Miliband and Raymond Williams, a leading figure of Britain's New Left, and one of the very few among their number who wasn't white.

In Birmingham in 1964, along with two of Britain's leading radical postwar thinkers, Williams and Richard Hoggart, Hall established the first cultural studies programme at a British university. Thereafter he became very nearly synonymous with this multidisciplinary field which insisted that mass or popular culture was worth studying if we really wanted to understand what was wrong with Britain in particular and capitalism in general.

In 1978, he was one of the authors of the book *Policing the Crisis: Mugging, the State and Law and Order*, a belated if bravura attempt to address what Hall called the "critical questions of race, the politics of race, the resistance to racism" and to tackle how the British state created a racist panic directed at young black men. It depicted those young men in Marxist terms, as a "super-exploited sub-proletariat". Here, and elsewhere, Hall did what his friend and colleague Paul Gilroy said in a *festschrift*: "Stuart Hall's work has helped us to appreciate that we have been living through a profound transformation in the way that 'race' is understood and acted upon."

Thereafter, he wrote and lectured extensively on the subjects of race, identity, social change in Britain and our shifting role in the world. He became celebrated as the "godfather of multiculturalism". He made many TV appearances especially late-night on BBC2, becoming as the Observer put it, "the progressive insomniacs' icon" and even the Telegraph praised him as a "dapper, assured figure with an agreeably forthright manner".

He was recently celebrated only last September by a lovely, respectful documentary by John Akomfrah called *The Stuart Hall Project*, which Peter Bradshaw in the Guardian described as "a deeply considered project that reconsiders culture and identity for those excluded from the circles of power through race, gender and class". Those words, too, were true of Stuart Hall's professional career.

Admittedly, the above narrative erases a great deal, not least what Hall called "the black person's burden". "I'm expected to speak for the entire black race on all questions theoretical, critical, etc," he said once, "and sometimes for British politics, as well as for cultural studies. This is what is known as the black person's burden." Sometimes, understandably, he wanted to remove that burden, but not often.

Nor does that narrative properly question the headline notion that Hall was the godfather of mul-

ticulturalism. For his part, Hall always argued that in Britain, at least, any rapprochement between the races, any easing of racial tension, wasn't very much due to the work he did in academia, but rather "it was more what I think of as a multicultural drift, just having them [people from other cultures] around, they weren't going to eat you, they didn't have tails".

Nor does it do justice to how cultural studies was a vexed field, derided by traditionalist critics such as Harold Bloom as an intellectually irresponsible imposture, and riven from within by theoretical differences - struggles to deal with tricky things like Althusserian Marxism, Foucauldian power theory, Deleuze and Guattari's schizoanalysis, post-Gramscian hegemony theory and that abiding threat to patriarchal power bases in universities, feminism. Hall, at least, could write about the impact of the last of these with superbly mordant self-criticism. In his paper *Cultural Studies and its Theoretical Legacies*, Hall recalls the impact of feminist thought on cultural studies. "As the thief in the night, it broke in; interrupted, made an unseemly noise, seized the time, crapped on the table of cultural studies ... Now that's where I really discovered about the gendered nature of power. Long, long after I was able to pronounce the words, I encountered the reality of Foucault's profound insight into the individual reciprocity of knowledge and power. Talking about giving up power is a radically different experience from being silenced."

Reading about getting shut up was one thing, Hall realised, having it happen to you something else. But for all that one gets the sense that Hall, who after all knew a little about exclusion, was also capable of appreciating a bracingly valuable power shift. Cultural studies, as practised by Hall, was never a smug academic activity, but one that often involved facing awkward truths about oneself and how one was deeply, painfully implicated in existing power structures.

But if there was failure, it was because Hall could

not escape who he was, certainly not by coming to Britain, and couldn't shed that above-mentioned burden for long. That comes out clearly in the chastening conclusion to an interview, by Tim Adams in the Observer seven years ago, when he said: "I am not a liberal Englishman like you. In the back of my head are things that can't be in the back of your head. That part of me comes from a plantation, when you owned me. I was brought up to understand you, I read your literature, I knew Daffodils off by heart before I knew the name of a Jamaican flower. You don't lose that, it becomes stronger."

Cultural studies as practised in Birmingham was in part inspired by the Italian Marxist Antonio Gramsci, who wondered why working people would vote to cede control to corporations and see their own rights and freedoms curtailed? Culture, Hall and his colleagues recognised, was a key instrument of political and social control. For instance, Hall argued that mainstream mass media in the US effectively proselytised for the notion that democratic pluralism was a reality rather than a façade, arguing for "the pretence that society is held together by common norms, including equal opportunity, respect for diversity, one person-one vote, individual rights and rule of law".

Not to consider how culture worked in such a capitalist societies meant, Gramsci thought and the likes of Hall agreed, was an abnegation of a politically committed intellectual's responsibility. Stuart Hall argued his intellectual life was certainly an argument with neo-liberalism, but also an argument with any kind of Marxism that contended it was all about the economy, stupid.

But it's 12 years since the Birmingham Centre for Contemporary Cultural Studies was closed. Today, there is a project to celebrate the legacy of the centre that Hall helped found 50 years ago.

But what is its legacy? Hall was hard-headed in his assessment:

"Against the urgency of people dying in the streets, what in God's name is the point of cultural

studies?... At that point, I think anybody who is into cultural studies seriously as an intellectual practice, must feel, on their pulse, its ephemerality, its insubstantiality, how little it registers, how little we've been able to change anything or get anybody to do anything. If you don't feel that as one tension in the work that you are doing, theory has let you off the hook."

But, more importantly, what of his hopes for that derided thing, multiculturalism in Britain? "It is a more genuine multicultural society than New York," he said in one interview, "where there are not the same black/white worlds. And what gives me hope is that there are still many, many people here who try to live it that way."

Perhaps, then, Britain wasn't quite as rotten as it

initially seemed to the Jamaican intellectual? The 2011 riots made Hall sceptical. "Some kids at the bottom of the ladder are deeply alienated, they've taken the message of Thatcherism and Blairism and the coalition: what you have to do is hustle," he said last year. "Because nobody's going to help you. And they've got no organised political voice, no organised black voice and no sympathetic voice on the left."

Hall regularly quoted with approval Gramsci's remark about the pessimism of the intellect, optimism of the spirit. By the end of his life, though, one might well think, Stuart Hall's optimistic spirit had been tested to its limits.



Stuart Hall: 1932-2014.

10 ways Facebook changed gaming for ever

From iteration cycles to compulsion loops, here are 10 things social gaming did for us - not all of it positive

By Keith Stuart

Social gaming. The mere utterance of that phrase is enough to send a shiver down the spines of "hard-core" console players. For many, what Facebook brings to mind as a games platform is a plague of aimless farming sims, designed to draw hapless web users into endless Skinner boxes. And up there, looming over it all is Zynga, social gaming's Ming the Merciless.

But is it really like that? Has the first 10 years of Facebook gaming brought us nothing but the ability to share cows with our friends? No, of course that's not true. Not entirely. Here are the 10 things Facebook gaming has done for us.

The idea of appointment gaming

Traditional video games are all about immersion - they're about long sessions of dedicated playing, which makes them unsuitable for time-poor players. Facebook, however, popularised a form of game design in which participants can keep nipping back in throughout the day, perhaps to check on the progress of a new ride construction in Rollercoaster Tycoon or to stop crops from spoiling in Farmville. This structure not only allowed people to use games as a quick diversion amid other tasks, it also cleverly turned the games themselves into "to do" lists, so they resembled work, and therefore provided similar levels of satisfaction. But in a fun way.

The rise of free-to-play

Of course, the ability to play a game for nothing and then pay money for extra content or in-game items has been around for many years, but it was turned into something of an artform by Facebook publishers like Zynga. The key games thrived on two important game mechanics: the concept of "energy" which limited play time and required players to pay real money to get past barriers; and the prevalence of virtual currencies, such as gems or gold coins, which deviously introduces ambiguity into cash purchases. But while F2P is all too easily written off as intrinsically evil, it has massively expanded the gaming audience by lowering that pay-upfront barrier that traditional boxed games erect. "Free-to-play changed the whole mindset of design," says Mark Robinson, chief operating officer of data technology firm, GamesAnalytics. "Developers went from releasing boxed products to creating and managing a service, and suddenly there was an opportunity to develop very strong relationships with their customers." Now both the PlayStation 4 and Xbox One are experimenting with free-to-play mechanics, no doubt hoping to learn from the rather exploitative practices of old.

The death of challenge

The standard criticism core gamers throw at titles like Farmville is that they're not really games; they are virtual cyclical activities with no genuine sense

of competition. And yet at its peak, Farmville attracted 85 million people who didn't seem to care. "Games don't have to punish players," says Oscar Clark, a gaming evangelist at EveryPlay. "A lot of the games we grew up with were about how devious the designers could be and how much they could punish failure. But Facebook players don't put up with that bullshit." Mark Robinson concurs: "Facebook allowed us to collect data on players and then optimise and personalise the experience - if you're not that confident a player, you get the easier version of the game so you don't feel like you're banging your head against a brick wall." Robinson refers to good social game design as the Goldilocks approach: make it not too easy but never too hard. This approach has now spread to console games, with most titles now providing 'easy' modes for complete novices, as well as lots of in-game hints and tutorials.

Frontloading the fun

In traditional video games, players pay up front for the experience so they're already invested and designers can afford to build slowly toward the most exciting enemies and best set-piece battles. Alongside free-to-play mobile titles, Facebook games have had to develop a new approach to design in which players are immediately engaged - as there's no cost, the "churn rate" is huge. "The first 60 seconds has got to be incredibly engaging," says Robinson. "The players haven't committed any money but you need them to commit time - you need to build your retention rates. In the game environment you need to be able to quickly calculate how competent a player is and adjust the environment accordingly."

Asynchronous multiplayer gaming

Again, Facebook developers didn't invent the concept of turn-based head-to-head games, but they made the most of a platform that allowed friends to play against each other over the course of hours or days - without ever having to be online at the same time. The key early example was Scrabulous, the Scrabble-like word game that drew in five million users a month through 2007; this has been superseded by Words With Friends by NewToy, Inc, a studio later bought by Zynga. Asynchronous multiplayer is important in our connected era, because it acknowledges that we love to play with other people, but we're not always available at the same time - and it makes a feature out of that. Console games have now adopted and adapted the model, so you get titles like Need For Speed: Hot Pursuit which tells you the best lap times of your friends so you can compete against them even when they're not around.

The compulsion loop is everything

Games have always had feedback loops - repetitive actions that reward the player. You achieve something, you get access to new content, the new content requires you to achieve something, and so on.

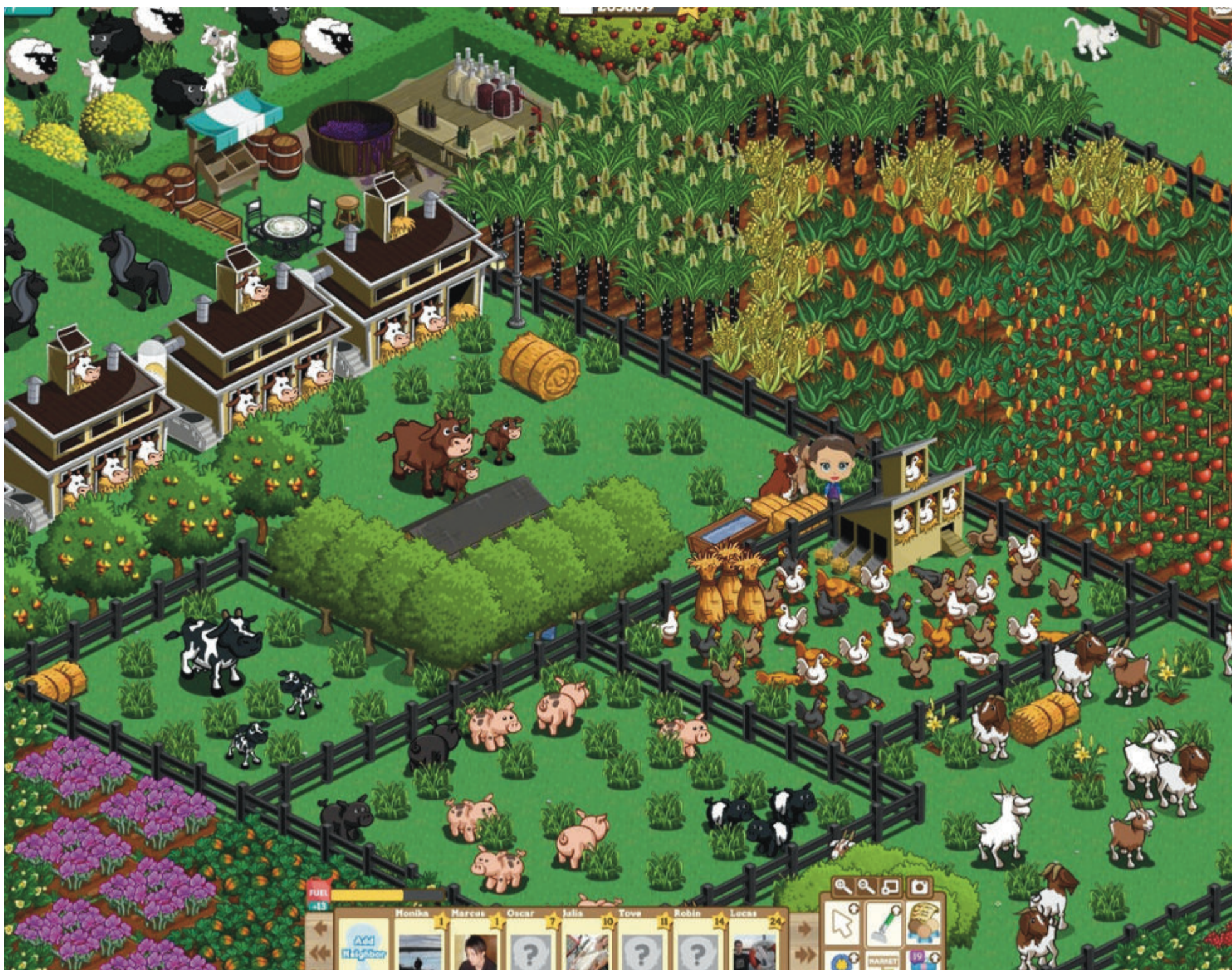
But social games have turned this into an absolute science. The most successful titles - the ones that monetise the most players - are usually entirely open-ended, supplying the player with a constantly evolving set of activities that are never really completed. So Farmville is essentially a series of interlocking systems based around planting crops, harvesting them and getting in-game cash to spend on new items - which can then be fed back into the agricultural process. "Facebook games have allowed us to understand that there are these processes going on in our brains," says Clark. "There are rewards that we get from repetitive actions, and designers can utilise these to make a more satisfying experience. Of course this can be abused, but the inherent idea isn't bad, it just means we have to realise that in order to make better games we have to understand human behaviour."

Mass gaming's first majority female audience

Traditional console gaming is dominated by the young male demographic and this was always the target audience of the major publishers. But Facebook changed that. Titles like Farmville, Bejeweled and Cafe World, quickly drew in a vast user-base of female gamers, and even more elusively, older female gamers. A survey commissioned by game developer Popcap in 2010 found that the average social gamer was a 43-year-old woman; three years earlier, major Facebook publisher Wooga found that 70 percent of its audience was female. "I did some research back in 2002 on how to attract female gamers," says Oscar Clark, who has also written a book - Games As A Service: How Free To Play Design Can Make Better Games - on the science of social gaming. "We asked women why they didn't play. A lot said that they needed to give themselves permission to play and they needed a social context. Facebook games provided both of those - you can play for a minute here and a minute there, so it's easier to give yourself permission, and the social element makes it easier as well. But it wasn't just women, Facebook opened up games to a whole range of demographics who wanted usually have played games."

Caring and sharing

Facebook games have always relied on virality. In 2007 it was all about Blake Commagere and AJ Olson's vampire, zombie and werewolf biting games, which required players to recruit Facebook friends into their monster covens. Then, agricultural sims like Farm Town and Farmville started rewarding players for helping others and sharing items. Brilliantly, it meant that the marketing was built into the game mechanic, spreading the brand through social circles. Facebook started cracking down on viral content in 2010, reducing the amount that developers could 'spam' the Facebook walls of its players, but the concept of being able to share in-game achievements with friends has spread out to every sector of gaming.



Farmville by Zynga, has come to symbolise the heyday of Facebook gaming Photograph: Stefan Sollfors/Alamy

No wait, iteration is everything

In the past, the games industry was built around a simple business model: fire and forget. Developers made a game, released it then moved on to something else. The arrival of digital distribution changed that, allowing publishers to release add-on packs for current console games, but Facebook developers took it a step further. Here, the standard model quickly became, release a game, study how people play it (where they get stuck, what items they like, where they 'convert' to paying customers) and then tweak the structure accordingly. At its height, Zynga had a huge data analysis division dedicated to studying player behaviours and changing the flow of its games accordingly. While he was head of the developer's analysis team, Ken Rudin famously declared, "We're an analytics company masquerading as a games company." The whole games industry now uses player analysis and iteration to alter games post-release. And now Rubin is head of analytics at Facebook, which is effectively an analytics company masquerading as a social network.

The social network as lobby system

Increasingly, developers are moving their games off Facebook as user habits change. "The closing of the

viral channels was essentially the end of the gold rush," says game designer Will Luton. "Since then, Facebook gaming has been on the decline as everyone shifts focus to smartphones. Facebook is now more of a facilitator of social connections for mobile games than a platform in itself." What we're now seeing is mobile, console and PC games using Facebook as a convenient way to add social connectivity into their titles. Players don't have to join a dedicated social system for every title they play, they can just sign into Facebook and have access to all their friends. This is why PlayStation 4 now gives owners the opportunity to log-in via a Facebook account - it immediately personalises and broadens the possibilities of multiplayer gaming. People might not be going on to Facebook to play games as much anymore - instead, Facebook is going on to their games.

In many ways, then, Facebook opened up some of the mechanics of games to a whole new audience, and in doing so, sent shock waves through the whole industry. Its conventions of accessibility and compulsion have infuriated many critics. As veteran game designer Martin Hollis says, "Dual currency systems, relentlessly pestering dialogs nagging you to post the game to your friends, and the premedi-

tated wearing down of players by the three-step process: giving them a little quick progress, showing them a lighthouse or mountain top to yearn for, and then delivering the absolute choice between glacial free progress or fast progress by inserting real money. At the darkest end there is a roster of abusive and manipulative techniques not unlike those used by pick up artists and casinos."

But then Facebook also democratised gaming in ways that were truly valuable. "The legacy of Facebook in games is an important one," says Luton. "It was the first platform that snuck in to almost everyone's lives and delivered games for free, right there. Before that you had to make some conscious decision to buy hardware and a game to play.

"Before Facebook you had to say, 'I'm a gamer, I play games, I buy games' and because of that the games industry was in fan service to its loyal, albeit small, market who demanded skill challenges and traditionally masculine pursuits like football, cars and guns. I was at SEGA as a junior just before Facebook gaming happened and pitched this idea about running a farm. I was told "don't be stupid, people don't want to farm, they want to feel cool". Then FarmVille happened and everyone was totally perplexed - the most successful game in the world wasn't a big graphical extravaganza in space, but a game where you waited for crops to grow. And your mum was playing it."

How Jimmy Hill won Blackburn the Premier League in 1994-95

Plus: Six players get a goal to mark their debuts, scoring (and saving) goalkeepers, and three men and a trophy. Send your questions and answers to knowledge@theguardian.com

By Georgina Turner

"With the adoption of three points for a win in 1981 [in the English football league], would any league title outcomes since have changed if the two-point system was still used?" wonders Jamie McGrady. **"And would there have been changes to former title wins pre-1981, if using the three-point system?"**

The Knowledge

The three-points-for-a-win system was introduced to make football more interesting; by Jimmy Hill's calculations, the incentives weren't high enough when a win yielded only one point more than a draw. Make it three points for a win, and you'll have goals galore, Hill reckoned. Whether it has had the desired effect is still up for debate, since the value of a win makes parking the bus at 1-0 a more desirable option. And it turns out that not much would have been different, in terms of title winners, had the system stayed the same: in the 30-odd years since the change, the only Premier League win to be struck off would be Blackburn Rovers in 1994-95, with Manchester United etched on to the trophy instead.

At two points for a win, one for a draw, the two would have been dead level on points and United's superior goal difference (+49 to +41) would have won them the title. In 2007-08 Chelsea would have come close to stealing United's crown, a two-point system drawing them level, but again United's goal difference (+58 versus Chelsea's +39) would have clinched it. In the Championship, Reading would not have been named 2011-12 Championship winners had a win still been worth only two points, because Southampton would've nicked the title on goal difference. And in 1991-92 the winners of the third division would've been Birmingham City, not Brentford.

So it looks as if Jimmy Hill didn't transport English football to a parallel universe. Had a win always been worth three points, however, the divisions would've stacked up rather differently over the years - with Plymouth Argyle especially hard done by in the two-points-for-a-win world. In 1921-22 Plymouth would have won the Third Division South, not Southampton. A few years later in 1925-26, when Reading took the Third Division (South) title, Plymouth would have been level on points had a win been worth three, and then won the title on goal average - having scored 107 goals in the season. And in 1974-75, when Plymouth finished second in the Third Division, three points for a win would have seen them take the title from Blackburn Rovers by a single point. By then, though, Plymouth

had pinched the Third Division title from Hull City, who would've taken the 1958-59 title if their 26 wins had been worth three points each.

The earliest change we can find is in the 1903-04 season, when Preston North End won the Second Division title, but with three points a win, second-placed Woolwich Arsenal would have drawn level and won thanks to their whopping 4.135 goal average. In 1911-12 Chelsea, not Derby County, would win the Second Division title thanks to the enhanced rewards for their extra win. Derby would also be denied their 1974-75 First Division title, while we're at it, since Ipswich Town, who finished third, had won two more matches than County and Liverpool. Had they been worth three points, Ipswich and Derby would've been level on points and Town's better goal average (1.5 to Derby's 1.367) would have sealed it. (Although had Liverpool beaten Middlesbrough away at the end of the season, they, in fact, would have won the title in Bob Paisley's first season in charge, thanks to their goal average, which was better than those of Derby and Ipswich. It was an outrageously tight season.) Liverpool did win the title the following season, and though three points for a win would have put Queens Park Rangers level, Liverpool's goal difference was again the best in the division.

It's then on to the 1920s, when league titles would five times have been decided on goal average had wins been worth three points. In the First Division, in 1924-25, West Bromwich Albion and Huddersfield Town would each have finished with 79 points; in 1927-28, Huddersfield and Everton would both have reached 73; and in 1928-29, Aston Villa and Sheffield Wednesday hit the same total. On each occasion the title winner - Huddersfield, Everton and Wednesday, respectively - would have been unchanged thanks to goal average. That 1928-29 season would also have seen the (unchanged) winners of the Second and Third Division (North) decided by goal average too. In 1923-24, three points for a win would have brought Rochdale level with Wolverhampton Wanderers, but they too would have remained second best on goal average.

Not much would have changed in the 1950s, with the 1950 Third Division (North) title going to Gateshead instead of Doncaster Rovers, and the 1955 Second Division title being won by Luton, a point ahead of Birmingham City (as it was, City won on goal average). By contrast, the 1960s would've been transformed by three points for a win: Chelsea, not Stoke City, would've won the 1962-63 Second Division title, with 24 wins to the Potters' 20. The following season Third and Fourth Division titles would have gone to Crystal Palace and Carlisle United respectively, not Coventry City and Gillingham (Coventry would also be denied the 1966-67 Second Division title, with Wolves winning by a

point). In 1964-65, third-placed York City would have won the Fourth Division title instead of Brighton and Hove Albion.

The 1965-66 Fourth Division was a tight affair, with three points separating first and sixth. Had wins been rewarded with three points, Darlington pip Doncaster Rovers with 84 points to 83. Force those eyelids back up, come on folks; we're almost there. In 1967-68 Ipswich, who actually won the Second Division title, would have been bumped down to third, since three points per win would have seen QPR crowned on 83 points, with Blackpool on 82. (Ipswich would have had 81.) That same season Bury would have beaten Oxford United to the Third Division title by a single point, not the other way around.

And so, finally, to the 1970s. At the end of the 1970-71 season Fulham would have topped the Third Division instead of Preston North End, without even needing their superior goal average; as it was they finished second. There would have been more radical change at the end of the decade, mind: in 1978-79, Watford would have won the Third Division on goal difference from Swansea in second, with Swindon Town jumping to third and the real-life champions, Shrewsbury, dropping to fourth. Meanwhile in the Second Division Brighton would have been champions, with Crystal Palace shoved down as far as fourth thanks to the additional points owed to Sunderland (second) and Stoke City (third on goals scored). Aren't you glad he asked?

What have we got wrong, then? knowledge@theguardian.com

DEBUT GOALS

"In their FA Cup fourth-round victory at Port Vale, Brighton won 3-1 with all three of their goals being the goalscorer's first goal for the club," notes Karl Stringer. **"Can this be beaten?"**

"Maybe not beaten, but matched," says Kevin, of Sydney via Glasgow. "Chelsea v West Ham, in the first game of the Premier League in 2000, had three or four goals from debut players. Jimmy Floyd Haselbaink, Freddie Kanouté and Mario Stanic x2." Stanic's first was a proper belter, too.

"Major League Soccer formed in 1996 with teams that had no prior history," says Tim Dockery. "In the first couple of weeks of the inaugural season, almost every goal scored was the first goal scored by that player for his club. On May 5, 1996, Sporting Kansas City (then known by the less fortunate name of the Kansas City Wiz) was drubbed 4-0 by the Colorado Rapids. All of Colorado's goals came from players who had never scored for Colorado before: Scott Benedetti, Steve Trittschuh, Sean Henderson and Richard Sharpe.

”Three days earlier, however, Kansas City were doing the drubbing when they beat the Columbus Crew 6-4. The six KC goals came from four players who had never scored for their club before: then US internationals Mike Sorber, Preki (2) and Mark Chung and the former Scotland international Mo Johnston (2). In addition, two of Columbus’s goals came from players who had not previously scored for Columbus (Michael Clark and Todd Yeagley), meaning that a total of six players had their debut goal for their club in one game.”

KNOWLEDGE ARCHIVE

”Ricardo did it in a shoot-out against England in the summer but has any goalkeeper ever saved a penalty and scored in normal time?” asked Joe Blair in 2004.

The answer is: yes, yes and kind of, Joe. We’ve dug up two bona fide examples, as well as the curious case of Niall Quinn.

First up, is the former Paraguayan captain José Luis Chilavert, whose goal-scoring record - as Tom Adams was quick to point out - was rightly famed. ”I reckon it must be inevitable that Chilavert scored and faced penalties in the same game,” writes Mr Adams. A shame then, that he decided to ”leave the laborious trawl through Vélez Sarsfield and Colombian results over the 1990s for someone else”. He left them for John to be precise, who diligently confirmed that Chilavert scored and saved a penalty in

Vélez Sarsfield’s 2-0 win over Independiente in 1999.

Less well-known are the goal-plundering exploits of current Bayer Leverkusen keeper Jörg Butt, who has scored 24 goals (all penalties) in his career to date; while playing for previous club Hamburg, he even managed to end up top scorer with nine goals in the 1999-2000 season. It was in the same season that Butt scored and saved a penalty in Hamburg’s 3-1 victory over Schalke.

Which leaves us with Niall Quinn. Back in the days of the ’old’ first division and no substitute keepers, Quinn - who had already scored - was stuck between the posts after Tony Coton was sent off for Manchester City against Derby at Maine Road during the 1990-91 season. Dean Saunders stepped up to take the penalty and, in the immortal words of James Sweet, Quinn ”got a hand to it and it went over the bar in the style of Banks against Pele”. Indeed, according to Kenneth O’Brien, ”such was the big man from Perrytown’s expertise, he actually travelled to Italia 90 as Ireland’s third goalkeeper”. Which, we suppose, makes Niall Quinn nearly count. But not quite.

And, to go back to Joe Blair’s original question, we turn to goalkeepersareifferent.com. Apparently, prior to 1912, goalkeepers regularly appeared on the score sheet thanks to rules that allowed them to handle the ball up to the halfway line.

ARCHIVE UPDATE

”I see last week you had the story of Carlo Corazzin’s booking at the kick-off in about 1994 for Cambridge United,” says Nader Khalifa, referring to last week’s archival story about weird kick offs. ”The chap who mentions it is actually a bit mistaken, and it’s even weirder than he states. United were playing Lincoln, managed by John Beck (who had been sacked two years previously by United after his crazy but successful era at Cambridge).

”At the kick-off in question, Beck had ordered two or three of his players to charge the ball at the whistle. However, entering the centre circle is only allowed once the ball is played and not simply after the whistle is blown. Corazzin didn’t touch the ball only to see a Lincoln player steam in and take the ball off him, before the ref halted play and demanded a restart. However, after three starts, and three infringements by Lincoln players, the ref inexplicably booked Corazzin for time wasting. This makes Corazzin, by my reckoning, one of the few players ever (if it has indeed happened to anyone else) to be booked before kick off, and certainly the only one to be booked for time wasting before a game had technically started!”

THREE MEN AND A TROPHY

”I was wondering,” says Sean Bower, ”with Sunderland through to the final, if any other team have had three different managers (Paolo Di Canio, Kevin Ball, Gus Poyet) en route to a final.”

”Presumably without much surprise, Chelsea can match Sunderland’s feat,” says Jack Cummins. ”Their FA Cup triumph in the 2008-09 season saw them play in the competition under Phil Scolari, Ray Wilkins and Guus Hiddink.

”Luiz ”Big Phil” Scolari for the third and fourth rounds (4-1 vs. Southend in a third round replay and 3-1 vs. Ipswich in a fourth round replay); Wilkins managed the team in a caretaker role in the fifth-round win against Watford (3-1); and Hiddink took Chelsea the rest of the way past Coventry (2-0) and Arsenal (2-1) to eventually beat Everton 2-1 in the final.”

MOPPING UP

”Regarding the question about managers getting a good start with an early goal in a debut game,” says Raymond Simpson. ”Jackie McNamara’s first match in charge of my team Dundee United, last year, brought a goal after 13 seconds.”



Without the rule change in 1981 to three points for a win Blackburn would have ceded their 1994-95 Premier League title to Manchester United. Photograph: Action Images

Jack Monroe: how to save money on your food shopping

Find out which 'hero ingredients' can help you make the most of a tight budget and how to save on your grocery bill

By Jack Monroe

I don't shop like other people. You'll often see me in the supermarket, down on my hands and knees, rummaging at the back of shelves for the latest sell-by date I can find on fresh goods, or that last value-range tin of beans. Or closely examining bags of bananas for the one with eight or nine in, rather than the stated "minimum six". I devote time to my shop, hunting down chickpeas in the "world food" aisle or coconut powder to replace coconut milk. I scrutinise shelf edge labels to calculate the cost per 100g of everything, stoutly ignoring offers at the ends of aisles. I shop loosely, a carb here, a green veg there, paraphrasing Coco Chanel in my head: "Before you leave the aisles, check your basket and take one thing out." But it starts way before that point ...

Before you start

It may not be sexy, but the easiest way to save money on shopping is in the planning. Write a rough list before you leave the house. As well as speeding up the process, it will help you resist those urges for unnecessary things the supermarkets, in particular, encourage us to give in to. I go armed against temptations - where highly profitable products are placed, the smells wafting from the bakery (don't go shopping hungry), the route past those impulse buys - because I have a strategy.

Before I leave, I open my cupboard, fridge and freezer and do a stocktake of fruit, veg, carbs, dairy and protein. Plan a few meals based on what you already have, and buy the additional ingredients. Be brave and use your imagination. Don't be afraid to substitute one ingredient for another; it is far better to use the broccoli languishing in the fridge in that "cauliflower cheese" dish, or experiment with mint instead of basil in another. Use recipes as inspiration, not as definitive sets of instructions, and see what works for you.

Where to go

If you're fortunate enough to live near a good greengrocer or market, see if their fruit and vegetables are cheaper than the supermarket's. You can certainly buy them in the quantities you need rather than plastic bags of predetermined amounts; the same goes for butchers and fishmongers, who will often have cheap cuts and special offers and give advice on how to cook them. I'm lucky to live a short walk from the beautiful old fishing town of Leigh-on-Sea, and can often be found on a midweek morning browsing through the fishermen's co-operative of shops tucked behind the railway line. They're friendly, knowledgeable and sell everything from

squid rings to fish pie offcuts.

Asian supermarkets offer an array of spices, fresh chillies and other ingredients cheaper than the ones in small jars or plastic bags in the supermarket (mine's a hike, so I stock up every few months). You might be pleasantly surprised; you don't need to live in central London to have a wealth of diverse food shops around you. It is the same with produce growing freely: foraging won't be an option for everyone, but you'd be amazed where you can find blackberry bushes (pick just what you'll use, leaving some for other people), and ask around - one of your friends might have a fruit tree in their garden. I did, and now have a free supply of plums and crab apples.

Saving in the supermarket

If you rely on supermarkets for your shopping, make sure you get the most out of them. Take nothing at face value, especially when it comes to offers. A Which? investigation last year found supermarkets are still advertising dodgy deals, such as misleading multibuy that don't actually save you money. Always do a quick calculation in your head to see if you'll *really* save this way, rather than buying products individually. And even when they're legitimately cheaper, browse those eye-catching buy-one-get-one-free deals carefully; they're usually only worthwhile on products that can be frozen or otherwise stored.

Next, consider the bottom shelf, where the cheaper ranges are kept. There is far too much snobbery in this area: tinned tomatoes and bags of apples, bananas and rice can all be found in decent shape in the value ranges across all the supermarkets. The financial exception I can now afford to make is to consider animal welfare by buying free-range meat and eggs.

Shop the whole supermarket

Think about what you're buying and where. For instance, bags of nuts or dried fruit will be far cheaper in the baking aisle than identical products sold as snacks elsewhere. The world food aisle is often cheaper for speciality goods and spices. For example, coconut water - newly trendy, ubiquitous and expensive - has been for sale cheaper in the world aisle for ages. The reduced chiller in the supermarket is also your friend. If you find any punnets of berries or other small fruit here, you can freeze them for later use. Often, shopping later in the day will mean you're in prime position for offers, but ask a friendly-looking supermarket worker, as it varies from one store to the next.

What to buy

I try to shop with the rules of a healthy, balanced diet in mind. I'll get something from each food group, picking up protein first. I mix them up, rotating meat, fish, beans, pulses and eggs; then I go for the fruit and vegetables, and one or two carbs a week, sifting through flour, rice, pasta, potatoes etc. A bag of rice won't get used in a week, so I keep my store cupboard interesting with, say, pearl barley or red lentils. Then there's dairy. As well as fresh milk, powdered, UHT and soya, almond or rice milk are good cupboard standbys. I buy medium eggs, which are cheaper but won't make or break my recipes. For flavour come the herbs (parsley and coriander are my "everything" herbs) and spices (my essentials are paprika, cumin and turmeric), and some treats that add richness to everyday cooking - chocolate, wine and beer.

Meat and fish shopping requires a bit of mental arithmetic - it is worth working out the price per 100g rather than overall. Check out the fresh counters. You can ask for smaller amounts, or if there are cheaper alternatives that would work in your recipe. With both fish and meat, frozen tends to be cheaper than fresh, but sold in large quantities, so consider your freezer storage space. You'll get a lot of protein from tins of sardines or jars of fish paste, which are easy to store, and which bring me to ...

Fresh, tinned, dried or frozen

There's room for everything from fresh kale to tinned potatoes in my kitchen. I come under a lot of fire for using tins, but I make no apology. During the worst period of my life, they were pretty much all I had. There's still a lot of debate around whether tinned food is as nutritious as fresh, because of processing and long shelf lives (this New York Times blog argues that the nutrients are more stable in canned, citing an interesting study by researchers at the University of California); on the other hand, your Peruvian asparagus will have spent a lot of time getting from field to plate.

Either way, a tin of carrots is better for you than no carrots at all. It's still the case that tinned fruit and vegetables are cheaper than their fresh counterparts, and you can buy them without added salt and preservatives these days. Keeping tinned vegetables and pulses - a cheap source of fibre - in the cupboard will mean you always have an emergency curry or casserole half an hour away (in a spicy stew, you'll notice less difference than you think). I pack out soups with them and use them to make chilli, burgers, curry, stews and casseroles.

Big, basic vegetable stew packs are useful for roots and the like - when it comes to fresh vegetables, seasonal is always cheaper. But I also like frozen spinach, peas, broccoli and green beans,

which are interchangeable in most recipes and handy as a side. I buy onions cheaply in bulk; a large bag can keep for three weeks, or chopped and frozen for even longer.

Large bags of apples and bananas are fantastic, and I always get some in, but fresh fruit is expensive and, along with pricey bags of salad and other vegetables, makes up a huge proportion of the more than seven million tonnes of food UK shoppers throw away each year, according to the organisation Love Food Hate Waste. I supplement fresh fruit with tinned peaches, pineapple chunks, mandarin segments and pears for stirring into yoghurt, tagines and curries.

Hero ingredients

Having these things on standby will liven up mid-week cooking and expand your potential recipe repertoire.

Flour

Even if you're not likely to make your own bread, pick up flour anyway. Plain flour is best - self-raising is great when you first open it, but the raising agents are less effective once in contact with air, so I add bicarbonate of soda or baking powder to plain as I go. It is handy for dusting the insides of tins before putting something in the oven, battering fish or vegetables for tempura, making everything from yorkshire puddings to gnocchi, thickening sauces and chowders, shaping burgers ... flour is your friend. And while you have a bag in the cupboard, well, you might as well make that bread. People are often incredulous that I make bread without bread flour - but I do, and you can too.

Chocolate

I'd always have some dark chocolate in the house as a base for spicy Mexican soups, or to add that bitter-sweet undertone to a bean chilli. It is also fantastic grated over hot, buttered toast (popping up in a toast bar near you at twice the price!) for a breakfast treat that's not quite a pain au chocolat, but is still a buttery, chocolatey hit for those mornings when yoghurt or granola just won't cut it. It also makes affordable, rainy day treats: stirred into cornflakes for quick cakes, or melted into hot milk for a bedtime drink.

Yoghurt

I always pick up a 500g carton of plain, natural yoghurt. It is healthy and delicious, but so much more than a treat - it goes a long way, from making a speedy breakfast with fruit or granola to lifting everyday dishes, as a marinade for chicken, or tossed with pasta, lentils and herbs for a quick lunch. I use it instead of mayonnaise for a warm potato salad, with spinach and spices. Vive la yoghurt! I wouldn't be without it.

Cheese

I usually pop a cheese from the value range in my basket for cooking - my favourites are feta, mozzarella, cream cheese, hard, strong cheeses that work as a parmesan substitute and soft, creamy brie. These are all very useful for pasta dishes, topping homemade burgers, grilling on toast and adding a creamy, luxurious taste to risotto. I won't use a block of cheese in a week, so there are usually two or three different varieties rolling around my fridge. The stronger the flavour, the less you need in the dish. Sorry, mild cheddar, but you're not the one for me.

Wine and beer

I usually have a bottle of red or white on the go, either left over from a friend invited to dinner or wine I picked up for around £3.50. Wine is great for stews, casseroles, pasta dishes and risottos (cheap hock tends to go in a glass for me and a glass in dinner - I've never pretended to have expensive tastes). Cheap bitter adds a great kick to a simple sausage casserole or meat stew, and is a rich addition to soda bread.

Herbs and spices

By far the cheapest option is to grow your own - they'll pay for the small outlay in no time. If you're starting a herb garden from scratch, try just four plants: an 'everything' herb, a delicate herb, a woody herb and a chilli plant. I started out with coriander (my everything herb), mint (my delicate

herb), thyme (my woody herb) and a chilli plant.

Everything herbs: Choose between parsley, a simple, fresh herb that can be added to almost any dish, or coriander if you like curries and spicy food.

Delicate herbs: Mint and basil both have a fresh, uplifting flavour well suited to Mediterranean cooking, pasta dishes, light soups and homemade pestos.

Woody herbs: Start with thyme, rosemary or sage. Rosemary is very hardy but takes a little time to prepare. Sage is deliciously earthy and grows to fill the pot that it is in. Thyme does well on a sunny window ledge and can be plucked and snipped into tiny pieces.

Chillies: I've been growing tiny red chillies on a window ledge for years and I get a good crop all year round (I can harvest about a hundred in August, when the plant is at its peak). Chilli plants can be bought very cheaply from the supermarket or garden centre, and repay their cost very quickly.

● *A Girl Called Jack* by Jack Monroe is out on February 27 (RRP £12.99). To order a copy for £10.39 with free UK P&P, call 0330 333 6846 or visit guardianbookshop.co.uk.



Jack Monroe buying fish from the Leigh Fisherman's Co-operative. Photograph: David Levene for the Guardian

Arctic Monkeys take America, finally: 'It seems like some sort of victory'

Arctic Monkeys have never quite made it big in America - until now. With latest album AM topping charts, the band just sold out their first US arena show. Alex Turner and Matt Helders talk aliens, Oprah Winfrey's hair and music with Amanda Holpuch

By Amanda Holpuch in New York

While Arctic Monkeys are a household name in the UK, they've never quite made it big in America. Since releasing the UK's fastest-selling debut album in 2006 - and representing their country on the world stage at the London Olympics opening ceremony in 2012 - mentions of their name in the US more often received a response of: "Who?" Hardly recognition, let alone fandom.

But now, in the US and other countries outside Britain, Arctic Monkeys' latest album, AM, is topping radio charts for the first time and is prevalent in 2013 album of the year lists. This fervor helped the band reach a milestone in American music culture: selling out an arena show for the first time in the US at New York City's Madison Square Garden.

"For anyone, no matter what stage of your career you're at, it's still an amazing place to play," drummer Matt Helders told the Guardian on Saturday before the band's MSG show. He was drinking coffee with lead singer Alex Turner at the Manhattan hotel at which they had arrived a few hours earlier, with just enough time to get a few hours of sleep before the big gig.

Helders and Turner weren't entirely sure why they are now getting this attention in the US, nearly

a decade after they debuted. "We've played here an awful lot. Most of our time in the last seven years or whatever has been spent touring the US, so I think that's built up this fanbase that's been bubbling, and I guess it's starting to spill over with this record," said Turner.

"It's not like there was a different approach to this album. I suppose there was in specifics technically or whatever, but it essentially was: we thought of an idea for an album and wrote the songs for it," Turner said. "It didn't seem like this sort of overhaul to the approach to making music."

The hip hop and R&B inspired AM was released in September, and is the band's highest-charting album in the US. The album's second single Do I Wanna Know? has been No 1 on the US alternative chart for four weeks in a row, and it is their first time at No 1 in the US.

"Even back home there's a feeling this record is more popular than the last few. It's a bit better, really," Turner said. "There's something fresh about it."

For years, Arctic Monkeys have quietly built up a cult following in the US. At the Garden concert, a woman in the front row carried a sign telling of how this was her 67th Arctic Monkeys show.

The concert was a celebration for these American fans who have been proselytizing about the band for years. One of those people was Blake Puente, a 28-year-old paralegal who was at his 50th Arctic Monkeys concert. Puente is a mini-celebrity in the Arctic Monkeys fan community for creating the band's online forum in 2009 - which has since been picked up by the band's official site - then creating a

Tumblr in 2010 that now has 35,000 followers.

"A lot of the people I've been yelling at about Arctic Monkeys for six years, who've never felt any sort of, who never liked them, suddenly everybody I know is telling me: 'I listened to Arctic Monkeys' new record'. I love it" Puente said.

Puente was excited they were finally getting some of the attention he thinks they deserve, but didn't know why AM is the album that did it. "I didn't listen to it and think: 'Oh my gosh, this is the one that's really just going to crack America,'" Puente said.

The album and single also performed well on one of the newest indicators of success - Tumblr - where in the past thirty days, 57,000 people wrote posts including the words "Arctic Monkeys."

"This is bigger than Lady Gaga on Tumblr right now," said Tumblr's music evangelist Nate Auerbach, who first noticed the Arctic Monkeys' Tumblr dominance after the illustrated visuals for AM and the Do I Wanna Know video were released in the summer and subsequently spread across the site.

Auerbach is working on a case study for Tumblr about Arctic Monkeys because of their unprecedented success on the site. He thinks that British bands do well on Tumblr because it's their first point of access for American fans. "The internet is the new Ed Sullivan show," Auerbach said, referencing the venue for The Beatles' first televised US performance.

The MSG show happened to coincide with the anniversary of The Beatles performance, which occurred about 24 blocks from the Garden, 50 years



Lead singer Alex Turner, Photograph Erin McCann/Guardian

earlier. “Apparently one in three Americans watched that performance, and if we’re lucky, maybe, one or three Americans will see this performance on YouTube,” Turner told the audience during the concert, before the band covered All My Loving.

While the show was a celebration for the band and its fans, the band performed there for the first time in March 2012 as the supporting act for The Black Keys on a North American arena tour. It is the only time they toured as a supporting act. Turner and Helders happily reminisced about touring with a band they love, though those shows were performed in half-filled auditoriums consisting mainly of restless concertgoers anxiously waiting for another band.

“Looking at it purely cold, business-wise, it meant we got to reach a lot of people who wouldn’t have heard otherwise, turned a few heads,” said Turner. The Olympics performance afforded a similar opportunity and helped get their debut single I Bet You Look Good On The Dancefloor on iTunes’ top 100 list, again, after debuting at No 1 in the UK in 2005.

That international exposure, the album and some weird internet stuff seem to have helped fill 14,262 seats on Saturday night. The set ended with the first single off AM, R U Mine? There, a tradition for this tour continued, as the crowd displayed the most fervor for songs off the newest album, banging their heads through the thumping chorus.

“There’s some gratification that comes with that, somehow, that you’ve still got it or something.” said Turner, who seemed to walk extra slowly off stage at the end of Saturday’s concert. “It seems like some

sort of victory. I don’t know why.”

What is the weirdest moment you’ve had on this tour?

Matt Helders (MH): “I don’t know what’s the weirdest thing that’s happened on this tour.”

The Guardian: “It’s all been normal?”

MH: “Or it’s all been weird.”

Matt, what do you think of Alex’s dance moves? Alex, where do you get your dance moves from?

MH: “I think they’re great, ‘cos he got them from me.”

If you woke up and realized you’d become someone from the band, who would you want to be, and what is the first thing you would do?

MH: “I’d be Jamie Cook and I’d cut my hair. No, I wouldn’t. The reason I want to be Jamie Cook is purely based on our arena tour we just did in England - I haven’t told anybody this. During Arabella, because I’m facing that way, I can always see big screens, and there’s always a great bit of him during that song, where they do a split-screen mirror. The way he moved it looked like 70s rock, I looked at it and thought that looks great.”

Alex Turner (AT): “And I’d be Nick and the first

thing I’d do is keep my beard.”

Do you believe in aliens?

AT: Yes.

MH: Yes.

AT: You’d be naive not to.

How does American food compare to UK food?

MT: There’s more of it.

Would you rather get your thumbs eaten by a piranha or walk around London naked?

AT: London.

MH: London. We need them [thumbs].

AT: Possibly.

If you had to swap hairstyles with another famous person, who would it be?

MH: Oprah Winfrey. Only because I want her to have mine, because that’s part of the deal.

Psychic Gruel and Mötley Crüe - a classic interview from the vaults

The metal act may have announced their Final Tour, but the 'world's most despised band' aren't quite ready to call it quits, and say they will continue to make music. To remind us of their bizarre and beastly tendencies, here's a 1986 piece taken from Rock's Backpages

By J. Kordosh

Consider Suite 619 at the Park Hyatt in Chicago. The floor plants in wicker baskets. The liquor cabinet. The glass coffee table, with fresh flowers and copies of the latest issues of Esquire, Fortune and the Neiman-Marcus catalogue.

All the splendid touches to make the busy traveller feel at home. If you'd like a cold beer, why, just call room service – or enjoy your beverage in a plush chair in the lobby bar where you can purchase 12 ounces of Miller Lite for three dollars.

You can do many things in a room as fine as this and – if you're paying for it – you should. It's costing you \$225 a night; check-out time is noon. One thing you can do (and you can do this even if someone else – let's say a rock group with money to burn – is paying for Suite 619 for the sole purpose of you spending an hour with a musician) is spend an hour with a musician.

Which is what I did, the musician being Nikki Sixx, bass player, songwriter and spokesman for Mötley Crüe, the world's most despised band and the band that's worked hardest to convince the world they are despicable.

To say that many see the Crüe as sexist morons and musical imbeciles is actually going pretty easy on these guys. They're a true anathema. Tipper Gore, the well-known musicologist, once recited some of their lyrics to me (Livewire and Too Young To Fall In Love) and I believe she did it off the top of her head. Singer Vince Neil has been quoted in newspapers as saying things like: "Oh, we're so glad to be in Albuquerque – our only regret is we can't eat all the pussy we see here tonight." What's more, he's been reliably quoted.

That the same man was behind the wheel in a car accident that killed Nicholas Dingley of Hanoi Rocks and seriously injured two others has been widely reported. Driving under the influence, Neil was – in addition to a few other punishments – ordered to pay \$2.6 million to the injured parties.

But that was over a year ago. Now, Neil is back on the road, so to speak, and Mötley Crüe's sort of back on track. Their Chicago concert was sold out... but, then, most of their concerts are. Their fans almost literally worship them, much as their detractors vociferously deride them.

So are they worth all this hullabaloo?

Frankly, I doubt it. Their three albums – now there's a voluminous body of work for you – are undistinguished. Let's face it: when Mick Jagger was about their age he was singing songs of everlasting innuendo ("She said she liked the way I held the microphone") that make the Crüe's stuff sound like it was written by a moderately-imaginative dishwasher, which Nikki Sixx used to be. (A dishwasher, I mean, not moderately imaginative.)

Their shows are punctuated with great bursts of flame and continuous dynamite charges, but that only means they can afford such things. Besides, it diverts your attention from their songs, which are (as mentioned) undistinguished.

I imagine they're worth looking at for sociological reasons, like Bob Greene did in Esquire – unfortunately, not the issue on the glass coffee table in Suite 619. Let's do that, shall we?

Nikki Sixx is tall, slow and at ease. He talks in a teen-aged drawl that combines a certain ersatz ingenuity with a load of aggravating repetition. Even here, offstage in Suite 619, he wears cut-off leather gloves. He says his real name is Nikki Sixx and that he's 26 years old.

Therefore you can believe some of what he says, I guess.

"I remember, when I was a kid, listening to the radio and hearing Big Bad John by Jimmy Dean – and it just blew me away," the 26-year-old says. "I used to sit there and call the radio stations and request that song. And then the Beatles were obviously out already, but I really didn't know about the Beatles. I remember I ran across some Beatles tapes – fucking wimpy. Except I kept listening to

Helter Skelter, I remember that one, which we covered on our album [Shout At The Devil]. Then I found the Rolling Stones, and I says, 'This is getting better' – and it just kept getting better, y'know? Gettin' heavier. And I always liked that more punchy stuff. But it all started with that one song that had that big, baritone voice. Y'know, it sounded big! It sounded rough. I always liked that. You can't say why you like it, you just do."

Wow... from Jimmy Dean to Mötley Crüe. Talk about entropy. How could the famous balladeer and future sausageer know what he was unleashing when he wrote Big Bad John on an airplane en route to a Nashville recording session? (Chronology fans, please don't write to remind me that Big Bad John was released in 1961, when Nikki Sixx was two years old, because I know that. Write to Nikki Sixx instead.)

His favourite albums, at least, were released after the JFK assassination... Nikki cites AC/DC's Highway To Hell, the Beatles' White Album (strictly on the inclusion of Helter Skelter, one must suppose) and Mötley Crüe's Shout At The Devil as three of music's greatest, adding: "Ha ha ha ha; aw, piss someone off with that one."

Yeah, it's pretty much the height of outrage. I can

practically see some of our elderly readers turning purple, clutching their chests and expiring right there in the recliner.

Of course, the Mötleys feel obliged to piss you off, whoever the hell "you" are, and I reckon they do more shouting at those who could care less about the existence of Mötley Crüe than they do at the devil. In fact, I proposed that I write the following: "These guys really suck; they've never done anything of substance."

"That's fine!" he enthused.

"They hate women –"

"That's fine!"

"– and they're the worst influence ever on anybody," I concluded.

"Please print that," Nikki Sixx requested.

Consider it printed, my man. You guys are some bad dudes. Scum, in fact. Your music is puerile. You violate every convention of civility ever invented. You're sick. You're rich.

"First of all, let me explain something: I'm not incredibly rich," said Nikki Sixx.

I stole the Neiman-Marcus catalogue from Suite 619 myself, just as a memento.

A cold, cold rain pelted the Chicago area as five of us got into a limousine.

Two were Nikki Sixx and Tommy Lee, the Crüe's drummer. Two were their managers, Doc McGhee and Doug Thaler. The last was me, the magazine thief.

A limousine, you understand, is large and comfortable and a fine way to travel if you're incredibly rich, or even if you're not. This particular limo had a phone in the back and a tape deck within reach of Tommy Lee, who was playing some hardcore tapes. At least three of us (Lee, Sixx and myself; dunno about the managers) were bored and antsy and cursing the northbound flow of traffic. Lee's thrash tape – of exceptionally poor fidelity – continued playing.

"Remember when you asked me what bothered me?" Sixx said. "That bothers me." Me too. I mentioned the idea of rating records, which we'd talked about some back in the hotel.

"Why don't we just title the next album with all their ratings?" suggested the, bass player. "We'll just call it D/A/O/X or whatever they want – that should make 'em happy." I thought it was a good idea and said so; nobody else seemed particularly thrilled.

The long ride continued, as did the boredom and claustrophobia. Many stories were spun and many comments were made. Tommy Lee referred to Yngwie Malmsteen as "Yngwie Bumsteen." Humour flowed.

The guys asked me who I last interviewed and I said Howard Jones. "It could've been worse," said Nikki Sixx. "It could've been Tears For Fears."

The amiable Doc addressed the marketing of Dokken thusly: "If Elektra put a million bucks be-



Tommy Lee, Vince Neil, Nikki Sixx and Mick Mars of Motley Crue pose for a studio group portrait backstage at the Download Festival, Donington Park, Leicestershire on June 12th, 2009. (Photo by Mick Hutson/Redferns) Photograph: Mick Hutson/Redferns

hind my album, it'd go gold, too." Nikki said – in regard to Prince – "I hope that slimeball falls on his ass." A fitting fate for slimeballs, I think we can agree. Someone mentioned it was curious that W.A.S.P. sell records until they play a town. W.A.S.P. are friends of the Crüe's, according to both Nikki Sixx and Blackie Lawless. It was a pretty weird ride.

Back at the hotel, I'd given Nikki Sixx a 'frinstance: "You're a bunch of dunderheads and your I.Q., put together, is 90, all four of you. So, do you give a shit?"

"Fuck no," he quipped. "I love what I'm doing and I wouldn't change for anything. I'm having a blast and I think the people that give us the respect are the people that I really do care about. That's the fans."

When the long ride ended – finally – dozens of those fans were grouped at the back of the arena, the place where the limos slide in, carrying the stars. The fans, standing in a torrential, frigid downpour, recognised Tommy Lee, who was sitting at the left rear window. Lee rolled down the window and yelled, "Yeahhh – sex!" thrusting his arm in the air. The fans went berserk. Lee rolled up the window and looked at Nikki Sixx.

"Cunts," he said, in an unmistakably harsh tone.

A weird ride, like I said before.

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Well, I've gotta admit the Crüe showed me a good time at the Rosemont Horizon. Nikki Sixx took me onstage during the soundcheck to show me their pyrotechnics and bizarre, angular stage. I met Vince Neil there. He was drinking a glass of water.

I was drinking many beers, courtesy of Mötley Crüe. I met Mick Mars, who was slumped on a couch backstage. He ended up giving me a bunch of personalised Mick Mars guitar picks and some souvenir "Welcome To The Theatre Of Pain" tour programs for my kids. (The book's really a high-quality item, but it's got some strange information in its pages. For example, it says that Mick Mars's "most

terrifying experience" was "getting the shit kicked out of me by a couple of black guys." Is it less terrifying to get the shit kicked out of you by a couple of white guys? Black girls? An octoroon and an Arab?)

I told them that I'd read somewhere that someone had counted the flash explosions in Dio's latest show – there were more than a hundred.

"We have 116," Nikki Sixx said. "Write that down." Yes, sir!

Sixx bemoaned their fate when I mentioned that the Crüe were possibly becoming less than the coolest, what with a ballad like Home Sweet Home on their latest LP. "First we were mass murderers for doing Helter Skelter, then we were Satan-worshippers and now we've wimped out." You just can't win, I guess.

Nikki was enthusiastic about their video(s) (there's several versions) of Home Sweet Home, though. In fact, he was so enthusiastic that he took me out to their bus to show it to me. "Watch for the lesbos right at the very beginning," he advised me with some fervour. Yep, there they were, all right.

(Another concept enjoying a critical vogue these days is that Mötley Crüe are homophobes. Part of this is because of a run-in they had with Deborah Frost, who was working on a story about them for People – a story that People never published. Nikki Sixx remembered her as a "lesbian body-builder," at which point I asked him if they were, indeed, homophobes.

"What's that?" he asked.

"That's people who are afraid of homosexuals because they fear their own homosexual tendencies," I explained.

"Hey, man, if that's what people wanna do, that's fine with me. I don't really care what people do."

"Well, what about your, uh, effeminate clothes?" I asked.

"Hey, man, I like to look good, I wear make-up," said Nikki. "Shit, President George Washington used to wear a wig and make-up. I mean, c'mon. If he can

do it, I can do it."

(It's true. Shout at the Hessians.)

During their concert, Vince Neil hauled out the usual lines ("How many perverts we got here tonight, huh?"; "As I remember it, there ain't nothin' like Chicago pussy, huh, boys?"; "You're impressin' the fuck out of me tonight, Chicago") and the bombastic show – I really must thank the roadie who warned me to cover my ears before each explosion – culminated with their quirkily speeded-up (and, to be honest, kind of lousy) version of Jailhouse Rock.

Is that the most amazing song in the world to sing when the guy knows he's got to spend 30 days in jail as part of his sentence for the drunk driving rap? I mean, Jesus.

"We're doing it every night and we're, like, recording it almost every night we can – and then we're gonna put it on the next album," said Nikki Sixx. I asked Mick Mars if Neil felt "uncomfortable" doing that particular song.

"No way," scoffed Mars.

Jesus.

© J. Kordosh, 1986

Fake-food scandal revealed as tests show third of products mislabelled

Consumers are being sold drinks with banned flame-retardant additives, pork in beef, and fake cheese, laboratory tests show

By Felicity Lawrence

Consumers are being sold food including mozzarella that is less than half real cheese, ham on pizzas that is either poultry or "meat emulsion", and frozen prawns that are 50% water, according to tests by a public laboratory.

The checks on hundreds of food samples, which were taken in West Yorkshire, revealed that more than a third were not what they claimed to be, or were mislabelled in some way. Their results have been shared with the Guardian.

Testers also discovered beef mince adulterated with pork or poultry, and even a herbal slimming tea that was neither herb nor tea but glucose powder laced with a withdrawn prescription drug for obesity at 13 times the normal dose.

A third of fruit juices sampled were not what they claimed or had labelling errors. Two contained additives that are not permitted in the EU, including brominated vegetable oil, which is designed for use in flame retardants and linked to behavioural problems in rats at high doses.

Experts said they fear the alarming findings from 38% of 900 sample tests by West Yorkshire councils were representative of the picture nationally, with the public at increasing risk as budgets to detect fake or mislabelled foods plummet.

Counterfeit vodka sold by small shops remains a major problem, with several samples not meeting the percentage of alcohol laid down for the spirit. In one case, tests revealed that the "vodka" had been made not from alcohol derived from agricultural produce, as required, but from isopropanol, used in antifreeze and as an industrial solvent.

Samples were collected both as part of general surveillance of all foods and as part of a programme targeted at categories of foodstuffs where cutting corners is considered more likely.

West Yorkshire's public analyst, Dr Duncan Campbell, said of the findings: "We are routinely finding problems with more than a third of samples, which is disturbing at a time when the budget for food standards inspection and analysis is being cut."

He said he thought the problems uncovered in his area were representative of the picture in the country as a whole.

The scale of cheating and misrepresentation revealed by the tests was described by Maria Eagle, the shadow environment secretary, as unacceptable. "Consumers deserve to know what they are buying and eating and cracking down on the mislabelling of food must become a greater priority for the government," she said.

A Defra spokesperson said: "There are already robust procedures in place to identify and prevent food fraud and the FSA has increased funding to support local authorities to carry out this work to

£2m.

"We will continue to work closely with the food industry, enforcement agencies and across government to improve intelligence on food fraud and clamp down on deliberate attempts to deceive consumers."

Testing food is the responsibility of local authorities and their trading standards departments, but as their budgets have been cut many councils have reduced checks or stopped collecting samples altogether.

The number of samples taken to test whether food being sold matched what was claimed fell nationally by nearly 7% between 2012 and 2013, and had fallen by over 18% in the year before that. About 10% of local authorities did no compositional sampling at all last year, according to the consumer watchdog Which?

West Yorkshire is unusual in retaining a leading public laboratory and maintaining its testing regime. Samples are anonymised for testing by public analysts to prevent bias, so we are unable to see who had made or sold individual products. Many of the samples were collected from fast-food restaurants, independent retailers and wholesalers; some were from larger stores and manufacturers.

Substitution of cheaper ingredients for expensive materials was a recurring problem with meat and dairy products - both sectors that have seen steep price rises on commodity markets. While West Yorkshire found no horsemeat in its tests after the scandal had broken, mince and diced meats regularly contained meat of the wrong species.

In some cases, this was likely to be the result of mincing machines in butcher's shops not being properly cleaned between batches; in others there was clear substitution of cheaper species. Samples of beef contained pork or poultry, or both, and beef was being passed off as more expensive lamb, especially in takeaways, ready meals, and by wholesalers.

Ham, which should be made from the legs of pigs, was regularly made from poultry meat instead: the preservatives and brining process add a pink colour that makes it hard to detect except by laboratory analysis.

Meat emulsion - a mixture in which meat is finely ground along with additives so that fat can be dispersed through it - had also been used in some kinds of ham, as had mechanically separated meat, a slurry produced by removing scraps of meat from bones, which acts as a cheap filler although its use is not permitted in ham.

Levels of salt that breached target limits set by the Food Standards Agency were a recurring problem in sausages and some ethnic restaurant meals. The substitution of cheaper vegetable fat for the dairy fat with which cheese must legally be made was common. Samples of mozzarella turned out in one case to be only 40% dairy fat, and in another only

75%.

Several samples of cheese on pizzas were not in fact cheese as claimed but cheese analogue, made with vegetable oil and additives. It is not illegal to use cheese analogue but it should be properly identified as such.

Using water to adulterate and increase profits was a problem with frozen seafood. A kilo pack of frozen king prawns examined contained large quantities of ice glaze, and on defrosting the prawns themselves were found to be 18% added water. Only half the weight of the pack was seafood as opposed to water.

In some cases the results raised concerns over immediate food safety. The herbal slimming tea that was mostly sugar contained a prescription obesity drug that has been withdrawn because of its side-effects.

Making false promises was a dominant theme among vitamin and mineral supplements. Of 43 samples tested, 88% made health claims that are not allowed under legislation because there is no science to support them or were mislabelled as to their content in some way.

Even when fraud or mislabelling is found, it is not always followed up. Once it has detected a problem with a product, a council is required to refer it to the home authority in which it was originally made, which may or may not take enforcement action.

Richard Lloyd, executive director of Which?, called for more effective use of resources and tougher penalties.

"No one wants to see another incident like the horsemeat scandal happen again and the rigorous enforcement of standards underpinned by effective levels of food testing is essential for restoring consumers' trust in this industry," he said.