

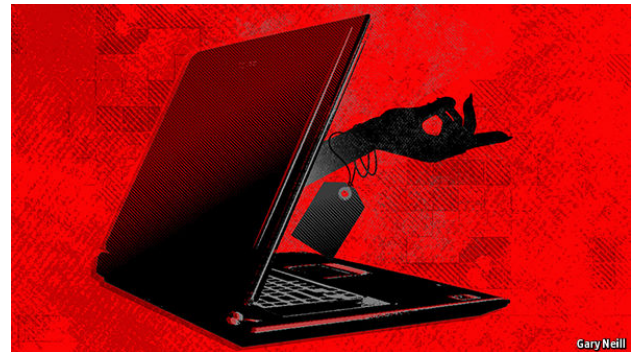
Pornography (2)

Naked capitalism

The internet blew the porn industry's business model apart. Its response holds lessons for other media firms

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IT WAS 2012, and Fabian Thylmann's goal was world domination. The man who had put together Manwin, an emerging online-pornography giant, now controlled most of the top ten porn "tubes"—aggregators that, like YouTube, contain thousands of videos and are wildly popular, because much of their content is free. If he could get hold of the two biggest, XVideos and XHamster, he could put it all behind a pay barrier and build an online porn empire. If competitors emerged, he would buy them, too. What antitrust authority would rein in a monopolist in a business that upstanding people pretend does not exist?



But neither of his targets would sell. The French owner of XVideos is said to have turned down an offer of more than \$120m with a scornful "Sorry, I have to go and play Diablo II." Mr Thylmann later sold out of Manwin (since renamed Mindgeek), after coming under investigation by tax authorities in Germany, his home country.

Still, Mr Thylmann left a lasting legacy—just not the one he had intended. Inadvertently, he helped cement the tubes' dominance, turning porn into a commodity in the process. The upheaval suffered by other media businesses in recent years has been experienced by the porn industry in fast forward. And it is now signalling the direction of further change, including the fusing of real and online worlds through virtual reality and robotics.

Cheaper thrills

Porn used to be pricey: although it is legal in many countries, sexual taboos, regulation and the difficulties of distribution limited supply. That made for high prices—and outsized profits. Business was best after first videotapes and then DVDs made it cheap to shoot and distribute

films to watch at home. In the 1990s dozens of producers, many of them based in California, churned out hundreds of X-rated films each month to buy or rent.

In the internet's early days, pornographers continued to profit. They realised the potential of e-commerce faster than other businessfolk: an American law requiring them to make customers of phone-sex lines punch in a credit-card number to prove they were not minors meant they were technically well prepared. By the early 2000s there were more than 3,000 porn sites, most of them tiny, subscription-based outfits. Making money was simple: set up a website with some pictures, control access using billing software and see the bank account fill up.

But then porn was hit by the truth, first spotted by Stewart Brand, a technology guru, 30 years ago, that content “wants to be free”. To attract custom, sites started to give away “teasers”. Amateur pictures—and not a few pirated ones—joined the free commercial content. Soon it was all being aggregated by “list sites” and “thumbnail galleries”, essentially collections of links. As the internet got faster, videos replaced pictures. Then came the tubes, which made their thousands of clips searchable. That porn is an industry where raw market forces reign helped them lay siege to the established producers: when anything goes, everything is tried, and quickly copied if it turns out to work.

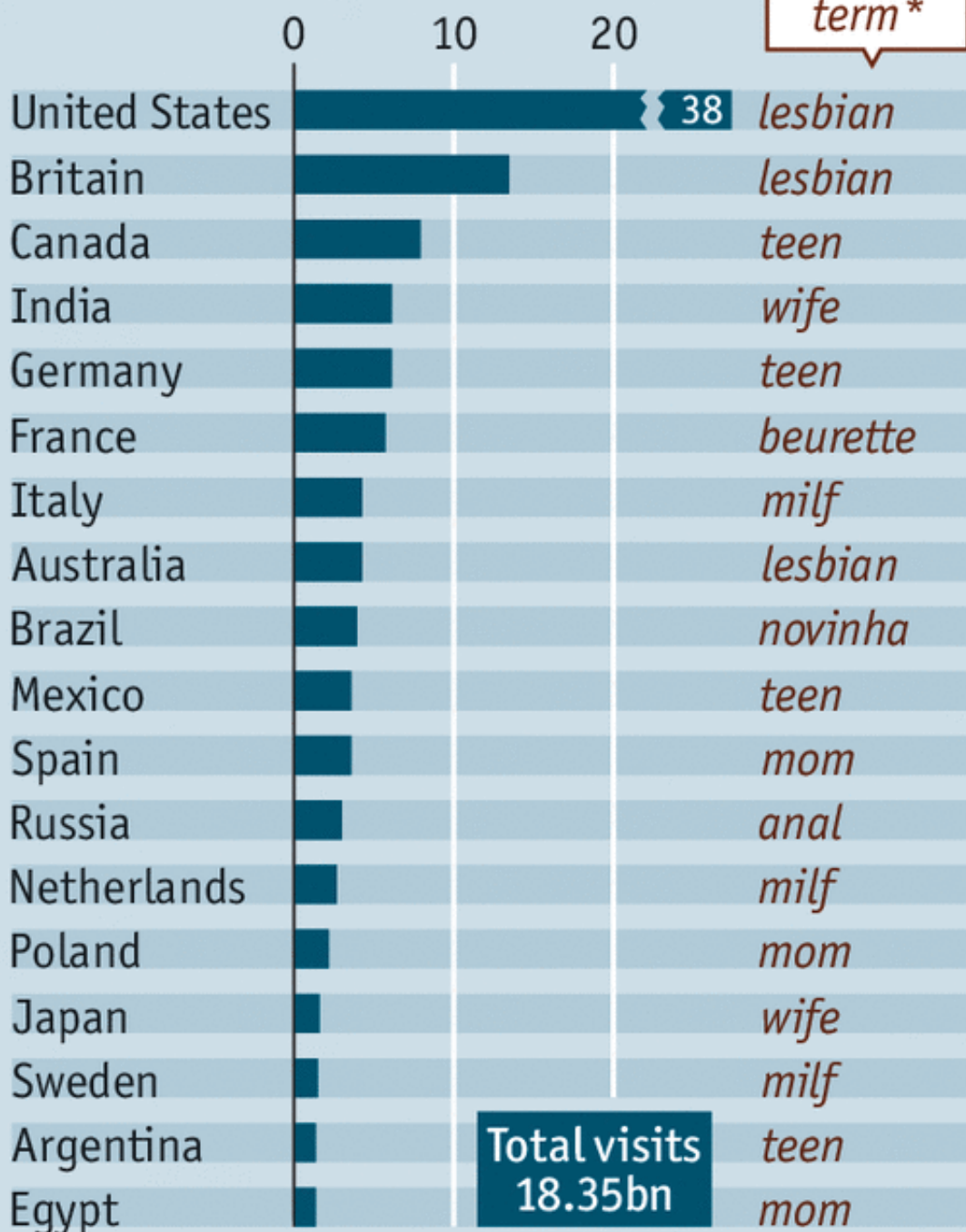
In America the number of porn studios is now down from over 200 to 20, says Alec Helmy, the founder of XBiz, a trade publication. Performers who used to make \$1,500 an hour now get \$500—even as increased competition means they are asked to produce more extreme content. Revenues are well below their peak; how far below is hard to say, as most porn producers are private. Just before the tubes took off, plausible estimates put worldwide industry revenues at \$40 billion-50 billion. Mr Thylmann thinks they have fallen by at least three-quarters since then.

Mr Thylmann was not the first corporate porn-predator, but he had an edge: originally a programmer with an interest in data science, he had rare insight into what made one site successful and what it would take to drive more traffic to another. Sometimes his data-crunching meant he knew businesses were more valuable than their owners had realised. Among those he scooped up were some of the most successful pay sites. In 2012 he took over Digital Playground, which specialises in (by porn's standards) big-budget productions, such as a highly successful parody of “Pirates of the Caribbean”. Mindgeek has continued its acquisition spree since he stepped back.

With most porn on the internet now free and easy to find, the number of adult sites, and traffic to them, have exploded. The web boasts an estimated 700m-800m individual porn pages, three-fifths in America. Pornhub, Mindgeek's biggest tube, claims to have had nearly 80 billion video viewings last year, and more than 18 billion visits (see chart). In terms of traffic and bandwidth, Mindgeek is now one of the world's biggest online operators in any industry. The

The porn supremacy

PornHub traffic, 2014, % of total



Source: PornHub

*Excluding nationality-related terms

Economist.com

company says its sites serve more than 100m visitors a day, consuming 1.5 terabits of data per

second—enough to download 150 feature films.

Earlier than other parts of the online world, porn discovered that traffic and data are the coin of the digital realm. Tsunami-like traffic became the basis for a new business model. The list sites of the web's early days sold clicks on their sites to traffic brokers, which redirected visitors to pay sites. If one ended up subscribing, the pay site would give the broker a fixed fee or a share of the revenue. Next-Generation Affiliate Tracking Software, known as NATS, which Mr Thylmann developed in the 1990s, was best at monitoring traffic and ensuring that it was paid for. Mindgeek now uses the data it collects to refine ad placement: TrafficJunky, its online advertising network, delivers highly targeted ads, for instance to mobile devices owned by gay people in San Francisco.

Beyond explicit

The traffic the tubes can direct towards pay sites means that their relationship has evolved from hostility to close, if grudging, co-operation. More and more content producers are signing deals to let their stuff appear on tubes: if a viewer clicks through to the originating site and subscribes, the tube will get a cut, sometimes as much as 50%. Since tubes get so many visitors, the bargain may be worthwhile for pay sites even if only one in 1,000 of them decides to subscribe. But the tubes are by far the bigger winners, getting not only commissions but more videos, which in turn drive up their traffic and ad rates. The model has been likened to a “vampiric ecosystem” in which Mindgeek and the other tube sites feed on pay sites, sucking their profitability.

All this will sound painfully familiar to other media firms. Echoing the aggregation deals struck by the tubes with commercial porn producers, social-media sites are starting not just to link to content, but to host it. Snapchat, a messaging app that lets users send each other photos and videos that vanish after a few seconds, allows news outlets to publish articles on its service in return for a share of advertising revenue. Facebook is doing something similar with its Instant Articles service. Indeed, Facebook, Twitter and their like have essentially evolved into traffic-brokers. Many of the clicks they pass on come from links posted by users. But the number of ads, promoted posts and suchlike is growing.

Some pornographers hope to escape the tubes' embrace by going beyond the standard skin flick. One approach is to connect the real and virtual worlds by offering live performances via webcams. A client might pay \$4 a minute for a personal performance, half that if others are watching. Performers get a cut, typically 25%. Such “cam” sites are among the biggest advertisers on the tubes. Some can stream thousands of feeds simultaneously. LiveJasmin, one of the biggest, has 40m visitors a day; its founder, Gyorgi Gattyán, is Hungary's richest man.

Kink.com takes specialisation further. It peddles BDSM (bondage, dominance, sado-masochism

and the like). Its strong brand helped it withstand the onslaught from the tubes; still, revenue has been sliding since 2011. It is trying to recover by strengthening loyalty through new forums and interactivity. Customers can log in to watch live shoots, chat with participants and buy props and costumes that were used in films. Another type of specialisation is to coax well-known people in front of the camera. Vivid Entertainment, which is run by Steven Hirsch, a veteran of the industry, has made a business out of releasing celebrity sex tapes online.

This niche-carving might suggest that the industry is settling down after its shake-up. The tubes are now so big that growth is hard to come by. To expand their reach further, some are resorting to guerrilla marketing. This summer, for instance, Pornhub loudly announced a crowdfunding exercise to raise \$3.4m for “Sexploration”, a project to film the first sex tape in space. (The zero-gravity antics will have to wait: less than \$300,000 was pledged.)

Nevertheless, Mr Thylmann strikes a downbeat note. Sitting in his office, next to a giant picture of Pablo Picasso (“who loved porn”), he says he fears that the industry he did so much to change is no longer at the cutting edge. Porn sites, once magnets for the brightest geeks, are losing out to mainstream e-commerce and social media in the talent war. He has remained out of the business (officially at least) since leaving Mindgeek, and is now an angel investor in conventional tech firms. “I get pitched a lot of porn ventures,” he says, “but no one has come to me with the next killer idea, and I’m not sure it’s out there.”

Earlier this year Pornhub launched a Netflix-style subscription service, which offers high-quality, ad-free streaming for \$10 a month. But it has not yet said anything about early take-up. The industry faces regulatory risks, as governments seek to strengthen filtering and enforce age restrictions for viewers. Another risk is that Google chooses to censor porn keywords; it already seems to be moving porn sites down search results. Still another is that Visa and MasterCard follow American Express in refusing to process payments to porn sites.

Meanwhile pay sites are fighting a constant battle with purveyors of computer viruses and other malware. In 2010 a group of researchers at the Vienna University of Technology and elsewhere found that over 3% of porn pages triggered malicious behaviour of one sort or other. The risk of malware or fraud makes many porn-watchers think twice before opening their wallets—as does the risk of exposure if a site they subscribe to is hacked.

Flesh thinking

Some believe that cam sites have reached the high point of their popularity. But a peer-to-peer version is already taking off. Last year Snapchat introduced Snapcash, a feature that lets users of the app send each other money. This is being used to pay for viewing pictures of strippers, lap-dancers and the like. Prices range from a dollar or two for a few pictures, to double digits

for a personal sex show.

And then there is the real thing—or a version of it—made possible by the fact that a viewer's whereabouts can be inferred from his internet connection's address code. Many dating and escort sites advertise on the tubes, trying to lure clients with messages. (This sort of advertising is harder in America, where prostitution is mostly illegal, than in Europe, where it mostly is not.)

Porn is a pioneer in virtual reality (VR), a technology being eyed avidly by Facebook, Microsoft and others. Along with video-gaming, the industry is sure to play a key role in its mainstream adoption. Sex-with-headsets is either brimming with potential or a dead-end, depending on whom you ask. In an article for *Medium*, a website, a reporter who tried virtual sex with VR headgear concluded that it could be “an elaborate form of X-rated hucksterism”. On the other hand Bryant Paul, an expert on sex and the media at Indiana University, believes that “whether it's five or ten or 20 years, someone will come up with the killer combination of device and software to create human-like experiences.”

A fast-growing cottage industry makes sex toys that work with Oculus Rift and other VR headsets. There is also much excitement about “teledildonics”: remote-control technologies that allow people thousands of miles apart to control each other's gadgets. VirtualRealityPorn, which offers such a VR experience enhanced with sex toys, claims to have signed up in the “high thousands” of subscribers at \$7 a month. The revenues of porn producers may never return to their former heights. But whether or not such innovations bear fruit, the industry is once again offering other media and online businesses a glimpse of the future.

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