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These Entrepreneurs Are Literally Reshaping the Sex Toy Space

WHAT YOU NEED TO KNOW...

- ▶ Hi-tech sex toys are now 3D printed
- ▶ Sexpreneurs struggle with bias in the sex toy space



by ZARA STONE

[@AlmostZara](#)

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Ten a.m. is not the usual time of day to see a dildo. Dildos are very much an

CC



THE CONTEXT

HEALTH TECH

The intersection of health and

evening event - if indeed, they are an event at all. Not to mention, fluorescent light and a class of fifteen mildly interested college freshmen with notepads seems entirely the wrong setting. Still, they were looking at dildos in class, and unusual ones at that. Each was an exact replica of a different man's penis, photographed with 360-degree technology, then printed on a 3D printer and hand dipped in silicon.

Chelsea Downs, who brought the four penises to class, stood them upright on a metal table, pushed, her brown curly hair off her face, and smiled at the students. "Great to be here," she said. "I'm so happy your professor invited me to speak. I think it's cool you guys are learning about sexuality. I wish I'd had that at college."

A low giggle ran through the room, and Downs stood a little straighter. Her voice became stronger. "I'm the owner of the [New York Toy Collective](#), the world's first 3D scanning custom c**k service."

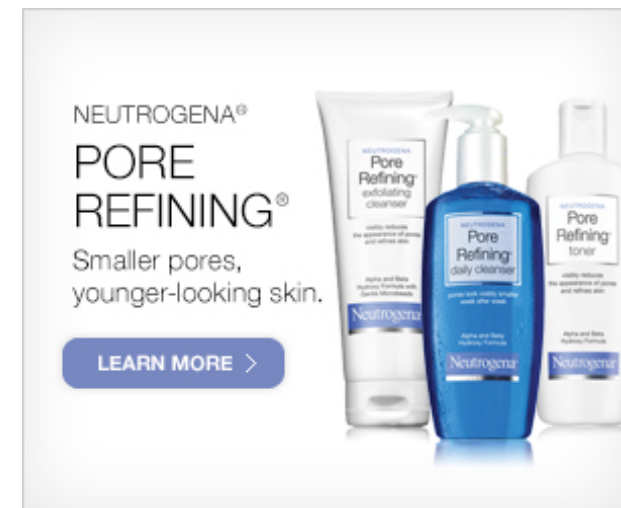
Students at Parsons' New School are used to an esoteric class schedule, and their syllabus reads like every parent's nightmare. This sex education class featured topics such as the C**t Coloring Book and assignments involving interviewing sex workers. It also focused on the changes technology has made to the adult industry.

This industry is worth a lot. Quite how much is hard to say, but [Dan Miller](#), [Managing Editor of XBiz](#), the adult entertainment industry's business guide, says that's because private companies aren't under any obligation to report their revenues. "When you see estimates like \$15 billion mentioned, it is based on our knowledge of the territory, not any list of industry profits," said Miller. "[And] sex toys are one of the fastest growing sectors."

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New technology has led to huge advancements in the types of toys offered, moving far beyond remote-controlled devices into the realms of Bluetooth-activated vibrators and sex toys that work over the internet.

Sex toy customization, in particular, is a recent trend, and nothing is more suited to this than 3D printing. That's why the sex toy industry is investing heavily in this technology, and using it for everything from creating toy prototypes to actual sex-toy printing. Basically, this sector is booming.

But even as entrepreneurs in this space flourish, banks aren't always willing to open business accounts for those in the sex toy industry, and Chinese factories demand high minimum orders for manufacturing. Still, some startups like Downs' are persevering.

That's because the mainstream acceptance of sex toys coupled with evolving technology has given consumers many options, and they are demanding higher quality products tailored to their desires. That's where Downs' products come in.

"It's funny how much the industry has changed in the last five years," said Lisa Lawless, a licensed psychotherapist and [CEO and founder of the National Association for the Advancement of Science & Art in Sexuality \(NAASAS\)](#). "3D printing has opened up a lot of possibilities with sex toys...we're seeing some really cool innovations."

Lawless works closely with companies to help them refine their products, counseling them on what will work in the market. "People approach me with concepts all the time, but they don't understand the reality," she said. "I often have to tell people that unless they can back their product financially, from manufacturing to distribution, it won't happen. It costs a lot for a factory to

create a new product mold, and they will want a large and expensive minimum order.”

Kim Airs is a sex toy consultant and product reviewer. Her career in the adult industry began in 1993, when she launched Grand Opening, a female-friendly sex store in Boston. She left her job as an administrative assistant at Harvard University to open it, and has now sold the business. At 54, Airs is never photographed without red lipstick, and she wears her hair short and blonde. She believes the changes in the industry are a response to the internet. “It lets people get things in discrete packages, and there’s more information,” she said in a phone interview.

There’s also the tech in the product. A large number of vibrating toys that exist can be operated by a partner, making them a hands-free experience for women. An example would be the soon-to-launch [Durex Fundawear pants](#) (Australia only), which feature an embedded vibrator that’s activated by smartphone.

Airs revealed she was consulting for the manufacturers of a new hi-tech toy that’s slated to go to market later this year, but it’s so new she couldn’t share any details. “It does utilize 3D printing,” she said. “And it will be a real game changer.”

The essence of 3D printing is to create physical objects from digital drawings. A computer-aided design (CAD) can be made with a variety of programs, and is then used to create a 3D virtual mockup. This gets divided into tiny sections that allow the object to be built in layers. Next, the design is sent to the printer. A variety of materials can be ‘printed’ in this manner, ranging from plastic, paper and metals. Currently, there is no way of printing silicone.

The printer adjusts the design to make it work with the chosen material and then builds up the object one layer at a time. This technology has been around since the 1980's, but high costs have meant it has only been used in large manufacturing plants. That has changed dramatically in the last few years, and now brands such as Makerbot and Formlabs offer consumers affordable printers for the first time.

“You can print pretty much anything,” said the Makerbot store clerk (who asked to stay anonymous). “Sex toys?” He laughed with a wide, white grin. “I’ve never heard that question before. I guess you could.”

At Parsons College, Downs is laying out the way of her work to the class of students.

“It’s hard to be in the sex business,” Downs said then. “No pun intended. There are a lot of barriers to entry. Banks won’t take your account, manufacturers won’t give you products, and so on. Doing something against the social norm is just going to take more drive if people think your idea is weird. But making it happen gives you an amazing feeling of accomplishment.”

Downs had been working as video producer for Nickelodeon when she came up with the concept for the New York Toy Collective. She launched the company in mid-2012 with her best friend, Laura Parker. She was 28. In February 2013, she handed in her notice, and added 3D scanning to her new company’s mix.

She hoped that the press buzz from 3D printing sex toys and the income from her line of handcrafted dildos would launch her business into profit - as it has.



The Hello Touch "hand vibrator"

Michael Raphael, [CEO of ShapeShot 3D Scanning](#), was surprised when Downs approached him with her 3D sex toy idea. "My background is in engineering," he said. "I moved from working on 3D printing for huge companies to setting up a business 3D scanning. Chelsea Downs approached me in November 2012 about scanning private parts. It wasn't something I'd ever considered before, but it's not hurting anybody."

This isn't Raphael's first experience with scanning genitals, as his company worked on Sacha Baron Cohen's film "The Dictator," creating 3D replicas of

his penis for use in the film.

Raphael trained Downs and her partner, Parker, to use his 3D scanning equipment. “It takes a few hours of instruction to train someone on how to take measurements,” he said. “Establishing the methodology takes a little longer. I generally had my team do the penis scans, but I had to do one of them on my own.” He laughed awkwardly. Raphael also has no desire to have Downs create a 3D model of his own penis. “I could if I wanted too, but I just don’t feel the need.”

[Pre-op transsexual Rebecca Kling had a different feeling about this.](#) She was very intrigued by Downs’ 3D scanning process and chose to have her penis scanned, as she hoped to sell models of it to raise funds for her gender reassignment surgery.

Only weeks earlier, Kling stood in the bedroom of a fifth floor suite in the Eventi Hotel, Soho, shivering. She was dressed in the light terry cloth bathrobe the hotel provided. A glass of champagne stood on the mahogany dresser and a box of chocolates sat unopened on the bed. Kling could hear low murmurs outside the room, the light conversation of Downs and Parker who were waiting to photograph her. She threw back her hair, pushed her shoulders back, and opened the door.

In front of her was a small rolling chair, with a fluffy white towel placed upon it. She handed her robe to Parker and slowly sat down. She couldn’t seem to stop talking. “Good weather, huh?” she said as she spread her thighs apart.

Each position had to be held for ten seconds and Downs took multiple

photographs, so that all angles would be covered. She spoke in a slow calm voice, giving tips when Kling needed to adjust position.

Kling acknowledged she felt conflicted. She wanted to raise money for her operation, but she was also displaying a part of herself that she had fought hard for the right to remove.

“It’s awfully contradictory as someone transgender to have this done, as on one hand I’m getting rid of my penis, and on the other hand it feels emasculating to let others see it. What will they think of it?” she said. “I thought the idea of having this done was hilarious; it’s certainly funnier in the abstract.”

By the time Kling received her customized creation a few weeks later, she’d had some time to reflect on the process. “It was a little intimidating to be naked in front of two strangers, both entirely clothed, while pictures were taken of my penis” she said. She keeps the dildo on a shelf in her living room. “It’s certainly not a view I had of it before.”

Dr. Susan Bodnar, a clinical psychologist at Columbia University, New York, finds it difficult to assess the mental state of the New York Toy Collective’s clientele. “I can’t even conceptualize what people are doing,” she said. “It could be a character disorder, it could be narcissistic, or it could even be just for fun. The idea of reproduced body parts bothers me. Things like this take on a consumer life of their own, and erase the individual stories of how people relate to this stuff, to their own sexuality.”

Sexual sociologist [Dr. Chauntelle Anne Tibbals](#) sees the rise in making a replica of a body part in a more positive light. “There are a lot of debates about

whether sex toys promote unrealistic expectations,” she said.” Having a toy that’s a replication of your partner’s penis might have a stimulating effect as that’s a “real” penis and you’re not using somebody else’s.”

Of course making a 3D version of a body part is not the only way to go when it comes to tech and sex toys. Michael Topolovac is [co-founder of Crave](#), a sex toy product line that’s designed for the hyper-connected world of today.

Coming from a background in engineering, he wanted to create something that people felt reflected their lives. His Duet vibrators charge via a computer’s USB port, and the top model features 16GB of data storage, allowing pleasure and power points in one item.

“No one said, make me a USB charger,” he said. “What they said was that batteries were annoying, and USB is a way to remove hassle from the experience.”

The allure of making money online from adult enterprises has created numerous other spin-offs around this space.

The popularity of online crowdfunding gave Ben Tao the idea for his website [Offbeatr](#). “We saw the success Kickstarter had at getting new and original content and products produced, and our thinking was why not for the adult industry? Popular crowd funding platforms don’t allow adult options so we decided to create a platform for that.” This has been especially embraced by furry fetishists and the adult art community, who are happy to have found an avenue to support projects they relate to.

Another company piggybacking on the popularity of erotica is Unbound Box, a quarterly erotic subscription service. Sarah-Jayne Kinney, one of the founders, holds down two jobs to manage the company. She’s currently

testing products for the next box that will launch in December. “The box pays for itself,” she said. “Well, kind of, we’re not taking a salary. But for a company that’s less than a year old to not lose money is pretty terrific.”

Cindy Gallop, the [CEO of MakeLoveNotPorn.tv](#), sat on a couch decked out in a skintight leather mini dress, with her tan thighs encased in patent boots. She’s the face of MakeLoveNotPorn, a web based video sharing site; think of it as an X-rated personally curated YouTube.

Gallop has struggled to raise seed money for her venture. “Everyone said it was a great idea, but then banks wouldn’t take our business. I call bullshit on the tech world,” she snarled. “Why are there so many brakes on something with such a high financial return?”

Gallop’s long-term goal is simple: to strongly demarcate between sex and porn. “One day no one will be ashamed of having a vibrator in their home,” she said.

This is what [JimmyJane](#) founder Ethan Imboden is trying to do as well. JimmyJane erotic products place an emphasis on personal pleasure, with no hint of pornography.

With a scruff of brown hair and a wide white smile, Imboden looks much younger than his 40 years. He created JimmyJane in 2004 as a response to a market filled with unpalatable products. “What intrigued me was the reticence of the mainstream press to embrace sex products in mature and appropriate way,” he said. “I saw an opportunity to transform through design.”

However, Imboden has faced similar difficulties to those of the other entrepreneurs mentioned. He was refused credit lines due to “unspecified bank morality clauses,” and had marketing campaigns killed after they’d been approved.

His latest launch was ‘Hello Touch’ in February 2013, a gadget which attaches vibrating pads to fingertips, allowing exploration of the body.. with a buzz. The design is very different from standard penetrative products, and the market has responded with cash. “We had a 91 percent spike in revenue,” he said. “Consumers found other things out there intimidating, and this seemed approachable.”

Imboden has always placed a focus on integrating technology into his vibrators. “The best leveraged technology is one that disappears rather than dominates the experience,” he smiled.

Whatever might inspire someone to make use of this sex-infused approach to technology, Downs is riding the wave to wherever it takes her. She is currently planning another 3D scanning event for the New York Toy Collective. She is still trying to finalize a venue, and talking to adult stores about hosting it. The price of her 3D dildos is significantly higher than the handmade dildos she sells, but they also require a lot more time to make.

For now, she is hoping to break even in her finances this year, unusual success for a startup company.

When Downs and I last spoke, she had signed a non-exclusive distribution deal with Babeland, a statewide chain of lesbian sex stores. “This is so big,” she said, her voice cracking. “If you’d have told me a year ago I’d be stocked in the best sex store in the states and drinking Diet Coke and photographing

penises in hotel rooms, I wouldn't have believed it.”

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