



Future of Sex Report

Jenna Owsianik
Ross Dawson

FutureofSex.net

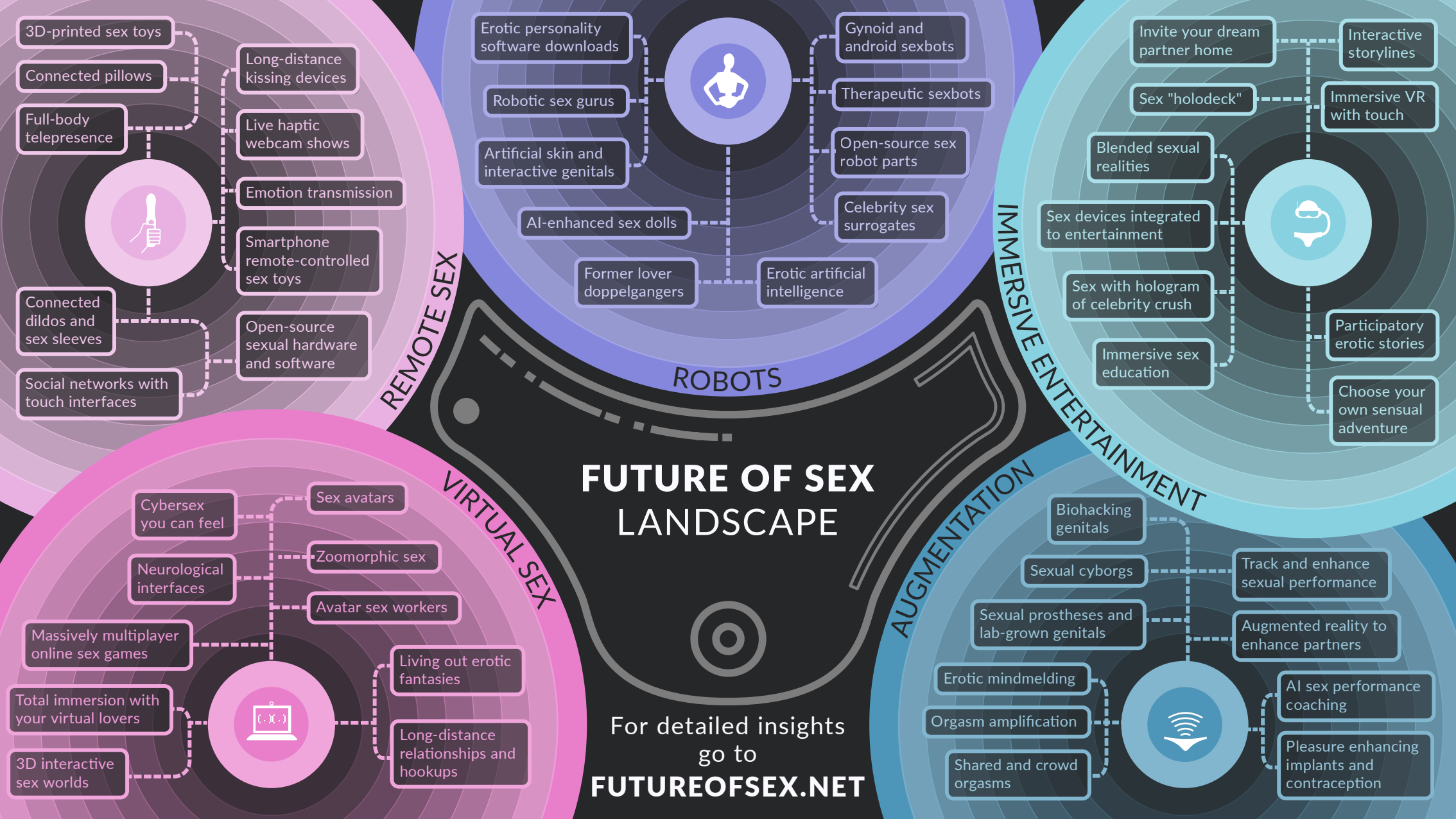
Introduction

In a rapidly changing world many aspects of our lives are being transformed by technology, including how we feel and express our sexuality. Among many other innovations, we can communicate instantly with lovers, near and far, making long-distance relationships workable and lustful gratification with new partners easier to satisfy. Robotics, virtual reality, and extraordinary scientific innovations are expanding how we can express and experience sexuality through our five senses. Breakthroughs in biological and neurological science are opening manifold erotic possibilities.

At FutureofSex.net our mission is to help people understand the possibilities and implications of how sex is evolving, so they are better prepared for the coming transformation of human sexuality, potentially far beyond what we have ever before imagined. We have prepared this report to offer insights into where the future of sex is heading. Enjoy, share with your friends, and start a conversation on what you would like to happen!

Table of Contents

Introduction	1
Future of Sex Landscape	2
Remote Sex	3
Virtual Sex	7
Robots	11
Immersive Entertainment	15
Augmentation	19
Authors	23
About	24



Future
of Sex

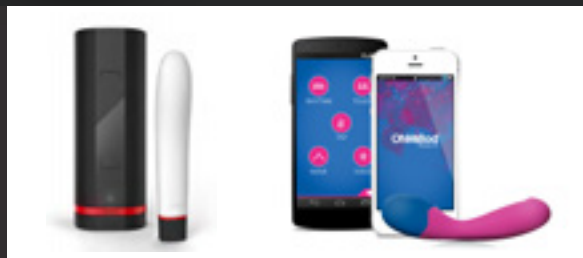


Remote
Sex

What Is It?

Remote sex is sex between two or more people who are not in the same place, yet are connected through the Internet. People often use electronic sex toys, operated by computers or devices that use data, to boost the experience and share pleasure. They transmit sensations through touch sensors to help long-distance partners arouse each other in real time.





Super-Connected Sex Toys

Various “smart” vibrators and male sex sleeves, such as Kiiroo’s Pearl and Onyx devices, interact with each other through desktop and mobile platforms, mimicking the feeling of physical sex and sending the sensations over long distances. Products for women, including OhMiBod’s blueMotion vibrator, can also be controlled remotely via mobile apps. Connected pillows also let you hear your partner’s heartbeat when miles away, while long-distance kissing devices ensure you’ll never miss a smooch goodnight.

Interactive Sex Shows

Webcam sites such as Flirt4Free feature models who use Internet-connected sex toys. Instead of viewers simply watching adult entertainers perform, they can control performers’ sex toys, and vice versa, during live haptic webcam shows.

Participatory Porn

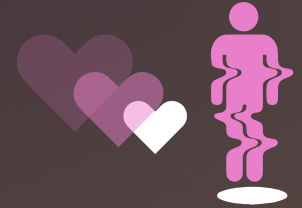
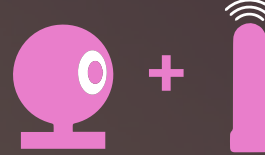
Smart sex toys like Vstroker can control the action of adult videos, so when a viewer thrusts, the erotic content changes to match the pace. New partnerships between adult content creators and sex toy makers also make it so the action in erotic films controls the sensation of male and female sex devices.

Teledildonic Virtual Sex Worlds

Computer-generated worlds and massively multiplayer online sex games like Red Light Center and 3DXChat are beginning to support remote sex devices. So when avatars are having sex, the people behind the computer can feel the action through synchronized sex toys.



What to Expect



Long-Distance Sex

While remote sex devices already use force feedback to transmit sensations of touch, this will expand further to the entire body. Prototypes of haptic body suits will come to the market, enabling fully physical long-distance sex. 3D printing will also enable tailor-made sex toys and molds that will replicate your lover's body parts. Open-source sexual hardware and software will aid in making these custom creations act and feel how you want them to.

Pan-Sensual Social Networks

Social networks designed for remote sex will become popular, and existing dating apps will embrace touch interfaces. Instead of simply exchanging flirty messages, singles will become intimate and share full-body telepresence from different locales.

Remote Sex Workers

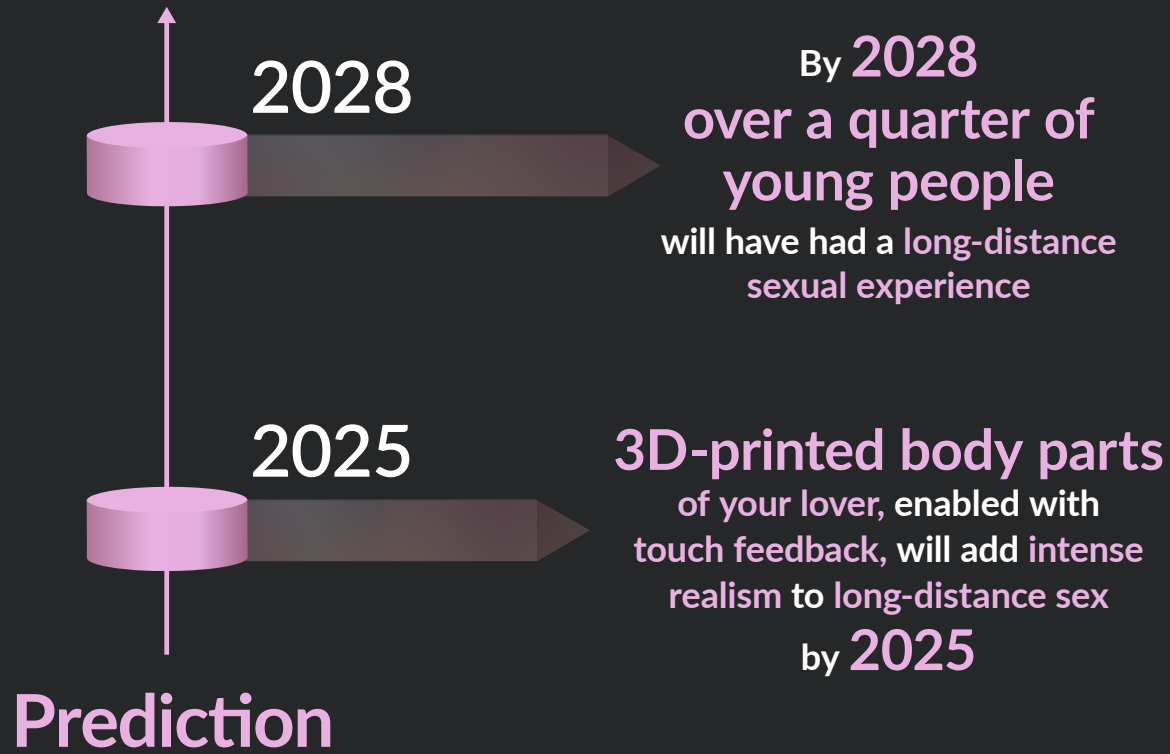
It will become commonplace for webcam models to interact with their clients via remote sex devices. This will provide a richer and more realistic sexual experience that will change the nature of the industry.

Holographic Lovers

Intimate video chats with partners will combine remote sex devices and touchable holograms of their lovers. Adding to the physical and visual, advances in neuroscience and biotech will also let you share personal feelings through emotion transmission.

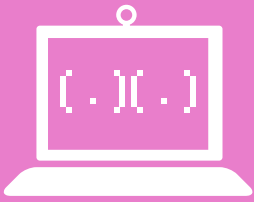


What to Expect



The term **Teledildonics** has stimulated the imaginations of many on the potential for erotic connection at a distance. Often misattributed to Ted Nelson's 1975 book *Computer Lib/ Dream Machines*, the term was coined by Howard Rheingold in 1990.

Future
of Sex



Virtual Sex

What Is It?

Virtual sex happens when people connect through communication devices and share sexual content. This includes typed messages as well as video and voice chats both online and over the phone. 3D worlds developed by computers are an increasingly popular place to have virtual sex by using avatars, which are digital representations of players.



State of the Art



Massively Multiplayer Online Sex Games

Online virtual worlds like Second Life and Red Light Center attract millions of users searching for virtual sex partners. Once inside, users can create custom avatars to play out their erotic fantasies in a variety of settings. While Red Light Center was created specifically for sex, the more mainstream Second Life allows players to purchase external add-ons like genitals and sex acts for an X-rated experience.

Alternative Sexual Communities

Meet real people in real time in non-judgmental virtual environments who want to explore new desires and kinks. Live out your erotic fantasies in a BDSM dungeon or indulge your animalistic side by transforming yourself into a creature for zoomorphic sex. Or why not hire an avatar escort or sex worker to try out a new form of role-play?

DIY Erotic Playgrounds

Design hyper-customizable sexual environments and bodies, turning yourself or another avatar into the ideal sexual partner inside your own personal sex world. Countless choice lies at your fingertips, allowing you to select everything from breast and genital size to where to place your leather couch and hot tub in proximity to your stripper pole.

Hyper-Realistic Avatars

Motion-capture animations of real adult actors having sex help create incredibly lifelike moving graphics. With certain 3D sex games supporting virtual reality headsets and interactive sex toys, realism intensifies and you're now having immersive cybersex you can feel.



What to Expect



Total Immersion with Virtual Lovers

As haptic sex toys and virtual reality become more and more popular and advanced in the coming years, the line dividing “real” sex with someone in your physical space and virtual sex in online worlds will disappear. People will become fully intertwined with the experiences of the avatar, both seeing and feeling what they do.



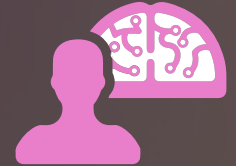
Untethered, Full-Body Sexual Gaming

Players in adult virtual worlds will embrace hands-free technology en masse so they can explore erotic landscapes with hand motions, saying goodbye to keyboards and mouse clicks. Haptic sex toys and suits will become increasingly sophisticated in how they send and receive touch, removing any perception that virtual sex is a form of mutual masturbation. Neurological interfaces will push immersion deeper as players interact with each other and their digital environment using brain waves.



Long-Distance Relationships and Hookups

Distance will have less influence over relationships and sexual encounters. With incredibly immersive and realistic experiences in virtual worlds, you won't have to, or want to, wait for your lover to return from a business trip to have great sex. For those on the prowl, you won't be limited to sex partners within a short radius, but can get extremely intimate with someone hundreds of miles away.

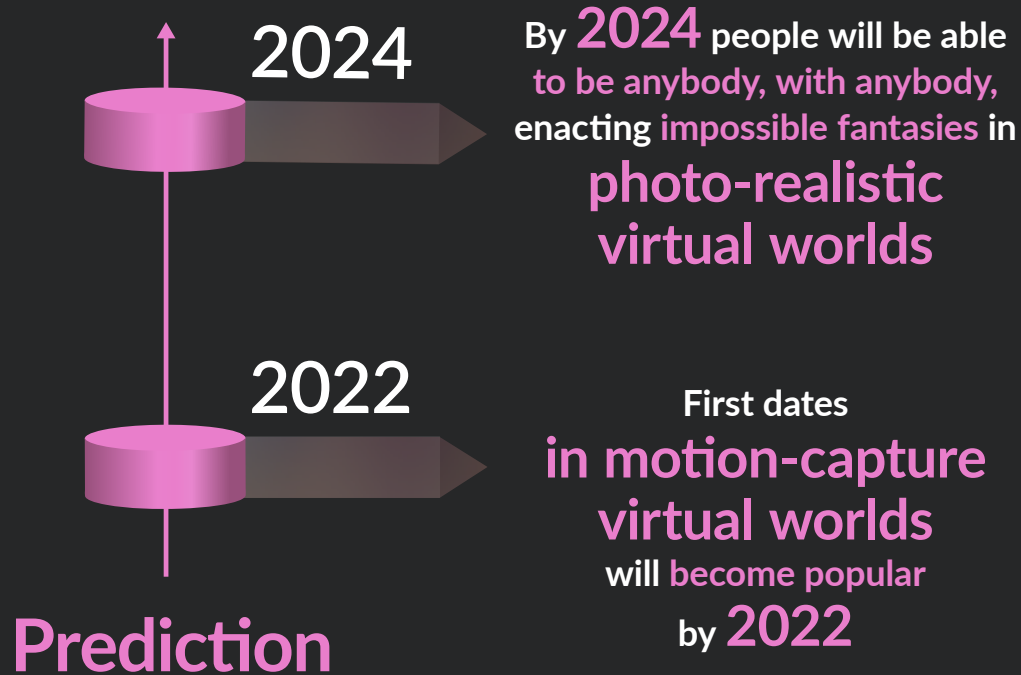


Artificial Intelligence Lovers

Artificial intelligence and software programs designed for sex will become so advanced that it will be commonplace for people to have sex with avatars that are entirely computer generated.



What to Expect



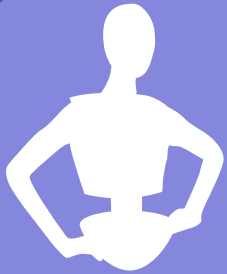
"We're rapidly approaching a point where man and machine merge, where sex can be better and safer outside of real life."

- Brian Shuster, CEO, Red Light Center

Ray Kurzweil says in the future we will be able *"to have sex with whoever we want, at any time or place that we want, at any age that we want"*

from Susan Greenfield, *Tomorrow's People: How 21st-Century Technology Is Changing the Way We Think and Feel*

Future
of Sex



Robots

What Is It?

Robots are machines intended to make human lives better, but some fear they will steal our jobs and our hearts. Human-like robots are called androids, while female robots are gynoids. Advances in the field are taking them into the more complex domains of sex, emotions, and love.



Hyper-Realistic Sex Dolls

Several companies create silicone sex dolls that both look and feel like real people. They offer customers diverse customization options including hair color, nipple type, body shape and size, and makeup styles. One of the most popular is Abyss Creations in the United States, which makes the RealDoll (and is also developing a talking robotic head to attach onto its posable bodies). Japanese companies rival in realism as their culture has a strong appreciation for dolls.

Adult Chatbots

Hop online and you can swap racy messages with erotic chatbots, either by seeking them out on purpose or perhaps unknowingly talking to one in a public chatroom. These software programs have various personalities and aim to become more responsive as they converse.

Humanoid Robots

While companies like True Companion and MacMil Cybernetics have attempted to create robotic sex partners, respectively Roxxy/Rocky and Susie Software/Harry Harddrive, a look at the accomplishments of the larger robotics industry shows great progress in creating human-like robots. Honda's Asimo robot moves like a human, being able to walk, climb stairs, and perform tasks like opening doors and carrying objects. It can talk, recognize faces and sounds, and uses sensors to interact with its environment. Hiroshi Ishiguro's Geminoid F robot is a very realistic female robot that has starred in a film, can recognize body language, speak, and respond to eye contact.



What to Expect



Seductive AI

Software developed by erotic engineers will rise in sophistication and use deep learning to understand and seamlessly respond to human desire. Advances in cognitive technology from supercomputers like IBM's Watson and ventures to download human consciousness into a robot, such as BINA48, will bolster progress. You will be able to download these personalities into sex robots and dolls.

Augmented Robotic Reality

Where robotic design is left wanting, virtual reality will step in to create a visually appealing lover superimposed onto a robotic frame. People will use this technology to create former lover doppelgangers and replicas of celebrity crushes.

Therapeutic Sexbots

People suffering from loneliness or sexual dysfunction will use sex robots as aids to teach themselves about sex and to use for companionship.

Simulated Skin and Interactive Genitals

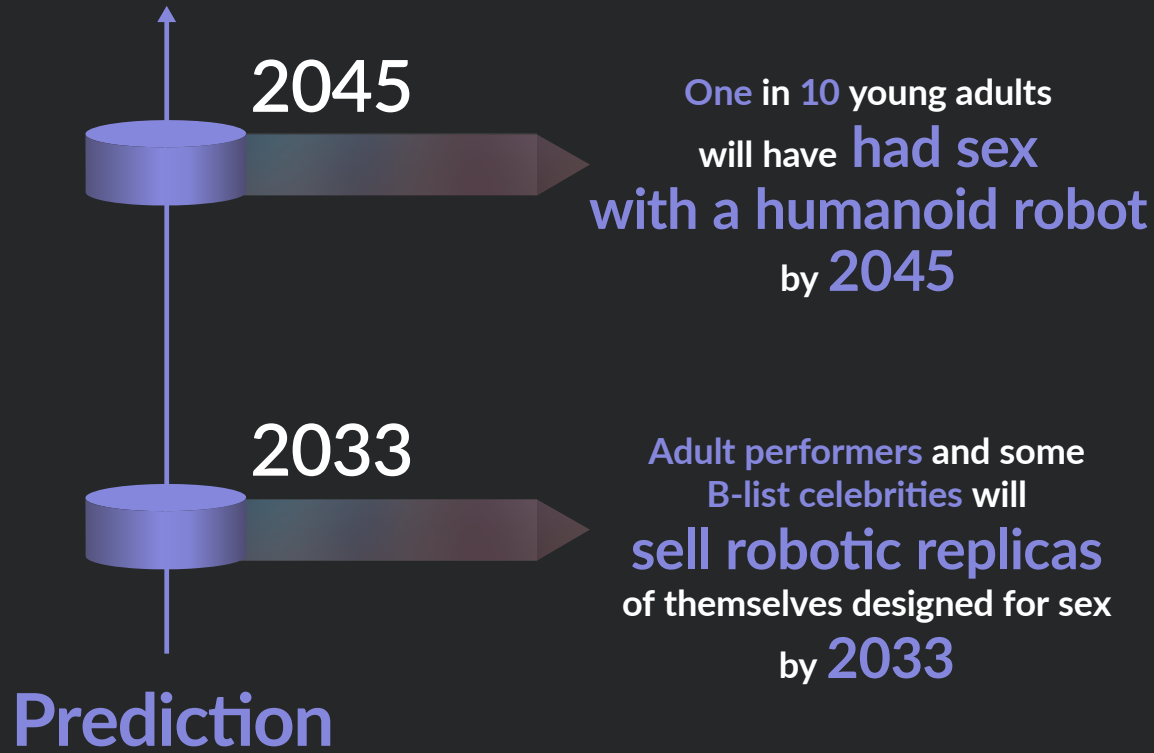
Interactive sex toys equipped with sensors will be used as the genitals for sex robots. You'll be able to buy these parts or use open-source software to 3D print them at home.

Robotic Sex Gurus

Robots will become the ultimate lovers, being able to adapt their sexual skills, constantly upgrade them, and learn what their human lovers like most.



What to Expect



"Humans will fall in love with robots, humans will marry robots, and humans will have sex with robots, all as (what will be regarded as) 'normal' extensions of our feelings of love and sexual desire for other humans."

- David Levy, Author, *Love and Sex with Robots*

Future
of Sex



Immersive Entertainment

What Is It?

Immersive entertainment is technology that blends the physical world with virtual or simulated worlds created by computers. The point is to make users feel they are truly part of the action in a created environment. One form is virtual reality, which is when someone fully enters 3D environments, usually by wearing a headset.





Live VR Shows

Sites like CAM4VR and AliceX offer live streaming of VR sex cams. This helps keep power and safety in the hands of performers while making the experience more interactive and realistic. A plus for the sex industry is live VR shows may potentially curb pirating and reinvigorate the world of online adult content.

Multi-Sensory Sexperiences

VR porn films feature 360-degree perspectives, binaural sound, and integrate sex devices, altogether tempting your senses and immersing you into the action in a way some users deem more intimate. Sex toys also sync with steamy audio recordings and e-books, creating participatory erotic stories that titillate body and mind.

Augmented Adult Entertainment

Adult entertainment companies have begun offering demos that bring viewers' body parts into a scene, as well merging their immediate space with visuals of erotic performers. One demo platform lets users interact and customize their experience with 3D avatars, this included allowing them to customize the appearance and positions of their "holographic" playmate.



What to Expect



Blended Sexual Environments

It will become commonplace to bring holographic representations—3D images viewable at any angle—of adult performers into your immediate space.



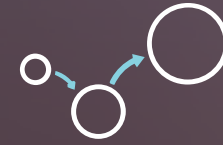
Immersive Sex Education

Virtual reality will commonly be used to educate people on how to enjoy sex more and how to have safe sex by offering simulated and instructional experiences.



Full-Body Experiences

Video chat sex will be taken to new heights as people will combine virtual reality and haptic sex devices and body suits to feel their long-distance lovers.

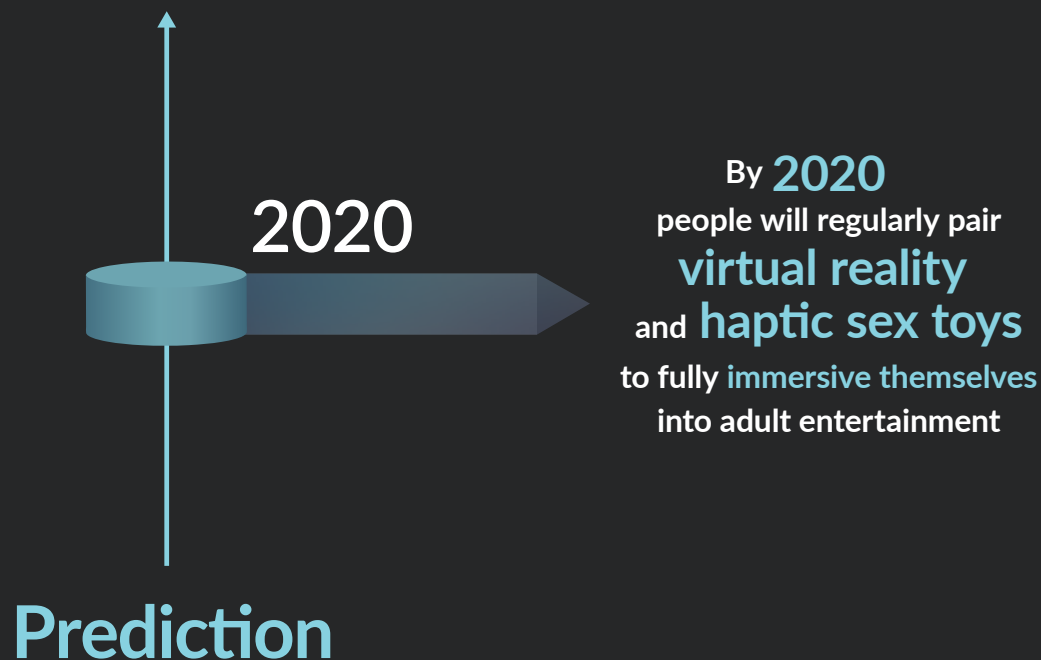


Choose Your Erotic Adventure

Adult entertainment will become more interactive, not just with remote sex toys, but participants will be able to choose how storylines unfold in pornography. Viewers will have a wide selection of angles and perspectives to choose from as they themselves move around and interact with the content, overcoming the current dominant and limited viewpoint of passive (male) spectator/ active (female) performer.



What to Expect



"You're immersed in the world so much that you don't feel like there's anyone around you to judge or gawk at you. It's just you and this world."

- Ela Darling, Secretary, Adult Performer Advocacy Committee

Future
of Sex



Augmentation

What Is It?

Human **augmentation** is using technology to improve what the human body is capable of doing and how it appears. Augmented reality, implants, and wearable computers are meant to push biological limits. When it comes to sex and sexual health, medical professionals and people in the general public are challenging the boundaries of pleasure.



Sexual Prostheses and Lab-Grown Genitals

The medical profession is performing genital reconstruction surgeries, penile and womb transplants, and even using regenerative medicine to grow sexual organs. The Wake Forest School of Medicine has created lab-grown vaginas and penises.

Biohacking Bodies

Viewing the human body from a hacker ethic, people, some of them known as Grinders, are turning themselves into sexual cyborgs by manipulating biology. Biohacker Rich Lee has created prototypes of a vibrating penile implant called Lovetron9000.

Contraceptive Innovations

LELO HEX, a new condom with a hexagonal molecular structure, is supposed to be thinner and stronger than other prophylactics on the market. German inventor Clemens Bimek has created the Bimek SLV, a prototype of an implant that can temporarily switch off sperm production. Australian researchers have created an ultra-thin new latex that may be used for condoms.

Wearables for Sex Performance

While not altering the human body, gadgets and clothing equipped with sensors are measuring sexual performance and health. A popular trend is to sync them with smartphone apps that receive tracked data.



What to Expect



Brain-to-Brain Sex Interfaces

Neural headsets record wavelengths and can tell when you and another person have matching brain patterns. This opens up possibilities for intimacy with a lover through erotic mindmelding and thought sharing.



Augmented Reality to Enhance Partners

Make your partner look like your celebrity crush or enhance their appearance while you are having sex with digital overlay technology.



Sexual Cyborgs and Superhumans

Using tissue engineering, human-made implants, and advanced surgical techniques, we will have options to customize our bodies for personal sexual aesthetic and heightened erotic bliss.



Sexnet of Things

As more objects are becoming connected to the Internet, so will our bodies as people begin using chips and sensors with their brains and genitals to track and improve their sexual health and fitness. Artificial intelligence will then give tailored sex performance coaching.

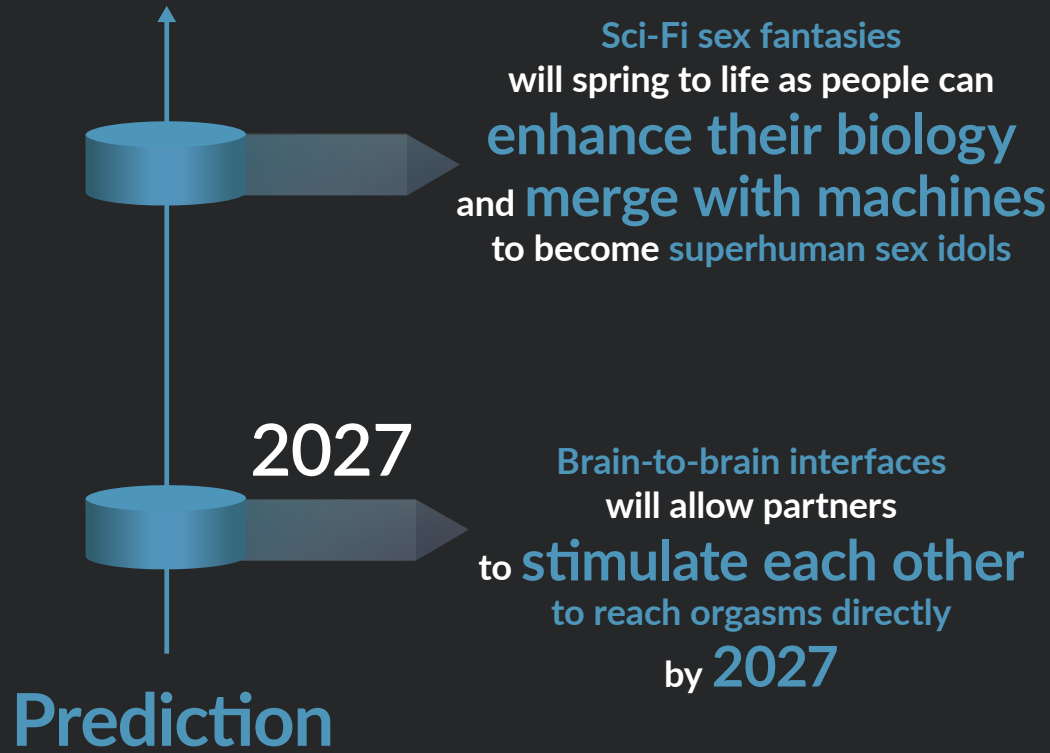


Pleasure Implants

Brain implants or sensors will tap into pleasure centers in the brain, bringing people to new orgasmic heights and allowing them to experience the orgasms of one or several people at the same time. New forms of contraception will focus not only on birth control but also on intensifying pleasure.



What to Expect



By 2020 adult entertainment in virtual reality will be worth \$1 billion, with adult entertainment being the third most important driver behind VR games and movies.

- Travis Jakel, Research Analyst, Piper Jaffray

"Erogenous zones and orgasms are simply the product of chemicals firing in the brain. If scientists can replicate that feeling by firing signals from an implanted chip or a brain wave headset, then it might even be the end of sex altogether."

- Zoltan Istvan, Transhumanist candidate for US President

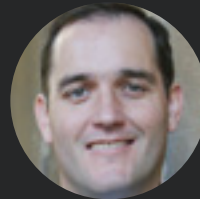


Jenna Owsianik

Editor
FutureofSex.net

Jenna Owsianik is a Canadian journalist with a special interest in how sexuality and human relationships are affected by new and emerging technologies. Beyond sex, her research covers advances in robotics and artificial intelligence, including how they may create a more accessible world for aging and disabled persons.

As a reporter, her work has appeared on Al Jazeera English, CTV British Columbia online, CBS Sunday Morning, CBS 60 Minutes, Global News, and CKNW Radio in Canada and the United States. She received a Masters of Journalism from The University of British Columbia while specializing in Social Justice and Gender. She also has an Honors BA in Women's Studies and French from The University of Western Ontario, and studied at L'Université Lumière Lyon II in France.



Ross Dawson

Publisher
FutureofSex.net

Ross Dawson is globally recognized as a leading futurist, entrepreneur, keynote speaker, and strategy advisor. He is the founder or co-founder of six companies, currently Managing Partner and Chief Futurist of marketing, innovation, publishing and ventures group Rh7thm.

He travels the world helping major organizations think about the future, having delivered keynotes and executive workshops in 27 countries across six continents. His bestselling books include the acclaimed *Living Networks*, famous for anticipating the rise of social media. Ross appears frequently in the media, including on CNN, Bloomberg TV, SkyNews, ABC TV, New York Times, Guardian, the Today and Sunrise shows, and many other programs.

Researcher



Bryony Cole

Bryony Cole is a sex and relationship coach at Cambyo.co. She currently hosts the sex tech podcast *Future of Sex* and works as a researcher and strategist in future human and technology fields. She resides in Brooklyn, New York, and is an active member of the Women of Sex Tech community.

FutureofSex.net

is the world's leading publication on how technology is changing human sexuality, today and tomorrow.

Visit us to keep current on the leading edge of the future of sex, explore the latest news and analysis, and subscribe to our email updates on the most exciting developments in the space.

Media Enquiries

For futurist perspectives on sex and how technology is changing humanity:

Ross Dawson - publisher@futureofsex.net

For detailed insights into the state of the art and landscape of the future of sex:

Jenna Owsianik - editor@futureofsex.net

Advertising and Partnerships

For enquiries about advertising, promotions, and partnerships:

advertising@futureofsex.net

Image Sources

Disclosure: Some links are affiliates.

p3: [Lovense](#). **p4:** [Kiiroo](#) [NSFW], [OhMiBod](#), [Stassi Stroker](#) [NSFW], [Vstroker](#) [NSFW], [Red Light Center](#) [NSFW].
p7: [3DXChat](#) [NSFW]. **p8:** [AnneMarit \(Marit\) Jarvinen](#), [Charisma Jonesford](#), [Chathouse3D](#) [NSFW], [Vanity Mirror](#).
p11: [Michael Coghlan](#). **p12:** [DS Doll photographer](#), [Hiroshi Ishiguro Laboratory](#), [ATR](#). **p15:** [Lovense](#).
p16: [AliceX](#) [NSFW], [HoloFilm Productions](#) [NSFW], [Holodexxx](#) [NSFW]. **p19:** [A Health Blog](#).
p20: [Wake Forest Institute for Regenerative Medicine](#), [Rich Lee](#), [LELO HEX](#), [Minna Life](#).