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## Robots, men and sex tourism

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### ABSTRACT

In 2050, Amsterdam's red light district will all be about android prostitutes who are clean of sexual transmitted infections (STIs), not smuggled in from Eastern Europe and forced into slavery, the city council will have direct control over android sex workers controlling prices, hours of operations and sexual services. This paper presents a futuristic scenario about sex tourism, discusses the drivers of change and the implications for the future. The paper pushes plausibility to the limit as boundaries of science fiction and fact become blurred in the ever increasing world of technology, consumption and humanity, a paradigm known as liminality.

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## 1. Introduction

Would you pay to have sex with a robot? Even if it was akin to something from *Stepford Wives*? Is this the future of sex tourism in a futurist world? A revolution of humanoid social robots (or androids) is quietly taking place in our society, autonomous, interactive and human like entities of various sizes and shapes are leaving research laboratories in large numbers, making their way into the world of our everyday lives. Automated teller machines, vending machines and automated telephone response systems are standing in for human attendants to serve real people; online search agents, game bots and chat programs are working for and playing with human users; and robotic dolls and pets are cuddling up with children and talking to the elderly [1].

The rise of a synthetic social world where human individuals and humanoid social robots co-mingle, calls for a new conceptualization of society. The traditional view of society as consisting of only human individuals needs revision. For one thing, the boundary between humans and human artifacts is no longer inviolable due to the increasing technological prostheticization of human bodies. Technologies are becoming an integral part of the human condition. Furthermore, robotic replacement of human individuals in the processes of social interaction and communication creates a human-machine nexus that is indispensable to the operation of everyday life. Society comprises of not only human individuals as delimited by their biological bodies, but also technological extensions of individuals, including their robotic surrogates. In *Terminator Three*, the android terminator manifests itself simultaneously as young naked flesh but also as a self-deprecating, declining and ageing actor, being chased by the next level up android, which happens to be a young, blond, female killing machine. Her ability to totally reconfigure her body, at a moment's notice, imbues her with an unusual allure [2]. By the same token, considering the female 'Borg' character 'Seven of Nine' from the *Star Trek Voyager* series; 'falling in love' with a machine

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appears to be inevitable, her pert attributes are continuously subjected to nano-probes and aesthetically placed biotechnical devices. The film, *Veronica 2030* is about a female android called 'Julia', created to provide sexual pleasure for humans. When she accidentally gets transported back in time from the year 2030 to 1998, she becomes a lingerie model and engages in various erotic adventures. These fictional characters are constructed to be physically pleasing with a high degree of sexual arousal, especially for male audiences all in the search for fantasy and perfect sex [2].

All of this suggests blue skies thinking or paradigm shifts, something akin to science fiction or utopia. If the basis of this paper is science fiction, then there must be truth in the proposition as science fiction is a genre of fiction, of plausibility, in the context of the future. Science fiction writing employs rationality [3] about alternative worlds but not fantasy as the story has context and reality, etc. there is a degree of truth in the story at the very least. As Parker et al. [4] point out science fiction "involves systematically altering technological, social or biological conditions and then attempting to understand the possible consequences" [4]. Science fiction has an explanatory framework, as stories point out a mechanism or structure of explanation in a narrative form; why else would Steven Spielberg [5] have brought together 23 futurists to explain how technological futures might occur for the film 'Minority Report'? He did this in order to find linkage, causality and explanation for the science fiction features of the film. According to Bergman [6] when writing about futures studies, beyond science fiction is Utopia, a no place. Utopia is a place that neither tells the truth nor points out causes. It is a place where you cannot live, as it does not exist. If you arrive in utopia, you want more or a further utopia. Therefore, sex with robots has a foundation, it is not a Utopia. It has technology reference. It is feasible. Society has had relationships with machines and we continue to have increasingly intimate relationships with more and more sophisticated technologies.

As Levy [7] suggests in his book *Love + Sex with Robots*, by 2050 technological advancement will allow humans to have sex with androids. Taking this one step further Henrik Christensen, chairman of EURON, the European Robotics Research Network predicts that people will be having sex with robots in five years and in 2010 the world's first sex doll was showcased at the AVN Adult Entertainment Expo in Las Vegas. Priced between \$7000 and \$9000 US Roxxy is a truly interactive sex doll offering a range of replicated personalities from frigid Farah to Wild Wendy.

Robot sex offers a solution to a host of problems associated with the sex trade. Given the rise of incurable STI's, including emergent strains of gonorrhoea and HIV/AIDS throughout the world and the problem associated with human trafficking and sex tourism it is likely that we will see an increase in demand for alternative forms of sexual expression. In 2050, Amsterdam's red light district will be all about android prostitutes who are clean of sexual transmitted diseases, not smuggled in from Eastern Europe and forced into slavery. Android prostitutes will be both aesthetically pleasing and able to provide guaranteed performance and stimulation. This article discusses how such a scenario could come about based upon a futurist perspective of sex tourism in Amsterdam.

The problems and dangers associated with the selling of sexual services are myriad and well documented. We wish to acknowledge the very real negative consequences of the sex industry. However, the purpose of this paper is to think outside of current day realities and imagine a world in which high quality, non-human sexual services are available for purchase.

## 2. Sex tourism

Tourism and sex have always gone together [8]. It is theorised that Columbus brought syphilis from America to Spain in 1492 [9]. Soon after, epidemics of syphilis spread across Europe, mainly associated with the movement of men. In 1494, the 50,000 troops dispatched to the Alps by Charles VIII were handicapped by syphilis and consequently withdrawn to France. Between 1495 and 1496, cases of syphilis were reported in a number of European countries, from England to Hungary, and throughout Germany and Russia.

Tourism, romance, love and sexual relations will continue to be linked in 2050 and beyond. For as long as people have travelled, they have engaged in romantic and sexual encounters of various kinds. Sometimes sex or the prospect of sexual encounters in the destination or along the way plays a central role in the decision to travel and the choice of destination. At other times, sex represents an incidental aspect of a trip or plays no role whatsoever in the decision-making. Sometimes sexual activity is regarded as being a socially acceptable and mutually beneficial reason to travel, as in the case of honeymoons or romantic getaways. Sex tourism is one of the most emotive and sensational issues in tourism. It is an extremely problematic area to define. Destinations such as Las Vegas, Thailand and Amsterdam are sex tourism destinations whether by intention or not.

## 3. Amsterdam's sex industry

We have chosen Amsterdam as the site for this future scenario because it has a long history as the sex capital of the world. During the middle Ages, prostitution in the Netherlands was not prohibited. Prostitution in Amsterdam has always been tolerated as this posting proclamation for the city council in 1413 states:

*Because whores are necessary in big cities and especially in cities of commerce such as ours – indeed it is far better to have these women than not to have them – and also because the holy church tolerates whores on good grounds, for these reasons the court and sheriff of Amsterdam shall not entirely forbid the keeping of brothels [10].*

Though the red light district has existed for several centuries and has been a boost to the economy by attracting tourists and collecting taxes from brothels, today problems abound and the district is losing its lustre. How might the city change in a future where sex with robots is considered *de rigueur*?

#### 4. Scenario: perfect sex

So, in 2050 will sex tourism in Amsterdam look like this?

*The Yub-Yum is Amsterdam's top sex club for business travellers located beside a 17th century canal house on the Singel. It is modern and gleaming with about 100 scantily clad blonde and brunettes parading around in exotic G-strings and lingerie. Entry costs €10,000 for an all inclusive service. The club offers a full range of sexual services from massages, lap dancing and intercourse in plush surroundings. The Yub-Yum is a unique bordello licensed by the city council, staffed not by humans but by androids. This situation came about due to an increase in human trafficking in the sex industry in the 2040s which was becoming unsustainable, combined with an increase in incurable STI's in the city especially HIV which over the last decade has mutated and is resistant to many vaccines and preventive medicines. Amsterdam's tourist industry is built on an image of sex and drugs. The council was worried that if the red light district were to close, it would have a detrimental effect on the city's brand and tourism industry, as it seemed unimaginable for the city not to have a sex industry. Sex tourism is a key driver for stag parties and the convention industry. The Yub-Yum offers a range of sexual gods and goddesses of different ethnicities, body shapes, ages, languages and sexual features. The club is often rated highly by punters on [www.punternet.com](http://www.punternet.com) and for the fifth year in a row, in 2049 was voted the world's best massage parlour by the UN World Tourism Organisation. The club has won numerous technology and innovation awards including the prestigious ISO iRobotSEX award. The most popular model is Irina, a tall, blonde, Russian exotic species who is popular with Middle Eastern businessmen. The tourists who use the services of Yub-Yum are guaranteed a wonderful and thrilling experience, as all the androids are programmed to perform every service and satisfy every desire. All androids are made of bacteria resistant fibre and are flushed for human fluids, therefore guaranteeing no Sexual Transmitted Disease's are transferred between consumers. The impact of Yub-Yum club and similar establishments in Amsterdam has transformed the sex industry alleviating all health and human trafficking problems. The only social issues surrounding the club is the resistance from human sex workers who say they can't compete on price and quality, therefore forcing many of them to close their shop windows. All in all, the regeneration of Amsterdam's sex industry has been about the success of the new breed of sex worker. Even clients feel guilt free as they actually haven't had sex with a real person and therefore don't have to lie to their partner.*

#### 5. The drivers that are shaping this scenario are:

*Driver One: The Growth of the Sex Industry*

*Driver Two: Why Men Pay for Sex?*

*Driver Three: Beauty and Physical Perfection*

*Driver Four: Human Trafficking*

*Driver Five: Incurable STIs & HIV/AIDS*

*Driver Six: Sex Toys Enhance Sexual Pleasure So We Will Have Sex with a Robot*

*Driver Seven: Our Emotional Connection to Robots*

*Driver Eight: Destination Brand and the Importance of Sex Tourism in Amsterdam*

##### 5.1. Driver one: the growth of the sex industry

Davies [11], in the American Sociological Review poses the conundrum of prostitution: 'Why is it that a practice so thoroughly disapproved, so widely outlawed in western civilization, can yet flourish so universally?' Today the sex industry is growing [12]. Sex is a mainstream entertainment product, packaged as excitement. The desire for sex is ever present, and while there is an element of pleasure in the danger of erotic adventure, for most it is of no more moral consequence than the desire for food.

##### 5.2. Driver two: why men pay for sex?

The simple answer to this question is 'because they can'. There are myriad reasons why people have or buy sex. Typically, research suggests that women do it for love and men for pleasure, DeLamater [13]. However, a recent study by psychologists Meston and Buss [14] revealed that marriage for some is not really the institution of romantic love, fidelity and pure

commitment, but an economic exchange that 84% of women will have sex to ensure a 'quiet life' or to get household chores done by their husbands.

It is hard to work out how many men buy sex; social stigma and shame make research results in this area unreliable. It is likely however that many men will purchase sexual services at some stage in their lifetime. The most reliable measure is probably still Alfred Kinsey's [15] comprehensive 1948 study. According to Kinsey, 69% of the white male population of the USA had been with a prostitute.

The likelihood that someone will purchase sex is a factor of demographics, lifestyles and other motivations. However, the sex industry is beginning to use the marketing strategies, business forms and wider economic structures of late capitalism to sell an individualised, interactive touristic experience [16]. It is likely that in the future, for those with even the vaguest of interest in sex with robots, opportunities to purchase services will fall into their laps.

### 5.3. Driver three: beauty and physical perfection

Our fascination with beauty and appearance is a universal development that seems to have intensified in the past few decades. This is something that has traditionally been associated with women and the gay male community. However, the rise of the metrosexual phenomena and the fact that rhinoplasty and botox are currently the most popular cosmetic surgery procedure for men are testimony to the fact that heterosexual men have not escaped the push towards physical perfection. All in all the pressure to look good has intensified for both sexes over the years, leading to an age of the image where visual appearance is prized above all else.

Despite a slowing economy and tighter consumer budgets, the future looks bright for the cosmetic and plastic surgery industry [8]. The American Society of Plastic Surgeons (ASPS) claim that in the future more people will be taking advantage of better technology and more competitive prices [17].

### 5.4. Driver four: human trafficking

Human trafficking is the acquisition of people by improper means such as force, fraud or deception, with the aim of exploiting them. The Netherlands is a top destination for victims of human trafficking and it is on the rise [18]. At the end of 2008, six people were convicted in what prosecutors said was the worst case of human trafficking ever brought to trial in the Netherlands. The ill treatment of women in the case meant that victims were compelled to have breast enlargement surgery [19]. It seems likely that recognition of the magnitude of the social problem will lead to reforms.

### 5.5. Driver five: incurable STIs & HIV/AIDS

Prostitution is sex work, therefore there is a connection to incidents of STIs [9]. The fall of the Berlin wall and communism in Eastern Europe has immigrated labour towards Western European countries. As a consequence, many poorer migrants have brought diseases with them including STI's. Figure one highlights that the majority of registered HIV infections in the Netherlands relate to the non-Dutch citizens, and this is rising (Fig. 1).

Driver six: sex toys enhance sexual pleasure so we will have sex with a robot

The world's most advanced country associated with technological advance is Japan; it is also the country that leads the way in high end sex dolls. According to Connell [21], in Japan the rent-a-doll market has blown the hooker market wide open. South Korea too has turned to hiring out sex dolls to plug the gap created by their recent anti-prostitution laws.

Levy [22] reports that if consumers from the most advanced technology economies in the world will have sex with dolls, then it is likely that humans will jump species to have sex with robots. The early successes of the sex doll businesses are a clear indicator of things to come. If static sex dolls are financially viable business, then android prostitutes become a feasible proposition. Driver seven: our emotional connection to robots

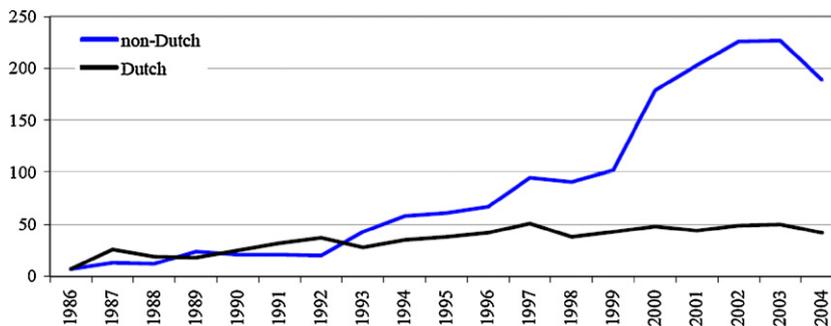


Fig. 1. HIV infections [20].

Today, robots are far from human like in what they can do [23]. Many robots are used for drudgery related tasks and this creeping army of technological gain is invading the realm of human social life, sharing the living environment with people, communicating emotionally with humans and learning 'right' and 'wrong'. This emerging movement of social roboticization is causing a fundamental change in the meaning of social interaction and the nature of human communication in society [1]. In the 1990s a barrage of humanoid robotic pets, toys and dolls, hit the consumer market, all designed to trigger human emotions with believable social interaction. Parallel to this was the emergence of socially intelligent software agents that communicate with human users in natural human language 'ChatterBots' [24]. Today there are vocalised chat bots capable of communicating on topics ranging from politics to sex [25]. Meanwhile the popularity of the *Stormtrooper* fetish, porn/chat sites and social networking sites such as <http://male.bots.com/> also set the ground for robot sex. Human beings are increasing becoming cyborg creatures, intimately attached to our various forms of technology.

Sherry Turkle, writing in her book *Second Self* [26], eloquently makes the point that, 'it is not about what the computer will be like in the future, it is what we will be like'. Anthropologists suggest that we live in a liminal paradigm a place between the known and the unknown, characterised by ambiguity, openness, and indeterminacy. Liminality refers to in-between situations and conditions that are characterised by the dislocation of established structures, the reversal of hierarchies, and uncertainty regarding the continuity of tradition and future outcomes [27]. Such liminal conditions of uncertainty, fluidity, and malleability are an aspect of modern life. Liminal experiences transform us cognitively, emotionally, and morally. Technology is changing rapidly and humanity is changing with it. We can love animals; we do love machines, so a logical next step is the proposition of having sex with one or even marrying one.

#### 5.8. *Driver eight: destination brand and the importance of sex tourism in Amsterdam*

What would Amsterdam be without the red light district? According to the destination's website: *The majority of people have heard about Amsterdam's Red Light District well before their visit. Leaving nothing to the imagination, most stereotypes about this area are true.*

(<http://www.iamsterdam.com/en/visiting/spotlight/redlightdistricts>)

The red light district is part of Amsterdam's brand equity and values according to research for the Amsterdam City Council and Tourist Board [28]. Kavaratzis and Ashworth [29] argue that one of the main elements of the city's international image is associated with the liberal attitude towards soft drugs and prostitution. Both the studies above highlight change is necessary but as the city can't afford to lose its drugs and sex image, it is a process of balance.

### 6. Is making love to a robot a feasible future?

Sexual transmitted diseases, human trafficking, the body beautiful ethos, and the importance of the sex industry to Amsterdam's tourism lead to the suggestion of androids as sex workers. Even the real sex workers of Amsterdam may not be able to compete with such technologies. Levy [30] quotes a reference for the UK Guardian:

In 1983, the Guardian newspaper reports that New York prostitutes share some of the future of other workers – those technology developments may put them out of business. All the peepshows now sell substitutes – dolls to have sex with, vibrators, plastic vaginas and penises – and as one groused in New York, 'it won't be long before customers can buy a robot from a drug store so they won't need us'.

So, is such a suggestion feasible? For starters, virtual sex or cyber sex is one of the successful stories of the internet, the top selling searches and purchases on the internet are sex and tourism [8]. Haptic technology refers to technology that interfaces to the user via the sense of touch by applying forces, vibrations, and/or motions to the user. This mechanical stimulation may be used to assist in the creation of virtual objects (objects existing only in a computer simulation), for control of such virtual objects, and to enhance the remote control of machines and devices. New devices such as the Simulator, a device that lets you connect a sex toy to your computer so that other people can control it for you over the internet are constantly emerging. The simulator moves internet sex one step beyond chat or Skype, allowing by means of integrated sex toys, the users to feel their partners force and rate of thrusts [31].

Emerging technologies and personal robots are adding emotional reaction to the functionality of existing technology (<http://robotic.media.mit.edu>) meaning robots can be programmed for intimacy [23].

From an ergonomic perspective the mechanical construction of robots makes them appear non-human and affects how they themselves experience the world however; a new kind of robot is being developed called an anthropomimetic robot (<http://eccerobot.org/>). This robot copies the inner structures and mechanisms – bones, joints, muscles, and tendons – and thus has the potential for human-like action and interaction in the world. In addition, robots now recognise people, using facial recognition software. This means that robots not only recognise someone but are able to access memory systems of their potential lovers likes and dislikes [32].

At the same time, as technology is changing our knowledge and understanding of sex is reawakening. 2000 years ago sexual ecstasy was for the few; scholars and priests, those with title, money, or religious or political power [33]. Since the 18th century according to philosopher Foucault [34], a repressive hypothesis that says that sex is a private, practical affair that only properly takes place between a husband and a wife has been in existence. Sex outside these confines has been

repressed. The democratisation of consumption bought about by the internet means that knowledge is more available to all than ever before and that women in particular have access to sexualised knowledge, experiences and products in a way never before possible. It is women who have been having sex with vibrating machines since the turn of last century and women whose sexual response is more sensitive. For women a vibrator delivers an orgasm almost without fail. For many women, with a lover this is not the case, especially when sex consists mainly of vaginal penetration. Robot lovers, sensitive to the nuances of arousal, programmed with sexual knowledge few men understand, able to provide prolonged stimulation and available on demand are guaranteed to be popular.

So what does this suggest for the future of sexual and leisure behaviour? Sexual behaviour is changing and technology could make robotics a paradigm of humanity. But it is more what Turkle [26] has to say; it is not about how technology is changing but how we are changing. Magnetic resonance scanning allows us to understand ourselves in ways that were not previously possible. The way the brain functions at orgasm can be measured and the link between good sex and health and longevity is becoming better understood [35]. Ancient knowledge of sexual practices that make today's six to thirty second orgasms look like adolescent fumbling's [36] can be proven. Women and men are demanding better and more varied sex [37] and sex is no longer as repressed as it was 50 years ago. If android lovers programmed to deliver are the gateway to the kind of mind blowing sex few people currently experience, it is likely that our attitudes to robot sex will change.

## 7. Concluding remarks

Could our patterns of consumption in late capitalism expand to include cyborg sex in an Amsterdam brothel? It is certainly hard to imagine David Levy's prediction that by 2050 sex and love with robots will be a human possibility. But then again, 25 years ago when Haraway [38] imagined a cyborg future where technological extensions of the human self are an everyday reality, we could not possibly have imagined our own present day relationship with connective technology.

The future of sex tourism in Amsterdam needs an innovative solution and the use of androids as sex workers is that futuristic solution. The present situation of human trafficking, sexually transmitted infections, pressure from the local community and the threat to the destination brand means change is inevitable. However, the use of androids as sex workers has implications for society. For example, would humans actually do it? In advanced technology societies such as Japan and Korea, humans are already having sex with sex dolls and we already live in a society where technology has emotional appeal. Levy [39] proposes that such a change will happen by 2050. For example, would such a proposition be legal? Most of us in a free-thinking society are unlikely to feel that the use of androids by adults in private is a practice that should be prevented by legislation, yet in Alabama, Texas, and some other jurisdictions in the U.S.A., the sale of vibrators has been deemed illegal [40]. Would your partner consider sex with an android as infidelity or is it just another form of masturbation? Would the use of androids who outperform humans in sex as they could offer variety in the terms of appearance, size, endurance, voice, conversation and performance of sexual acts that to some would be unimaginable? Will women consumers of sexual services prefer android sex? Finally, when do robots become humans or overtake humans, as they do in many science fiction futures? This article is not about these issues, but the future of sex tourism in Amsterdam using androids as sex workers. If such a proposition came true, Amsterdam would probably be the safest and best sex tourism destination in world and all the social problems associated with sex tourism would disappear overnight.

In a liminal paradigm in which we are cyborg creatures, intimately linked with technology on a daily basis it is likely that sexual pleasure and sexual healing will become integral to our leisure experience. Robot sex is safer sex, free from the constraints, precautions and uncertainties of the real deal, but regardless of how good the sex is, will we always continue to think of it as something less than fully human?

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