

Opinion

Re: Sex-Bots—Let Us Look before We Leap

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Abstract: With the understanding that a substantial commerce in sexually-enabled robots represents a plunge into the unknown for humankind, and at the “deep end of the pool”—i.e., involving one of the most important, complex, and problem-ridden aspects of human existence—it is the goal of this brief opinion piece to help ensure that we remain aware as a society of some of the potential pitfalls—these, as is quite appropriate for an opinion piece of this kind, illustrated via negative but plausible scenarios—and presented as well in the light of the multi-dimensional aspect of human sexuality; and with the reality of a certain level of risk associated with sex-bots having been established, there are presented in conclusion some potentially strategic considerations for those professionals who find themselves involved with their design, production, and/or marketing.

Keywords: sexually-enabled robot; sex-bot; sex; sexuality; inherited disease resistance; DNA repair; bastard muses; robotic caregiver; open source AI; open source robotics

1. Sex as System

“There are more things in heaven and earth, Horatio, than are dreamt of in our philosophy.”

This, of course, is the famous warning addressed by Hamlet to his college buddy, Horatio¹—the two of them back in Denmark from Wittenberg University—and if we equate the bubble of Wittenberg to the laboratories in which the next generation of sex-bots are being developed, then the real-world mess in which Hamlet finds himself enveloped back at home becomes quite instructive: his mother Gertrude has not only collaborated in the murder of his father, but is in fact sleeping with the murderer himself.

The point, obviously—and here we begin with a shock exposure to the more lurid social aspects of our subject—is that sexuality is not only one of the most important but also one of the most perpetually troubled aspects of the social fabric (more about this later); and although it can be legitimately argued by the sex-bot industry that their products will be as oil upon the waters—this by providing (1) an outlet for those without partners, and (2) for those with partners, some relief from the tedium of a long-continued relationship—such an assertion is perhaps, in the spirit of Hamlet’s warning, “whistling in the dark”.

Indeed, with addiction to internet porn having already emerged as a problem (Young 2008), the sex-bot industry leaves itself open to accusations that “it is planning to put porn on legs and let it stalk through our bedrooms and living rooms”, or—to use an even crueller analogy, and one which regards internet porn as the omnipresent handgun of the industry—that it is now planning to “introduce the equivalent of the assault rifle”².

¹ Act 1, Scene 5.

² As to the assertion that sex-bots cannot be compared to universally-available internet porn because they will be privately and individually owned, your author has had the opportunity to hear a first-hand account of prostitutes working out of

In other words, the industry must keep in mind that it is dealing with a phenomenon on a par with nuclear energy in respect to (1) its potency, (2) its deep roots within the physical universe, but also in respect to (3) the difficulty of safely harnessing it for commercial purposes: Japanese mega-consortium Toshiba, for example, has recently announced the bankruptcy of its Westinghouse nuclear engineering subsidiary (Wikipedia 2017a).

However, having mentioned the physical universe, let us begin there with a more reasoned and less inflammatory consideration of our subject³, i.e., let us consider its biological aspects: notwithstanding the status of male–female sex as the world’s foremost media topic, sex of this variety in fact remains absolutely essential to human existence, and not only from the standpoint of procreation per se (and please note, by the way, that the industry’s expensive devices will tend to bring down the birth rate only where least needed, or in fact undesirable—in the developed economies): given that humankind remains under evolutionary pressure—no longer from direct competitors, but rather from our parasites and our decaying environment, (1) it is of course sex that represents the mechanism by which potentially adaptive mutations are distributed (as, for example, resistance to a potential global pandemic); (2) it takes real sex—and lots of it—to make sure that those potentially beneficial mutations are thoroughly distributed before there is a need for them⁴; and (3) if that distribution is to include developed economies, then artificial sex might not be such a good thing.

It may come as a bit of a shock, furthermore, to realize that sex is not only critical for (1) procreation and (2) adaptation, but also for (3) the basic maintenance of the human genome itself: given the incredible complexity of the genetic blueprint of advanced organisms, it is becoming increasingly evident to science that there are certain types of DNA repair that can occur only with the availability of corresponding DNA chains from two separate individuals (Bernstein et al. 2011)—just as the repeated copying of a manuscript can be kept from going awry only if there is in each instance two versions of that manuscript which can be compared.

Or in summary—and despite all the adolescent talk of a “singularity”, and downloading our consciousness to a microchip—we are currently biological beings, and will remain so for the foreseeable future; and so before introducing a disruption to a critical biological system, we need to be sure that we know what we’re doing.

“But wait,” one might protest, “surely you are not suggesting that sex-bots can tip the scales in the direction of a downward spiral in the viability of the human species itself?”

One would like to think that there is no need for such pessimism, and that society will learn to live with the sex-bot as it has learned to live with the automobile and the TV; but even so, it must be pointed out that the United States has perhaps already entered such a downward spiral, with life expectancy declining for a second year in a row as a result of the drug crisis (Bernstein and Ingraham 2017)—and there is beginning to be scientific evidence, if evidence is needed, of the link between substance abuse on the one hand and compulsive sexual behavior on the other (Love et al. 2015⁵). One must suspect, in

vans in order to service the oil field workers of southern Louisiana; and if we are to credit this account, what is to prevent us from imagining a criminal cartel launching a fleet of sex-bot equipped vans, and one of which is to be stationed within walking distance of each of our major high schools? Or in other words, a product itself can have universal currency—and one unimpeded by the requirement of an internet address.

³ Although the subject of sex-bots has already attracted to itself a not-insignificant literature (see, for example, (Puccetti 1967; Levy 2007; Richardson 2015)), the field is not yet at a stage that a synoptic approach to it—such as the present editorial—can depend upon a web of references.

⁴ Your author experienced an “Aha!” moment in reference to this subject when hitchhiking with his own college buddy back to campus after a late 1960s spring break. Having caught a ride with one of our university’s own entomologists, the subject naturally turned to “acquired” resistance to pesticides—and we were surprised to hear said entomologist express the idea that the mutation or mutations required to confer resistance to one of any number of pesticides were perhaps already present in a given insect population, and awaiting only the effects of natural selection in order to emerge; i.e., “acquired” resistance is something of a misnomer. See https://en.wikipedia.org/wiki/Pesticide_resistance#/media/File:Pest_resistance_labelled_light.svg (accessed on 31 December 2017).

⁵ Note that the introduction to this paper cites no less than nine additional papers exploring the neural pathways common to all forms of addictive behavior.

other words, that the drug crisis is far worse than it might otherwise have been due to the possibility of sequestering one's self with readily available internet porn—and now consider this scenario: one of our young citizens stands with a methamphetamine tablet (a known arousal agent (Frohman et al. 2010)) in his left hand, and in his right a remote which will allow him to command the sex-bot standing before him to assume any of a multitude of insanely erotic sexually receptive positions (“Your current preferences: (1) on tip-toes; (2) legs spread slightly; (3) feet turned slightly in”). What are the chances that said young citizen will place both pill and remote aside, walk out to his vehicle and strap himself into it, and drive off to the local community college for his class in computer programming?

2. Some Potentially Strategic Considerations

Given the economic incentives involved—and how typical would it be to say that people have always been willing to spend money, whether directly or indirectly, for sex, and that it is in fact one of the not-so-hidden drivers of our economy, helping to sell everything from cars to cardiology?—given the economic incentives involved, there are certain to be any number of thoughtful and talented professionals who find themselves involved in the design, production, and/or marketing of sexually-enabled robots.

They certainly do not need my advice; but at the same time—and in light of the extraordinary circumstances in which all of us find ourselves as a function of the dizzying pace of technology—there is perhaps some value in the following catalog of potentially strategic considerations.

2.1. A Sense of Humor Not Optional

A sense of humor—if not savage irony—would seem to be essential if we are all to get through this together, and no less so than it was for Hamlet, who, as we remember, resorted to a feigned and manic madness in order to deal with his own encounter with a perfidious sexuality. There is no place in this dialogue for individuals—of whatever persuasion—who take themselves too seriously.

We can only be encouraged in this approach by understanding how problematical sex has become for Mother Nature herself (and here I of course anthropomorphize Darwinian evolution): in the oceans in which life evolved, sex could be quite streamlined, e.g., female fish swims by and leaves eggs, and male fish then swims by and fertilizes them; but on dry land, we must depend on somewhat ungainly genitalia, and our embarrassment with which is reflected in their not-so-lovely names: “penis”, “vagina”, “testicles”, “prostate”, and—my favorite of favorites—“scrotum”.

With this lexicon, we have a preview of the real dilemma which Mother Nature was to face in respect to maintaining on the part of her favorite new two-legged creatures a sufficient respect for sex: having emerged from a forest existence to stand erect above the vast savannahs of East Africa, and with a plethora of new and exciting activities to choose from—e.g., hunting with our state-of-the-art stone weapons, or building camp fires, or just looking up at the stars (we had become, in Loren Eiseley's lovely phrase, a “dream animal” (Eiseley 1957))—there would have been an inevitable tendency for big-brained humans to lose interest in the tedious, disease-ridden, but also essential process of conflating those genitals. Hence the seemingly insane preoccupation with sex with which Mother Nature has been forced to endow us—and so laugh we must at our situation!

2.2. Cross-Linked and Re-Purposed: Sex and Its Cultural Aspects

In typical multi-faceted evolutionary fashion, however, Mother Nature has also reinforced and cross-linked and repurposed our interest in sex: reinforced and cross-linked, for example, to an aesthetic appreciation for physical beauty; and repurposed as a means of holding together the nuclear family during the lengthy human maturation period.

Unfortunately, the second of these ameliorative factors would seem to be in the direct cross hairs of our new industry: it is hard to imagine the stable nuclear family in which dad keeps a sex-bot in the closet. But who am I to say? Perhaps the female sex-bot will come to be viewed by society as the equivalent of the Harley-Davidson which that same dad keeps in the garage—a dangerous device, to

be sure, but one which renders him content to maintain a domicile; but there is also the “queen bee” syndrome: traditional pornography is one thing (my own mother tolerated my father’s subscription to *Playboy*), yet quite another to have an actual physical rival under the same roof! (Here, moreover, is an opportunity for your author to confess that, given the impossibly pervasive nature of our subject, he has given himself permission to approach it from a largely male perspective⁶.)

But what of the aesthetic dimension—Botticelli’s “Venus”, and all the rest? This, one must suppose, is the rationale under which an analysis of the sex-bot industry has been assigned to a special issue of a journal of the fine arts, and with the idea that the design of sex-bots might approach the status of an art form—but the situation is not at all straightforward.

Yes, there has often been a very close connection between sexuality and the visual arts—abstract painter Frank Stella has gone so far as to state that “if it’s not sexy, it’s not art” (Stella 1986, p. 77); and yes, an aesthetic approach to the design and deployment of sex-bots might help soften their lurid aspect—in his book *The Nude: A Study in Ideal Form*, the famous British art critic Kenneth Clark notes that “The amount of erotic content a work of art can hold in solution is quite high” (Clark 1956); but at the same time, literary scholar and critic Cleanth Brooks has identified pornography (along with propaganda and sentimentality) as one of the three “bastard muses” (Brooks 1985). In other words, the moment we cross that thin line separating the contemplative from the masturbatory, the idea of art flies out the window—and it is perhaps for this very reason that those art lovers involved in the sex-bot industry should set for themselves the paradoxical goal of creating a figure so charming in aspect, and so precise and graceful in movement, that we prefer to experience it “en volant” as opposed to “en position”.

2.3. From Sex to Succor

Speaking of “repurposing”, it hardly needs to be said that the ultimate sex-bot would be a close approximation of the ultimate medical caregiver: gentle, sensitive, athletic (it almost goes without saying that it can take quite a bit of strength and agility to care for the bedridden), and—not irrelevant—pleasant to look at. With some 60 million baby-boomers approaching the age of decrepitude in the United States alone, this would seem to represent a primary rather than a secondary market—and there is no reason that the sex-bot industry cannot be maintained in a state of readiness for this eventuality.

2.4. Open Source: Not Only Common Sense, but with an Unexpected Potential Benefit

As with that other potentially ultra-disruptive and not unrelated technology—and we are clearly referring here to artificial intelligence—one must wonder how any responsible enterprise could be opposed to the idea that its work in either of said fields should not be entirely open source (Basulto 2015). Or in short—and no matter how much this might fly in the face of a traditional understanding of entrepreneurship—are we really willing to let our society be infiltrated by autonomous software and hardware agents whose details of operation are known only to a select few? Of course not—and so here, yet another mission for the thoughtful and talented individuals recruited by the sex-bot industry.

Finally, and as noted in the title of this section, there might be an unexpected benefit: if sex-bots are truly “open systems”, i.e., with published software and hardware specifications and interfaces, we might expect our previously-encountered “young citizen” to take a more salutary and creative interest in them, and this by way of analogy to the “hot-rodgers” of the 1950s and 60s who, having available to them certain standards, and, in particular, the famous Chevy “small block” V8 engine (Wikipedia 2017b), converted a private and dangerous obsession into a communal and vocational activity.

⁶ Without question, there are sex-bots specifically designed for heterosexual women, and which is to say further that women have not been excluded from the industry; but it would seem evident that the field in general—and mirroring society as a whole—is male-defined and male-dominated, with men serving as both the chief creators and consumers; and all the more ironic, therefore, that a female Yale biology PhD, Donna Haraway, has been responsible for one of the most penetrating studies (Haraway 1991) of the relationship between human and machine.

3. Conclusions—Or Not

There can be no “conclusions” as such in respect to a subject which is evolving as rapidly as that of the sex-bot—but it is at least to be hoped that there have been presented here both some principles in reference to which the primary subject can be approached, and some possible strategies for a professional co-existence with it.

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