The In(-frared)visible Hand:
Kinect, Interactive Pornography, and the Quest for "Action at a Distance"

Throughout the ages, new media technologies have always been adapted to sexual uses. In ancient Greece, pottery was used as a medium for pornography (Mathieu 2003).[i] VCR won over Betamax in the early 1980s for bringing low-cost, pornographic videos to private households (Rogers 1988).[ii] The opening of the Internet to the public in the 1990s led to an explosion of online pornography. As a major market force, sex has become the "invisible hand" that drives the dissemination of new technology. Recently, the same "hand" has operated on Microsoft's new motion sensor Kinect. Two months after its release, the Xbox controller that detects body movements through infrared sensors and translates them into onscreen actions, was hacked by the sex industry to produce interactive pornography. First, adult film star Kristin Price was seen online playing Kinect naked, namely, to test the sensor's ability to "censor" nudity.[iii] Then, software emerged that morphs players' bodies into sexy female avatars so they can hop around with large virtual breasts.[iv] There was also the funny "Kinect titty tracker," in which a hacker uses the motion sensor to detect his nipples and project different shapes of bras onto his chest.[v] It seems that Kinect has provided a promising stage for various sexual perversions to play out, including exhibitionism, voyeurism, fetishism, and transvestitism.

Among the many ways to combine Kinect and sex, the most controversial was a game developed by ThriXXX, a software company based in Austria, who released a demonstration video in December 2010. In the video, the player moves his disembodied "hand" (detected by Kinect's infrared depth sensors) up and down the body of a scantily-dressed female character, who then interacts by groaning and squirming around (Firth 2010).[vi] Deemed by many as "unsavory" or "creepy," this video irritated Microsoft, who branded Kinect as a family friendly technology and stated that they "would not condone" adult content to be played on its platform. The video also pushed the limits of traditional moralists and porn critics. The fear is that this game has unleashed a full range of possibilities for more extreme sexual violence (e.g. sadomasochism) to be enacted on the platform of this motion-tracking technology. If in traditional pornography these perversions seem to remain in the realm of fantasy, now they are let out of the Pandora's box and can be acted out in physical motions. This shift further blurs the line between fantasy and reality and raises a whole new range of ethical issues concerning the effects of interactive pornography.

Without too quickly condemning this technology, this paper sees Kinect porn as a curious case of disembodiment and alienation, interactivity and sexuality, censorship and surveillance, physicality and desire. As Kinect increasingly entangles real bodies and virtual bodies, it redefines the relationship between touching and watching—two bifurcated modes of connectivity born out of the various modes of sensory alienation in modern media. In this paper, I aim to accomplish two tasks: First, I examine how Kinect manifests the perennial desire to "touch" at a distance and traces it back to the 19th century debate in physics about "action at a distance." As the debate brought into question the authenticity of an ordinary, physical touch, it worked in tandem with the motion-tracking technology to relocate the definition of "touch" from the realm of physicality to the realm of desire. Second, I argue that while Kinect is an excellent technology for bodies to interact on the level of desire, it is ineffective in connecting bodies on the level of drives. I analyze the ThriXXX game and point out that it undermines the player's sexual

enjoyment by putting the "invisible hand" onscreen. Since users usually masturbate while watching traditional pornography, the "invisible hand" (never represented in pornographic images) functions as the absent center (or, in Lacan's words, the *real*) of the users' sexual fantasy. By taking away the last morsel of tactile evidence that points to the presence of the Other, Kinect porn further removes the player from real sex (which is already mitigated in traditional pornography from the touch of two bodies to a squeeze of hand) and is ultimately unsatisfying.

Kinect and the Quest for "Touch" at a Distance

"Kinect" is a fusion of two words—"kinetic" (of physical motion) and "connect" (the act of joining together). This duo meaning corresponds to two main functions of the Kinect sensor: First, it can perceive and project individual body movements on the screen in order to correct and discipline them; second, it can link the physical motions of different bodies and facilitate their interaction. These two functions result in two types of Kinect games currently available in the market. The first type includes Dance Central (a music video game which instructs predetermined dance moves to the user), Your Shape: Fitness Evolved (a fitness game which correct the user's movements like a personal trainer), or some portion of the Kinect Sports that focus on individual sports (such as bowling or track and field). The second type of games, which joins different bodies together, includes group or competitive sports in Kinect Sports (such as boxing, table tennis, beach volleyball, and soccer) and Kinectimal (a digital pet game which allows the users to raise their personal lions, tigers, and cheetahs). (Between the two ends of the spectrum, there is an intermediate stage in which an individual body interacts with objects in a virtual environment, which are mostly found in Kinect Adventure games such as Reflex Ridge, River Rush, etc.)

Kinect porn evidently falls into the second category, as it allows remote bodies to interact with each other as if they are in close physical contact. In this respect, the motion sensor expresses an age-long desire to "touch" at a distance—a desire produced by various modes of visual and aural alienation in modern media. Although communication technologies allow us to see and hear each other across great distances (or time), they seem incapable of transmitting (or recording) physical contact. Comparing to vision and voice, touch seems to be resistant to simulation and thus becomes a romanticized ideal for communication. It is deemed, from time to time, as the healing place in our estranged media sphere, the last sacred trace of our bodies' dwindling presence (which is reflected in how much masseurs charge for an hour). In *Speaking into the Air: A History of the Idea of Communication* (1999),[vii] John Durham Peters sees the touch as triumphing over other modes of sensory perception because it is utterly unique and non-replicable:

> Of all the senses, touch is the most resistant to being made into a medium of recording or transmission. It remains stubbornly wed to the proximate; indeed, with taste, it is the only sense that has no remote capacity (unless eros be such). Touch defies inscription more than seeing or hearing, or even taste or smell (cooking and perfumes are their recording media). Though materializing mediums, telephone promoters, and radio performers all tried to transport touch their efforts at such cloning always fell eerily short (270).

Since the emergence of Kinect and other motion-tracking technologies, however, Peters' statement is thrown into question. If now a machine can read and replicate the physical movement of our bodies and reenact it onto the body of others, then we must ask: Is touch truly resistant to simulation (thus transmission and recording)? How does an ordinary, physical touch differ from a simulated "touch"? What makes a touch a touch? To answer these questions, I return to an earlier chapter in Peters' book, where he evoked the 19th century debate in physics about "action at a distance." This debate calls for a radical reinterpretation of the meaning of physical contact.

Possibly in 1873, physicist James Maxwell delivered a public lecture describing two opposing schools on "action at a distance" (Peters, 177). One argues that action at a distance never occurs because there are always infinitesimal steps linking two objects (such as the moon's gravitational pull and the ocean's tides). The other insists that all actions are at a distance as absolute contact between two objects is impossible. As a proponent of the latter school, Maxwell pressed two lenses together and shined a light through them. He showed that no matter how tightly the lenses were pressed against each other, luminous rings were still observed between them, demonstrating an ultimate gap separating the two (Peters, 178). Viewed from either sides of the debate, the line between an ordinary, physical touch and a simulated "touch" is blurred. On the one hand, if action at a distance never occurs and all objects are connected, then a Kinect-simulated "touch" is no less authentic than a conventional one. Just as the gravitational force linking the moon and the tide, there are infrared radiation beams connecting the player's hand to the simulated body on screen (e.g. a baby tiger, a boxer, or a scantily-dressed woman) and enable their interaction. On the other hand, if all actions are at a distance and no objects are in absolute contact, then the authenticity of a conventional touch is in doubt. Since no matter how closely the skins of two bodies are pressed against each other, they are still separated by an unbridgeable chasm, then it is time to redefine touch and locate it outside the realm of physicality.

While Peters evoked Maxwell's theories in physics, he intended it as a metaphor for the metaphysical. For him, the unbridgeable chasm not only exists between the electromagnetic fields of two objects, but also exists between two solipsistic minds that are locked in their private, subjective experiences (4). Likewise, the infinitesimal steps that link one object to another can also be taken as a metaphor for a telepathic force that joins different minds together. But neither solipsism nor telepathy captures the full picture of our psychic world. Psychic dynamics, which we call desire, are produced by a compromise between the two—that the chasm that separates the subject from the Other is precisely what generates the desire to connect to it. In Lacanian terms, desire is a direct product of the bar, or split, which divides the child from the mother, consciousness from the unconscious, the signified from the signifier, etc.

Viewed from the level of desire, the Kinect games currently available on the market can be mapped onto a spectrum with one end focusing on "self-centered" movements (the projection of body-ego onto an onscreen avatar—highlighted by the VGA camera function which takes pictures of the player throughout the game) and another on "other-oriented" movements (the practice of interaction ritual with virtual bodies onscreen). Kinect porn can be situated at the far end of the spectrum and is, ironically, the closest to Kinectimal—the game designed for children to learn a trusting relationship with another living being.[viii] In Kinectimal, children are allowed to approach exotic animals (mostly large beasts of prey), give them vocal orders to "roll over" or "play dead," or scratch them behind their ears.[ix] This supposedly most "wholesome" game,

however, has the same structure of desire as Kinect porn, which lets adults approach sexually desirable females and engage in physical and vocal interactions with them. Despite their apparent thematic difference, both games express the desire to touch the untouchables. Bodies become untouchable for various reasons—they are either too dangerous (wild beasts or casual sex partners), or too distant (aliens or long-distance lovers), either dead (ghosts or deceased relatives), or having never existed (virtual figures or fabricated characters), etc. The yearning to touch the bodies of others is always accompanied by unspeakable anxiety. In highly mobile urban societies, the more frequently strange bodies encounter each other, the stronger anxiety there is for physical contact. Thus, "separation technologies" such as toilet seat covers, antiseptic soaps, condoms, dental dams, masks, and surgical gloves are invented to shield us from the bodies of strangers. They materialize the desire to "touch without really touching," or "almost touching," a desire probably best illustrated in the Michelangelo painting *The Creation of Adam*.

And then there comes Kinect—a digitally simulated platform which performs a similar function. While it vacates the bodies of others, it uses a series of motion-tracking, face- and voice- recognition technologies to allow for multi-layered symbolic interaction between the Self and the Other. According to Goffman (1982), interaction ritual relies on the "ultimate behavioral materials" such as "the glances, gestures, positionings, and verbal statements" which are exchanged during every day face-to-face encounters. If the audiovisual aspects of such symbolic exchange have already been simulated by telephone, Skype, and video conferencing technologies, then motion sensor adds the kinetic dimension to it and makes the simulation even more vivid ("Skype on steroids," using the phrase from Kinect hacker Oliver Kreylos[x]). Although this simulated interaction is still constrained by technical limits (such as Kinect's slow reading speed, limited space and lighting conditions for motion recognition, and lack of accuracy in detecting certain body movements, etc.), it does produce tremendous intersubjective pleasure. Since touch is, from the very beginning, characterized by an unbridgeable chasm, we can say that the simulated "touch" through Kinect is just as "authentic" as an ordinary touch—not at the level of physicality but at the level of desire.

Visualizing the "Invisible Hand:" The Case of Perversion
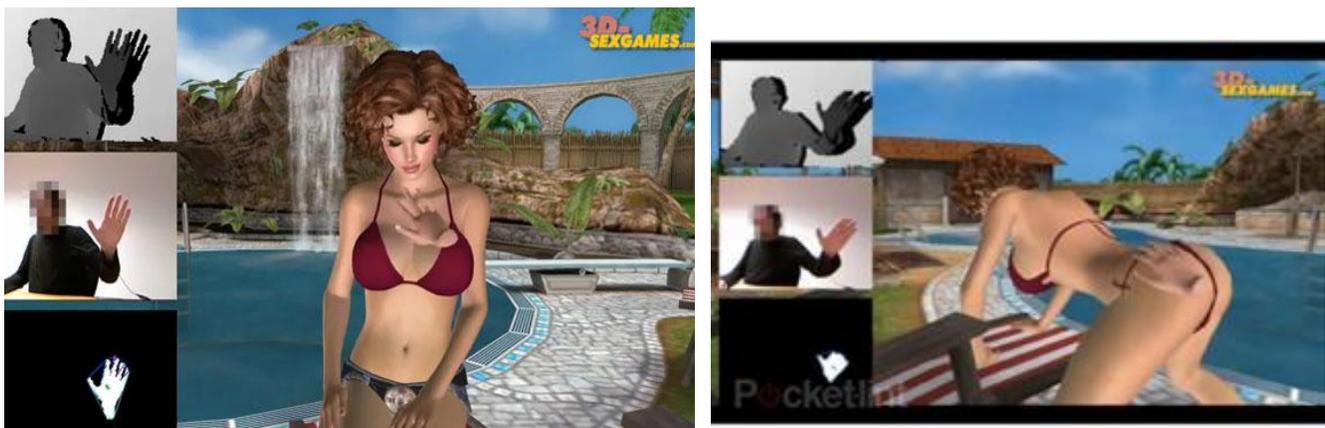
After reviewing the general structure of desire that underlies the motion tracking technology, I will now analyze the particular sex simulation game produced by ThriXXX. Referencing to the above two screen shots from its demo video, we see a bikini-clad, computer simulated woman sitting or kneeling next to a pool

with a disembodied hand moving up and down her body. She interacts with the hand by moaning and squirming around; her eyes trace the hand's movement on her chest, suggesting her awareness and enjoyment of the feeling of being touched. The hand evidently belongs to the man on the left side of the screen. His face is dubiously mosaicked out. His figure is represented in three ways, through the infrared sensors, the VGA camera, and the body joint recognition software. Across these three panels, he becomes more and more disembodied—from a regular image of his upper torso, to a mere silhouette, to finally nothing but a shadow of a hand.

Comparing to traditional (print or video) pornography, this game provides unprecedented interactivity between the user and the female character onscreen. Here she is no longer a pure object, a passive body receiving the sexual act, but a desiring subject who actively perceives and enjoys the touch. The subjectivity of the male user is also transformed. Instead of remaining outside of the picture as in traditional pornography, he is now represented on the screen and participating in the sexual act. However, as Foucault rightfully states, "visibility is a trap" (200);[xi] as soon as the male body enters Kinect's field of vision, it becomes entrapped by its multilayered, infrared-projecting panoptic gaze. His body is first "amputated" from the waist down and then emptied out into a shadowy figure and finally down to a hand (the three panels on the left vividly illustrates the step-by-step process of his "amputation"). Moreover, this hand, the only organ that his entire body is reduced down to, is deprived of any tactile pleasure; its participation in the sex act is only validated by the woman's visual and vocal response. He turns himself into a tool of the woman's pleasure and let her use him like a sex toy.

Since the release of this demo video, its publicity generated a wide response which, according to Brad Abram, the vice president of ThriXXX, "brought our five servers down to their knees."[xii] A large number of responses were negative, finding the game "creepy" or "kinky." Viewed from a psychoanalytic perspective, these comments are right-on because the game displays a structure of desire which is exactly that of perversion. Here I will briefly explain the difference between neurosis and perversion. First, consider the oft-quoted Lacanian formula "man's desire is the desire of the other;" it means that the subject's desire is radically de-centered and is contingent upon the desire of the other. This formula is a neurotic one, as it assumes a perpetual gap of non-knowledge separating the subject and the Other and the unknown-ness of the Other's desire allows the subject's desire to persist. This type of subjectivity is best exemplified in the man who always wonders if his female partner's orgasm is real or fake. Jerry Seinfeld told a joke about this:

> You know there are two types of female orgasm: the real and the fake. And I'll tell you right now, as a man, we don't know. We do not know, because to man sex is like a car accident and determining the female orgasm is like being asked "What did you see after the car went out of control?" "I heard a lot of screeching sounds. I remember I was facing the wrong way at one point. And in the end my body was thrown clear."

Using the car accident as a metaphor for sex, Seinfeld describes the neurotic man as someone who is not at all in control and can neither master his own pleasure nor his partner's. For him, the authenticity of the female orgasm remains as a perpetual mystery that continues to intrigue him. (For example, in the Seinfeld episode "The Mango," Jerry could not get over the fact that Elaine "faked with him" and begged for a second chance; but when he actually got the second chance,

he blew it because he was concentrating too much on trying to tell if "it" was real or not.) The pervert, however, wastes no time in trying to determine if the female orgasm is real or fake. Always remaining in control, he knows exactly what the Other enjoys and turns himself into a tool of the Other's enjoyment: "In perversion, the subject locates himself as object of the drive, as the means of the other's *jouissance*" (Lacan, S11, 185). In *The Sublime Object of Ideology* (1989), Slavoj Žižek points out that the formula for perversion is "they know very well what they are doing, but still, they are doing it" (instead of the Marxian formula of "they do not know it, but they are doing it") (29). Similarly, in the ThriXXX's sex simulation game, the male player obviously knows that the woman's groaning and squirming are fake (simulated), but he hardly cares and still zestfully carries on with the game as if he is the master of the Other's pleasure.

Due to the inherent perverse structure of desire, this game's potential market will be certainly limited within a smaller group instead of the general public. In fact, for most people, the absence of the tactile pleasure is ultimately unsatisfying. Since users usually masturbate while watching traditional pornography, the "invisible hand" (never represented in pornographic images) functions as the absent center of the users' sexual fantasy. By putting the "invisible hand" onscreen, the game undermines the player's sexual enjoyment by taking away the last morsel of tactile evidence that points to the presence of the Other (the *real,* in Lacan's words). Now the tactile drive is short-circuited (one "touches" but cannot be touched back) through the scopic drive (the look and the gaze) and the invocatory drive (the speech and the voice), the player is further removed from the experience of real sex, which is already mitigated in traditional pornography. No wonder an online commentary says in a sarcastic tone, "Wow, that handful of air feels just like a nonexistent boob. EXACTLY what I am used to."

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[i] Paul Mathieu, *Sex Pots: Eroticism in Ceramics*, 2003. Rutgers University Press.

[ii] Everett Rogers, "Video is here to stay," *Center for Media Literacy*. http://www.medialit.org/reading-room/video-here-stay

[iii] Chris Wyman, "Watch a naked porn star test the limits of decency: Microsoft's Kinect," *Gawker.tv*, November 19th, 2010.

[iv] "Jiggly Kinect Boobies," http://www.youtube.com/watch?v=tbRmUrny0Bs

[v] "Kinect Titty Tracker," http://danomatika.com/blog/kinect-titty-tracker/

[vi] Niall Firth, "Hands-on entertainment: Sex firm hacks Microsoft Kinect to create interactive pornography," *Daily Mail*, December 18th, 2010.

[vii] John Durham Peters, *Speaking into the Air: A history of the idea of communication*, 1999. University of Chicago Press.

[viii] "Kinectimal's, Pets for Your Xbox 360 at E3." http://www.gameon.co.uk/game/news/2010/kinectimals-pets-for-your-xbox-360-at-e3

[ix] In Sherry Turkle's *Alone Together* (2010), she talks about how children prefer robots than going to the zoo to see real animals.

[x] Jim Giles, "Inside the race to hack Microsoft's Kinect." *New Scientist*, December 4th, 2010. Vol. 208, Is. 2789.

[xi] Michel Foucault, *Discipline and punish: The birth of the prison*. 1979. Vintage.

[xii] Ki Mae Heussner, "Kinect sex game offers interactive porn: Sex simulation company ThriXXX launches demo Youtube video of first Kinect sex game," *ABC News*. December 16, 2010.