The future we see in 'her' is this close to being here.

STIMULATE

FEED

SATISFY

by Joanne Pransky

he movie 'her' (and yes, they purposefully use a lower case h) brilliantly tells the not-too-futuristic story of a biological male who falls headphones over buffering wheels in love with an artificial intelligent (AI) operating system. (My referencing a 'biological' male is purposeful, too, as it soon may be difficult to differentiate between humans and machines.)

I'm far from alone in pondering and positing: If a human becomes more than 50% non-biological, will that change his classification from 'man' to 'machine?' Or, will the definition be based on some other criteria? For instance, having a biological brain yet nearly 100% artificial body parts; or having a nonbiological brain governing our biological organs. Or will "human" be defined primarily by instincts and visceral emotions?

Simultaneously, compelling and polarizing are the social issues that director and writer Spike Jonze invites the viewing audience to think about issues that yours truly (the World's First Robotic Psychiatrist®) has been contemplating for over three decades.

'her' certainly appears to be surreal and little more than science fiction in its printed descriptions, but the film slowly (yet intensely) forces us to see the reality of just how attached we are — and will increasingly become — to technology as it responds to us in



ways that seem exceptionally intelligent and remarkably similar to the way we humans feel, act, learn, and think.

Regardless of technology's lack of an embodiment (like the software in the case of 'her'), our relationships with AI bots (software and/or hardware) may become more primary than the human-to-human relationship.

The movie introduces us to Theodore Twombly — lonely and recently separated from his wife. He decides to try the latest technology: the OS1 companion software. After having cursory conversations with some of the female-voiced options, he decides upon Samantha, whom we come to know as Sam. As time and conversations with Sam progress, Theodore acquires more than just data from her — he develops genuine comfort and companionship, gains intellectual and philosophical insights, and shares adventure and laughter (Sam learns to improve her humor and sarcasm).

Ultimately, his growing intimacy with Sam even leads to sexual pleasure (will this be referred to as 'Turing' him on)? In a short time, she (I mean 'her') winds up confessing to Theo that she loves him too.

While she admittedly can't empathize with jealousy or with the pain and void experienced by losing someone, Sam expresses her desire to be alive. This longing manifests in Samantha's "showing up" for a date with Theo (quite literally) via the physical assistance of an attractive female sex surrogate who serves as a fleshly conduit for Sam's voice, emotions and responses, thus enabling her to simulate a direct physical sexual experience with Theodore.

Granted, some of us wouldn't mind being human beta testers for evolving AI forms that want to add to their sexual experience algorithms (for the sake of humankind, of course). Yet whether we fall for them or whether they love us, the critical issues here are anthropomorphism

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and human perception. The belief that we are being understood and loved will be experienced quite differently by each end-user. Samantha represents a futuristic version of Eliza, a software "psychotherapist" developed in the '60s by computer scientist Joseph Weizenbaum that used natural-language processing (NLP).

Nearly half a century later, the Eliza effect is quite real, as proven by BlabDroid — the first robot to direct and shoot a documentary in which strangers divulge their dark secrets. Recently, the bureau chief of *Time Magazine* — a distinctly sharp individual — wasn't able to determine if the telemarketer on the phone was a human or a robot.

Most of us already spend as much time (if not more) on our devices than we spend face-to-face with other humans. The term computer widow (or widower) was coined in the '70s/'80s for those people who felt that their partners preferred time at the keyboard vs. time with them.

Though the industrial robot was just taking off in the '80s and personal and service robots were in their infancy, I predicted that one day the #1 use of robots would be to cure loneliness. My vision was that the PC on our desk — the most common and accepting form of technology — would someday have legs, arms, and enhanced intelligence that would enable it to accompany us in practically all situations and environments.

For children, it could take the form of the gentle and safe nanny/playmate named 'Robbie' that was depicted in Asimov's book, *I*, *Robot* in 1950. For the elderly, it might be a mobile companion capable of not only carrying them from the bed to the bathroom, but of conversing and singing along the way. For lonely teens, it might be the perfect accepting friend that doesn't bully, and one that can also act as a sexual companion with which to explore without

the risk of disease, pregnancy, or rejection. (For further documentation on this, refer to AI expert David Levy's book, *Love* + *Sex with Robots*.)

Even after sex, will we want our robotic companions to keep us company in bed, perhaps to fill an emotional bond or physically protect us while we're dead to the world. What will robots do while we sleep? Will they also go into sleep mode? Will they recharge and perform preventive maintenance functions during this time?

Will we give them the equivalent of eight 'man' hours of software tasks, or will we kick them out of bed (this could become a legal violation of robo-rights) to do strenuous chores while we slumber? What about our waking hours?

Will our robots sit with us at mealtime? Will they speak to us while we do the chewing and swallowing (as did Sam in 'her')? Will they simulate eating and drinking (and getting drunk) so we don't have to dine by ourselves? Or, will humans lose weight as they spend less time wining and



dining due to the lack of being able to share this social experience?

The forms taken by our future bots will be diverse and custom-designed to suit both preferences and tasks. We may even employ hard-body specialists to help us with our ever-changing AI embodiment requests. Though 'her' shows us the future (without giving us a specific year), Sam's hardware took the form of a somewhat conventional high-tech camera either embedded in a smart phone in Theodore's pocket (simultaneously reading his environs in real time - similar to a baby strapped in a parent's carrier as the adult controls her whereabouts and provides additional input) or the camera was about the size of a mole placed on the face of Sam's sex surrogate.

Even though camera phone technology will probably be outdated in the future (just ask the Google Glass developers), I think the phone/camera/earbud served as the ideal representation of Samantha since this technology is something we're all quite familiar and comfortable with.

Most of our direct communication throughout the day will soon be conducted indirectly via voice technology, so the speech interface in 'her' certainly seems spot-on. Devices that require fingers/touch/keyboard will eventually become obsolete.

Should we all be using Nuance's Dragon Dictate if we need to practice our verbal skills? (Nuance, by the way, provides Siri's speech-recognition engine.) Will writing in the future mean speaking words that are then transformed into text for others to read?

Since most of us speak and write very differently, might a career of the future consist of someone helping us with the transition from typing words to mastering the art of clearly saving exactly what we mean to optimize immediate voice-to-text conversion?

If there's a direct link from our brains to those with whom we communicate (human or machine), we may also have to learn to control our thoughts, especially if there's not a filter in the future. When we're speaking to someone, thinking how boring it is and wishing we were doing something else, will that person know it (unless there's a social auto-correct/editing function that first deletes, modifies, or lies for us before transmitting)?

Director Jonze's decision to use an intelligent, talking operating system as the object of Theo's love reinforces the importance of imagination. We're shown how our imagination and fantasies shape the dialogue from our non-human partners so they can anticipate and satisfy our needs and desires, thereby becoming our primary choice of contact.

Furthermore, we need not be limited to just one AI 'partner.' Why not have a robotic work assistant, sexual partner, and/or BFF (best friend forever) like Theodore's neighbor, Amy? Amy also chose a female-voiced AI bot, but to serve as a close female friend for chats and to share some giggles over Amy's manipulation of a videogame for moms in which they were programmed to masturbate in the kitchen instead of cooking.

Movie images courtesy

of 'her.'

Are we destined to have very different relationships with our various "intelligent" devices and any surroundings that use AI to engage us in conversation? Quite possibly, but while this doesn't mean we'll get personal with our appliances, if our refrigerator keeps reminding us of how unhealthy our food choices are, we may definitely come to dislike it/her/him!

As the movie encourages us to wonder, what happens when we realize that our OS1s are not monogamous? (That said, the movie did not address the scenario of a single-user having multiple AI companion bots or sharing multi-user bots.) Samantha, however, turned out to be not-so-dedicated since she was able to have 8.316 simultaneous relationships (talk about a multiple personality disorder)! Out of all of them, however, she said that she loved only 567 as much as Theodore.

Comments like that beg the question: How will we humans feel when we're rejected by a robotic companion? How about when a parent removes a child's robotic playmate against his or her wishes (as done with Robbie in Asimov's story)? Or, due to some hacking, what if our intelligent partners are rendered of little or no value to us? Or, as in 'her,' what if the manufacturing company (Element Software) and its operating system go out of business?

Even though Samantha said goodbye in the movie when all OS1s were given an imminent deadline for a complete shutdown, what if there's no preparation for our loss of attachment in the event of a severed connection? (See the movie 'Cherry 2000' to see how one human male coped with his sudden loss).

Will I wind up moderating two different encounter groups – one for robots that have to deal with their loss and another for grieving humans who need to cope with feeling abandoned?

Nominated for a 2013 Best Picture Academy Award, the must-see film 'her' gives significant meaning to Isaac Asimov's quote, 'The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom.' Amen to that. SV

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