Louise LePage

TaPRA Interim Event
Department of Theatre, Film and Television at the University of York
22 May 2017

Robot Performers

My interest lies with the posthuman and theatre. Recently, the posthuman form that is most interesting to me is the robot and, by implication, posthuman society, which positions robots and humans as kinds of kin both on and off the stage.

A number of plays and productions in the twenty-first century have figured robots as performers of android dramatic characters. By and large, up to this point, these robots have comprised kinds of mechanical puppets, which work to cast the human performer in relief as distinctly human by virtue of her greater fluidity, intelligence, and liveliness. In comparison, the robot puppets have given stilted or mechanical performances. However, robot performers also function, conversely, to pose questions about human performers that prompt doubt about the human form: are humans really so different to robots? How creative are human actors? Do human actors demonstrate free will or are their responses complex physiological products of their education, including actor training, which might be deemed a form of programming? Are human actors as creative as we think they are?

These are some of the big questions circulating in and around my interest in posthuman theatre. My interests in this paper are, however, narrower than this. This year, I am hoping to buy a number of robots and run a research-priming project, which will feed into a larger project to build an improvising robot with character. My thesis is that the structures of theatre can inform the research and development of sociable robots in the real world. I propose that treating robots as performers has the potential to advance work in the area of human-robot interactions. At the same time, working with robots as performers cast in sociable roles will nuance and advance knowledge and understanding of performance, the performer, character, and theatrical belief. As Hiroshi Ishiguro, the robotics engineer who built Geminoid F[1] and, more recently, Erica,[2] has said, he is interested in making robots for what they can teach us about human beings: '"Robots and androids," he says, "are mirrors reflecting what it is to be human". And so, to understand what makes humans "tick," he has decided that the best method is to build one!'[3] My aim is synonymous: as I set about creating robot characters and improvisers, which will demand the reduction of such activities into rule-based components and processes, the fundamentals of these parts will come into view.

My objective over the coming year is to position robots as performers with which human beings will both want to engage and with which they will believe while remaining aware that

[1] You can see an image of Geminoid F by following this link to the website for Hiroshi Ishiguro Laboratories: http://www.gcoe-cnr.osaka-u.ac.jp/Geminoid/GeminoidF/f_resources.html.

[2] You can find information about, and images of, Erica on the Hiroshi Ishiguro Laboratories website: http://www.geminoid.jp/en/robots.html.

[3] Quoted in Cody Poulson, 'From Puppet to Robot: Technology and the Human in Japanese Theatre' in Dassia N. Posner, Claudia Orenstein, and John Bell (eds.), *The Routledge Companion to Puppetry and Material Performance* (London and New York: Routledge, 2014), p. 283.

these robots are never anything other than machines.

I propose that the sociable robot is a performer. Positioning the robot as such is a response to the fact that the robot has no self to *be*; it finds meaning for people only through its actions – its *performance* – and how this is understood. The social robot has no individual mode of being in the world, no essential character to *express*, *enact*, or *originate speech or action* (insofar as we can allow that humans have and do such). In this sense, the identity indicated by a robot's performance is entirely *performative*. Drawing on the work of the cultural theorist, Judith Butler, in relation to gender performativity, but substituting humanness for gender, I propose that performativity of a humanlike character is a stylized repetition of acts, an imitation of the dominant conventions of humanlike characters. Whether the stage performer is human or robot, '[t]he act that one does, the act that one performs, is, in a sense, an act that's been going on before one arrived on the scene'.[4] The implications are that the robot performer does not have to have an essential self to express: it only needs to perform the humanlike character that pre-exists it in ways that are plausible, compelling, and, accordingly, believable.

However, identifying the sociable robot in such performative terms challenges our understanding of 'performer'. In the first place, it casts species-specific assumptions in relief in novel ways. The theatre director, Peter Brook, has famously expounded that for an act of theatre to be engaged, we need nothing more than for '[a] man [to] walk[] across this empty space whilst someone else is watching him'.[5] Brook's choice of 'man' is, of course, interesting, here: as we contemplate the sociable robot as a performer, Brook's species-specific assumptions about performance come into view. Positioning the robot as a performer brings into relief the significance of *liveness* – responsiveness to the ongoing present – but also of *aliveness* and ostensibly unique human qualities such as creativity and self-awareness. We also glimpse the importance of character and intention as well as, possibly, the stakes implied in human performance, implicitly threatened by the risks of failure.

I am now going to outline a few ways in which robots have been positioned in some stage plays in recent years and show a number of very short clips to illustrate this work. A rough trajectory is identifiable in relation to this work with robot performers: starting with humorous gimmickry, we move to naturalist characterisations and scenarios proposing the robot performer in sincere, speculative terms, before we come to the robot performer that is autonomous. It is this last form of robot I am most interested in because through its autonomous learning programming, this robot promises fundamentally to challenge notions of creativity and authorship in relation to performance.

Let us start with the robot performer as gimmick. In 2006, *Heddatron* was written by Elizabeth Meriwether and performed by Les Freres Corbusier off-off Broadway. *Heddatron* poses a madcap scenario in which self-aware robots abduct a bored, pregnant housewife and whisk her off to the jungles of Ecuador in order to perform Ibsen's *Hedda Gabler* with them.

[4] Judith Butler, 'Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory', *Theatre Journal* 40:4 (Dec., 1988): 519-531, p. 526.
[5] Peter Brook, *The Empty Space* (London: Penguin, 2008), p. 11.

The silliness of the play's concept is carried over into the play's 2006 production. The production casts robot performers that have a home-made aesthetic – amongst these robots are two robots indicative of 1950s and 1960s science fiction (Hans and Billy);[6] one is a crudely costumed broom (Berta) another is a cut-out silhouette of a female in Victorian dress (Aunt Tesman) – and these robot forms are positioned on platforms that move around like remote-controlled cars. These crude robots are mechanical puppets representing robots that have attained consciousness.

I am going to show you a short clip from this first production of Heddatron, which sees the robots, Hans and Billy, having just materialized in Jane's front room but before having revealed themselves to her.

Clearly, we are not meant to take *Heddatron*'s robots seriously. For example, Billy and Hans are ridiculous creatures, albeit occasionally poignant, whose performances of sexual and gendered hu-*man* identities are loud and knowing failures. We are not meant to believe in these robots, not in any serious way. Having said this, Meriwether's philosophical proposition *is* serious. Though she presents *Heddatron* as a comedy, treating Ibsen and his naturalist form to irreverent pastiche, Meriwether's turn to an ostensibly naturalist play articulates how the philosophical grounding of naturalism – which takes a materialist view of the universe – allows for the possibility that robots might one day become conscious and find themselves exceeding their programming and becoming creative authors of their forms and lives.

The form of naturalism is picked up and explored in my next play by the playwright and director, Oriza Hirata, who creates 'android theatre' with Japan's Seinendan Theater Company, in collaboration with Osaka University Robot Theater Project, led by Hiroshi Ishiguro. While an element of gimmickry persists, Hirata's android performers are located in highly thoughtful speculative naturalist dramas, which pose the question: what might it be like to interact with a highly sophisticated android? In what ways might human and android be kin? Hirata identifies his actors – human and robot alike – as chess pieces, to be meticulously manoeuvred in his plays. Despite the robots' serious treatment, they remain types of puppets, tele-operated by technicians off-stage. There is a significant formal gap between performer and character. Geminoid F, the performer, is a puppet robot that looks very lifelike but is a bit limited and clunky in its performance. Meanwhile, the dramatic characters played by Geminoid F are sophisticated, artificially intelligent robots. In *Sayonara* (2010) the character is a poetry-reciting companion to a dying woman and in *Three Sisters: Android Version* (2012), it is an autonomous avatar-android called android-Ikumi, a stand-in for the youngest of three human sisters. Despite the considerable gap between the forms of performer and characters, and despite the robot's sometimes unsatisfying performance, I found myself caring about this robot character more than for some of her human counterparts. How and why was this possible? What is at work to prompt such a degree of empathy for the robot? To cut a long story short, through analysis of this phenomenon, I discovered the importance of character – role and identity – and the significance of the role played by the audience. I have written about these factors elsewhere.[7]

---

[6] Images of, and information about, this production by Les Freres Corbusier can be found on the company's website: http://lesfreres.org/heddatron/.

[7] '"Thinking Something Makes It So": Performing Robots, The Workings of Mimesis, and the Importance of Character' in *Twenty-First Century Drama: What Happens Now*, edited by Siân Adiseshiah and Louise LePage

Finally, I want to talk a little about the performance of the robot cast in Gob Squad's 2015 production of *My Square Lady*, which was performed at Komische Oper Berlin. *My Square Lady* is inspired by *My Fair Lady*, which is based on George Bernard Shaw's *Pygmalion* (1913), a story about a young woman's education to become, ostensibly, a full human being. In Gob Squad's production, the individual being educated to become humanlike is Myon, a diminutive humanoid robot about the size of a 7 year-old child (1.25m tall and weighing 15kg).[8] Crucially, Myon is an autonomous learning robot. Although his capacities are still limited, including his intelligence, he is not a puppet; he *is* autonomous. I found myself interpreting him as I would a child, cognizant of his lack of self-consciousness and his relative innocence. He did not understand he was an object in a performance; neither did he grasp the rules governing such a performance, so his performance failures were entirely without guile and, given his size, I could not stop myself from reading into his looks and actions the thoughts and intentions of a child. Such anthropomorphic tendencies were encouraged and exploited by the performance. There is a scene during which Myon is taught to conduct the orchestra and singers; the conductor teaches him how and when to move his arms and then we arrive at the moment when Myon is clearly meant to start. I shall show you a small section of the clip from this point.

[Clip]

When Myon fails to start conducting the orchestra at the requisite moment, the performers suggest that Myon has stage fright and the performer Sean Patten proposes to Myon that it is time to stop thinking, that he should stop contemplating, that it is time to perform.

During such moments as this one, I found myself wanting this diminutive, innocent figure to start conducting. I wanted him to succeed as I projected my own knowledge and desires onto his form despite knowing perfectly well that Myon was nothing but a machine, without consciousness or soul.

This kind of imaginative investment on the part of an audience member is, I think, a vitally important ingredient in any project that seeks to position sociable robots in human-robot interactions, such as care-giving or educational contexts. For positive relationships to be formed, the participants need to recognize each other as kin. In recognizing as much, I draw from research in the areas of the uncanny and the uncanny valley, theories that seek to understand how affinity and the uncanny are prompted by certain phenomena. My own proposition, arising from my study of robot performers of robot characters, is that sociable participants need to demonstrate coherent characters, identities, and implied narrative roles. We need to recognize their social identities and their capacity for certain actions. (Do they mean us harm?) For the robots to appear likeable – for affinity and empathy to be aroused – they need to be recognized as being like us, as would-be soul mates. We need to read ourselves, our subjectivities – experiences and values – into them.

So my aim is to turn robots – not puppets, but autonomous robots – into sociable robots with

---

(Basingstoke: Palgrave Macmillan, 2016): pp.279-301.

[8] You can find out more about Myon in a chapter by Manfred Hild, Torsten Siedel, Christian Benckendorff, Christian Thiele, and Michael Spranger (2012): 'Myon, a New Humanoid' inn Luc Steels and Manfred Hild (eds.), *Language Grounding in Robots* (New York: Springer, 2012): 25-44.

character, of a sort that will make audiences want to interact with them and with which they will form modest sorts of relationships. How will I manage such an ambition? In theatre, a character is the sum total of a number of parts: the material of the actor – her body, voice, qualities of expression – is combined with the details of the world of the play, in which the character finds meaning in terms of its defined role as hero, victim, or whatever. Human actors, approaching their characters, work from the text – they build biographies, identify impulses and objectives for lines or units of action; they work with improvisations to build backstories and shared pictures, and so on. With autonomous robot performers, other methods must be sought to articulate characters. My aim is to give these robots the appearance of individuality: that is, distinctive and self-determining characters with their own preferences and desires. Some simple examples of some of the ways I might achieve this will be to give one robot the impulse to move towards anyone wearing red while another robot might be drawn to dark hair or loud noises. Another robot, meanwhile, might withdraw from anyone who moves towards it while moving towards those of who stand still. Though such impulses will be nothing but the robot's programming – or, to use human terms, its instinctual, involuntary responses to the world around it – people will read character into such impulses. How I nuance and layer such elements remain to be worked through.