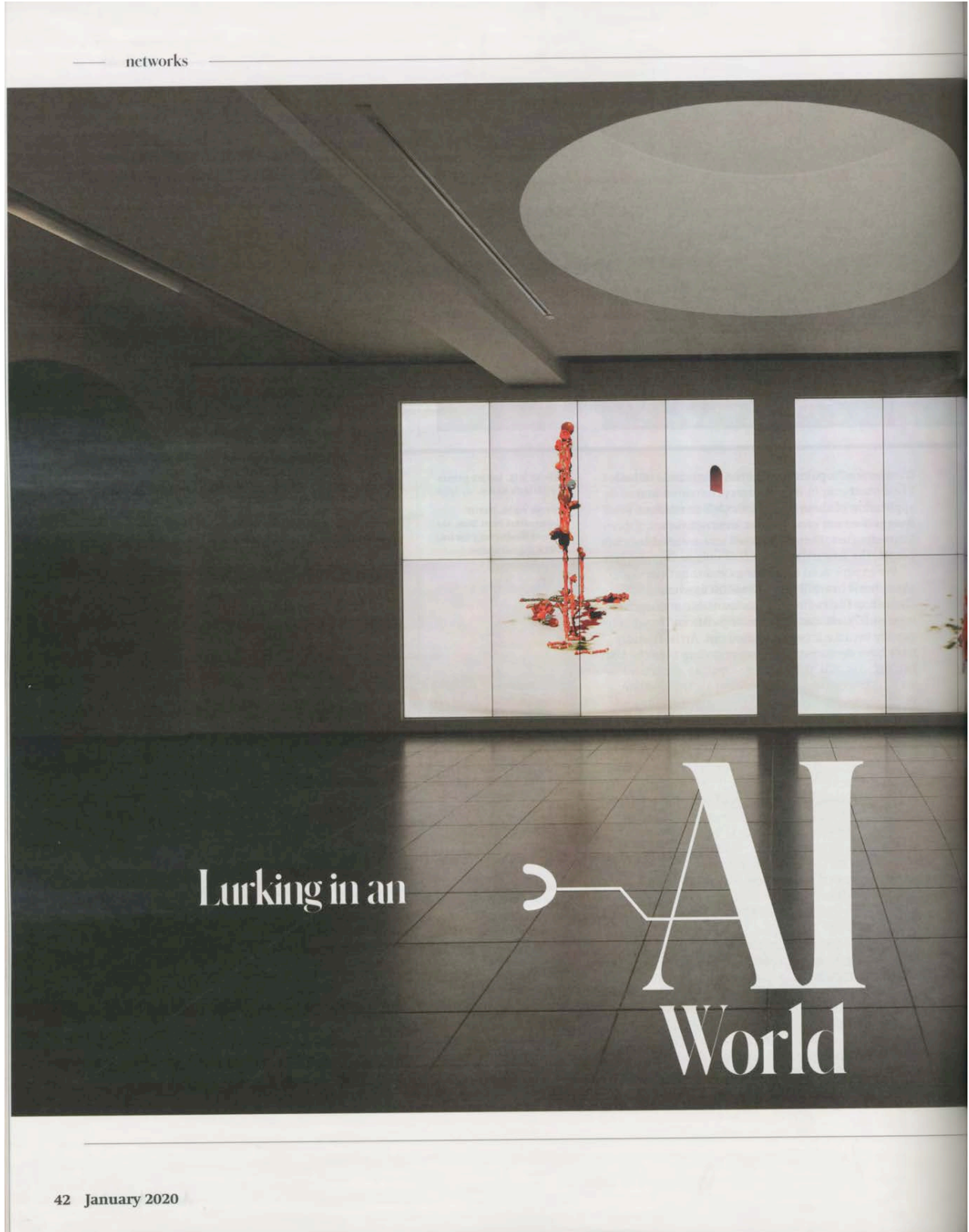


GLADSTONE GALLERY

Matthew Shen Goodman, "Lurking in an AI World," *Art in America*, January 01, 2020

Art in America





As the novelty of AI-produced artworks fades, Ian Cheng's simulations offer insights into how AI is changing the way we perceive art.

by **Matthew Shen Goodman**

Images Made by Machines, for Machines

Last fall Christie's sold a computer-generated painting titled *Portrait of Edmond de Belamy, from la Famille de Belamy* (2018) for \$432,500. (Early estimates had peaked around \$10,000.) A blurred portrait of a chubby man in a frock coat, the work, per Christie's, was created "by an artificial intelligence, an algorithm," the algebraic formula for which, "with its many parenthesis," was written out in the painting's lower right-hand corner like a signature.¹ As media outlets sought out experts to parse the freak sale, an AI-in-art community coalesced. Spokespeople for this ad hoc group of artists and technologists quickly denounced the painting and its algorithm, credited to the Parisian collective Obvious.



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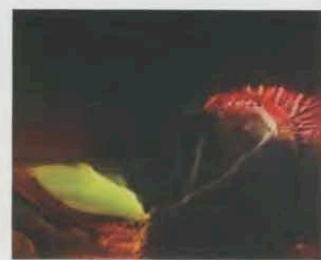
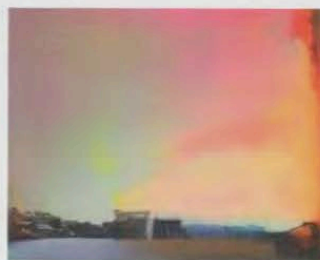
Previous spread, view of Ian Cheng's installation *BOB*, 2018, at the Serpentine Galleries, London.

Right, *Obvious: Portrait of Edmond de Belamy, from la Famille de Belamy*, 2018, ink on canvas, 27½ inches square.

Below, three prints from Trevor Paglen's series "Adversarially Evolved Hallucination," 2017, 21½ by 26½ inches each. Left to right, *Comet (Corpus: Omens and Portents)*, *Rainbow (Corpus: Omens and Portents)*, and *Venus Flytrap (Corpus: American Predators)*.

The collective had made extensive use of code by nineteen-year-old wunderkind Robbie Barrat, who rebuked Obvious as, well, obvious. "No one in the AI and art sphere really considers them to be artists," Barrat told *Artnet*. "They're more like marketers."² Similarly, fellow AI art luminary Mario Klingemann said, "It's horrible art from an aesthetic standpoint. You have to put some work into it to call it art."³

Many popular accounts of AI hinge on the possibility, whether longed for or feared, of a self-directed artificial general intelligence able to perform any human intellectual act. Part of the backlash to the *Edmond de Belamy* sale was in response to the suggestion that an "artificial intelligence managed to create art," as a since disavowed press release stated.⁴ Like most of what currently passes as AI, Obvious's program is less self-actualized consciousness than relentlessly honed unitasker. Drawing from fifteen thousand portraits painted over the last five centuries, the AI analyzed the data set's patterns until it produced a



number of criteria defining said portraits. The AI then set two algorithms against each other: a generator that produced images based on the criteria, and a discriminator that decided whether those newly generated images met the standard.

It seems predestined that someone would use available technology to render uncanny, historic-looking portraiture, signifying little else but the fact that a computer made something as arbitrarily old-looking and conservatively humanist as *Edmond de Belamy*. But the machinic consumption and production of images can be much more sophisticated and harrowing: ICE mines information from driver's licenses with facial recognition technology; deepfakes are used for pornography and political trickery. Moreover, AI can create images that are far stranger than a depiction of a hunched, portly white man seen through Photoshop's oil paint filter.

For his series "Adversarially Evolved Hallucination" (2017) Trevor Paglen trained a generator-discriminator AI to produce visual representations of allegories and concepts, ranging from symbols from Freud's *Interpretation of Dreams* to monsters like vampires and zombies that have been historical emblems of capitalism. As is the case with much AI art, the "Hallucinations" were produced through extensive human labor, with Paglen gathering tens of thousands of images for the AI to assimilate. Paglen's use of these technologies is less about the prospect of facing our mechanized doppelgangers in art school than about coming to terms with the power and volume of rather

specific applications. Traffic cameras snapping license plates, algorithms trawling the more than 50 billion photos posted on Instagram, scanners discreetly registering faces at Walmarts and sports stadiums—optic data is extracted wholesale anywhere and everywhere both IRL and digitally. AI vision invades our public and private lives at an incredible pace and magnitude. "The overwhelming majority of images are now made by machines for other machines, with humans rarely in the loop," Paglen writes.⁵

The question of whether a machine can make a work of art is therefore a little quaint. We humans seem to have consigned ourselves to minor modes of visual production in the face of both AI's current application and the prognosis of its future uses. (More dangerous than nuclear weapons, says Elon Musk.) Artworks engaging with AI beg to be eclipsed by these questions, as well as the increasing antiquatedness of the works' content in the face of whatever comes next.

Simulation as Ritual

A few months after the *Edmond de Belamy* sale, I had an indifferent experience when viewing an animation produced by an AI, in the sense that I had little to no response to or engagement with it. On the screen was a creature composed of a series of spiny segments strung together like some unending crab leg. It glanced around with many visages. Its gray auxiliary faces lined a body topped by a larger crimson head, all simultaneously



feline and reptilian. *BOB* (2018), the moniker an acronym for “Bag of Beliefs,” is described somewhat cheekily as an AI life-form by its creator, New York-based artist Ian Cheng. Though not associated with the AI crowd that responded to the Christie’s sale, Cheng has become well-known over the past eight years for his work in screen-based simulations, usually coded using the video game engine Unity. In 2017, the “Emissary” trilogy of simulations, exploring the history of cognitive evolution, constituted Cheng’s first US solo museum presentation, at MoMA PS1 in New York.

But my reaction to Cheng’s work came at Gladstone Gallery in New York, as I watched *BOB* jet across a mostly empty digital space displayed on eighteen monitors gridded together into a giant screen mounted on a white wall. At the top of the barren landscape floated a constellation of dots. Every few minutes, *BOB* soared toward one of these dots, connecting with it as if touching a star in the sky. A gong then sounded and a black portal opened, dropping offerings. *BOB* floated back to the floor to sniff at the heavenly gifts, auxiliary heads proffering spiny fruit and mushrooms to the creature’s central mouth, which made a *hmmph* noise as it ate and the crab leg grew (and defecated, telescoping pipes of gray emerging from its trunk).

Cheng described the dots as shrines, and each one visible on screen was tagged with the name of an individual (IG Max, Young Costanza, etc.) who had downloaded and operated the *BOB Shrine* app. Through the app, I could select consumables to feed *BOB*, as well as gift charms like black orbs and “luck stones” (I understood the effects of neither). I could also send bombs that blew *BOB* up. Reduced in segment number, *BOB* briefly appeared corpse-like before it resumed zooming around. (I could give the offerings labels like “cursed” and “lucky”; *BOB* would judge the labels’ accuracy according to an inscrutable algorithm and thereby award me reputation points.)

Disallowed death, *BOB* periodically cycles through micro personalities described by the show’s press release as a “congress of motivating ‘demons.’” The term “personalities” sounds more complex than the unitasking singularity of the demons’ urges: eater demons are hun-

Cheng: *Emissary Forks at Perfection*, 2015–16, software simulation.

gry for offerings, flight demons flee threats like bombs. In the exhibition’s exegesis of this bag of beliefs, the demons fight for control over *BOB*. The winner is the one that produces minimal surprise, the unexpected creating “emotional upheaval” that signals *BOB* to update its beliefs in order to avoid further disruption. The goal, it would then seem, is stability, an entropic settling into sameness of behavior, regardless of whatever explosive material or lucky stones rain from above.

I visited *BOB* three times, for an hour or so each session, over the course of the two months it lived at Gladstone. I never saw *BOB* jump to my star. While I sat, my shrine was never listed in the right-hand ticker, where bot-vernacular messages from *BOB* appeared: “I chose Chunky Rat’s Shrine”; “My Alert Demon took over me, but now my Idle Demon is coming.” I was hard pressed to determine any meaningful differences between the demons, which mostly seemed to vary the speed with which *BOB* snuffled at offerings and darted toward the ceiling.

Emissary Forks at Perfection (2015–16), the second work in Cheng’s earlier trilogy, was on view concurrently at the Museum of Modern Art in New York as part of a group show. I stood in front of the massive screen for an hour, watching myriad Shiba Inu dogs be led by unmanned golden leashes around a swampy crater lake at dusk as a skeleton man loosely clothed in translucent flesh wandered around. Had I not read Cheng’s account of these various agents, I would not have deduced that the skeleton was an unnamed undead celebrity whose relationship to the Shiba controlled the water level of the lake, depending on the health of their bond. This was managed by an AI that “spoke” to the dog through the leash—an interaction I would never have intuited.

Emissary Forks at Perfection was totally opaque to me, but I could understand, in general, what *BOB* was doing, if not exactly what was going on in the bag of beliefs. If easier to parse, the interactive elements of this relatively simple single agent weren’t particularly engaging. All of that demonic congress of code and mobile phone-distributed instruction made for a life-form alone with inanimate objects, doing what animals in captivity often

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do. I felt as though I were watching an aquarium with one inhabitant.

AI automates and accelerates the production of images, moving and still, and of prose, poetry, and pop songs in a media environment already saturated with human-made cultural objects. The low ratio of signal to noise produces a great deal of indifference. These viewing experiences, in which we are present and unengaged, are paradigmatic of how we currently engage with most things. But watching Cheng's segmented creature bolt to "Furthering Height's Shrine" to unleash a hail of starfish offerings was, once I understood what was happening, an odd, AI-inflected combination of novel and uninteresting.

In various interviews, publications, and press materials Cheng frames his simulations as "video games that play themselves."⁶ These simulations are characterized by an odd series of states: virtual, singular, and infinitely ongoing, at least until the power cord is yanked. One could have always watched more, and one could have always watched differently. Cheng himself has said that his simulations continually surprise him, and I imagine he has watched them more than anyone else has. Looking for something digestible, i.e., finite, critics are left either to engage with what they've seen of the works previously or cling to first premises and principles, to a simulation's numbers and functions and the narrative and argot the coder is trying to push on them. Trying to understand such a work can be like reviewing an instruction manual. An AI art piece will always be, at the very minimum, about how it's AI.

That so much of what constitutes the simulation remains unseen makes it strangely akin to works that cannot be fully taken in from one viewpoint at one time, like certain examples of Land art. The difference is a kind of quantifiably boundless excess, which encourages long viewing times, trying to catch a glimpse of what might happen, even if it's slight variations in aquarium behavior. Scholar Sianne Ngai argues that calling something "interesting" is a plea to keep paying attention because it's perpetually different, always diverging from what it was before.⁷ A simulation is the apotheosis of this. BOB isn't uninteresting, as I first surmised; it is merely interesting.



Above, two BOB production drawings, 2018–19, ink on paper, 8½ by 11 inches each.

Left, Cheng: BOB, 2018.

Worlders and Lurkers

A simulation could be more than that. In *Emissaries Guide to Worlding*, a publication that accompanied Cheng's 2018 exhibition at the Serpentine Galleries, London, where BOB debuted, Cheng writes about his work as Worlding (always with a capital W), an infinite game played for the sake of playing, as opposed to the finite game played to win. As Cheng describes it, Worlding is a three-act process. The player (a "Worlder") first composes a present of characters, relationships, and ecological conditions, then narrates a prehistory, and finally simulates a future in which an "infinite-enough game engine for the World" exists "to perpetuate itself without its supervising author."⁸ Though the singular noun of Worlder suggests a lone artist giving rise to a fictional expanse, Cheng's emphasis on "infinite-enough" perpetuation hints at Worlding's extra-fictional effects. Cheng cites as twentieth-century examples of Worlders various titans of technology and mass media whose stories and ideas have become the bedrock intellectual property for corporate empires that far exceed any individual authorial scope. "The fiction," Cheng writes, "becomes the movie, becomes the video game, becomes the toys, spinoffs, theme park, becomes the working mega-economy of a franchise."⁹ Walt Disney, George Lucas, Steve Jobs: whether artists or marketers or names that mostly serve as metonyms for multimedia conglomerates worth many billions, they're Worlders all.

A simulation is a neat trick for an individual artist to attempt in order to match the scale of such empires, and Cheng has generated enough complexity out of his AIs and mythologies to produce something ongoing. Perpetuation isn't engrossment, however, even though I imagine either the technology of the simulations or the narrative glosses Cheng gives them will improve. As of now, however, the two combine poorly: the mythologies provide an inadequate hermeneutic for those scrutinizing the random action of the machine.

I watched BOB's random action but I wasn't engrossed in its world, as I am by many of the franchise products that constitute the myriad worlds available to those with an internet connection, a laptop, a phone, a console. I acquiesced to unitasking, which is to say I was a pair of eyes zoned out watching a video game play a video game, much in the same way I zone out watching other people play video games, a phenomenon that began on friends' couches and spread en masse through livestreaming platforms like Twitch that combine real-time play with continuous dialogue between streamer and audience through a chatroom overlay. Twitch has grown rapidly since its 2011 founding. Each month during 2018, some 3.4 million unique broadcasters streamed themselves, for a combined total of 560 billion minutes watched. Bought by Amazon in 2014 (and thus becoming part of Worlder Jeff Bezos's infinite game), the website is, according to Alexa.com, the fortieth most visited website at the time of this writing. You can stream other kinds of simulators there (I have been watching a Mennonite farmer play *Farming Simulator 19*), and MoMA PS1 ran the "Emissary" simulations on the platform during Cheng's 2017 show, though the institution has left no documentation on the account. Streamers, one should note, often review video games while playing them. An adequately novel, if incomplete,

form of reviewing a Cheng work, might be to do a gonzo Twitch stream of it in which we all congress around BOB.

I don't play video games, but I do keep up with them via blogs and YouTube and Twitch. This phenomenon of engaging not with a cultural form itself but rather with its attendant offshoots seems to be increasing. Who has time to do the thing, anymore? Just look at the documentation. And while I won't speak categorically, I imagine there is at least a sizable portion of the Twitch-watching public that thinks as I do when I occasionally peruse the website. A vast technological infrastructure undergirds the playing of games not to win even when one can, but simply to play, and this infrastructure produces its own cosmology and history and vernacular and rituals of communication. In the face of this World, I watch but don't contribute or engage or interact.

The opposite of the Worlder in these media environments Cheng calls Worlds might be the Lurker, a passive and unengaged recipient of content. I just lurk mutely, then think later about what I've done, often regretting the time spent giving something my attention but being inattentive. I used to be more of a guilty couch potato, someone who relaxes through media but feels worthless when reflecting on their downtime, but I've realized how haptic these things are, the way my fingers type in URLs, swipe to apps on my phone. (While writing this I lost ten minutes watching Tfue, the most-followed Twitch streamer, play *Fortnite*, the most-streamed Twitch game of 2019.) This tendency toward engaged unproductivity, habituated into my body by however many screens I'm surrounded by, can feel like a precursor to a coming world.

There is a technological advance up the gentle slope of graduated artificial intelligences. This will assuredly exert downward pressure on wages and available work, regardless of whether every hand lifting a wrench or a paintbrush is replaced by the automaton's claw. Extrapolating from current studies of the nonworking and underemployed, both retiree and prime-age male populations spend most of their time devoted to leisure, "the lion's share," according to *Atlantic* reporter Derek Thompson in his essay "A World Without Work," "spent watching television, browsing the Internet, and sleeping."¹⁰ Thompson was writing in 2015, and his report already sounds dated, as differentiating watching television from browsing the internet is becoming increasingly difficult. Where is the playing and watching of video games?

Against the couch-potatofication of the working world, there are optimistic predictions that we'll all turn to meaningful communities of play or art-making as technological unemployment ratchets up, every person becoming a Twitch streamer or a Worlder. Maybe, but here's a hedge of my own against disappointment: as economies mutate and Worlds metastasize (with or without marketing departments), endlessly outputting wikis for prestige television spin-offs and movies of video games or vice versa, much of the material may be mediocre – or merely novel at best. That combination of new but meh is the sort of spectacle I and others already zone out to, lose time to, because we can muster no aesthetic judgment but only a passive reception of serialized difference. And all this cultural output, or at least that portion of it that's available to our human eyes and ears, can become art through institutional validation. But there's no guarantee that you or I will still be able to earn a living from the art we create or the work we do. We may become a world of Lurkers. But perhaps people will send me money on Twitch for my criticism. I'll stream myself looking, but doing little else, and talking – until I become like a function, an AI parsing contemporary work and finding itself indifferent, an automaton of myself that I can sit back and lurk. ●

Cheng: *Emissary Forks at Perfection*, 2015–16.

¹ See "Is Artificial Intelligence Set to Become Art's Next Medium?" Christie's, Dec. 12, 2018. christies.com

² Robbie Barrat, quoted in Tim Schneider and Naomi Rea, "Has Artificial Intelligence Given Us the Next Great Art Movement? Experts Say Slow Down, the 'Field Is in Its Infancy,'" *Artnet News*, Sept. 25, 2018. news.artnet.com.

³ Mario Klingemann, quoted in Meagan Flynn, "A 19-Year-Old Developed the Code for the AI Portrait That Sold for \$432,000 at Christie's," *Washington Post*, Oct. 26, 2018. washingtonpost.com.

⁴ Quoted in James Vincent, "How Three French Students Used Borrowed Code to Put the First AI Portrait in Christie's," *The Verge*, Oct. 23, 2018. theverge.com.

⁵ Trevor Paglen, "Invisible Images (Your Pictures Are Looking at You)," *New Inquiry*, Dec. 8, 2016. thenewinquiry.com.

⁶ See, for example, Ian Cheng quoted in Andrea K. Scott, "Watch the Absorbing and Tedious Simulations of Ian Cheng," *New Yorker*, May 16, 2017. newyorker.com.

⁷ See Sianne Ngai, *Our Aesthetic Categories: Zany, Cute, Interesting*, Cambridge, Mass.: Harvard University Press, 2012.

⁸ Ian Cheng, *Emissaries Guide to Worlring*, London: Serpentine Galleries and Fondazione Sandretto Re Rebaudengo, 2018, p. 7.

⁹ *Ibid.*, p. 9.

¹⁰ Derek Thompson, "A World Without Work," *The Atlantic*, July/August 2015. theatlantic.com.

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Courtesy Gladstone Gallery, New York and Helsinki.