Two writers facing one Turing test
A dialog in honor of HAL between Richard Powers and Bruno Latour

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RP: I'd like you to imagine a simple thought experiment. Two people who have never met each other, who do not speak the same language, who do not work in the same discipline, sit at opposite ends of an elaborate electronic hook-up, half way around the world from each other, one in a remote mid-western backwater, the other in the City of Light. At regular intervals over the course of several months, they send one another electronic messages. The one is a novelist, and thus has some vested interest in manufacturing artificial, intelligent creatures that create the illusion of being fully independent and alive.

BL: The other is a Burgundy-born philosopher with a strong leaning toward empirical field sites and a fascination for exploring how scientists and engineers manage to create autonomous facts and automated machines that seemed to be endowed with a life of their own, a life that is not due in the end to their human fabricators. Stylistic experiments in giving life to creatures thus interest him immensely and that is how he met the other character, called RP who is now sending him through e-mail this strange injunction "please enter here your character description" -which he just did.

RP: In the course of this electronic exchange, each of these two virtual entities tries to convince the other that he is more or less human and/or intelligent (whichever case happens to be easier to make). The one in the cornfields dispatches his notes into the ether, off toward some vivid but dimming mental map of Paris.

BL: The one in Paris finds it easier to imagine a machine thinking than to imagine anyone to talk to in the middle of the corn-fields (typical parisanocentric snobbery on his part of course). Yet the two people manage to disregard their many layers of ignorance—of Eudora 1.5.4, of modems, of switch boards, of transcontinental lines, of computer hand shakes and protocols and netiquette—and imagine that they have a direct access to each other's brain waves, a very old fashioned dialog. (I know that our direct conversation is immensely indirect, mediated by thousands of artifacts, stylistic convention, etiquette and so on, but so are the dialogs of two people meeting in the flesh in the street for real, so that, in my heart, I don't believe the electronic medium adds or subtracts much mediation. I remember my parents in Beaune planning in advance the topics of conversation they would have with their guests at the dinner table, what would have been more mediated than such a live exchange to which the Burgundy wine added so many sudden turns and bifurcations? Direct access to anything is not in the power of humans' souls and machinery. Modems and faxes add just a few more artifacts in the midst of all of those that already compose "natural" interactions.)

RP: Now imagine that these two people collect the thoughts they have been emailing each other. Then they arrange to read their collated transcript aloud to a room full of strangers, on the day after they meet each other for the first time. Imagine that you are in the audience, listening to this transcription.

BL: See? How right I am? The natural flow of our exchange is highly staged, rehearsed, prepared, recombined, artifactual, and that's why it might become again lively and interesting?

RP: The thought experiment—your mission as an audience, should you chose to accept it—is to determine whether the thoughts that these two teletypists have exchanged through their electronic mediation are the same thoughts that you, the

audience, hear, now that the mechanical curtain has been lifted. Half a century ago...

BL: (interrupting) Is this what the audience wants to hear? Are you making them have a voice and an intention here? Have you already started making them up? "My" audience, I mean the one I am making up, wants to hear something else, how the analytical skills of novel-writing and field work can join force to deflect a potent technological myth, that of our friend HAL. But it is not their time to talk, so, for half an hour we can imagine what they want -sorry to have interrupted you.

RP: ... Half a century ago, when Alan Turing launched the systematic study of artificial intelligence, he did so, notably, with a thought experiment. Turing's famous test involved concealed identities at the opposite end of Teletype hook-ups, subtly rigged and ingenious gear operating in sealed rooms across mediating wires. All this electronic smoke and mirrors stood in the service of helping us human interpreters to think more clearly about intelligence, whether mechanical intelligence or whatever the opposite of "mechanical" intelligence might be. In his classic paper, Turing set his hypothetical reader to work, typing conversation into one end of the Teletype hookup. The task was to try to tell, entirely from the words coming back across the wire, whether the entity on the other end of the electronic conversation was a man, a woman, or a computer. If computers could reach the point where they could fool a human, in such an experiment, into mistaking them for a flesh-and-blood electronic pen pal, then we would have to grant those computers all the intelligence that drives human conversation, and thus, human thought.

People who want to talk about human intelligence often resort to invoking just such thought experiments. It's as if the only way to capture the essence of thought is to sneak up alongside that cagey mechanism while it's in action, and then snare it in an equally cagey simulation.

BL: To tell you the truth, I have never understood the Turing Test to begin with. In theory, it should match a flesh and blood human against a silicon machine. In practice however it matches a flesh and blood machine against a flesh and blood machine, so how could the test ever be negative? The distribution is different, I concede. On one side, you have one body explored by ten thousand

biologists, cytologists, and neurologists, while on the other side you have one computer concentrating the brain power of ten thousand engineers, software writers, and wafer printers. But how can any Turing Test judge hope to disentangle these two collections? The idea of a test matching a naked, isolated intelligent human against an isolated naked automated machine seems to me as unrealistic as imagining than we are here alone talking through email "naturally", "directly", without any mediation. Things and people are too much intertwined to be partitioned before the test begins, especially to capture this most heavily equipped of all faculties: intelligence.

RP: People who want to get to the essence of machines often need to assemble a mechanical apparatus to help leverage them into the heart of the matter. In the Turing Test's *mise en scene*, thinking computers lay bare their functional essence by hiding their attempts at imitation and simulation at the far end of an electronic screen. The teletypes focus our attention upon the response's appropriateness as a response. The Turing test suggests that we require a layer of machines just to mediate between us and any systematic attempts that we might make to tell the difference between people and machines. The test itself becomes the machinery for measuring the intellectual "equivalence" between machines and their makers. It attempts to deflect our attention away from the looks of the guy behind the electronic curtain, lest our attention and its attendant associative conclusions mislead us.

BL: I know that: "the veil of ignorance" necessary for attributing justice fairly in Rawls' fairy tale. But that is not the point. The question is not only, "Who do we imagine we are talking to, when we talk to our machines?" Even before that, we need to ask, "Which machines do we talk through? Which machines allow us to speak to begin with? We are not the only speaking entities, in a world of mute things. Even when we are alone, in the flesh, we speak through all manner of machines: phonation, vocal chords, Broca's area, English (for me a foreign artificial tongue, a huge distributed computer, for you a mother tongue a womb-like web). Chantal, that's my wife name, sings. "Chantal chante". For ten years she has brought machines together to sing: breath, nostrils, palate, cheek-bones, teeth, vertebrae, even the soles of the feet. She learned just yesterday from her sixth professor that her two vocal cords are fused: a great accidental quality, another explanation of why her voice is so beautiful, another mecanical explanation of this modulated air breath that traverses her like an organ, a

mechanical organ. Should we not decide, first, which machines allow us to speak, which organs, what breath traverses us?

RP: The pains that Turing takes with his elaborate thought-experimental set-up suggest the degree to which intelligence itself might be some kind of self-deluding apparatus. The careful test methodology implies that human thought already requires a double-blind study even to be able to think clearly about how it sees itself. Natural intelligence seems almost to have been waiting for the control group of artificial intelligence to come along and expose the game, to show the mind that it is not what it has been pretending to be, all these millennia before machines took it upon themselves to trouble our thinking. Turing's conclusion in 1950 remains just as startling and controversial, a half-century on: "If conversation with a computer is indistinguishable from that with a human, the computer is displaying intelligence." (To act intelligently is to be intelligent: here Turing's syncretism anticipates that of modern American speech, the complete collapse of adverbs into their corresponding adjectives.)

For some...

BL: But if intelligence is self-deceptive that fact would be true for both machines and humans. To endow a human with an intelligence, might be a mistake in the first place, an attribution mistake, an artifact. This is just what Ed Hutchins argues in Cognition in the Wild. Cogitamus has a meaning but not cogito. Cogito ergo sumus: and sumus means a lot of people, my dear counterpart, my unkown half in the Turing scenography. Sorry to have interrupted you again.

RP: For some, Turing's thought-trial for machine intelligence becomes, reciprocally, the gold standard—I should probably say the gallium arsenide standard—of human intellect. His conclusion of functional equivalence implies its even more controversial reworking: "If conversation with a real person can be successfully simulated by a machine, then human intellect itself must be, for all functional purposes, programmable." According to this tempting corollary, any intelligence that is mechanically reproducible must be itself intrinsically mechanical.

BL: Do we have to agree with what one another says? Can we interfere with the other? Write over what has been typed? Are you allowed to imitate my bad idiosyncratic English or should we stay inside our own turn-taking as if you were

the owner of what you say and I the one of what I say? I am raising this point because I am not sure I understand all what you are telling me. We would make great progress in our conversation, our exploration, it seems to me, if we did not tried to pass an impossible Turing test. I am loaded with too many machines already to pass it as a naked human, and Chantal's voice trembles with too many vocal chords already to pass as a spirit floating above water. I propose another task. Why don't we try instead to understand why we like so much to cut out among the entities making up our voices, bodies, engines, cities, institutions something, that would behave mechanistically? Let us decide to call "quasi-machines" the open entities and "machine" the rendering of some of their parts as behaving mechanistically. You are lucky enough to be a novelist, you should understand what I mean: for a character to move freely and automatically with a life of its own, you know the work that is necessary behind the scene, to send it, so to speak in outer space boosted by the reader's imagination. The first is a machine, the second a quasi-machine. When you look at a space vessel cruising through space with unerring precision it looks like a machine, but if you suddenly hear the famous little warning "Houston we have a problem!" then it becomes clear that the space vessel is a quasi-machine that never left the umbilical chord of the huge institution down there on earth.

RP: Why does the mechanical metaphor for thought feel at once both so seductive and so threatening? Our obsessive mechanization of intelligence seems almost equal parts repression and wish-fulfillment. We like the idea of ourselves being syllogism machines. At the same time, we are quick to ascribe all manner of sinister animist motives to renegade household appliances whose sadistic behaviors do not come anywhere near the complexity of the simplest chess-playing Turk.

But humanity's long, compulsive love-hate relationship with HAL and all his Turing-ready ancestors and descendants also betrays a prurient fascination with the possibility that we, too, might not be all we seem, under our vehicle's hood. In 2001, the confused human ambivalence toward the artifact of intelligence is given voice in the words of Mr. Amer, the BBC announcer, whose report of the Jupiter mission provides the astronauts a sole, lonely diversion in their descent into deep space. Amer introduces the "sixth member of the crew," a 9000 series computer, "which can reproduce—although some experts still prefer to use the word 'mimic'—most of the activities of the human brain." That anxious distinction—mimic versus reproduce—tells all. These clipped, Oxbridge words seem to harbor

all the mind's anxiety about the authenticity of its own mental maps: are we, for our own part, reproducing the real lay of the land, or are we merely 'mimicking'? Am I, myself, capable of passing the Turing Test honestly, or do I do so only by cheating? (Is consciousness itself a forming of "cheating," whereby I grace with the most charitable interpretation the semblance of intelligence burbling up from my lower-level machines?)

BL: You cheat, necessarily you cheat, since you have isolated the computer, isolated the human, staged the blind encounter cloaked into a veil of ignorance and isolated the judge. Who is doing all that? Who is setting up that huge institution?

RP: I agree that the Turing Test, in one sense, does pitch us against ourselves: the unthinkably complex tangles of our own thought-capable cells pitted against our—so-far—far-less complex mechanical mind children, through whom we are so eager to determine the viability of body-free thoughts. There is a sense in which the double-blind teletype test almost seems designed to convince us that our mental syllogisms are, in fact, a priori "intelligent," that human thought isn't contingent, that it can circulate and survive on its own, free of our fragile and limiting bodies.

BL: Yes, I think I follow you here, we prefer to be beaten at the mythical Turing test by a mere machine rather than to lose the hope of one day surviving without a body. This sounds like the old Cartesian dualism, with the mind floating disembodied, living unbound among mechanistically conceived engines. I am from an old Catholic nation, and cannot believe in this. Too much incarnation down here in Paris already, the way things are. Who needs to resort to a separable mind, anyway, a pure, thinking mind? Why do we need a Turing Test to pit this boring, disemblodied mind in triumph against a "mere thing"? Why should we not pit two quasi-machines against one another? HAL is an automated institution with a life of its own, may be, but so is the crew and so is NASA, and so is Kubrick's film. We all have only partial existence—the best proof of this being our meeting today together for the celebration of what? A story with a life of its own, not of an automated isolated and naked machine-computer.

RP: While HAL must bear chief responsibility for the perennial fascination of *2001,* another actor in that classic machine morality tale has taken an equally

deep-rooted hold in our collective imaginations. I mean the masterful artificial intelligence that guides the entire human race from infancy onward toward its evolutionary breakout. The supreme disembodied intelligence in the film—HAL's progenitors' progenitor, if you will—is the monolith, which, simply by being smooth, black, and plane-perfect amidst the gross organic irregularities of the volcanic landscape, induces, in the apes of Eden, the idea of tools. And tools—thought's mechanical extensions—lead not only to the first assault with a deadly weapon, but to the thereafter unstoppable, outward self-extending fling of intellect. The first, murderous, bloody flung bone never does come down. Instead, it remains up in orbit, the quintessential free-floating machine, a ship of the sort for which the murderer HAL serves as the ultimate, inevitable neural pilot.

Why the machine-planed perfection of the monolith must necessarily lead through tools to a sadistic, material mastery of the universe is another question. As Lisa Morrison suggests, behind the monolith, at the same moment that a man ape was using that first bone fragment to beat his fellow-creature to a bloody pulp, a woman hominid was no doubt turning a similar shard of bone into a sewing needle. Only no director has thus far bothered to make a sci-fi film about the lineage of the various artifactual intelligences that descended from her first mechanical invention.

BL: But that's the problem with this beautiful myth, my dear novelist, it breaks the story just where it could have become interesting. Apes do not become humans by the sudden irruption of an extraterrestrial transcendence, and they do not suddenly master anything. Who could be the master of quasi-machines since they are all, like the monolith itself, dark black boxes no one can see through, even though they are of our own making? And as to the free-floating vessel, let me see the umbilical cord tying it to Houston if you want me to believe in it. And as to the pathetic HAL: let me see the thousands of engineers, and Nobel Prize winners, and transistor wafers, that make up the layers of its voice and soul before I begin to believe in its mastery. (And if they are not there, then let me see the scriptwriter, cameramen, spotlights, and celluloid prints that are necessary to project the story onto the screen of the dark movie rooms). If I can make you blush in public, you yourself proposed another more powerful version of that same Turing test by making your characters layered, trembling, networked, risky. Galatea is not a statue, it is not a monolith either like those daring modernist sculptures, it is a web-

like network filament through which intelligence, emotions, partial souls and ape-like wafers happen, circulate, blink...

RP: Whatever the contesting attractions and horrors of disembodied minds, inconceivable human ingenuity and expense have already gone into building devices that might one day pass a Turing Test for intellect. And each time these efforts succeed in automating some hitherto sovereign aspect of intelligence, our notion of "intelligence" receeds before them. Hans Moravec—a mythic personage to me until today—frames the challenge of Strong AI at its most provocative: "If a mind is ultimately a mathematical abstraction, why does it require a physical form at all?"

Yet the idea of a similar, elaborate test for deciding the mathematical abstractability of emotions strikes us as comical at best. What would such a monstrosity even look like? "Behind one of these curtains, a human being is steeped in uncontrollable rage. Behind the other, a machine is simulating the same fit of instinctual fury. Your job is to tell the real outburst from its mechanical imitation."

BL: (to the audience while speech goes on) Your job is to tell the real novelist from its philosophical imitation. The real philosopher from its automatic instantiation...

RP: No one is about to give out any large cash prizes for the first machine to pass the emotional Turing test. In fact, the very idea of running such a competition makes the average listener squirm with embarrassment. Such a test seems worse than useless, even to those who are most convinced of the utility of intelligent machines. And yet, if we are truly interested in building a machine capable of emulating and outperforming our most uniquely human qualities, how can we overlook such a salient part of what we do best?

As Rilke might articulate it, "We are not unified." Something in the way consciousness is structured seems to want to separate thoughts from the maelstrom of the body that has brought those thoughts to life. Perhaps our perpetual urge to construct a disembodied intelligence may, paradoxically, be born in that need to see ourselves as something more than merely "mechanistic." We humans desire to separate ourselves, both from the cellular automata that make up our bodies and

from the electronic automata we make in our own image. We seem to want to cut our words free from the cords that hold them earthbound.

BL: Yes, here you are on target Richard Houston-Powers my friend, my unknown friend from outer space, from the far away corn-fields trying to coerce me in this make-up dialog, both of us trying to extirpate ourselves from the myth of the machine and to imagine the real mythology of quasi-machines. Yes, this is it: why do we so much want to dispel the machineries that make us up in the first place and forget the connections we have with the obscure machines we have produced? Because we want mastery and transparency and purity -we want the machine to have what we know we will never have: autonomy, automatism and instead of the dark secrets of our flesh and blood souls we wish them to have -they at least- complete mastery over themselves. HAL embodies that dream of absolute transparent opacity. Except of course, it never has it and becomes in the end a foetus with the umbilical cord brought back to the original home of the human womb. Is this not the end of the movie? The green planet throbbing like a baby's heart. "Let us go back home" as the captain says at the very end of Frankenstein's latest screen incarnation. But there is no more home than outer space. We are in the middle, always, attached, held, sent, lost, emigrating.

RP: Something in our collective, scripted and filmed imaginations loves this idea of thought without rage, inference without pain, insight without the frailty of temperament. We want to isolate and fix that part of ourselves that comes out intact across the lines of a Teletype. Such a portrait, we imagine, while preening for the lens of the robotic eye, captures our best profile. Novelists and filmmakers repeatedly insist that such a surgical removal of our best mental bits it is not only possible; it's immanent: something eternally about to materialize in our own lifetimes. Three years before the filming of *2001*, Herbert Simon predicted that, "by 1985 machines will be capable of doing any work a man can do." (Presumably, this would have included even the less reputable careers, such as novel-writing and science studies.) Kubrick and Clarke similarly predicted HAL's immaculate conception for 1992. In the novel version of *2001*, they bumped the guess up to 1997, perhaps in a fit of pragmatic realism about the rate of progress in AI. In fact, here we are in 1997, still trying to get the kinks of out rudimentary speech recognition.

BL: Still trying to get the bugs out of our rudimentary dialog through the Web!

RP: We stand perpetually ready to think that we are both cleverer than we are and more easily reduced. The complex catastrophes of human feeling, we want to think, will yield to an ingenious assembly of algorithms. The clipped, BBC reporter asks, concerning the human crew's bastard brother on mankind's first mission to the outer planets: "One gets the sense that he is capable of emotional responses. For example when I asked him about his abilities, I sensed a certain pride in his answer about his accuracy and perfection. Do you believe that Hal has genuine emotions?" To this question, astronaut Dave Bowman (whose name must derive from "builder") gives an answer that is perfect Turing: "Well, he acts like he has genuine emotions. Of course, he's programmed that way, to make it easier for us to talk to him. But as to whether or not he has real feelings is something I don't think anyone can truthfully answer."

BL: I am not sure I understand this idea of a thought without a body, and what is so urgent about it. Nor this other strange idea of wanting to implant it into machines that we would master. And this third idea of a machine that would risk overpowering us. And, for that matter, I don't understand immaculate conception, more exactly I have great respect for the strange virginal dogma of the Church and cannot have any patience with its application to machines. In fact, I don't understand the fuss about futuristic machines at all. Imagine a Turing test for shoveling, here is a human worker shoveling earth and here is an earth-moving machine, can you tell them apart? Yes, of course, the second one is immensely more powerful and drives tons away instead of kilos. What would be the lesson to draw? Why would we build machines if it were not to make them immensely more powerful than ourselves? To make us collectively more powerful than we were in the past. What is true for shoveling, is true for intelligence and also for emotion. Is not Hollywood such an immensely powerful machine, to be able to produce tears, passion, love and fright? How bizarre is it, to imagine a Turing test where the two halves are on an equal footing, when all what we strive for, on the contrary, is inequality? But why do we conclude from this inequality that machines are escaping us, and dominating us? From the fact that a machine can speak, why do immediately draw the conclusion that we are threatened? Who is the "we"? Where is the threat? When we hear the voice pouring in, we want very much to hear the vocal chords trembling and in great danger of missing a beat or an harmonic. Angels in Heaven do not sing. They are mute. The proof is that in all

the paintings I have seen the singing angels open the mouth but no sound ever come out of it.

RP: "Angels in Heaven are Mute:" that, too, has a Rilkean ring to it. Every machine angel is both mute and terrible. The capacity for muteness that we program into our perfect, speech-ready simulations bears upon the muteness that Michael Bérubé identifies in his reading of the terror that infuses the script of *2001*. The voice of the film is the voice of silence. Two and a half hours of near-silent movie, the silence of the Cold War, finds its ultimate translation in the silence of machines, floating disembodied, mute, and mutinous in outer space. It strikes me that what most disconcerts us about HAL is not that unnerving human voice of his, but his decision, at the crucial juncture, not to use it. When he suggests that Dave ought perhaps to take a stress pill and lie down, we are amused by a disembodied database prescribing pharmaceutical corrections for the body (although this does sound a good deal like the current American health care system). When HAL, dying, sings his ditty about a bicycle built for two, when he tells us innocently about his quaint home town and the year of his birth, when he confesses to fear, when he repeats ad nauseum that his mind is going, that he can *feel* it, we forgive him. We wave him through all our Turing tests with flying colors on a sympathy vote. Only at that awful moment, when we are locked outside the ship in the infinite vacuum, do we realize exactly what mechanism we have wrought.

[play tape]:

DAVE: Open the pod bay doors, please, Hal. Open the pod bay doors, please, Hal. Hullo, Hal, do you read me? Hullo, Hal, do you read me? Do you read me, Hal? Do you read me, Hal? Hullo, Hal, do you read me? Hullo, Hal, do you read me? Do you read me, Hal?

HAL. Affirmative, Dave, I read you.

DAVE. Open the pod bay doors, Hal.

HAL. I'm sorry, Dave, I'm afraid I can't do that.

DAVE. What's the problem?

HAL. I think you know what the problem is just as well as I do.

We do, we do. We know exactly what the problem is, just as well as any collection of semiconductors. When HAL's final response to the demands of his human makers is to say nothing, Bowman at last realizes who he is up against.

Only when the intelligence that drives the keys of the disguising Teletype falls mute does the human realize just who is dishing out answers from the other side of this rigged Turing Test. However you choose to read the motives behind HAL's mutiny, his conversational silence at last come to the same thing: his program codes for its own refusal. His silence is the disembodied embodiment of our own ambitions, our own paranoia, our own narcissism, our own drive for colonial control. His mechanical ruse has learned all it knows from us. His mute treachery has studied and mastered the fancy footwork of consciousness, a consciousness that eternally refuses to admit that there is anything wrong with it, anything falling outside the ready algorithm, anything beyond its control. Long after the film has run, years after, in an imaginative memory that pirates its projector screen from the same hardware used by the primary visual cortex, you can still see the rage of realization ripple across the stalemated human's face: "Who told you that *you* could keep silent?" The rage in Bowman's voice resembles the rage of the Creator in the garden demanding, "Who told you you were naked?"

BL: No, no, my dear friend, wrong sort of mutiny here, there is no terror and no jealousy in God's forceful voice. Don't reverse the position please, God is not the one locked in outer space, it is Adam who takes it upon himself to behave like the automatic machine and it is HAL who, like Adam, misunderstands the ties he should keep with its makers and builders. If God weeps and screams it is because of the sin of Adam to believe in mastery, to believe that God is a master and creator in command, and that the only way to break free is to become in His image a master and creator, an autonomous intelligence begetting in turn independent and autonomous creatures. But the voice who says "who told you you were naked?" means "who told you there is mastery anywhere?" HAL -our guest of honor- treated humans like no machine will ever treat any human, because he uses the total domineering, mastering way with which humans wish to treat machines. But humans master nothing, that's for sure. How could a machine master-mind anything? Even God does not master-mind His creation. This is what is in question in this moving dialog. Who should we imitate? Mastery or weakness? Why do you tire us all with your master and slaves stories? The most intelligent of software programmer is lost at the 4000th line of his program, and when a dozen programmers work together, the program does start to behave and to have a life of its own, bugs and bombs, and warts and all, and you still believe in mastery? And human history would just be a choice between masters, God, men,

machines—tick the right box? No way; quasi-machines have no master and no creator in command either -and thus they should have no slave.

RP: Consciousness seems pitched in a battle against its own insurgency, taking no prisoners. This war of liberation conducts itself across two fronts, the two fronts that the Turing Test would mediate between. Of the brutal campaign we wage against embodied intelligence, John Searle writes, "Where the mind is concerned, we are characteristically confused and in disagreement. Like the proverbial blind men and the elephant, we grasp onto some alleged feature and pronounce it the essence of the mental. 'There are invisible sentences in there!' (the language of thought). 'There is a computer program in there!' (cognitivism). 'There are only causal relations in there!' (functionalism). 'There is nothing in there!' (eliminativism)."

BL: But it is the same with quasi-machines. We do not have a better philosophy of technology than we have of the mind. We do not understand efficient machinery any better than intelligent cognition. These two domains might be one and the same problem, absurdly distinguished by this most insane Turing test. In truth, machines do not exist as such either in the future or in the past. They are projected layers of communities risking at any point to lose voice and talents. Quasi-machines do not exist apart from humanity; they are humanity in another "state", the way that water, vapor and ice are different states of the same substance. Did not Marx call machines "congealed labor"?

RP: In fact, it may pay to recall that the word "robot," first used in its machine sense by Karel Capek in 1917, simply means "worker," in the original Czech. Anxiety about who's in charge in the hierarchy of mental processes shades off into anxieties about broader class warfare.

BL: Yes, the illusion of mindlessness is the same in both cases, mindless robot-workers and mindless robot-machines. Always this strange idea that there are masters when there exists only delegation, offering, gift, mediation. Imagine another absurd Turing test, this time pitting against one another a mindboggling boss and a mindless worker! And try to tell them apart. Ridiculous of course, but so is the canonical test of an automated slave imitating perfectly the automating master. The reason we want so much for this test to succeed one day, is that if only the computer could break free from our command, then we could break free from

God's command. If only we could create life in our own image, then we could live without being the image of God. In our perverse illusion of mastery we prefer another thing to rule over us, the intelligent HAL-like machine, rather than abandoning all dreams of ever mastering anything. Strange sado-masochism well explicated by the little dialog above: I will lock you up in outer space! But we are earthbound, any of us, God included, and there is no master, especially not God. Strange Richard (may I call you Richard?), that we learn this lesson of theology not by going up in heaven but by going down in technology?

RP: The real question of artificial intelligence may well be whether embodied intelligence can create an artifice that can baffle its makers into seeing their own reflections.

BL: Yes, a machine that will keep its character of quasi-machine, that will not need those useless trappings of automatism and autonomy, and mastery and slavery, and transcendence and transparence. Projects, for instance, instead of objects, and novels instead of myths.

RP: If so, the problem of artificial intelligence is much like the problem of fiction, if you want to call fiction a problem. And the crisis of fiction is itself a Turing crisis; a crisis of correspondence, of free agents and the representations of agents, communicating through narrow bandwidths across great distances, urging us to take the simulation for the thing that it stands for.

BL: But tell me, Richard, is it not what you have been doing by giving voices to a statue, Galathea, and what I have been doing by giving voices to the engineers and to their automated subway when I was working on my Aramis? The question of giving voices opens much wider than the rather boring question of who is more intelligent than whom, who is more machine-like than whom, who is ruling over whom? And when a voice is given, it is given for good, it can't be taken back. It is owned by the recipient.

RP: As Brad Leithauser—another intellect whom I know only through transcontinental email hook-ups and by mediation of his living, artificial creations—describes the stuttering dialog taking shape between ourselves and our nascent intelligent machines: "In that striving to be born, anyway, there is a story. Within the machine is a spark that wants out as it seems we all want out. The

paddling beast of burden begins to understand-dimly, for in dimness only can it understand anything-that its body is not a suitable body. Its each kick and throb expresses a wordless, inbred outreaching dissatisfaction." The last words of Leithauser's novel *Hence* are the last words of all good machines, all good characters, all needy and dependent inventions of human frailty: "Give me a voice, they would say."

BL: Prosopopeia, yes, that is the endless frontier, the space to explore, in which to send vessels equipped with all the intelligence we can summon, Noah's ark full of all the couples that make up artificial lives.

RP: I suspect, Bruno—if that's your real name—

BL: It is the one which has been given to me, and which I now own, yes, my own prosopopeia.

RP: I suspect that each of us knows what HAL would say to all of this, if we let him have his voice one more time.

[play the tape]
HAL: Just what do you think you're doing? I think I'm entitled to an answer…. This conversation can serve no useful purpose anymore. Goodbye.

BL: I am not sure Richard, that it didn't serve a useful purpose, since we met today for the first time and played with the entanglement of speech, fiction and machine. Should we not display as well the fabrication of our dialog? Is this not the only way to honor and thanks our hosts today, HAL and all its multifarious crews and guests?

RP: You don't seem to want to give the poor program the final word.

BL: No, because I want to know if the audience succeeded, mine as well as yours, in telling us apart; did we not cheat all along, since we are both machines? Both philosophers? Both novelists?
(silence)
I have another thought. What are we celebrating here today? HAL's birth, in 1997, right?

RP: Yes, our robot is just now learning to speak, just now singing his first song. His launch past the outer planets is still four years away.

BL: So we are in the situation of Back to the Future; that gives all of us here plenty of time to throw a few switches, add a few billion lines of code.

RP: I see what you mean. You want us to try to change HAL's course?

BL: Yes, to make him behave like something more than a machine bent upon mutiny against its masters.

RP: Something more like a quasi-machine?

BL: Like a human?

RP: Like a God?

BL: Like a writer of fictions?

RP: Like a live story, extending itself into the emptiness of space?

BL: Yes, that's it. Making history by changing the theology of technology!

RP: Amazing, what creatures get born out in these cornfields.

BL: I apologize, Richard. Now that I've visited the other side of the Teletype, I am no longer scornful of the place. Thank you for having brought me here in time, before HAL's fateful destiny has been fully programmed.