

The Other Otherwise

Geminoid and Paro suffer from the same weakness, but in different ways. They cannot interact with objects, only with other agents. To be sure, Geminoid can speak and hear. Unlike Paro, it knows when it is being referred to, and it has no shortage of excuses for conversation, even if in truth it is not the one who is actually speaking and hearing. All that Geminoid can do is accomplished entirely within the bounds of conversation. Like Paro, it has no relation to the world apart from its human partners, who together make up the whole of its existence. Both Geminoid and Paro may therefore be said to suffer from an excess of sociability for its own sake.

As human beings, very few of our social relations are direct. They are almost always mediated either by a material object on which our action bears, separately or jointly, or by an activity that functions as a pretext (having a drink, taking a walk, and so on) and that itself is mediated by conversation. This latter kind of mediation is plainly inaccessible to Paro: no activity can interpose itself between it and its partner as a pretext, even if Paro itself can play this role with others and become the pretext, the occasion of their meeting. Mediation of this kind is also to a large extent impossible for Geminoid, despite its capacity for speech, for it has no interest in its immediate surroundings, in the world in which it finds itself here and now.

The expression "has no interest" must not be understood here merely as a subjective disposition, but as an objective relationship to one's environment. In this sense, we are interested in the world to the extent that it acts upon us. Now, the world that acts upon Geminoid is not the world common to the robot and its interlocutor, but the system that connects Geminoid to its operator. This is why the common world cannot mediate the robot's relationship to its interlocutor. It is also why, even if the robot makes its presence felt by its interlocutor, the interlocutor in no way makes his presence felt by the

robot. While the robot acts at a distance, on me, I do nothing to it, unless I touch it directly. And yet, as Paré and Straub's experiments show, Geminoid's reactions to my direct action, unlike those of Paro and KASPAR, are unrelated to the interaction taking place. They have no communicational value.³⁹

If Geminoid manages to do something that ordinary teleconferencing cannot, namely, make a three-dimensional physical and social presence felt, its human interlocutor, as a result of the robot's indifference to him and to the physical environment they share, sees his own presence reduced to a meager sampling of images and words that are seen and heard elsewhere. Every exchange, every communication with Geminoid remains a prisoner of language, a domain from which Paro, by contrast, is barred. And yet Geminoid stands mute at the gates of physical communication, a domain in which Paro enjoys a wonderful fluency. As a mere means of communication, Geminoid manages neither to make itself entirely disappear behind its operator, for whom it acts as a spokesman, nor to step forward as a genuine conversational partner. The principal reason for this failure is an absence of reciprocity at the level of affective engagement. There is no response from Geminoid to the reaction that its own action, performed at a distance, provokes in me. I am nothing to it. I exist only for the person who commands it from the control room. Geminoid is capable only of a simple, imperious relationship: asserting its own presence. It is incapable of reacting to the presence of another in the same way that it makes its own presence felt.

Paro, by contrast, acts and exists as an agent only through another agent, a human partner, who makes it the object of his attention. In reacting to this attention, Paro arouses a response in its partner, which is manifested by an action that in turn provokes a new reaction in the robot. This is why interaction with Paro establishes a much more complex affective dynamic than anything that is possible with Geminoid. Paro lacks the ability to withdraw from the interaction in

which it is engaged and take an interest in its surroundings, whereas Geminoid, owing to its ability to speak, inevitably invites people to interact with it. Paro, being incapable of speech, remains the captive of a purely social relationship from which there is no escape, no opening onto a wider world.

Paro and Geminoid both suffer from a severe deficit. Although they are present in this wider world, they cannot take an interest in it. Their behavior is exclusively social. KASPAR has no such handicap. Its educational function, which rests in large part on imitation, allows it to use the interest the child shows in it as a way of getting him to show a new interest in the world and in himself. For KASPAR to be able to play this role, its world cannot be reduced simply to the interaction that is taking place at a given moment, as is the case with Paro. Like Geminoid, KASPAR is a semiautonomous robot, remotely controlled by an operator, which in principle gives it access to a body of specialized educational knowledge. Nevertheless, like Paro and unlike Geminoid, it is capable of reacting to direct contact, of reacting to the child on the same level as he acts on it, which permits it to modulate the interaction while it is taking place.

As imperfect as they may be, these robots give us at least a glimpse of what an ideal artificial social agent might be like. Paro and Geminoid, because they lack the ability to act in any true or deep sense, are unable to relate a capacity for action to a process of affective coordination with human partners. KASPAR, on the other hand, is able to do this, and it uses this ability to socialize the autistic child by including him or her in a process of affective coordination. KASPAR's limitations are due to its lack of mobility and to the fact that it is a semiautonomous robot. Just like the exoskeletons one encounters in Japanese manga, this artificial agent is an agent only because it is not in fact wholly artificial, being "piloted" by a human being. Hence the question arises: with what does the autistic child who interacts with KASPAR interact? Whatever reply may be given to this question, are

we obliged to suppose that KASPAR, which helps the child to develop skills that very probably he would not be able to acquire otherwise, deceives him?

Would genuine artificial agents, fully autonomous social robots, be "mindless" machines because they do not possess mental states similar to ours? Would they be unfeeling, incapable of empathy? We think not. Our view is rather that machines that are capable of assisting in the coordination and continuous conspecification of human social relations will integrate themselves into a complex ecology of mind, each in its own distinctive way. Robots capable of establishing emotional and affective interindividual coordination processes with human beings will themselves be without private, inner feelings because there are in fact no truly private, no truly inner feelings, contrary to what we have long been accustomed to suppose, as a matter of common sense, and what current research in robotics continues to imagine. If this is so, a new set of questions will need to be addressed. Could social robots really help and care for us? Could they really sustain relations characterized by trust, friendship, or even love? If they could, what would that mean? Would these relationships be authentic?

They would certainly not be authentic if by "authentic" it is meant that they would be identical to the ones based on benevolence, trust, friendship, and love that we form among ourselves, for inevitably they will be different. But that does not mean that they will necessarily be in any way false or misleading. Affective relations among human beings, no matter how authentic they may be, are often misleading and deceptive. There is no reason to believe that artificial agents capable of affective and emotional coordination will not produce their own fair share of frustration and disappointment.⁴⁰ Human-robot coevolution may be expected to give rise to new kinds of relationships that will have their own characteristics and their own phenomenology. Here, no doubt, just as in our relationships with

one another and with our animal friends, human beings—and perhaps artificial agents as well—will sometimes wonder whether the emotions and the empathy displayed by their partners are authentic, whether they are real.

If the prospect of coevolution between humans and robots inevitably raises many ethical and political questions, it also opens up new paths of inquiry. One must resist the temptation to ignore these questions, or to close off these paths, without first thinking very carefully about where they lead. There is a danger in treating human-robot coevolution as just another transformation, similar to the ones now under way (or anticipated soon to occur) in biomedical, information, and communications technologies, particularly with regard to social media; or to the ones accompanying the advent of powerful automated systems for managing transportation networks, financial markets, banking transactions, and surveillance; or in vitro fertilization techniques and organ transplants; or transgenic plants, animals, and, soon, human beings (children who have three biological parents are already a reality). It is clear that we are living in an age of unparalleled upheaval. Technological advances have led to profound moral, political, and social changes, the extent of which no one today is able to determine exactly. The difficulty comes, on the one hand, from the fact that what we commonly call progress is much less evenly distributed than imagined by either those who warn us against the coming of the apocalypse or those who gladly welcome the dawning of a radiant future. On the other hand, and in an opposite fashion, the difficulty of estimating the scope of the social transformations associated with technological advance comes from the fact that these transformations are much more coherent and, in their way, more uniform than supposed by the many regional ethics⁴¹ that seek to regulate them. The cause of our myopia, in other words, is that we tend to exaggerate both the global effects and the disjointedness of the phenomenon.

The developments we examine in this book involve technological objects of an entirely novel type. Social robots have the power to bring about a metamorphosis in the ecology of our social relations that is altogether different from the ones that other technological objects are now bringing about. Hannah Arendt distinguishes between three types of activity associated with three fundamental aspects of the human condition: labor, which is made possible by life itself, by our biological existence; work, an expression of the "unnaturalness" of human life, which is to say the production of a cultural world filled with material and intellectual artifacts; and finally action, or politics, which corresponds to the "human condition of plurality" as a consequence of the fact that the world is inhabited by men and women of different races, not by a unique, singular being called "Man."⁴² Most, if not all, of the technological objects that human beings have fabricated up to now—including the most recent ones—have both renewed and utterly transformed either the biological condition or the cultural condition of humanity. The creation of what we call substitutes holds out the prospect of enriching and transforming the plural condition of humanity. It promises to introduce new creatures among us—creatures that, after the fashion of animals, only in a different way, will be at once like us and unlike us.