Talking to Robots: On the Linguistic Construction of Personal Human-Robot Relations

Mark Coeckelbergh

Department of Philosophy, University of Twente
Postbox 217, 7500 AE Enschede, The Netherlands
m.coeckelbergh@utwente.nl

Abstract. How should we make sense of 'personal' human-robot relations, given that many people view robots as 'mere machines'? This paper proposes that we understand human-robot relations from a phenomenological view as social relations in which robots are constructed as quasi-others. It is argued that language mediates in this construction. Responding to research by Turkle and others, it is shown that our talking *to* robots (as opposed to talking *about* robots) reveals a shift from an impersonal third-person to a personal second-person perspective, which constitutes a different kind of human-robot relation. The paper makes suggestions for empirical research to further study this social-phenomenological process.

Keywords: human-robot relations, philosophy, phenomenology, language, construction, interpretation.

1   Introduction

The field of social robotics and human-robot relations is a growing and attractive inter-disciplinary research field [1][2][3][4]. Robots are not only more intelligent and autonomous; they are also more capable of interaction with humans. Some use the terms 'social robots' [5] or 'artificial companions' [6] and suggest a near-future scenario of widespread 'living with robots': robots will enter the personal sphere and provide companionship, entertainment, sex, and health care.

Whether or not this scenario will actually happen, there are already people who live with robotic 'companions' such as robot pets and there have been experiments with relations between robots and elderly people and between robots and children [7]. These experiences and observations raise many philosophical and scientific issues.

One striking observation is that people often address robots in a very 'personal' way. Their language use is similar to that in a human-human relation. We start talking *to* robots, not just *about* robots. For instance, Turkle and others report that one of the residents of a nursing home says to the robotic doll My Real Baby: "I love you. Do you love me?" [8]. How can we make sense of this kind of 'personal' and 'social' language use, given that many people view robots as 'machines'?

This paper reflects on the use of language in human-robot relations by developing the following argument.

2   Appearance, Language, and the Construction of Artificial Others

Approaching human-robot relations from a phenomenological point of view enables us to attend to the appearance of robots to human consciousness. We do not always perceive robots as 'mere objects' or 'machines'; robots can appear to us as 'quasi-others' [9] and human-robot relations as quasi-social relations. This is happens in particular with robots that are highly interactive and have a human-like (e.g. child-like) or animal-like appearance. Sometimes robots appear as more-than-things and this constitutes a particular kind of human-robot relation that is formally or structurally similar to a social human-human relation [10]. For instance, we play a particular role (e.g. the mother of the robot), develop social expectations (this are typically a kind of 'second-order' social expectations: e.g. I expect the robot to want something from me, it expects me to do something), we ascribe emotions to the robot ("it seems not very happy now"), and adapt our behaviour based on expectations (e.g. we expect the robot to be unhappy when we perform a particular action so we decide not to do it).

How can we best conceptualize the role of *language* in this social-phenomenological process? Our use of language mediates in at least two ways: (1) it does not merely represent but also *interprets* the robot and the human-robot relation and (2) it also helps to *construct* the robot as quasi-other and the human-robot relation as a social relation. This happens mainly by means of a shift from an impersonal third-person perspective ("it") to a personal second-person perspective ("you"). Instead of only thinking "it is happy now" we might address the robot and say "you are happy now, aren't you?" If this happens, a (stronger) social human-robot relation is being constructed. Sometimes the first-person plural is used ("we"), especially in cases of joint action.

In these cases, the robot is addressed and related to as if it were a human person. Here language functions not as a representation of a (social) 'objective' reality; it interprets whatever that reality is and helps to construct it. To say that there is 'first' the quasi-social relation and *then* language use adapted to this relation is not an adequate description; instead, language use is an integral *part* of the social relation and shapes it. For example, if I address a child robot (or, for that matter, a baby) as a 'you' instead of an 'it' this language use is part of the developing relation between me and the robot, a development that becomes more 'personal'. By talking to the robot in this way, the relation is constituted *as* a social relation. Thus, instead of seeing language use only as emerging from the human-robot relation as an 'objective' state of affairs (a representation of the relation), language gets a more 'active' interpretative and constructive role.

This linguistic-phenomenological framework helps us to make sense of existing research results, for example those offered by Turkle et al. Rather than interpreting the robots in question mainly as 'evocative objects' [11] that function as a stand-in for a human, the proposed framework reveals 'personal' robots as linguistically constructed artificial others. Here human identity is not delegated to the robot; instead, the robot and the human-robot relation are given their own, distinct and unique identity by means of narratives and pronouns that interpret and construct the robot as a quasi-other and constitute the relation as a social relation in a particular context.

How exactly the robot is addressed (talked to) and talked about will depend – among other things – on the appearance of the robot in a particular context and on the personal history of the human (for example the human might have never seen that type of robot and therefore experience uncertainty about how to address it). But language use plays an active role in defining 'what the robot is' and is not just a reflection or representation of the social relation.

3   Suggestions for Empirical Research

This claim can be turned into a hypothesis for empirical research: the language we use when talking about and *to* robots is not only a *result* of what happens in the human-robot relation but also constructs that relation. In order to test this claim, we could set up an experiment in which the *linguistic* 'environment' is manipulated in such a way that the human-relation is pre-defined and then observe what happens to the relations. For instance, in one series of interactions the instructor could pre-define the relation by using an impersonal third-person perspective when talking about the robot ("it") and in another series the instructor would encourage a second-person perspective by addressing the robot with "you". It is expected that there will be a significant difference in how people interact with and relate to the robot.

Note also that in order to study human-robot relations as *relations* one would need to shift the usual focus on (a small number of) *interactions* to long-term relational developments. This would reveal human-robot relations as changing and developing - as our interpretations and constructions of these relations also continuously change and develop.

4   Conclusion

If we wish to enhance our understanding of the 'personal' and 'social' dimension of what goes on between humans and robots, both philosophical and empirical work could benefit from more attention to the linguistic mediation of human-robot relations – in particular their interpretation and construction. The discussion offered in this paper needs further development but sketches a tentative conceptual framework that could guide further reflections and research in this direction.

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