

328 **Book Reviews**

The only unfortunate aspect to this book is its outrageous price. Despite this, this volume represents a “must-have” for those interested in emergence.

JAMES W. HAAG
Graduate Theological Union
Berkeley, CA, USA

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Anne Foerst *God in the Machine: What Robots Teach Us About Humanity and God*
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More than anything else, the field of science and religion aims to bring separate disciplines into dialogue about common problems. It is for this reason that Anne Foerst’s work is a welcome contribution to that field, because she has been in the unique position of collaborating with leading thinkers in the areas of theology and Artificial Intelligence (A.I.). After writing a dissertation on the relationship between Christian anthropology and A.I., Foerst secured research positions both at M.I.T. and Harvard Divinity School, which provided the basis for this book. Though filled with many interesting reflections and explanations concerning the field of A.I.—particularly relating to her time with the research teams that produced the robots Cog and Kismet—this is a book on human nature. Specifically, Foerst argues that A.I. research can both challenge and confirm traditional Christian teachings about what it means to be human.

The first chapter describes Foerst’s view of human nature. She argues that the most distinguishing human characteristic is the “universal trait to tell stories” (17). This characteristic allows humans to form cultures and live in community, but also to become estranged from God and others (which she defines as sin) because we are unable to tolerate the ambiguities that are an inescapable part of storytelling. While her discussion of human nature is somewhat independent of the insights of computer science, it provides a soteriological framework for the rest of the book. Foerst later examines the narratives we form about robots in order to illustrate the frailties of human nature and encourage the adaptation of an inclusive narrative that can help overcome our estrangement. A fuller appreciation of robots, it seems, points the way toward healing.

The second chapter is a discussion of science; and here Foerst demonstrates an ability to be a part of a research team while maintaining enough critical distance to examine its assumptions. She deftly deflates the myth of scientific rationality while affirming that science (and in particular neuroscience) has “taught us a lot about ourselves” (63). She also includes a fascinating insider’s account of the hostility that was generated by a theologian teaching a course at M.I.T.

The topic of the third chapter is embodied intelligence, which is offered as a corrective to the Cartesian division of mind and body. The basic themes of Foerst’s arguments against mind–body dualism will be recognizable to those familiar with work in theology and philosophy over the past decades. Even so, this chapter might prove helpful to anyone interested in the way anti-Cartesian ideas have developed within cognitive science.

Unfortunately, as is often the case with discussions concerning the legacy of Descartes, Foerst sometimes overreaches. For instance, she claims: "We can safely say that we Westerners no longer understand our bodies as part of who we are (79)." But one need only look to the most influential producers of narratives in Western culture (i.e., Hollywood) to acknowledge that we Westerners can exult over our bodies. Perhaps a more nuanced presentation would better portray the way in which conflicting narratives of the human body function within Western culture. Similarly, Foerst argues that our hesitancy of seeing Adam's rib in the Genesis story as a "penis bone . . . demonstrates yet again the extent to which we have unlearned seeing our bodies as integral parts of who we are" (85), without seriously considering the fact that there is no etymological basis for this reading. Nevertheless, these examples do not undermine the larger point that the mind-body split has had a persuasive influence on Western thinking.

The theme of the fourth chapter is community, and Foerst addresses the topic from a theological and scientific perspective. From a scientific perspective, Foerst explains the bonding mechanisms that produce in us strong feelings towards other humans or even robots like Kismet. As a theologian, she argues that a return to a Biblical understanding of soul would help correct the dualistic, individualistic view of the soul that she attributes to Descartes. Specifically, she argues that the multilayered Hebrew term *nefes* cannot be flatly translated as "soul," as traditionally has been the case, because it can refer both to the individual person and the larger community. Correctly understood, *nefes* "emerges out of the history of interactions between God, every human individual, and the Jewish people as a community" (119).

This later argument is provocative but difficult to assess, particularly because of the lack of citations in the work; the publisher was clearly hoping to market the book to a wider audience. Nevertheless, I wonder again if Foerst has oversimplified a complex picture. For someone who seems willing to take seriously the assertions of critical Biblical scholarship (e.g., Jesus probably had a sexual relationship with Mary Magdalene [108]), oddly she thinks that the Bible speaks with one voice on the issue: "The meaning of the soul is the same in the Hebrew scriptures and the New Testament" (120). I would have liked some citations for this claim, because I know of no mainstream Biblical scholar who would support it. A more sophisticated account, and one more in line with Biblical scholarship, would have examined what any number of individual Biblical writers meant by the word soul.

The final chapter focuses on the question of whether robots should be considered persons. After all, what would a mass-marketed A.I. book be if it did not include a controversial claim about robots? Foerst argues that the concept of person, unlike the concept of a human, is a social construct that can be granted or denied on the basis of cultural criteria. But she says any criteria of personhood that is narrow enough to disqualify robots will also exclude certain classes of humans, which is morally objectionable. Therefore, why not drop our "narratives of exclusivity" in favor of a narrative that promotes unconditional acceptance of others? Speaking as a Christian theologian, Foerst believes the Christian narrative is well suited for the task.

This strong claim is bound to encounter objections, and I will raise two. First, even if no clear criterion for personhood exists, it would still not justify Foerst's conclusion. The problem of borderline cases is common even for helpful classification systems. For instance, consider recent debates on the status of Pluto. Should the fact that astronomers cannot agree on a criterion for "planethood" mean they should drop their narratives of exclusivity and consider all interstellar objects (no matter how small) as planets? A more satisfying argument would be to present her understanding of personhood and an explanation why robots and humans are grouped together in her schema.

A second objection to accepting robots as persons is based on the possible deleterious moral effects. In Western culture, personhood is the basis for many of our moral judgments. For example, in the abortion debate both sides agree that once we grant that the fetus is a person, we recognize its moral claim on society. But would the same apply if we acknowledged Kismet as a person? Would it, for instance, prevent one from upgrading to Kismet 2.0 and depositing the old Kismet in a recycling bin? Should we be outraged that Kismet has been on display at the M.I.T. museum? I believe Foerst's arguments would upend the link between personhood and moral obligation and thus offset the moral good gained by her more inclusive model of personhood.

Despite these criticisms, this is a work worth reading. One can disagree with Foerst's larger conclusions and still appreciate her many insights about theology and computer science. It is one thing for a theologian to publish work on A.I. on the basis of library research; it is another to work along side the top thinkers of the field. In that way Anne Foerst is a pathbreaker, and we are in her debt.

JOSH REEVES
Boston University
Boston, MA, USA

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