

Our robots, ourselves

reviewed by [Mark U. Edwards](#) in the [September 25, 2002](#) issue

In Stanley Kubrick and Steven Spielberg's film *AI: Artificial Intelligence* David is an android, created in the image of a human boy and designed to provide a couple with an emotional substitute for a gravely ill child. Once the phrase that activates him to love is read to him, David has no choice but to love the activator, even if his love is not reciprocated. Created in the image of God, human beings have decided to "improve" on God's creation by not allowing the imperfections of free will to complicate "loving relations" between made and maker.

Farfetched? It won't seem so after reading Noreen Herzfeld's lucid and thought-provoking exploration of how the image that humans share with God (*imago Dei* in traditional terminology) may be related to the image that we wish to share with our own creations (by analogy, *imago hominis*, the image of the human). Herzfeld, doctor of theology and associate professor of computer science at St. John's University in Collegeville, Minnesota, identifies three analogous approaches to *imago Dei* in Christian theology and to *imago hominis* in AI research.

The first, the substantive approach, relies on an analogy of being. We possess the image of God as a trait or property, commonly thought to be reason, which allows for self-consciousness and self-transcendence. Reinhold Niebuhr's theological view of the *imago Dei* serves as Herzfeld's theological example of this typology. The analog in AI--often termed symbolic AI--locates intelligence in mental representations of reality consisting of symbols and rules for manipulating these symbols. Symbolic AI often operates on the premise that "mind" is the software that runs on the hardware brain.

In the functional view we reflect God's image in what we do rather than in what we are. The image of God shines forth when we exercise dominion in God's stead. Gerhard van Rad illustrates the type theologically. The analog in AI research seeks to mimic human functionality in a limited domain such as game playing, facial recognition or language transcription. It has yielded a number of commercially successful programming techniques that have been employed in everything from

manufacturing operations to "smart" appliances.

In the relational view we show forth the image of God when we mirror the relationship within the triune God by our relationship with God or with other human beings. Karl Barth's trinitarian theology illustrates this category. The analog within AI is defined by the famous Turing test. If in an extended but technologically mediated conversation a human cannot distinguish between her human and her computer interlocutor, then the program can be said to be intelligent. Herzfeld includes under this analog those approaches to AI that rely on "intelligent agents" or on distributed but interconnected functional processes within robots. She also includes approaches that see intelligence as dependent on language and as acquired through embodied social experience.

Having established this foundation, Herzfeld devotes a chapter to illustrating how AI has been portrayed in science fiction movies, contrasting cautionary tales such as *2001: A Space Odyssey*, in which AI takes the form of disembodied and threatening Reason, with wish-fulfillment tales such as *Star Wars*, in which AI takes the form of companionable robots or magical helpers.

Herzfeld offers in another chapter three examples of what might concern Christians about the quest for AI. Under the substantive, she questions the dualism and other perversions entailed by fantasies of cyber-immortality (that is, fantasies that one will someday be able to "upload" one's mind into more durable, silicon-based computers). Under the functional she explores some dangers entailed in using AI to extend our dominion over the rest of nature. Under the relational she warns against thinking that we can create companions who will substitute for our relationships with God and with other human beings. She closes *In Our Image* with a chapter offering preliminary suggestions on what a computer-human ethic might entail if AI is ever able to produce the intelligent Other that it seeks.

Although definitions can vary--and Herzfeld's differ somewhat from the ones I offer here--"strong AI" seeks to create a machine that acts intelligently and has a real, conscious mind. "Weak AI" seeks to create a machine that acts as if it were intelligent within a limited domain. I doubt that strong AI is possible as currently conceived, whether arrived at substantively, functionally or relationally. Herzfeld does not tackle the question of feasibility, but her summaries suggest that she, too, sees the quest for strong AI as quixotic. In any case, her brief book puts contemporary theology on the *imago Dei* in dialogue with AI research and makes both fields accessible and stimulatingly provocative for the lay reader. I recommend

it highly.