"nonpersons." Grace is not saying that her mother is a nonperson, but her choice of a robotic companion marks the moment when Grace's mother is no longer the person Grace wants to remember as her mother.

CHAPTER 5: COMPLICITIES

1. Rodney A. Brooks, "The Whole Iguana," in *Robotics Science*, ed. Michael Brady, MIT Press, 1989), 432–456. This was written in response to a two-page challenge by Daniel C. Dennett about lessons to be learned by building a complete system rather than just modules. See Daniel C. Dennett, "Why Not the Whole Iguana?" *Behavioral and Brain Sciences* 1 (1978): 103–104.

2. Kismet is programmed to recognize the word "say" and will repeat the word that follows it. So, children trying to teach Kismet its name would instruct, "Say Kismet," and Kismet would comply, much to their glee. Similarly, children would try to teach Kismet their names by saying, "Say Robert" . . . "Say Evelyn" . . . "Say Mark." Here, too, it was within Kismet's technical ability to comply.

3. Cog and Kismet were both built at the MIT Artificial Intelligence Laboratory. Cog has visual, tactile, and kinesthetic sensory systems and is capable of a variety of social tasks, including visually detecting people and salient objects, orienting to visual targets, pointing to visual targets, differentiating between animate and inanimate movement, and performing simple tasks of imitation. Kismet is a robotic head with five degrees of freedom, an active vision platform, and fourteen degrees of freedom in its display of facial expressions. Though the Kismet head sits disembodied on a platform, it is winsome in appearance. It possesses small, mobile ears made of folded paper, mobile lips made from red rubber tubing, and heavily lidded eyes ringed with false eyelashes. Its behaviors and capabilities are modeled on those of a preverbal infant. Kismet gives the impression of looking into people's eyes and can recognize and generate speech and speech patterns, although to a limited degree.

Much has been written about these two very well-known robots. See Rodney A. Brooks et al., "The Cog Project: Building a Humanoid Robot," in *Computation for Metaphors, Analogy and Agents*, vol. 1562 of *Springer Lecture Notes in Artificial Intelligence*, ed. C. Nehaniv (New York: Springer-Verlag, 1998), and Rodney Brooks, *Flesh and Machines: How Robots Will Change Us* (New York: Pantheon, 2002). Brian Scassellati did his dissertation work on Cog. See Brian Scassellati, *Foundations for a Theory of Mind for a Humanoid Robot* (PhD diss., Massachusetts Institute of Technology, 2001). Scassellati and Cynthia Breazeal worked together during early stages of the Kismet project, which became the foundation of Breazeal's dissertation work. See Cynthia Breazeal and Brian Scassellati, "How to Build Robots That Make Friends and Influence People" (paper presented at the IEEE/RSJ International Conference on Intelligent Robots and Systems, Kyongju, Korea, October 17–21, 1999), in *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems* (IROS) (1999), 858–863. Cynthia Breazeal and Brian Scassellati, "Infant-like Social Interactions Between a Robot and a Human Caretaker," *Adaptive Behavior* 8 (2000): 49–74; Cynthia Breazeal, "Sociable Machines: Expressive Social Exchange Between Humans