

Jennifer Robertson, *Robo Sapiens Japonicus: Robots, Gender, Family and the Japanese Nation*

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When Jennifer Robertson was living in Japan as a child in the early 1960s, she recalls her fascination with two television cartoons where the heroes were robots, *Astro Boy* and *Gigantor*. Astro Boy belongs to a robot family and Gigantor has an emotional relationship with a young boy. She later realized that these cartoon robots, like their counterparts in science fiction films and the like, are dexterous and possess super-human powers, while in comparison actual, tangible robots seem clumsy, slow, and underwhelming. Despite this gap between fact and fiction, robots are going to play an increasing role in modern industrial societies. Robertson, an observant professor of anthropology at the University of Michigan with many years of research in Japan, is most interested in the relationships between humans and robots and the role that robots can play in the average household and in society at large. The focus is on humanoid robots. While to date humanoid robots represent a “very expensive industry with very little in the way of tangible, sustainable services for ordinary folks in their everyday lives,” the expectation is that these types of robots will become more common in the years to come (31). A goal of this book is the exploration of the societal role of these robots.

Robertson finds Japan to be a very useful place to study this human-humanoid relationship. Today, Japan produces slightly over fifty percent of the world’s total production of operational robots and leads all other nations in the creation and development of humanoid robots that are designed specifically to participate in and to augment human society. In her opening chapter, Robertson introduces the reader to *Innovation 25*, current Prime Minister Shinzo Abe’s detailed blueprint for revitalizing Japan’s economy through the increased use and development of robots. One of the key elements of this plan is its emphasis on the central role that household robots will play in the stabilization of core institutions, such as the traditional family.

Robertson writes that it was Abe who, “beginning in 2007, energetically promoted robotics as the industry that would save Japan. According to his vision, industrial robots would accelerate production; household robots would provide elder care and child care and thereby make married life and motherhood more attractive to women; and robotics spin-off ventures would generate employment and profitable investments and exports” (29). Thus, for example, the expectation is that robots should be so constructed as to fill in the gaps created by the nation’s aging and declining population and will help elder members of society living on their own with a whole variety of household tasks. The challenge facing people charged with implementing this plan is to figure out how to introduce more robots into sectors such as agriculture, nursing care, and childcare to help foster economic growth in Japan (44).

A core criticism and theme that dominates Robertson's book is her dislike of the terminology used for *Innovation 25*. "Innovation 25" emphasizes the roles that biotechnology and robotics will jointly play in securing the stability of both the Japanese economy and Japanese social institutions. The rhetoric of innovation used in *Innovation 25*, however, is misleading. Robertson notes that "'Renovation 25' would be a more accurate title, for it is not *new* values but rather the *renewal* of old values—especially those represented by the patriarchal extended family and wartime ideologies—that constitute the significant changes associated with the robotization of society" (35).

Robertson's core argument is that new bio- and robot technologies are being deployed to reify old or more "traditional" values, such as the patriarchal extended family and sociopolitical conservatism. A further question that Robertson investigates at length through her text is the question of how robots embody ideas and notions of the relationship in humans between sex, gender, and sexuality, and how mostly male roboticists make an effort to attribute the female or male gender to robots (82).

Robertson concludes that roboticists in Japan tend uncritically to reproduce and reinforce dominant stereotypes (or archetypes) attached to human female and male bodies (100). Robertson adds that robots, and especially humanoids, are in the future to be more and more introduced into everyday human society as adopted members of a household (132). The major functions of a robotized household center on convenience, safety, and comfort. Foreign visitors to Japan during the 2020 Olympics may not see humanoids in private homes, but they may well be ushered to their seats by robots who will greet them with a high degree of professionalism and warmth (192).

Robots will become increasingly important not only in Japan but also in South Korea, China, North America, and Europe. We humans need to be able to deal with the complex interactions between humans, and robots and roboticists will have to find better ways to integrate their robots into human societies. Robertson has done a superb job looking at the various problems that occur as robots play a more active role in society. Japan is at the forefront of this situation, but it is also something people across the world will have to cope with in the not-too-distant future.

Robo Sapiens Japonicus is well-researched and argued. It is a cutting-edge work that raises questions that cannot be answered any time soon. However, this is not an easy read, as there is a great deal of robotic jargon that is not that clear for an outside reader, and there are times when readers unfamiliar with this area specifically may have difficulty following some of Robertson's arguments. Being a Japan specialist is certainly very handy, as the writer assumes some basic knowledge and understanding of the rudiments of Japanese history and culture. Nevertheless, Robertson is to be fully congratulated for a most stimulating and interesting work that will stand the test of time.

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