



“What Doraemon, the Earless Blue Robot Cat from the 22nd Century, Can Teach Us About How Japan’s Elderly and Their Human Caregivers Might Live with Emotional Care Robots.”

Robert C. Marshall

Western Washington University

Author contact: Robert.Marshall@wwu.edu

Abstract

Structural analysis of the phenomenally popular and enduring Japanese anime *Doraemon* helps us think about what we might hope to see in the not too distant future from Japan’s promised surge in development of socially assistive robots (SARs) designed for the care of the elderly. Doraemon, the earless blue robot cat from the 22nd century, is assigned the conjoined tasks of caring for the 10-year-old boy Nobi Nobita as his constant companion, which he does by reproducing the ideal caregiving characteristic of Japanese expectations for mothers, endlessly affectionate indulgence; and of improving Nobita’s character, at which he is unsuccessful because he perpetually indulges Nobita’s immature demands for technology from the future to solve his problems with no effort of his own. One might suspect a moral lies hidden here for us all. Oddly and surprisingly enough, however, notwithstanding Doraemon’s failure as a robot to reform the child Nobita’s character because he can’t say ‘No’, exactly because the elderly require not reformation, but rather preservation, of the characters they have spent a lifetime honing, the unceasing affectionate indulgence Doraemon extends to Nobita (even if to Nobita’s lasting detriment) could augment the diminishing physical and emotional care resources available to the elderly from their real caregivers, fundamentally middle-aged women who must see first to the needs of their children and husbands as their essential duty to the futures of their families.

Keywords: *Japan, aging, robotics, caregiving, Doraemon, mothering, anime*

Anthropology & Aging, Vol 37, No 1 (2016), pp. 27-40

ISSN 2374-2267 (online) DOI 10.5195/aa.2016.124



This work is licensed under a Creative Commons Attribution 4.0 International License.

This journal is published by the [University Library System](#) of the [University of Pittsburgh](#) as part of its [D-Scribe Digital Publishing Program](#), and is cosponsored by the [University of Pittsburgh Press](#).

“What Doraemon, the Earless Blue Robot Cat from the 22nd Century, Can Teach Us About How Japan’s Elderly and Their Human Caregivers Might Live with Emotional Care Robots.”

Robert C. Marshall

Western Washington University

Author contact: Robert.Marshall@wwu.edu

Introduction

While immense literatures examine aging and robots in Japan separately, reality has not yet reached the point where care for the elderly by a socially assistive robot (SAR) can be examined comprehensively (Bemelmans, et al. 2012; Jenike n.d.; Sabelli n.d.). Disciplining conjecture with method, structural analysis of contemporary Japan’s most endearing and enduring work of the imagination, the children’s anime *Doraemon*, in which a slightly defective blue robot cat sent from the 22nd century becomes the helper and companion to a similarly slightly defective ten-year-old boy, lets us peer into one foreseeable future of this nexus.

Doraemon’s relationship to his charge Nobita plays out the pattern of persevering care founded in affectionate indulgence (*amae*) that reproduces the Japanese cultural ideal of care of a mother for her child, her husband, his parents, but which care is becoming increasingly unavailable in practice, at least to the elderly. The phenomenal popularity of the anime *Doraemon* warrants opening a window onto what tens of millions of Japanese evidently think a robot good with children might be like. From this vantage point, we can reflect further on whether or how a realized Doraemon might be good with people in that second childhood we never outgrow. When Japan’s robotics engineers come to consider the relationship binding Doraemon and Nobita as a plausible template for SAR performance for eldercare, the result of their effort might assuage today’s fraught and frequently infantilizing, even neglectful relationships with youthful, attentive elder-focused relationships.

Not a sensei, not a father, definitely not another child nor yet a mythical hero or trickster, Doraemon is a Mother, a Japanese Mother (capitalized to indicate the symbol ‘Mother’, not the observable behavior of any particular mother), which makes all the difference in Japan. Doraemon does not demand or insist or discipline, he indulges, he supports, he encourages, he puts up with, he whines, he weeps, he even mildly chides. With true devotion Doraemon carries out his assignment to care for Nobita as his constant companion and helper in order to improve Nobita’s character, but his help does not refashion Nobita into anything like a modern Momotarō, Japan’s traditional child folk hero, which is the robot’s ultimate task.

Mothers, in one aspect or another, are Japan’s intimate caregivers. What *Doraemon* has now led me to think about social and emotional robots in Japan’s future, care given the elderly rather than children and husbands, and the middle-aged children who have become caregivers to their own parents, leaves me somewhat unsettled. Considering the coming transition to SAR eldercare, I have begun to wonder with MIT robotics researcher Sherry Turkle (2011: 107), is the performance of care, care enough? Turkle points out how the caring robots presently being developed in Japan can “*take care of us,*” but they would not “*care about us*” (italics in original). But elderly Japanese, especially elderly women -- all mothers

themselves -- dread imposing on their children. And these elders' adult children -- the "Sandwich Generation" of women who must care for children, husbands, elders, and work at least part time outside the home -- are at best ambivalent; and many feel distinctly burdened (Yamashita and Soma 2014).

Through discussions of eldercare in Japan, SARs, Doraemon, and Japanese Mothers, the remainder of the present article ponders this quandary step by step: as inevitable as well-designed SARs are, can they ever become a sufficient solution to the care of the world's rapidly growing population of elderly? This much is clear: the social and emotional care robots that emerge from Japan in the next few decades will lead the way in SAR development for the rest of the world as well.

Elder-care in Japan

Twenty-five years ago Margaret Lock (1993: 46-47) captured the perspective on aging and elder-care in Japan that largely prevails there to this day. In contrast to the 50 years of prewar Japan, men can now expect to live 80 years, and women, a world-leading 87 years or more. If a tempered blessing for citizens, planners, politicians, and bureaucrats see in an image of 16 per cent or more of the population over 65 the approach of disaster, a tsunami. The "greying of the nation," which took 130 years in France, 85 years in Sweden, and 70 years in the United States, has taken Japan just 25 years. If present trends of both low fertility and mortality continue, by the year 2025 people 65 and over may make up a full quarter of the Japanese population.

The most dramatic demographic changes will occur during the first quarter of this century as the postwar baby boomers reach old age. This change in the structure of the population will not only produce a rapidly aging labor force and a major increase in expenditures of all kinds for the elderly, but forecasts widely assume it will all be accompanied by a decline in economic growth. Ogawa (1988) had already estimated in the late 1980s that by the year 2020, close to 55 per cent of medical expenditures will result from care given to the elderly, that actual costs will increase 10-fold, and that the greatest proportion of this money will come largely from the pockets of the shrinking younger population of taxpayers. Ogawa went on to point out that, should present trends continue, more than 14 million Japanese will suffer from senile dementia by 2025, of whom 66 per cent will be women, and more than two million people will be bedridden (*netakiri*, referring to all sick and disabled elderly, not necessarily entirely immobilized), of whom 62 per cent will be women. The combination of a high incidence of stroke, the cultural reinforcement of dependent elderly, a shortage of institutionalized facilities for the care of the aging population, and current government policies means, therefore, that many women from about the age of 50 or 55 can expect to devote a good deal of time to the care of the older generation, most often their parents-in-law.

The tradition of extended family care of the aged in Japan continues into the present. At the time Japan's Long Term Care Insurance (LTCI) system *kaigo hoken* was introduced in 2000, just over half (50.3%) of Japan's elderly were living with or cared for by their children or other close family members (Hashimoto 2000: 3). However, as women continue to join the paid labor force, as in-home care-givers age, as households of one and two elderly member increase, as fewer children are born, families lose their capacity to care for their infirm elderly members.

Kaigo hoken was specifically targeted to reduce the caregiving burden on families, especially women in the labor force, while at the same time was designed to help the elderly remain in their own homes as long as possible. Yet families do not necessarily give the best care available, nor does caregiving best support the integrity of families (Sugiura et al. 2009; Nakano et al. 2002). Many women and even some men do want to be qualified care givers and even go through a recognized course of training, but

those who do not do so are not penalized in this new system. On the contrary, the frail elderly of the household are entitled to all the care they are determined to need by a qualified care manager, itself a novel position created by *kaigo hoken* (Yamada et al. 2009).

In this way, the introduction of *kaigo hoken* dramatically increased demand for trained home care attendants (Tsutsui and Muramatsu 2005: 225). And so, as demand for home helper services exploded, what was expected was in fact discovered: “Home-visit care is the service clients complain most about. The complaints are mostly about the quality of the services and attitudes of the care workers. The root causes of the problem are related to inadequate training of home-helpers” (Nakane 2003: 19). Does this situation identify and create a place for SARs in Japan’s system of care for the elderly? Maybe not, but Japan will certainly try to find out.

Socially Assistive Robots and Elder-care

Japan leads the world in robotics, both production and socially assistive robots (SARs). More and better SARs are evidently on their way, but views on their prospects vary. Media reportage uniformly smiles on pilot projects (e.g., the debut of Softbank’s “human-like” robot Pepper (<http://www.bbc.com/news/technology-27709828>)) while Sherry Turkle (2011) has now come to expect only disappointing simulacra of intimacy from intelligent personal technology.

Can we glimpse possibilities for the use of and reaction to SARs for the elderly in Japan before this nascent technology becomes “rapidly mundane” (Horst and Miller 2012)? Japan’s ambitious National Robot Strategy was unveiled on January 23, 2015 (DeWit 2015). It was developed by the “Committee for the Implementation of the Robot Revolution,” which had its first meeting on September 11, 2014. Its membership included heavyweights straddling business and government. At its final meeting on January 23, it formally presented its report to Japanese Prime Minister Abe Shinzo. Abe then declared 2015 to be “year one (*gannen*) of moving towards a “robot society”.” The strategy outlined by the committee’s report aims to quadruple the current domestic robot market from ¥600 billion at present to ¥2.4 trillion in 2020. Japanese authorities want to expand the use of robots in such spheres as services, construction, disaster resilience, farming and elderly care.

The robot strategy aims to alleviate problems both of using robotic assistance to displace labor demand and to eliminate the current high risk of injury to care givers from handling the sheer weight of the elderly. Thus robotics will be used to help in moving the elderly from beds, in assisted walking, in bathing and use of the toilet, as well as in care of those with dementia. Survey data indicate that 60% of caregivers would like to use robots in elderly care. Moreover, among recipients of care, the desire to be assisted by robots is already higher, at 65%. The National Robot Strategy aims to raise both these figures to 80% by 2020.

Interviews with females between 55 and 75 who work as caregivers for the elderly in Japan show a mixed response. Many do find the physical work more demanding than they want, but almost equally, they find the emotional element either valuable or deeply distressing (Marshall 2013:30-31). A significant body of research examines the emotional capacity of workers and how employers try to harness it (England 2005). Lopez (2006) reviews this literature within the framework of the organization of emotional care in order to understand care work performed in nursing homes. Existing evidence suggests that there might be a place in this constellation of home and nursing home care for the right SARs, but does not suggest that empathetic robots are even on the horizon (Asada 2015).

Indeed, the right robots may never arrive, whatever robots in addition to Paro become commercially available in Japan or elsewhere. Bemelmans and his colleagues undertook an exhaustive search of the English language literature on SARs, "...robots designed to give assistance through social interaction to achieve progress in, for example, convalescence, rehabilitation, and learning" (Bemelmans, et al. 2012: 115). Their first cut found 2891 articles which, through exhaustively detailed methods, they boiled down to "41 publications reporting on 17 studies involving four robot systems and one undefined robot," almost all discussing research done in Japan.

So far, the effects and effectiveness of SARs in elderly care have not been demonstrated comprehensively. Most of this research is done in Japan, with a limited set of robots (mostly Paro and AIBO, now obsolete), and not yet fully embedded in care-need driven interventions. Although obvious positive effects are reported, the scientific quality of the evidence is limited methodologically (e.g., small sample sets, short durations, no control group, no randomization). The exploratory nature of this research emphasizes the pioneer work of the researchers and caregivers involved in this relatively young field (Bemelmans, et al. 2012: 117). The present would seem, then, a moment ripe for thinking deeply about the qualities that would make a SAR good with the elderly.

Wu and colleagues' (Wu, et al. 2012) French focus groups unwittingly invite us to consider Doraemon in all his aspects as a candidate. During discussions of humanoid robots, one theme concerned the non-genuineness of expressions of humanoid robots and of human-robot interaction. When looking at the robot Kobian, a participant said: "It has an expressive face." Another participant answered: "An expressive face is not an expression." Along this same line, most participants expressed at first glance a positive attitude toward Paro. Most of them found it charming and attractive. However, when the moderator told them about its interaction capacities, a participant said: "But this is not a genuine interaction," and later concluded: "To communicate with Paro is to communicate with nothing" (Wu, et al. 2012: 127).

Doraemon Cares

While Sparrow and Sparrow (2006: 141) find it "not only misguided, but actually unethical, to attempt to substitute robot simulacra for genuine social interaction," Sharkey and Sharkey (2012: 27) locate "three main ways in which robots could, if introduced appropriately, solve a number of the problems that elderly care might face: (1) to assist the elderly, and/or their caregivers in daily tasks; (2) to help monitor their behavior and health; and (3) to provide companionship." Ethical or otherwise, Doraemon, is definitely "not a pet," Odel and LaBlanc (2013: 70) assure us, "but a helper and companion." It seems worth asking, then, if a realized Doraemon couldn't assist someone in Japan at the other end of life just as well, someone perhaps at the edge of increasing senility. To do so we need first to understand the relationship between Doraemon and Nobita as *Doraemon* presents it to us.

In March 2008 Japan's Foreign Ministry appointed *Doraemon* the nation's first "anime ambassador." 2014 was the 35th anniversary of the *Doraemon* animated TV series, first broadcast in 1979 and based on a cartoon introduced in manga form in 1969. Since 1979 one 15 minute episode has been broadcast nightly at 6:45, just before the evening news. Fifty-plus full length movies, thousands of comic books and 1500-plus TV episodes have been created since *Doraemon* was first introduced in 1969. One Saturday evening while living in Japan in 2004, I surfed into the *Doraemon 25th Anniversary TV Special* and ended up watching four continuous hours of *Doraemon* cartoons, 16 in all. For the analysis here I use the 16 episodes of the *Doraemon Television Collection, Part 1, Vol. 1-3* (2001). By a fate mysterious and deep, Doraemon and I will share a common birth month and day, September 3, in the year 2112 for him, the suitably palindromic date of his manufacture.

Episode plots, the syntagmatic structures of structural analysis, are formulaic. Nobita Nobita, a ten-year-old boy and the central character of the cartoon, is an utter mediocrity or less in everything he does. The children in his neighborhood – the big bully Gian, the sneaky nerd Suneo and the cute girl Shizuka – are his friends and figure prominently in his adventures with Doraemon. In the words of young fan Mijea, “so many hundreds of stories start off with Nobita running home in tears, crying “Doraemon! Do something!”.” Nobita tries to get Doraemon to fish a gadget from the future out of his pouch to solve his problem. Doraemon resists but finally yields. The gadget performs as required, but then unintended and unforeseen consequences ensue, making matters worse, but funny. Nobita seems to have learned his lesson by the end, but tomorrow’s episode reveals that he has not. Wash, rinse, repeat as needed. Suitable for daily use with children.

Fujimoto Hiroshi, creator of *Doraemon*, and Claude Levi-Strauss, author of “The Structural Study of Myth” (which celebrated its 60th anniversary in 2015), two giants of 20th century mythology, form a gestalt. “When a manga hero becomes a success, the manga suddenly stops being interesting,” said Fujimoto. “So the hero has to be like the stripes on a barber pole; he seems to keep moving upward, but actually he stays in the same place” (Schilling 1997:43). From Levi-Strauss we learn that

...a myth exhibits a “slated” structure which seeps to the surface, if one may say so, through the repetition process. However, the slates are not identical. And since the purpose of myth is to provide a logical model capable of overcoming a contradiction (an impossible achievement if, as it happens, the contradiction is real), a theoretically infinite number of slates will be generated, each one slightly different from the others. Thus, myth grows spiral-wise until the intellectual impulse which has originated it is exhausted (1955: 105).

The 1500 fifteen-minute TV episode “slates” and 50-plus full-length movies have evidently not exhausted the impulse that moves Japanese children and now their parents, some of whom are robotics engineers who themselves once watched as children, to cease attending to Doraemon and Nobita’s barber pole.

Analysis of artifacts of pop culture and their place in daily life requires both a reliable method and a reliable technique. Pfadenhauer and Dukat (2015) argue convincingly that we cannot understand what SARs actually are until we understand their relations with the humans to whom they are connected. To consider whether the anime Doraemon could prove a model for a valuable SAR, we must have an accurate understanding of Doraemon in his relation to Nobita. Structural analysis offers a means to control our understanding of complex cultural objects beyond the simple associations symbols evoke in us as we encounter them.

The method of structural analysis takes symbols as public patterns for action based on structured and interested local knowledge, rather than as embodied loci of encoded, disinterested meanings. This method allows us to identify enduring and reliable connections among the operating categories of daily life and their relationships to each, the paradigmatic structure, which underlay the activities of the narrative, the syntagmatic structure. Ouwehand’s (1964) structural analysis of the late Edo era cartoons that immediately flooded the city following the great Tokyo earthquake of 1855, links earlier to recent creators and consumers of Japanese popular culture in a centuries-old continuous cultural tradition. This late Edo tsunami of cheap cartoons portrays the traditional child folk hero Momotarō (Peach Boy) and his animal companions (a talking dog, a monkey and a pheasant) descending into the bowels of the earth to quell with just a drinking gourd the writhing of the giant catfish (*namazu*) which caused earthquakes in Japan in those days. In one of the *Doraemon* franchise’s earliest theatrical movies, “*Boku, Momotarō no Nan na no, sa*” (Doraemon: What I am for Momotarō), released in 1981 just two years after the inauguration of

the television series, Nobita pops out of the peach and Doraemon bears Momotarō's iconic banner "*Nihon Ichi*" ("Japan Number 1"), self-consciously connecting *Doraemon* to Momotarō lore. *Doraemon* plays to mythic rather than modernist sensibilities, to emotional more than intellectual life, to the needs of children and to the needs of adults for their children, rather for adults themselves.

Ouwehand's results justify at least trying to analyze the structure of this vast body of connected cultural material, even if it is not produced collectively and anonymously, but within the conventional bounds of Japan's current commercial entertainment industry by a small number of known, indeed now famous, cartoon artists (Condry 2013). That Momotarō and his animal companions re-establish the *axis mundi* with just a drinking gourd and so calm the rumblings of the earth, jostles evocatively with Nobita, Doraemon, and the rest of his pals, and the tasks they fail to accomplish, for anyone who knows both narratives, which in Japan is everyone above age three. Nobita is not Momotarō, who is a culture hero even though a child. Who cannot be interested in the question, then, of how a child can build a sound character and what adults can do to help?

At a first pass, structural analysis of this sample of *Doraemon* episodes yields results within the range of available interpretations. At one extreme, Shiraishi (2000: 293) approvingly quotes Shilling's (1997: 44-45) cotton candy characterization cited previously, "a breath of freedom and a glimpse of a funnier, friendlier world where all dreams, even foolish ones, can come true." At the other, in the dyspeptic view of *The Anime Encyclopedia's* unattributed "Doraemon" entry (Clements and McCarthy 2006: 158), "...the cat's techno assistance causes more trouble than it is worth." My analysis generated a more moderate syntagmatic structure overall, that the futuristic gadgets Doraemon produces from his pouch offer a constant temptation to take the easy way out which, once viewers are exposed to their unintended and unforeseen, if amusing consequences, help us see once again that only genuine effort and *ningen kankei* (human relations) can be ultimately and intimately satisfying. But would the approving parents of *Doraemon's* child fans want Doraemon for their own aging parents? What price, then, reality?

A second pass, however, precipitated a more intractable and sobering question from the paradigmatic structure **Doraemon's gadgets : Nobita's problems :: Doraemon : Nobita**. *Doraemon* structures these hundreds of brief narratives around the assertion that technology is no more likely to solve our fundamental problem of how to live together as humans beings, than children are able to build self-reliant adult personalities with only their mothers to guide them, even when both do as well as anyone can expect of them. The minor contradiction of the paradigmatic structure, the left side relationship, focuses the way the gadgetry Doraemon pulls from his pouch both solves and fails to solve the endless minor childhood problems Nobita suffers. The minor contradiction these cartoons model, as Doraemon pulls one gadget after another from his fourth-dimension stomach pouch, tells us that especially when technology performs as it is designed to, even the ever more wonderful technology that awaits us in the future, it cannot improve upon or replace the dedicated tenacity, *ganbari*, Japanese know they must all exert to develop a character that can support genuine human relations, *ningen kankei*. The major contradiction, the right side relationship, however, has been built into the syntagmatic structure of the stories in a less obvious way. Doraemon has been sent back to the present from the 22nd century by Nobita's dissatisfied descendant Sewashi (like Nobita also a child) to improve Nobita's future, which can only result from improvements in Nobita's character, turning him from a non-entity into a 20th century success, rather than altering any specific event, against which time travelers are of course always warned. In a similar but not identical way, Doraemon cannot reform Nobita's character for him, because even as human rather than cat or robot as he seems, he is himself merely more not-quite-marvelous technology from the future.

The major contradiction, the constant relationship that runs through each episode, recognizes how Doraemon, the robot who does not look or act like a robot, does and does not help Nobita build a capable, self-reliant character that will be able to support genuine adult human relationships. Like his own gadgets, Doraemon is not quite right for the job he has been assigned. Because Doraemon perpetually fails to resist Nobita's persistent importunity for a solution to his problems from the technology of the future, Nobita never learns to rely on and develop his own capacities in the here and now.

We are told Doraemon's own flawed technology prevents him from straightening Nobita out, but it actually looks as if he simply won't. In any event, he doesn't. Doraemon first presents himself as having come to save Nobita from a horrible fate, but later we learn that Nobita's distant descendant actually brought Doraemon back to the past "to whip the disappointing boy into shape" (Orbaugh 2002: 113). This never happens. Technology appears to give Nobita's descendant Sewashi the capacity to (re)form the child Nobita's character, as an adult might. This appearance is illusory. In the United States our parents are the most important choice we make in our lives, but in Japan the perpetuity of the *ie* (corporate stem family) evidently requires people to go back even farther to fix fundamental family flaws.

The structural analysis presented here recognizes *Doraemon* as the *negation* of the technological part of present and future reality, a *reducto ad absurdum* through laughter. The technology works as advertised, but only mechanically, not socially, for each specific gadget explicitly and for Doraemon himself implicitly. The anime never, of course, refers at all to the invention of technologies of any sort, including robots, as a way for large companies to earn large profits, the entry point of technology into *our* world where invention is the mother of necessity. The self-referentially paradoxical irony underlying the overnight reset button is that Doraemon fails to change Nobita at all. Even as the content of the episodes shifts to include more topics of the day, such as environmental issues, Nobita and Doraemon remain the same. Even the earliest episodes, now over 30 years old, remain phenomenally popular in Japan. *Stand by Me Doraemon*, a full-length movie released in 2014, pulls together in one continuous narrative the main story threads from the beginning through the first seven years of the television anime series. The film was a major commercial success in Japan. It ranked number 1 on the box office charts for 5 consecutive weeks and was the second highest-grossing Japanese film for 2014 in Japan, with a box office total of ¥8.38 billion. In February, 2015, it won the Japan Academy Prize for Animation of the Year at the 38th Japan Academy Prize.

Far from realizing time travel, *Doraemon's* creator has made time stand still. From the point of view of social relations versus the inevitable changes brought on by spreading technologies, once called 'progress', *Doraemon* is utterly conservative if not actively Luddite in its sentiments: even if technology does no harm, it is still merely the preferred solution of an immature outlook and cannot be the foundation of an adult character and adult social relations. No future will experience the effects of Nobita's adult life while time stands still in his childhood life. A living Nobi Nobita is 57 years old in 2016. His wife cares for his aged parents.

Doing the same thing over and over, expecting different results, is one casual definition of neurosis. Takeo Doi's (1973) path-breaking work on neurosis and *amae*, the "need for human affection" (Johnson 1993: ix), opens the way to deeper understanding here. While nothing at all depends on Doraemon's gadgetry, Nobita and Doraemon depend deeply and constantly on each other for affection despite the failures of Doraemon's technology to solve Nobita's problems and Doraemon's (and Nobita's own) failure to improve Nobita's character along any timeline. Where can we look among Japanese life models for this relationship of interdependence based on enduring affection and support, and yet which evidently fails to develop the dependent child's character in a way that will help the child enter into and participate in society, effectively to grow up?

Japanese Mothers, Burdens and Affection

Nobita's Mama, like Papa, is an unimportant, two-dimensional figure in the stories, whose only task is to give Nobita an unexceptionable family to be part of. Doraemon, future relative Sewashi's defective technology sent back to correct Nobita's character, is the Japanese Mother of the narrative. That Mothers do and do not build their children's character remains tacit in the narrative and in Japanese life. How can Mothers, so utterly selfless, so self-sacrificing, be thought to have shortcomings precisely as Mothers, when they suffer so to indulge their dependents and thus add their support to help the next generation prosper and succeed? All Japanese know in some way that Mothers do not precisely create (or reform) character in a child (or husband) in the first place. *Sensei* (teacher) does this; Father would if he was ever home; the gang of neighborhood children (*nakama*) relish the chance; public officials and police officers are Mother's standby threat; and indeed the whole rest of the world (*seken, soto*) requires it.

This Japanese Mother disguised as an earless blue male robot cat sent from the future to (re)build Nobita's character is deeply underdetermined in relation to Nobita's equally overdetermined childish child. The character Mother in the Japanese domestic drama indulges (*amayakasu*), but is not understood to build character directly or explicitly. As a superordinate, she is not authoritarian but an enabler. Only later in life, when they recall her long-ago sacrifices for them, can her grown children draw on these emotion-laden memories to help them persevere (*ganbaru*, a deeply revered Japanese value) through life's hardships (Kondo 1990: 83-89). Memories of Mother reduce the hardest Japanese heart to tears. So sending a significantly flawed Doraemon is not exactly a mistake by Sewashi, but no one can have any interest in clarifying this situation. The story asserts that Doraemon is the best impoverished Sewashi, in his limited childhood situation, could manage. Structurally, making Doraemon a Mother in an earless blue cat costume is how Fujimoto keeps Nobita from growing up. He keeps the barber pole turning by stimulating his audience's affectionate attachment and sense of humor, rather than its critical awareness. Viewers do not see Doraemon's affectionate indulgence of Nobita's demands as one of Doraemon's characteristic defects, such as his fear of mice because a mouse ate his ears. Mothers indulge their children and their husbands. The question for the present article is, what expectations do Japanese have that mothers will indulge their parents and parents-in-law? How? And do they?

While Mothers everywhere are caregivers, they care differently from culture to culture. Here I draw on three widely familiar accounts of Japanese mothering relationships from the extensive literature on motherhood in Japan. Peak (1991) contrasts mothers with pre-school teachers; Kondo (1990) describes women of a certain age who work part-time in a confectionary; and Iwao (1993) observes mothers as wives.

Mothers and preschool teachers appear identical because, after all, they are; but their behavior is night and day to the children in their charge. In the popular wisdom of Japanese mothers and teachers, the home and the outside world are so different that the family cannot teach the fundamental rules of social interaction governing life in the outside world. The home is the home, preschool is the outside world, and the two settings require different styles of behavior and habits of self-presentation for success.

This discrepancy between the public and the private, *soto* and *uchi*, has frequently been described by observers of Japanese society. The Japanese language institutionalizes it and ritualizes it in indigenous discourse on the social world (Bachnik and Quinn 1994). The home, or *uchi*, is the private, intimate arena in which one can relax, let all of one's feelings show, and expect indulgence and sympathy from other members of the family. Within the *uchi* a healthy amount of self-indulgence, regressive behavior, and mild aggression are not only cheerfully tolerated, but also encouraged as the indication of intimacy and

trust. However, in the *soto*, the outside world, one must learn to assume a genial and cooperative public persona, in which individual feelings and desires must be subjugated to the harmony and activities of the group (Peak 1991: 7).

The family (*uchi*) is not the group (*shudan*). Neither style of personal interaction trumps the other in the abstract; in a healthy personality each should be exhibited in the appropriate situation. Japanese mothers desire to maintain a certain degree of *amae* in their child's behavior toward themselves and other family members while expecting that the child will learn to display *enryo* (self-restraint) from and toward peers, neighbors, and others outside the family. The first day of preschool presents this expectation to most Japanese children for the first time (Peak 1991: 16). Americans are routinely stunned to find that Japanese preschool teachers, far from considering hitting a matter requiring their intervention, see a child routinely playing alone quietly as an extremely serious behavioral problem (Peak 1991: 165).

This pattern of mothering becomes a significant means of creating intimacy and trust in other settings such as work as well, making them feel "homey." At the confectionary factory, women were instrumental in defining the tone of the work culture on the shop floor, the informal social relations on the job. "They did so primarily vis-à-vis the younger artisans, in their roles as surrogate mothers" (Kondo 1990: 294). Most of the younger male artisans were in their late teens or early twenties, while the part-timers tended to be women in their forties and fifties.

Kondo catalogues the ways these women provide the young men with a humanized work atmosphere, a source of support and care, fostering feelings of togetherness, of "company as family," of work groups which, like the household, become the locus of emotional attachment. "This position is a contradictory one, for it replays on the shop floor the notion that women are emotional workers, caregivers and creators of an *uchi* (homey) feeling" (Kondo 1990: 295) and so continually set themselves apart from the central story of maturity through apprenticeship and masculine toughness and skill: while they are acting like mothers toward these young artisans, they are not improving these young men's characters as disciplined workers.

At the same time, however, their position as Mothers puts them in a position of advantage over the male artisans and serves to make them important, though formally marginal, members of the company. In Japan, Kondo carefully records, the position of care-giver or the one who indulges the selfish whims of another (the *amayakasu* position) is actually a superordinate one associated with parents or bosses. By asking favors of the part-timer women or by acting childish, the young artisans are placing themselves in the *amaeru* position of a child or a subordinate seeking indulgence (Kondo 1990: 295-296).

Iwao describes how this pattern of indulgence based in the need for human affection, as something that can be at least wheedled if not demanded, carries over into married life and the relation between wives and husbands. The domestically helpless husband – and some women do call their husbands "my big baby" or "eldest son" – is a prime target for caring patterns shifted from the young. Japanese women give greater priority to their role as mother than wife, but the two do overlap considerably. As well, this role tends to keep husbands acting like children at home, "as they shift adeptly from the indulged son to the indulged husband" (Iwao 1993, 88-89). As elders, men more easily *amaeru* than women, a Buddhist priest explained when discussing care and loss in late life: "Strength is easier for women to achieve. Men can cry 'mommy'!" (Danely 2014: 177). Nobita cries "Doraemon!"

In commenting on Japan's large numbers of bedridden elderly, Kiefer (1987) points out that allowing oneself to be dependent on the family is culturally "available" (particularly for the very young and the old) and hence, in contrast to North America, Japanese culture indirectly encourages the infirm

to stay dependent. And yet, as Iwao (1993: 56) counters, “the care of both infants and the elderly rests almost solely on the shoulders of women.” So, “availability” of culturally space for “dependency” contrasts with the variable occupation of that space. The similarities *and* differences in the relationship of care-givers and their dependents at the two ends of the age spectrum do not meet to close the circle. A growing social movement in Japan urges a deeper examination of the state of the elderly bedridden in Japan (Ōkuma 2000; Sakuma 1998), insisting that infantilization (“*netakiri-ni-saserareru*,” to be made to become bedridden) is not the simple application of standard mothering technique in the same way to both the very young and the very old, but is rather a means of reducing the demands of the elderly, to make the elderly become bedridden for the care-giver’s own convenience in the way that Doraemon was sent to improve Nobita’s character by his great, great, great grandson, in the way US nursing homes have been accused of over-use of sleep medication. All this is the emotional opposite of *amayaku*, affectionately indulging a dependent’s need for affection, even at some trouble to oneself.

Yet here too we find not a one-way street, but a relationship. Consider the extent to which the elderly, women especially, are determined not to depend on their middle-aged children when their roles and authorities reverse. Traphagan (2000: 151) considers Lebra’s (1976: 55) discussion of dependence and indulgence to reveal patterns of interdependence, each contributing as they can, that dependency in Japanese society should not be viewed as either a wholly positive nor negative concept. People strongly feel “the need to avoid imposing on others’ comfort and freedom” (Kinoshita and Keifer 1992: 177) even when the bond of family allows some degree of dependence and even indulgence. However, even within the family there are limits on how much a member can cause a burden and on how much one is willing to be a burden to others (Traphagan 2000: 153). Either way, whether any daughters (-in-law) do indulge their parents (-in-law) or not, it seems that 1) dependent elders still need affection demonstrated by indulgence, and so might *amaeru*; and 2) it becomes harder and harder to indulge them as senile dementia advances.

The conclusion is hard to avoid that while this notion of *amayaku* and Turkle’s conception of “care *about*” must be very close, and perhaps even includes “care *for*” as well, a third term too must be considered: *meiwaku*, trouble, a burden. A person might well not ask for affectionate emotional indulgence because they do not wish to be a bother. “In one survey conducted on reasons worshipers attend Sudden Death Temples (*pokkuri-dera*), 93 percent stated that it was because they did not wish to become bedridden and a burden on other people. The second most common response (18 percent) was that people did not want to suffer with a prolonged illness like cancer (Woss 1993: 195)” (Traphagan 2004: 26). Long observes that “Death in Japan is feared more often than calmly accepted, but as high suicide rates for the elderly suggest, perhaps it is not feared as much as becoming a burden on others” (Long 2000: 7). Suicide rates for elderly Japanese women, higher than for elderly Japanese men and for both elderly men and women in the US, are “often interpreted in Japan as an indication of their unwillingness to burden daughters-in-law with their care” (Lock 1993: 13).

Amaeru and *meiwaku* emerge as one relationship looked at in the different light of the degree of affection of the person being caused trouble by the person making himself a burden. Children and husbands seem not hesitate to *amaeru* their mothers and wives, since that is Mother’s (and Wife’s) role, to take up that burden cheerfully. But this relationship does not appear to extend uniformly or routinely from the same woman in her role as care-giver to a dependent parent or parent-in-law. Or at least the elderly, especially women, do not shed their *enryo* (self-restraint) in a way that would easily let them impose on their caregiver, when they feel their request for indulgence could seem to be a burden to their caregiver.

Japan has now come to recognize explicitly that caregiver resources are increasingly limited. It is

less explicitly recognized how asymmetrically these resources are allocated: care for children requires infinite patience, even a willingness for the socially superior adult to absorb physical aggression from the child. Child care is the Mother's fundamental duty. Care for husbands plays out in similar ways, if with less devotion, but the question emerges explicitly in Japan whether the wife playing the role of the one who indulges (*amayakasu*) makes her the husband's social superior, and generalizing, whether that means that women have more power than men as a general proposition in Japan (Ogasawara 1998). This matter is treated as something for open debate in a society that routinely ranks near the bottom of the list for gender equality among developed nations: here is one subtle way Japan polices gender role inequality. And finally, all Japanese are familiar with the legend of Obasuteyama, Grandmother Abandonment Mountain, which tells us that, while the elderly merit all the care they require, they sometimes absorb resources that could be better used in furthering the prosperity of the family, which is the fundamental duty of all family members. Indeed, as the household's future looks more and more bleak, grandmother informs her son that it is time for him to take her to Obasuteyama. He resists as long as he can, but ultimately relents, ultimately indulges her, because he too must do all he can for the family, although this is the hardest thing he will ever have to do.

How true is it then that "one also cannot incur *meiwaku* (burden) with a robot" (Sabelli n.d.)? This assessment is too ambiguous. Is it because robots cannot be programmed, ever, to feel burdened or anything else; or is it that nothing one might ask of them could strike a robot as a burden, like a bodhisattva at last entirely free of desire and remaining on earth only to relieve others' suffering? From the other direction, can we move beyond simulacra to robots that can display emotion as humans recognize it? And should we? At this point I have not found evidence that intimate Japanese caregivers do indulge their elderly dependents in ways that parallel or extend their relations with children and husbands, although cultural space is available and the possibility widely valorized if only in the ideal. But given the care resources available to mothers, whose ultimate responsibility is to manage those resources her husband provides her for the good of the *ie*, the senior generation must come third after children and husband.

Discussion and Conclusion

Japanese Mothers do not build character directly through their immediate behavior, they indulge children and husbands in their need for affection and support, which has its positive effects on those who depend on them in the long term. Although the evidence is not clear that women affectionately indulge the elderly in this same way routinely, the culture would allow them to do so, just as it would allow the elderly to press for affectionate indulgence if they could bring themselves to overcome their inhibitions in this area. But duty requires all members to push resources toward the young of their household.

So, would the elderly and their intimate caregivers want to have Doraemon in their lives? Yes, they would. It feels odd to me to say so, but an imperfect anime robot that acts toward his charge as a Mother should act toward her imperfect child, realized, might be an ideal SAR for the elderly who require monitoring, assistance and companionship as they become less and less able to rely on whatever human resources, their own and of others, remain available to them. Elders reluctant to press daughters-in-law for the affectionate indulgence those daughters-in-law (now the superordinates) are reluctant to give or perhaps even feel, would develop a youthful rather than infantilized or neglectful relationship with Doraemon. Is it possible that Japan's robotics engineers will build Doraemon before 2112, albeit without the gadget pouch? Whether they have thought by now of Doraemon as a model robotic caregiver for the elderly, they all know him inside and out. And yet judging by the anime Doraemon we have at present, it seems unlikely anyone supposes he would make a real or lasting difference in peoples' lives, if not ultimately make matters worse. No one would ever think this of a Mother.

While I am not Japanese, it does not seem to me at least that inventing SARs to care for increasingly incapable seniors is “taking the easy way out” as care resources become less and less available to families. The elderly do not require having their characters rebuilt, but on the contrary dread as much as anything losing the personalities they have spent a lifetime developing. Companionship and personal assistance in old age are a different matter than for a ten year-old. But if a realized Doraemon could allow the elderly to enjoy life at least as much as Nobita does with the anime Doraemon, I think no one can ask for or expect more from any robot, and would rarely get as much from human caregivers.

REFERENCES

- Asada, Minoru. 2015. “Towards Artificial Empathy: How Can Artificial Empathy Follow the Developmental Pathway of Natural Empathy?” *International Journal of Social Robotics* 7:19–33.
- Bachnik, Jane and C Quinn, eds. 1994. *Situated Meaning: Inside and Outside in Japanese Self, Society and Language*. Princeton University Press: Princeton
- BBC News: Technology. 2014. “Softbank Unveils ‘Human-like’ Robot Pepper.” <http://www.bbc.com/news/technology-27709828>.
- Bemelmans, Roger, Gert Jan Belderblom, Pieter Jonker, Luc de Witte et al. 2012. “Socially Assistive Robots in Elderly Care: A Systematic Review into Effects and Effectiveness.” *Journal of the American Medical Directors Association* 13:114-120.
- Condry, Ian. 2013. *The Soul of Anime: Collaborative Creativity and Japan's Media Success*. Duke University Press: Durham, NC
- Clements, Jonathan and Helen McCarthy. 2006. “Doraemon.” *In The Anime Encyclopedia*, p.158. The Stone Bridge Press: Berkeley
- Danely, Jason. 2014. *Aging and Loss: Mourning and Maturity in Contemporary Japan*. New Brunswick, NJ: Rutgers University Press.
- DeWit, Andrew. 2015. “Komatsu, Smart Construction, Creative Destruction, and Japan’s Robot Revolution.” *The Asia-Pacific Journal*, Vol. 13, Issue 5, No. 2, February 2.
- Doi Takeo. 1973. *Anatomy of Dependence*. Kodansha: Tokyo.
- Doraemon Television Collection. 2001. *Doraemon Television Collection, Part 1, Vol. 1 – 3*. Wondershow Co: Tokyo.
- England, Paula. 2005. “Emerging Theories of Care Work.” *Annual Review of Sociology* 31: 381–99.
- Hashimoto R. 2000. “Japan’s Aging Challenge.” Presentation to the Morning Plenary Session of CSIS Policy Summit on the Graying of the Industrial World. January 25-26, pp. 1-6.
- Horst, H and D. Miller. 2012. “Normativity and the Principle of Materiality: a View from Digital Anthropology.” *Media International Australia Incorporating Culture and Policy* 145: 103-111.
- Ikegami Naoki. 2000. “The Launch of Long-Term Care Insurance.” *Japan Echo*, June, pp. 30-35.
- Iwao Sumiko. 1993. *Japanese Women*. Harvard University Press: Cambridge, MA.
- Jenike, Brenda. n.d. “From ‘Warm Contact’ to Robotic Caregivers: Transitions in the Meanings of Late Life, Disability, and Elder Care in Japan.” Presented at the 2013 American Anthropological Association Annual Meetings, Chicago, Nov. 21.
- Johnson, Frank. 1993. *Dependency and Japanese Socialization: Psychoanalytic and Anthropological Investigations into Amae*. New York University Press: New York.
- Kiefer, Christie. 1987. “Care of the Aged in Japan.” *In Health, Illness, and Medical Care in Japan: Cultural and Social Dimensions*, edited by Edward Norbeck and Margaret Lock, 89-109. University of Hawaii Press: Honolulu.

- Kinoshita Yasuhito and Christie Kiefer. 1992. *Refuge of the Honored: Social Organization in a Japanese Retirement Community*. University of California Press: Berkeley, CA.
- Kondo, Dorinne. 1990. *Crafting Selves: Power, Gender and Discourses of Identity in a Japanese Workplace*. U of Chicago Press: Chicago.
- Lebra, Takie. 1979. "The Dilemma and Strategies of Aging among Contemporary Japanese Women." *Ethnology* 18:337-355
- Lebra, Takie. 1976. *Japanese Patterns of Behavior*. University of Hawaii Press: Honolulu.
- Levi-Strauss, Claude. 1955. "The Structural Study of Myth." *In Myth: a Symposium*, edited by Thomas A Sebeok, 81-106. Indiana University Press: Bloomington.
- Lock, Margaret. 1993. "Ideology, Female Midlife, and the Greying of Japan." *Journal of Japan Studies* 19 (1):43-78.
- Long, Susan Orpett. 2000. "Introduction." *In Caring for the Elderly in Japan and the US*, edited by S. O. Long, 1-15. Routledge: London.
- Lopez, S. H. 2006. "Emotional Labor and Organized Emotional Care: Conceptualizing Nursing Home Care Work." *Work and Occupations* 33 (2): 133-160.
- Marshall, Robert C. 2013. "Does Certification and Self-governance Professionalize Cooperative Home-care Workers? The Attractions of Autonomy in Kōreikyō's Co-operative Model of Home Care." *Journal of Cooperative Studies* 47(3): 24-35.
- Nakane Junko. 2004. "Elder Care in Japan." *Perspectives* (Gerontological Nursing Association (Canada)) 28: 17-24.
- Nakano Tamiya, Yamaoka Kazue and Yamo, Eiji. 2002. "Use of Health Services Covered by New Public Long Term Care Insurance in Japan: Impact of the Presence and Kinship of Family Caregivers." *International Journal for Quality in Health Care* 14(4): 295-303.
- Odell, Colin. and Michelle Le Blanc. 2013. *Anime*. Kamera Books: Harpenden, Herts.
- Ogawa Naohiro. 1988. "Population Aging and Medical Demand: the Case of Japan." *In Economic and Social Implications of Population Aging: Proceedings of the International Symposium on Population Structure and Development*, Tokyo. United Nations, Department of International Economic and Social Affairs, New York, pp. 254-75.
- Ōkuma Yukiko. 2000. "Netakiri Rojin" no Iru Kuni, Inai Kuni (Countries With and Without "Bedridden Elderly"). Tokyo: Budōsha.
- Orbaugh, Sharalyn. 2002. "Doraemon." *In Encyclopedia of Contemporary Japanese Culture*, edited by S. Buckley. London and New York: Routledge.
- Ouweland, C. 1964. *Namazue and Their Themes: an Interpretive Approach to Some Aspects of Japanese Folk Religion*. E. J. Brill, Leiden.
- Peak, Lois. 1991. *Learning to Go to School in Japan: The Transition from Home to Preschool Life*. Berkeley: University of California Press.
- Pfadenhauer, M and C Dukat. 2015. "Robot Caregiver or Robot-Supported Caregiving? The Performative Deployment of the Social Robot PARO in Dementia Care." *International Journal of Social Robotics* 7:393-406.
- Sabelli, Alessandra. n.d. "Elderly and Robots in Japan: Search for Intimacy and Comfort in the Performance of Daily Actions." Paper presented at the 2011 Am Anth Assn Meetings, Montreal, Canada. Nov. 19, 2011.
- Sakuma Kiyoshi 1998. *Netakiri ni Shinai – Naranai Q & A (Don't be Bedridden, Don't Become Bedridden Q & A)*. Tokyo: Minerva Shoten.
- Senda, Yuki 2013. "The Japanese Family on the Brink of Change?" *Nippon.com*. <http://www.nippon.com/en/currents/d00095/>
- Shilling, Mark. 1997. "Doraemon." *In The Encyclopedia of Japanese Pop Culture*, edited by Mark Shilling. New York and London: Routledge.
- Sharkey, Amanda and Noel Sharkey. 2012. "Granny and the Robots: Ethical Issues in Robot Care for the Elderly." *Ethics and Information Technology* 14:27-40

- Shiraishi Saya. 1997. "Japan's Soft Power: Doraemon Goes Overseas." *In Network Power: Japan and Asia*, edited by P J Katzenstein and Shiraishi T., 234-72. Ithaca, NY: Cornell University Press.
- Shiraishi, Saya. 2000. "Doraemon Goes Abroad." *In Japan Pop! : Inside the World of Japanese Popular Culture*, edited by T. Craig. New York: Sharpe.
- Sparrow, Robert and Linda Sparrow. 2006. "In the Hands of Machines? The Future of Aged Care." *Mind and Machine* 16:141-161.
- Sugiura Keiko, Ito Mikiko, Kutsumi Masami, and Mikami Hiroshi. 2009. "Gender Differences in Spousal Caregiving in Japan." *Journal of Gerontology: Social Sciences*, 64B(1): 147-156.
- Traphagan, John. 2000. *Taming Oblivion: Aging Bodies and the Fear of Senility in Japan*. Albany, NY: State University of New York Press.
- Traphagan, John. 2004. *The Practice of Concern: Ritual, Well-being and Aging in Rural Japan*. Durham, NC: Carolina Academic Press.
- Tsutsui Takako. and Muramatsu Naoko. 2005. "Care-needs Certification in the Long-Term Care Insurance System of Japan." *Journal of American Geriatric Society* 53(3): 222-227.
- Turkle, Sherry. 2011. *Alone Together: Why We Expect More from Technology and Less From Each Other*. New York: Basic Books.
- Wu Ya-Huei, Christine Fassert and Anne-Sophie Rigaud. 2012 "Designing Robots for the Elderly: Appearance Issue and Beyond." *Archives of Gerontological Geriatrics* 54:121-126.
- Woss, Fleur. 1993. "Pokkuri Temples and Aging: Ritual for Approaching Death." *In Religion and Society in Modern Japan*, edited by M R Mullins, Susumu S, and P L Swanson, 191-202. Berkeley: Asian Humanities Press.
- Yamada Miho, Hagiwara Akihito, and Nobutomo Koichi. 2009. "Family Caregivers and Care Manager Support Under Long-Term Care Insurance in Rural Japan." *Psychology, Health and Medicine* 14(1): 73-85.
- Yamashita Junko and Soma Naoko. 2014. "Double Responsibilities of Care: Emerging New Social Risks of Women Providing both Elderly Care and Childcare in Japan." Paper presented at the Third International Conference on Evidence-based Policy in Long-term Care. London, 31 August - 3rd September.