Coffee Break Column - Lean On Me - The Evolution of Robots from Production Tools to Emotional Companions Written by Katsunori Ogawa, Chief Portfolio Manager

In 2024, the California-based IT company Figure AI began shipping its latest humanoid model Figure 02 in a box the size of a human coffin, targeting the robot at manufacturing, logistics, warehousing, and retail support. In the same year, Tesla's rival robot Optimus also garnered significant attention following its debut at the company's We, Robot event; the robot is expected to be able to assist humans in a wide range of tasks upon release.

However, while the global robot industry is focused on more and more human-like robots for areas such as industrial automation, surgical procedures, or military applications, Japan has chosen a different path. Here, robots are not mere cold tools of labour taking human form, but have emerged as companions in a variety of shapes and sizes. These companions can engage in conversation and provide emotional support to their owners. This difference stems not only from the choice of technology used but also reflects the unique cultural traits and distinct needs of Japanese society.

Since the 1970s, Japan has been the dominant player in the global industrial robot market, with its precision robotic arms occupying nearly half of the global market share. In addition, the introduction of Fanuc and Yaskawa robots into automobile production lines was responsible for a dramatic increase in efficiency for Japanese car manufacturers. However, in recent years, Japan has not confined itself to the industrial robot market but has expanded its contributions to wider society. This shift has coincided with the acceleration of population ageing and a declining birth rate. As a result of this demographic crisis, a new and pressing social issue has emerged: loneliness. In 2023, the World Health Organisation (WHO) declared loneliness to be a serious global health threat, one that has been associated with an increased risk of dementia and even incident coronary artery disease or stroke (1). Data indicates that the proportion of single-person households in Tokyo will likely exceed 35% by 2050, with a significant portion comprised of elderly citizens over 75.

Against this backdrop, Japanese companies are developing robots which seek to fill the emotional void in people's lives. Sony's robotic dog aibo, SoftBank's Pepper robot, and the seal-shaped therapeutic robot PARO-though varied in form-share one core feature: creating emotional connections through simulated life-like interactive feedback.

For example, the aibo (relaunched in 2021), pictured below, can recognise its owner's voice, learn daily habits, and express "emotions" through tail wagging and head tilting. Many users consider their aibo as a member of the family, even holding funerals for "deceased" aibos. This design logic focused on human emotion is almost unimaginable in the function-oriented robot market in the West.

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aibo Shinjiru Edition (left), aibo Takuseru Edition (right)

How Robots Became "Soul Repositories"

This unique path is deeply rooted in Japan's cultural heritage. First, the traditional concept of animism makes it easier for Japanese people to accept the personification of non-human objects because in the Shinto religion gods inhabit all things. Second, classic images of robotic companions in Japanese anime and sci-fi culture– such as the beloved character Doraemon–have long prepared market consumers for this development. More importantly, Japanese society's focus on harmonious interactions makes robots ideal: they do not judge or make demands on the user yet can provide a sense of companionship through appropriate responses during an interaction.

This cultural compatibility has led to the thriving of niche markets for Japanese robots. For example, communication robots for a senior citizen living alone which can greet users and remind them to take their medication, or educational robots which can alleviate the pressure on parents to enforce study time by making the activity fun for children through gamified interactions. There are even devices that simulate romantic partner interactions, known as virtual companions.

At a Crossroads

The global robotics industry thus stands at a crossroad. Western companies are betting on general artificial intelligence and humanoid robots (like Boston Dynamics' Atlas and Tesla's Optimus), attempting to create allpurpose laborers and assistants. In contrast, Japan is choosing to explore the possibilities of non-humanoid robots focusing on vertical scenarios that combine affective computing, biosensor technology, and psychology. For instance, the intriguing floating spherical robot BALL by Panasonic can convey emotions through light and

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sound changes alone. The startup Groove X's LOVOT robot uses a teddy bear-like plush exterior and temperature sensors to provide a comforting experience for its users.

Where next?

In the future, the robot market will continue to expand as the loneliness economy spreads and AI emotional recognition technology advances. Robots will truly integrate into the fabric of life when technology no longer insists on imitating human appearances but focuses on understanding the essence of emotions, with robots acting as the supportive "infrastructure" of the human soul.

Therefore, when we consider Japan's unique path a question arises: what is the ultimate value of robot technology? What if its purpose is not necessarily to replace humans as laborers, but to help humans become more complete individuals? If this is true, then while the world is gripped by anxiety about AI replacing the workforce, the rise of emotional companion robots in Japan suggests an alternative future – one where robots are not competitors, but partners who guard the spiritual fire of lonely individuals.

Perhaps one day, the world will no longer focus on the function or purpose of robots in terms of physical labour or race to pursue artificial intelligence, but simply accept these diverse companions as friends on our journey through life.

(1) WHO declares loneliness a 'global public health concern' | Global development | The Guardian

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Katsunori Ogawa is the founder and Chief Portfolio Manager of the Sakigake High Alpha strategy. He has more than 25 years of experience in the asset management industry. Katsunori joined the firm in 1994 and started his asset management career as a client relationship manager for public pension funds in 1997. In 2003, he launched the original Sakigake strategy and after accumulating ten years of exceptional returns, an investor requested Katsunori manage the portfolio with a higher risk/return profile in 2013. This led to the creation of Sakigake High Alpha. He was one of the earliest managers to identify trends such as China's growing consumption and the proliferation of ecommerce, as well as the changes that high-performance semiconductors are bringing to Japanese society. He has been leading the team since the inception of the two strategies.

Katsunori has been honoured with the Japan Best Equity Manager award at the Asia Asset Management Country Awards for five consecutive years, from 2020 to 2024. He holds a BA in economics from Keio University, and is both a Certified Member Analyst of the Securities Analysts Association of Japan (CMA) and a Certified International Investment Analyst (CIIA).