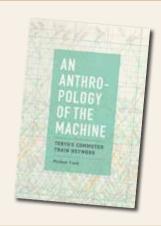
BOOK REVIEW

An Anthropology of the Machine: Tokyo's Commuter Train Network By Michael Fisch

University of Chicago Press, 2018 xi + 302 pages.



Reviewed by Anthony ROBINS

As Alisa Freedman writes, "The sight of long trains rapidly snaking between skyscrapers and of commuters, especially workers in suits and students in uniforms, flooding station platforms, characterizes the allures and difficulties of Tokyo in the global imagination." The city hosts the busiest station in the world, Shinjuku. Images of "tremendous tidal flows of commuters," as Hirooka describes them, forcing themselves onto trains or being forced onto trains are familiar globally, not least in the age of YouTube. Passengers elsewhere marvel at apologies for a train departing twenty seconds early, as reported for the Tsukuba Express in November 2017. Although daily commuting by train takes place in numerous cities around the world and elsewhere in Japan, Tokyo is unmatched in its intensity and its extremes, both positive and negative, of crowdedness, duration (until late at night), punctuality, and sleepiness. It is also unrivalled in the extent to which it touches the population, with operators' typical symbiosis of railway, real estate, retailing, and other businesses. In Fisch's words, "To live in Tokyo is to live on and by the commuter train network" (p. 17).

In An Anthropology of the Machine, the machine is this commuter network in Tokyo in the form of both its trains and its wider infrastructure. Commuters in Tokyo whom the writer describes probably do not reflect on it, as they sit gazing at their smartphones or catch up on sleep before almost miraculously exiting the train at the correct location, but Fisch's aim is to show how passengers and machine interact mostly successfully in a collective relationship. This interaction, or even synergy, means that rail travel in Tokyo can largely proceed smoothly day after day. Central to Fisch's ideas is the theoretical underpinning of Gilbert Simondon's ideas of "technicity" and Simondon's view that machines are not something merely external or intrinsically negative, but "integral to the processes of human thinking and social becoming" (p. 7).

As Fisch makes clear, to achieve this, there is the necessity for yoyū—literally "an excess of what is required" but effectively "leeway"—however constrained and overworked the Tokyo rail system is. This is achieved through a flexible equilibrium between two kinds of resha daiya (train diagram), the carefully calculated and ideal kihon (principle), and the

¹ Freedman 2011, p. 5.

² Hirooka 2000, p. 23.

real and at least somewhat fluctuating *jisshi* (practice). Advances in efficiency, such as more powerful rolling stock or contactless ticket gates, have been crucial in dealing with rising numbers of passengers and in allowing for recovery time, such as *kaifuku unten*, when train drivers have a margin of opportunity to make up for running late.

However, it is when this $\gamma o \gamma \bar{u}$ is sacrificed that the equilibrium is lost and indeed tragedy can result. To show this, Fisch moves away from Tokyo to the Kansai area to devote "90 Seconds," his sixth chapter, to the Amagasaki rail crash. The crash occurred on 25 April 2005 and killed 107 passengers and the train's driver. He shows effectively and comprehensively how the relationships involving humans and machine can break down following a loss of trust, in this case between local inhabitants and the operator, JR West. One part of the chapter, "An unforgiving system," refers to the constraints and pressures which resulted in the crash itself, but can also be seen as anticipating the discussion later in the chapter, where the company is seen as needing to ask for forgiveness, rather than expressing apologies. Almost every chapter title refers to times or intervals, but not mere time intervals, that allow successful recovery for the system to function. However, the fifth chapter, "Forty-Four Minutes," considers recovery from a particularly challenging and prevalent form of disruption in the form of jinshin jiko, literally "human body accident." This is actually suicide in the majority of cases. While again adeptly fitting it within his overall thesis, Fisch gives profound insights into an area about which railway companies are usually extremely circumspect.

In the previous chapter, "Gaming the Interval," the author's analysis ranges from a 1957 film, Ichikawa Kon's Man'in densha (The Full-up Train), through a more recent film, Densha Otoko (Train Man, 2005), with its parallel book and internet roots, on to a hypertext novel and finally to a keitai game. While Fisch was undertaking research, the then-keitai (mobile phone) had yet to be superseded by the more advanced smartphone. What is more, those limits were actually central to the hypertext novel and game. With the now almost all-pervasive smartphone, there is little doubt that commuting and being online can be and are "complementary experiences" (p. 142), not least because Tokyo commuters are provided with an interval to do this, which may be lacking at almost any other time in their day. What the author describes as, "the remediation of the train via the web" (p. 124) can be seen through this human interaction with a machine (the keitai or smartphone) within a machine (the train and its infrastructure). However, it is a challenge to follow the author when he writes that, "If web connectivity promises to transform the commute into a kind of game space ... then it opens the possibility for the train to serve as a point of critical intervention and transformation that begins with the question, Can the train teach us to care?" (p. 125)

An Anthropology of the Machine comprehensively succeeds through its synergy of describing the development of railways in the Tokyo area, with their key function as commuter carriers, and, to use a railway-related term, providing an inspired "platform" by taking a familiar environment in which to explore complex theories of relationships and balance between humans and machines. Given the technological advances now on the horizon with, for example, a series of tests in December 2018 and January 2019 of driverless operation of that most iconic of Tokyo's lines, the Yamanote line which circles the city, plus the ever increasing interworking of various rail companies' trains which has caused a rise in perturbations, and finally the possibility of the system being overstretched during the 2020

Tokyo Olympics and Paralympics, the challenge is to keep this balance whose foundation is the leeway of $yoy\bar{u}$.

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