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MEDIATISED IMAGES OF JAPAN IN EUROPE:
THROUGH THE MEDIA KALEIDOSCOPE

MUTUAL IMAGES

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EDITED BY

MARCO PELLITTERI & CHRISTOPHER J. HAYES

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A TRANSCULTURAL RESEARCH JOURNAL

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CONTACT: mutualimages@gmail.com

MUTUAL IMAGES RESEARCH ASSOCIATION – Headquarters
3 allée de l'avenir, Les chênes entrée 3
64600 Anglet – France

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Utopia or Uprising? Orientalist Discourses of Japanese Robotics in the British Press

Christopher J. HAYES | Cardiff University, UK

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ABSTRACT

For many years, Japan has held the popular image of a technologically advanced nation. This image persists, especially in the last couple of years with the introduction of service and retail robots such as Softbank's Pepper. While sometimes news publications present this as a positive image of the future, an idea of what we in the West have to look forward to, at other times, the image of technology in Japan is negative. Sometimes it has too much technology, or it has technologies that 'we in the West' would not see a use for. This paper uses Critical Discourse Analysis to investigate whether depictions of robots in the British press are characterised by Orientalism, but will also go beyond the usual analysis of news text, by setting depictions of robots against observation and interview-based research in Japan with technology manufacturers in order to see the extent to which the depictions are exaggerated. The study finds that Orientalist discourses inform the majority of reporting, but no single Orientalism is responsible; rather it is a combination of differing styles of Orientalism. Moreover, articles are often less concerned with the events occurring in Japan, but more with their implications for the British reader.

KEYWORDS

Journalism, News Reporting; Japan; Technology; Robots; Representation of Japan; Orientalism; Techno-Orientalism; Othering.

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Introduction

On 11th March 2011, Japan experienced a succession of disasters that continue to affect the country today. The magnitude 9.0 Tohoku Earthquake led to a tsunami, the combination of which led to the deaths of approximately 15,897 (National Police Agency of Japan, 2019) and the nuclear meltdown of the Fukushima Daiichi Nuclear Power Plant in Fukushima Prefecture (Lipsy *et al.*, 2013: 6082). A week later, the British newspaper *The Daily Telegraph* expressed surprise at how Japan was struggling to deal with the consequences of these events, leading with the headline 'It has built robots to take the place of chefs, concert pianists and even sumo wrestlers, but when it

comes to staving off nuclear disaster Japan has been left relying on human efforts' (*Daily Telegraph*, 18 March 2011).

The article presented this revelation as if it were a shock: surely Japan would have robots to tackle the disaster? Before the disaster, the journalist must have been convinced of Japan's technological development, possessing incredibly advanced robots. This belief was shown to be wrong, but it raises questions about Japan-related foreign reporting. In the context of British news, it is particularly important, because news media is probably one of the most prominent sources of information about Japan for Britons, since Japanese media is not commonly consumed in the country (Hernández-Pérez, Corstophine & Stephens, 2017). News media is significant because it is produced constantly. Online news in particular allows for stories to be continuously published and updated, without the restraints of space availability in a physical newspaper, the printing schedule, and the time constraints of scheduled news programming (excluding 24-hour news channels). Online news is also accessible to anyone, anywhere, as it can be read on a desktop computer, laptop, tablet and mobile phone. Moreover, news media is ostensibly factual, presenting accounts of events that have taken place. News media has authority, and is therefore likely to be believed.

Previous studies have shown that news representation of Japan is subject to stereotyping (Hammond, 1997; Hinton, 2014; Matthews, 2019). In particular, Japan is often talked about as being misrepresented in the news and being characterised by Orientalist understandings of the country, which depict Japan as an ancient land of tradition (Hargreaves, Inthorn & Speers, 2001). And yet Japan is also home to the neon lights of the Tokyo metropolis, to video games, and to robots. It is easy to dismiss depictions of contemporary Japan which refer to samurai, geisha and Shinto as Orientalist, but how should we treat depictions of robots in Japan? Can these also be Orientalist? And if so, does that mean they are not true, even though we can see photos of robots in news articles, and see videos online?

The purpose of this study, therefore, is to investigate British news articles about robots in Japan in order to answer two distinct questions:

- 1) How can we understand depictions of robots in Japan within an Orientalist framework?
- 2) To what extent do depictions of robots in articles correspond to observable reality?

Through analyses of British news depictions of robots in Japan, Japan's close association with robots will be shown to be a defining part of discourse about the country, considered a part of Japanese culture. It will be shown that depictions of robots in Japan are not consistent, and are even conflicting: sometimes Japan is presented as possessing a high number of robots and consequently as an almost futuristic country, using robots to solve problems that may one day be faced in Britain; other times, Japan is still presented as having a high number of robots, but this use is portrayed as negative and excessive. Whether positive or negative, analysis will demonstrate that articles typically characterise Japan by its difference to Britain, and more generally, the West, which is typical of Orientalism.

To address the second question, this study must go beyond analysis of news articles. Unlike other studies of journalistic representation of Japan, this study will set depictions of robots in Japan against empirical data, namely interviews carried out with robot manufacturers, robot users, and direct observations of robots in use in Japan. While texts can be shown to possess Orientalist attitudes, it does not disprove their content. As this study will show, robots do exist, but are not used to the extent claimed by articles. This is important for gaining an understanding of how Orientalism, and stereotyping more broadly, exaggerate the truth, and how this is used by the news media.

Finally, the paper will reveal that, while ostensibly about Japan, news articles are often more concerned about how robots will affect Britain in the future than actual developments in Japan¹.

Understanding depictions of Japan through Orientalism

Although all countries and their cultures are unique, Japan is perceived in the West as being 'uniquely unique', a perception Dower argues is rooted in historical encounters with the Japanese, but was reaffirmed by Japan's experiences after WWII, which prompted 'a steady stream of *sui generis* cultural explanations' that continue to hold today (2011: 62).

This emphasis of difference between Japan and the West is part of a larger discourse of Othering, called Orientalism, developed by Edward Said in his seminal work, *Orientalism* (1978). Said describes it as the 'Western style of dominating, restructuring, and having authority over the Orient' (1978: 2). Such attitudes, it is argued, serve to

¹ This work was supported by the GB Sasakawa Foundation Postgraduate Studentship; fieldwork was supported by the Japan Foundation Endowment Committee and the Sir Philip Reckitt Educational Trust; and additional support was given by the British Association for Japanese Studies through their John Crump award.

reinforce the idea of the West as being superior to the East (Macfie, 2000: 1-3). The terms 'East' and 'West' are highly problematic, however, something that Said himself stresses (though it does not prevent him from using the terminology and emphasising the actions of the 'West' – something that will be discussed later). They are a sociological dichotomous divide, splitting the world according to perceived differences. According to Said, the 'East' is made up of countries in the Middle East, North Africa and the Indian subcontinent, that is, chiefly Islamic countries, and those which have a history of European colonialism (1978: 1). He also widens his definition to include the 'Far East', which includes China, Korea and Japan, as these are the countries with which the United States has had long-standing relations with, and no history of colonialism in the Middle East (1978: 1). Meanwhile, according to Said, the 'West' is made up of European countries, Russia and the United States (1978: 1).

Said's work on Orientalism (1978, 1985, 2000 and 2005) approached the critique of the inherent biases of Western observers from an almost exclusively Near/Middle East perspective. As a Palestinian Arab with American citizenship, he admits his own personal interest and inclination to focus on this particular region (Said, 2005). While he recognises that his theory of Orientalism is only applied to Islamic cultures in his works, he asserts that it could be applied to the East as a whole—including the Far East: China, Japan, Korea, etc. (1978: 322). The immediate issue with this is that Said provides no justification for this assertion. His claim that *all* Eastern cultures are treated in the exact same way by 'Westerners', simply because they are all 'Oriental' (1978: 1-5), is bold, particularly as the 'East' covers a large part of the globe and includes countries with wildly different cultures and histories. This is not to say he is wrong necessarily, but he provides no evidence. Indeed, his references to Japan and other East Asian countries are limited to being listed as other countries to which his discourse supposedly applies, often crammed between parentheses at the end of a long passage discussing Orientalist attitudes towards another country, such as India (1978: 285).

As such, *a priori* Orientalism would not seem to fit with the narrative about technology and robots in Japan, so where does this fit in?

Beyond Said: Orientalism and Japan

Japan's relationship with robots is perceived as unique, and Western news media 'identifies Japan with an enthusiasm for robots bordering on the irrational'

(MacDorman, Vasudevan & Ho, 2009: 494). This description of Japan as irrational implies a rational attitude to have towards robots, the Western attitude.

To account for associations between Japan and technology, it is necessary to look beyond Said, whose work did not address Japan directly. Rather it was later scholars who applied Orientalism to Japan, and different offshoots of Orientalism have since been developed, including Techno-Orientalism (Morley & Robins, 1995), Self-Orientalism (Miller, 1982), and recently, Wacky Orientalism (Wagenaar, 2016). The term 'Techno-Orientalism' refers to the discourse that 'the country has come to epitomize a hyper-technified, dehumanized and materialist society' (Lozano-Méndez, 2010: 183). The Techno-Orientalist image of Japan is complex, since not only does it present an image of a high-tech, almost futuristic image of Japan, filled with advanced technology and robots, it characterises the Japanese as robots themselves, devoid of emotion, feeling and humanity (Lozano-Méndez, 2010: 183; Morley & Robins, 1995: 172). Although Techno-Orientalism acknowledges Japan's technological achievements, it is nonetheless bound up in the same prejudices of Orientalism, in which the West is superior: Japan may be superior technologically, but it is at the cost of the country's humanity (Lozano-Méndez, 2010: 184). Thus, a Techno-Orientalist understanding of Japan characterises the country as futuristic, possessing advanced technology, but it is not a positive image.

It would be remiss to suggest that the branding of Japan as a 'robot kingdom' is the fault of the Western observer alone. Indeed, in the 1980s when the depiction of Japan as technologically futuristic began to gain traction, the Japanese themselves 'crowned their nation the "Robot Kingdom"' (Schodt, 1988: 15). By doing so, the country Orientalised itself, something Miller called 'self-Orientalism' (Miller, 1982). Unlike other countries, which are often painted as victims of Orientalism, Japan has constructed a discourse that purposefully distinguishes itself from the West. Much as the picture of the 'Orient' created by Orientalists is largely fictitious, Japan has created its own imagined West. Indeed, the Japan described by American anthropologist Ruth Benedict, who did not speak Japanese nor visited the country, in the well-known *The Chrysanthemum and the Sword* (2006 [1946]) helped influence postwar discourse on Japanese identity and culture (Lie, 2001: 249).

Within Japanese academia, the field of *Nihonjinron* or 'theories about the Japanese' is heavily influenced by this discourse of Japan as unique. Many scholars have branded *Nihonjinron* a form of cultural and ethnocentric nationalism (van Wolferen, 1989). It is

worth noting that *Nihonjinron* predates Said's *Orientalism* and thus the term Self-Orientalism, but it has since been frequently discussed within these contexts. Orientalist discourse labels Japan as collectivist and the West as individualistic, but while Orientalists use this point to highlight the West's superiority, under self-Orientalism and *Nihonjinron*, Japan's collectivism becomes a strength (Iwabuchi, 1994: n.p.). Koichi Iwabuchi (1994) cites several reasons for this: (i) Western countries can be presented as 'superior, enlightened and civilised entities to be emulated' by an aspirational Japan; (ii) at the same time, however, the West is also presented in a negative light, its societies individualistic and selfish; and (iii) Japan's self-Orientalism serves as a source of national identity. By defining itself as the diametric opposite to the West, Japan embraces its otherness (Gluck, 1985). In the case of robots, then, it may be suggested that depictions are influenced by a narrative that comes from Japan itself, be it from manufacturers or from official bodies such as the national tourism organisation, JNTO, both of whom could profit from the depiction of Japan as technologically advanced: for the manufacturers it could increase sales, and for JNTO it could increase tourism to the country.

Lastly, one of the most recent contributions to Orientalist theory is Wacky Orientalism, coined by Wester Wagenaar (2016). Wacky Orientalism is the 'Western perception of Japan as weird' (Wagenaar, 2016: 51), and this weirdness is used by the West to confirm its own normalcy (2016, 51). Central to Wagenaar's argument is that this weirdness is only perceived as such because Westerners are not interested in understanding it (2016: 50). Could depictions of robots in the British news contain Wacky Orientalist discourse?

Before investigating recent news depictions of robots in Japan, it is worth examining historical depictions. As we saw in the example from *The Daily Telegraph*, in 2011 there was a longstanding assumption that Japan possessed advanced robots. The following section will review studies on robots in Japan, applying the theories of Orientalism that we have discussed.

Robots in Japan

Humanoid robots exist in the 'real world', and they exist in Japan (Robertson, 2018: 17). What Jennifer Robertson, author of the recent book *Robo Sapiens Japonicus: Robots, Gender, Family and the Japanese Nation* (2018), means by this is not that Japan has

robots living side by side with humans, but rather they exist as ‘indices of the country’s dominance in the field of robotics’ (2018: 17).

Mateja Kovacic, in her account of the history of robots in Japan, talks in terms of a robotic ‘lineage’ (2018: 573), a concept utilised by Japanese policymakers to promote the Japanese robotics and technology industries. The robotic lineage is characterised by Japanese artisanship and this long history of the refinement and reinvention of traditional crafts using modern methods. Indeed, she also explains how by embedding robots within a homogenous Japanese tradition, robots are not seen as taking over, but rather integrating with and conforming to Japanese societal norms (Kovacic, 2018: 573-575).

Robots have thus been given a historical lineage, cementing them as part of the Japanese tradition. Histories of robotics in Japan often refer to the *karakuri ningyō*, a type of wooden clockwork automaton originating in the Edo period (MacDorman, Vasudevan & Ho, 2009: 489). In the creation of a robotic lineage, there was also the development of Self-Orientalist beliefs about Japan: that the country is unique for its craftsmanship, that the country possesses longstanding traditions that persist to the present, and that these qualities contribute to Japan’s unassailable position in robotics.

Kovacic argues that this ties into *Nihonjinron* discourse, the academic concept of Japanese uniqueness, with Japan’s particular successes in technology and manufacturing attributed to the country’s history of craft-making and ‘*monozukuri* DNA’, which ‘signifies the organic cultural lineage of Japan’s manufacturing tradition as well as innovative excellence, social continuity, and homogeneity of products based on artisanship that is transmitted generationally’ (2018: 575). This has even appeared in official discourse, with a 2017 report by METI describing ‘the traditional spirit of the Japanese’ that continues to be passed down between generations of craftsmen (quoted in Kovacic, 2018: 575).

Morris-Suzuki challenges the significance of the *karakuri ningyō*, citing historians like Okumura Shōji, who have argued that the automata were only entertainment for the upper classes, as compared to European automata which would inspire practical innovations (1994: 53). Robertson echoes this by calling the relationship misleading, calling their shared humanoid design as a ‘superficial resemblance that masks their differences’ (2018: 13).

Nonetheless, a tradition of robots ascribes the technology with a cultural essence, and academics and historians have frequently rooted robots in Japanese culture, both traditional and popular. The animistic beliefs of Shinto have been used to explain the

success of robots in Japan, wherein both animate and inanimate objects can have a spirit or essence (Rathmann, 2013: 8; Kaerlein, 2015: 364).

Real-life robots began to appear in Japan in the 1920s, following the success of a Japanese staging of Karel Čapek's play *Rossum's Universal Robots*, in which the term 'robot' was coined. Of particular note is the robot Gakutensoku, created in 1928 for the accession of Emperor Hirohito (Hornyak, 2006: 35-37). Timothy N. Hornyak argues that this marked the beginning of a small robot boom in Japan, which included the regular appearance of robot characters in comics and stories, but was brought to an end by war with China in 1937 (2006: 39).

The modern robot came to be lodged in the Japanese imagination after the Second World War with the introduction of two fictional robot characters in manga: Astro Boy (originally Mighty Atom or *Tetsuwan Atomu*) and Doraemon (Kovacic, 2018: 584; Pellitteri, 2011: 152-190). Jennifer Robertson notes the particular significance of Astro Boy for Japanese roboticists working today, even observing pictures and figurines of the character on display in almost all the offices and labs in which she conducted interviews with roboticists (2018: 2).

Factory automation technology was originally pioneered in the US, with MIT producing a system that could encode programs on tape to control milling machinery, a system which prompted Japanese researchers to develop their own technologies. Japan overtook the US in automation because the technology was developed in Japan for the purpose of commercialisation, rather than military application, as in the US (Morris-Suzuki, 1994: 201). Indeed, Morris-Suzuki notes that it was official policy that pushed for technological change along this route, emphasising a shift from the 'old' Japan that would copy foreign ideas, to a 'new' Japan, with its own knowledge-industry, of which robotics was a key component (1994: 212).

By the 1980s, the success of Japanese companies was viewed with mistrust and disdain by Western observers. For example, the purchasing of iconic American properties such as Columbia Pictures & Records by Japanese companies was seen as a colonisation attempt 'through the absorption of economic and cultural assets' (Lozano-Méndez, 2010: 188). Indeed, in films such as *Blade Runner* (Ridley Scott, 1982), while the setting is not Japan, but Los Angeles, the Japanisation of America is all but clear with Japanese characters in neon, countless noodle bars and Japanese women in the advertisements. Throughout the 80s, Japan was held in popular imagination as a

glimpse into the future and served as the inspiration for the cyberpunk genre of literature and film. These works often adhered to Techno-Orientalist notions of Japan, that it was technologically advanced, but its society is ‘corrupt, repressive, sexist, and racist’ and ‘trapped in the 17th century’ (Russell, 1998: 98).

While, statistically speaking, South Korea leads the way in industrial automation (see Figure 1, below), today Japan nonetheless remains associated with robots. There are a number of reasons for this: firstly, historically, Japan was the world leader in robotics developments, making significant strides in the 60s and 70s, putting it ahead of other nations (Grau, Indri, Bello & Sauter, 2016: 6159-6160; MacDorman, Vasudevan & Ho, 2009: 490). According to the International Federation of Robotics, it was not until 2010 that Japan was overtaken by South Korea, and it now occupies fourth place, behind South Korea, Singapore and Germany (IFR World Robotics, 2017).

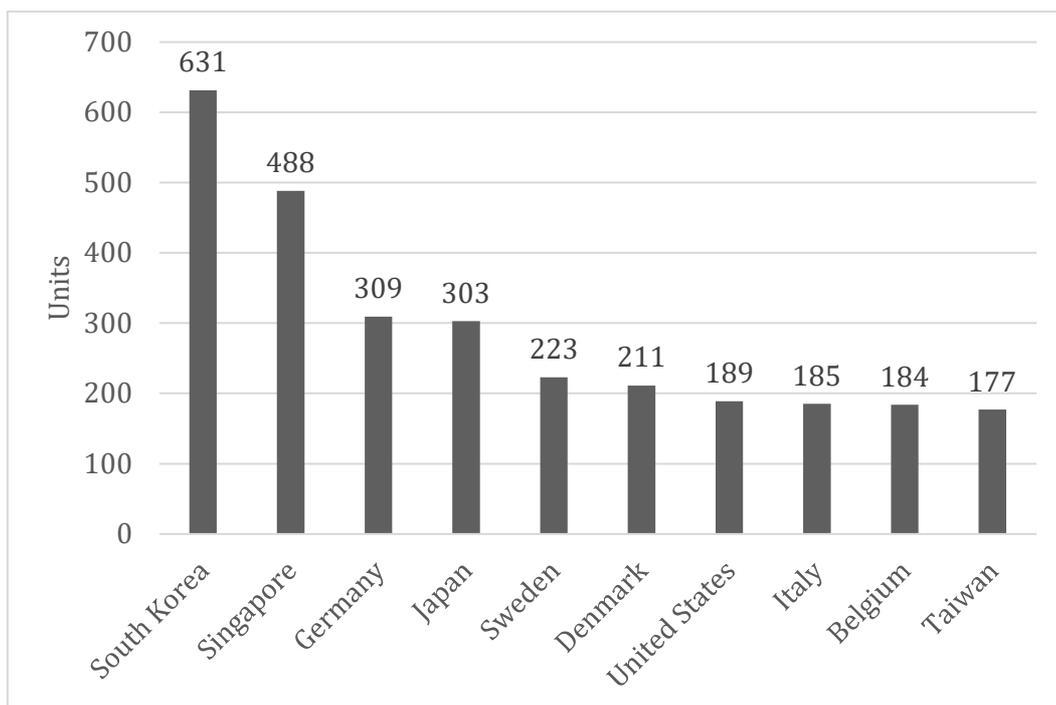


Figure 1. *Top Ten Countries for Number of Installed Industrial Robots per 10,000 Employees in the Manufacturing Industry (IFR World Robotics 2017)*

This brings us up to 2011 when the Triple Disaster occurred. As we have now seen, Japan had recently gone down in the rankings for industrial robot usage, but it nonetheless continued to possess strong associations with robots. Following the revelation that Japan did not have these advanced robots to enter the disaster zones, has discourse about robots

in Japan changed? Are they affected by these same Orientalisms? And, lastly, are these depictions purely Orientalism, or are they based in some fact?

News reporting and coverage of Japan

In 1940, Robert E. Park described news as a form of knowledge that is concerned with events, like history (1940: 670-675). Unlike history, however, news is not concerned with what has come before, but only with the isolated event (Park, 1940: 675). Park also argued that news has to be a story in order to retain the interest of the reader; it has to be 'sufficiently novel, exciting or important' (1940: 676). In the digital age, this requirement remains as important, if not more important due to the demands of social media, where 'the pressure to obtain clicks and shares will also influence decisions about what news to select, as well as news treatment' (Harcup & O'Neill, 2017). As such, we can suggest that news is an event that is deemed worthy of being written about for the reader.²

Foreign news coverage in news publications is comparatively low, and this is not just an issue for British news, but affects publications globally (Carroll, 2007; Moore, 2010; Segev, 2017). What this means for news about Japan is that it is generally limited in Western media and tends to 'report Japan in a distorted way' (Matthews, 2019: 375). In the case of British media, Phillip Hammond and Paul Stirner found that news stories about Japan were 'treated as a springboard for musing about the national character' (Hammond & Stirner, 1997: 88).

To the author's knowledge, the most recent major study of British press representation of Japan was by Ian Hargreaves, Sanna Inthorn and Tammy Speers (2001), which analysed a corpus of British newspaper articles about Japan from a range of different newspapers, spanning a period of ten years from 1990 to 2000. The study found that, despite the globalisation of Japanese goods and cuisine, news media continues to fall back on 'ancient characterisations' (Hargreaves, Inthorn & Speers, 2001: 1). The study found news about Japan in the period studied tended to focus on two points: Japan's 'strangeness' and Japan's 'economic impact' on Britain (Hargreaves Inthorn & Speers, 2001: 29). According to the study, the 'us' is an important explanatory factor in the prevalence of such stories. News is consumed by an audience, and so has to interest that audience. Strange stories are common 'entertainment' stories, whilst stories about Japan's economic impact on Britain

² For a more comprehensive discussion of news values, see Harcup & O'Neill's study which revises John Galtung and Mari Ruge's taxonomy of news, which was first presented in 1965 (2017).

are popular because they hold relevance for the reader—Japan is exerting some local influence (Hargreaves, Inthorn & Speers, 2001: 29).

In terms of our present investigation into robots, the study established that technology was a common theme in news articles, indicating that the British have the idea that Japan is a ‘nation eccentrically passionate about gadgets’ (Hargreaves *et al.*, 2001: 24). The characterisation of the fondness for technology in Japan as eccentric aligns with Wagenaar’s Wacky Orientalism, but also with Techno-Orientalism: articles depict Japan as having these gadgets, but their passion for them is portrayed as aberrant.

More recently, albeit on a smaller scale, Perry Hinton has found that representation of Japan continues to place emphasis on Japanese distinctiveness and (re)interpreting Japan through the ‘Western stereotype of the “cute, looking-down Japanese school-girl thing”’ (2014: n.p.). This has resulted in highly exaggerated and stereotyped stories appearing in the British press over the years. Hinton gives the example of news articles about *enjo kōsai*, a form of compensated dating, in which young women would provide men with company for a fee. In the Western media, Hinton says, this was hyped up and presented as a widespread practice of ‘lolitas’ engaging in underage sex, despite the fact that very few schoolgirls actually did *enjo kōsai* (2014: n.p.). Moreover, he argues that the media missed the cultural context of *enjo kōsai*, in which girls were able to subvert gender expectations by making money for themselves (2014: n.p.). This is a clear example of Orientalist discourse, wherein ‘culture’ is used as an explanatory framework and stereotypical knowledge is appealed to. The traditional Orientalist image of the subservient, passive woman is conjured to explain girls’ participation in *enjo kōsai*.

Hinton also gives the example of the 2013 BBC documentary *No Sex Please, We’re Japanese* (Holdsworth, 2013), a programme about Japan’s falling birth-rate and declining population, and yet the ‘only Japanese men under pensionable age interviewed were two men identified as otaku’ (Hinton, 2014: n.p.). Here, the presenter gives the impression that these men were typical of Japanese men, and also tried to portray them as deviants for playing a simulation game about high school students dating. Again, this is what Hinton argues is a lack of context, and he points out that simulation or ‘sim’ games are very popular with men of the same age in Britain too (2014: n.p.). Here, both Wacky Orientalist and Techno-Orientalist elements are present, as the host cannot help but comment on the what she perceives as weird behaviour by the men, which is explained by the context of the hyper-technified, manga and video

game filled world in which they inhabit. While not comprehensive analyses of British journalism on Japan as a whole, Hinton's research confirms the British media's continued predominance to define the Japanese by their differences to the British.

Methodology

In order to analyse these articles, this study uses Critical Discourse Analysis (CDA), a form of qualitative textual analysis that, as the name suggests, focusses on discourses. Discourse can be defined as the way in which something is talked about, i.e. the kind of language used, the assumptions made, and the social context in which it is discussed. Discourses are the ways in which we talk about and understand the world (Jørgensen & Phillips, 2002: 1). To talk about politics, for example, requires utilising political discourse, which comprises specific vocabulary, and an understanding of what is happening politically and the ideologies behind these actions. It is impossible to talk about any subject without tapping into some kind of common language or drawing upon a wider context. In this present discussion of the representation and depiction of Japan, by paying close attention to the kinds of discourses in use in articles one is able to gain an understanding of how Japan is perceived: for example, is Japan discussed primarily in economic terms? If so, is it discussed as an economic partner, or is it treated as an economic threat? In our particular case, we are interested in the discursive practices of defining Japan by its difference, using the topic of robots in Japan as an example of this.

Unlike other methodological approaches, such as content analysis, which is a quantitative method for breaking texts down into raw data and statistics, such as word frequencies, CDA necessitates close readings of a text in order to ascertain the meanings running through the whole text, that is, the discourses. Moreover, according to Norman Fairclough, who has led the development of CDA as a method, while the use of language is important, the unsaid must also be paid close attention to, as these indicate the assumptions that the reader is supposed to understand (1992).

Another proponent of CDA, Teun van Dijk, argues that all discourse serves to emphasise the distinction between us and them, or Self and Other (van Dijk: 1993). This distinction between us and them is central to Orientalism, which Wagenaar calls 'a matter of Us and Them, where the Us shapes parts of its identity by mirroring itself

against its imagining of the Other' (2016: 48). Analysis of articles will therefore pay close attention to instances of Othering and the positioning of Japan as inferior.

The sample for the CDA was obtained by carrying out a keyword search of the terms 'robot' and 'Japan' in headlines in the top 10 newspapers and news websites in the UK, based on data from SimilarWeb (2016) and the National Readership Survey (Press Gazette, 2015).³ In order to reflect reporting of Japan since *The Daily Telegraph* article, the analysis will focus on the following five years between 1 January 2012 and 31 December 2017.

By selecting such a recent period of time, we are able to address the second research question: To what extent do depictions of robots in articles correspond to observable reality? In order to facilitate this aspect of the research, the CDA will focus on articles pertaining to three specific robots as examples of robots frequently discussed in the British press as well as examples of robots known to still be in use. First, the CDA will examine the texts, analysing their structures, their vocabularies and their assumptions. In qualitative research, the frequency of words is not as important as how these words are used, which necessitates close reading. Furthermore, the purpose of this analysis is to reveal assumptions, which are not always expressed in words, but rather are assumed to be understood by the reader as pre-existing knowledge. It is in these assumptions that we are most interested, and analysis will pay close attention to how Japan is understood and whether it corresponds to Orientalist notions and attitudes.

It is not enough to identify Orientalism or exaggeration, however, because this does not immediately deny the truth of these articles insofar as these technologies exist and are used. This study seeks to gain a better understanding of how Japan is Orientalised in the media by assessing the degree to which these articles are accurate, using robots as a specific example of a technology purportedly in use in Japan. As such, in addition to analysing the discourses in articles, the content of the articles themselves will be critically evaluated through interviews with the manufacturers of robots discussed, interviews with companies that use them, and observations of the robots in situ.

³ Due to the UK's diverse and multicultural population, not all of the top 10 publications and websites were in the English language, including the Polish news sources *Wirtualna Polska* and *Onet*. These non-English sources have been excluded from these studies, and a revised top 10 was constructed from English language sources only, these being: *BBC News*, *MSN*, *Daily Mail*, *The Guardian*, *The Telegraph*, *The Daily Mirror*, *The Independent*, *IB Times*, *The Metro*, *Sky News* (SimilarWeb 2016; Press Gazette 2015).

Introducing the robots for this study

Three robots were selected from the sample of news articles as examples of recent robots that have received frequent press coverage: Chihira, Kirobo and Pepper (see Figure 2, below). As well as their prominence in the sample, these robots were chosen because they are robots that are still in use at the time of writing and are thus theoretically observable, allowing the author to investigate the degree to which depiction deviates from actual use.



Figure 2. From left to right: Chihira Junco by Toshiba, Kirobo Mini by Toyota, Pepper by SoftBank Robotics (formerly Aldebaran Robotics)

Below, each of the three robots is introduced, and lists are given of the articles retrieved in the keyword searches. Thereafter, the articles are analysed, drawing comparisons between each of the robots. Following this analysis, claims in news articles will be set against interviews and observations carried out in Japan.

The electronics company Toshiba is perhaps best known in the UK for its computing and audio/visual equipment. In 2014, Toshiba announced the development of a humanoid communications robot, based on its own robotics research as well as with collaboration from Osaka University (well-known for robotics and home to roboticist Hiroshi Ishiguro) in the creation of a human-like appearance (Toshiba, 2014). The robot, called Chihira, features in many articles in the sample, and is the first example robot used in this study. The robot has seen multiple iterations: first Aico, then Junco,

and most recently, Kanae (*BBC News*, 9 March 2016). Across the five-year timespan, seven articles relating to the robot Chihira were published in British news publications (print and online). In Table 1, below, headlines and leads (if available, separated by a semi-colon) are given for each of these articles.

Headlines and leads (if available) for articles relating to Chihira

<i>MailOnline</i>	7 October 2014	Dinobots, ping-pong-playing bugs and tiny cheerleaders: The latest innovations in robotics go on display in Japan
<i>Metro</i>	9 January 2015	Could this Geisha android be the very first robot sex doll?
<i>MailOnline</i>	16 April 2015	Can I help you? Toshiba puts its humanoid robot to work in Tokyo department store
<i>Independent (online)</i>	27 June 2015	Humans: Are the scientists developing robots in danger of replicating the hit Channel 4 drama?; We want robots to do our drudge work, and to look enough like us for comfort
<i>The Times</i>	5 September 2015	The robot coming to take your Job; We are on the cusp of a techno-revolution that could make us all redundant, says Tom Whipple
<i>BBC News (online)</i>	9 March 2016	Toshiba's robot is designed to be more human-like
<i>The Mirror (online)</i>	10 March 2016	Robots could take over hotel industry by 2020 as travellers welcome assistance from automatons; Machines fitted with the latest artificial intelligence technology could soon be greeting guests at receptions, cleaning rooms and serving food, it's claimed

Table 1. *Headlines and leads (if available) for articles relating to Chihira*

The second robot, Kirobo, currently exists in two iterations: Kirobo, which gained international press coverage in 2013 as it became the first humanoid robot to go to space (*BBC News*, 4 August 2013), and Kirobo Mini, unveiled in 2015. Kirobo Mini also gained international press coverage for its communication abilities (*The Sunday Times*, 1 November 2015). Twelve articles were found relating to Kirobo, the headlines and leads (if available) for which have been given in Table 2, below. Of these articles, seven refer to the first Kirobo, whilst the remaining five refer to the Kirobo Mini.

Headlines and leads (if available) for articles relating to Kirobo

<i>The Guardian (online)</i>	27 June 2013	Kirobo the talking robot makes for one very creepy space companion
<i>BBC News (online)</i>	4 August 2013	Kirobo is world's first talking robot sent into space
<i>Metro</i>	4 August 2013	One giant leap for talking robots as humanoid 'astronaut' Kirobo heads for International Space Station from Japan
<i>The Independent</i>	10 August 2013	SPACE: THE LONELY FRONTIER; Of all the hardships astronauts face, lack of company can be the most daunting. Could a talking robot alleviate the problem? Tim Walker reports
<i>MailOnline</i>	5 September 2013	'One small step towards a brighter future for all': Kirobo goes down in history by becoming the first robot to talk in space
<i>Metro</i>	5 September 2013	Meet Kirobo: Japanese robot calls home from the International Space Station
<i>MailOnline</i>	29 August 2014	Kirobo the robot is stuck in space! Japanese robot sent to befriend astronauts has his trip home delayed – and says he is 'lonely' after his astronaut friend came back to Earth
<i>The Sunday Times</i>	1 November 2015	Not a toy, but Toyota's little bundle of joy for tired drivers; The car maker's tiny Kirobo robot is designed to keep motorists happy and alert on long trips. So why does it know no jokes? Dominic Tobin reports from Tokyo
<i>BBC News (online)</i>	3 October 2016	Toyota launches 'baby' robot for companionship
<i>The Independent (online)</i>	3 October 2013	Toyota unveils Kirobo Mini, a robot baby intended to make lonely people more happy [sic]
<i>MailOnline</i>	3 October 2016	Meet Toyota's tiny 'hope' robot: Talking Kirobo Mini sells for under \$400 but its real value is 'emotional', says firm
<i>The Sunday Times</i>	9 October 2016	Gadget fix; Take your GoPro to new heights, bond with a cute baby robot, relax in a virtual world, snap up an iPhone 7 rival and size up a belting wearable, writes Graeme Lennox

Table 2. *Headlines and leads (if available) for articles relating to Kirobo*

The third robot is Pepper, developed by SoftBank Robotics (formerly Aldebaran Robotics), and announced in 2014 (*BBC News*, 5 June 2014). Of the three robots, this is perhaps the most well-known Japanese robot, yielding nineteen articles in the keyword search, the most in the sample. According to news articles, Pepper can be found in hundreds of stores and businesses across Japan, used by retailers (including SoftBank's own stores), banks and other businesses as an alternative to human sales assistants.

Headlines and leads (if available) for articles relating to Pepper

<i>BBC News (online)</i>	5 June 2014	Softbank unveils 'human-like' robot Pepper
<i>MailOnline</i>	5 June 2014	Meet Pepper, the world's first robot that reads emotions: Cute droid knows if you're upset, cracks jokes and offers support
<i>Metro</i>	5 June 2014	'I want to be loved' Meet Pepper the humanoid robot who can read your emotions
<i>i (Independent Print Ltd)</i>	6 June 2014	Meet Pepper, the kind and caring robot who just wants to be loved; It could even be used to look after Japan's elderly
<i>MailOnline</i>	23 October 2014	Would YOU be friends with a robot? Human-like droids could banish loneliness and keep the elderly company, experts claim
<i>BBC News (online)</i>	18 June 2015	Pepper robot to go on sale to public in Japan
<i>MailOnline</i>	22 June 2015	Pepper the 'emotional' robot sells out in ONE MINUTE: 1,000 models of the Japanese humanoid sell for \$1,600 each
<i>MailOnline</i>	13 July 2015	What it's like to live with Pepper the 'emotional' robot: Humanoid gives compliments, offers advice and 'prattles on'
<i>Independent (online)</i>	22 July 2015	Social robots such as Pepper can help with household chores – but at what cost to privacy?; consumers are snapping up the humanoid-looking robots
<i>Metro</i>	15 September 2015	Are you going to be replaced by a robot?
<i>MailOnline</i>	23 September 2015	No sex please, we're robots! Buyers of hit new 'emotional robot' Pepper to sign contract vowing it won't be used indecently
<i>Express Online</i>	23 September 2015	Want this robot? First you must promise not to have SEX with it?
<i>Metro</i>	29 September 2015	This is one robot you definitely can't have sex with
<i>The Guardian</i>	29 September 2015	No sex, please, they're robots, says Japanese android firm; SoftBank tells customers buying Pepper they 'must not perform any sexual act' on the humanoid
<i>The Telegraph (online)</i>	28 November 2015	My weekend with Pepper, the world's first humanoid robot with emotions; An ambitious first step towards a new generation of household robots, Pepper talks, dances and feels. Danielle Demetriou took him home for a stay with her family
<i>MailOnline</i>	30 November 2015	Dressing for cybersuccess: Japanese fans of Pepper robotic assistant create online fashion boutique with everything from \$163 kimonos to makeup and jewellery
<i>MailOnline</i>	2 December 2015	Androids everywhere: From superhero suits to realistic humanoids, Japan showcases the latest in robotics
<i>MailOnline</i>	27 January 2016	The cellphone store staffed by ROBOTS: Pepper will greet customers, answer questions and sell handsets in Tokyo
<i>MailOnline</i>	24 March 2016	The phone store run by ROBOTS: Tokyo firm replaces staff with a team of Pepper the 'emotional' humanoids

Table 3. *Headlines and leads (if available) for articles relating to Pepper*

Emerging themes in articles about robots in Japan

Articles relating to each of the three robots were first analysed for key themes, utilising grounded theory methodology (Glaser & Strauss, 1967). General concepts present in each article were noted down as part of a process of open coding, following Berg's approach (2001). Once these concepts were listed, they were grouped together into more specific themes in a way that 'articulates a coherent understanding or theory of the phenomenon of study' (Cohen & Crabtree, 2006).

Key themes in articles about Chihira

Theme	Number of articles
Robots are human-like	6
Robots are eerie, unsettling	4
Robots taking over/uprising	3
Robots taking jobs from humans	3
Robots can solve/aid the issue of elderly care	3
Robots in jobs	1
Sex with robot	1

Table 4. *Key themes in articles about Chihira*

Of the seven articles that referred to Chihira, six focussed on her human-like appearance, with four describing it as being eerie or unsettling. This discomfort with the robot is also paralleled in three articles' references to robot uprisings and the threat of robots to humans' jobs. Observable in these articles is a variance in attitudes towards robots: three articles describe how robots like Chihira can be used to aid in the issue of elderly care in Japan's ageing society, whilst other articles portray this in a negative light, instead focussing on how robots will be taking jobs away from humans, such as in the hotel industry (*The Mirror*, 10 March 2016).

Articles about Kirobo mostly focussed on the companionship aspect of the robot, with eight of the twelve articles making some reference to this (see Table 5 below). Five of the articles relate to the Kirobo Mini, the commercially-available version of the robot designed to sit in car cupholders during journeys, offering conversation and capable of connecting to vehicle navigation and entertainment systems, and yet only two of these articles actually describe this purpose.

Key themes in articles about Kirobo

Theme	Number of articles
Companion for humans	8
Childlike	4
Driving companion	2
Emotional value	2
Robots as substitutes for children	2
Disturbing future	1
Robots can solve/aid the issue of elderly care	1
Robots are eerie/unsettling	1

Table 5. *Key themes in articles about Kirobo*

The table above also shows that two articles referred to the Kirobo Mini as a substitute for a real child. *The Independent* (3 October 2016) said that the robot ‘looks like a baby – and could even serve that purpose for people in Japan, where it will be sold and where falling birth rates mean there are fewer and fewer children’. *BBC News* also writes about this, but clarifies that this is not a purpose given by Toyota themselves, but rather speculation by other news outlets (3 October 2016). Despite this explanation, the article goes on to quote Professor Dautenhahn of the University of Hertfordshire, who calls this an ‘offensive’ suggestion (*BBC News*, 3 October 2016).

Moving on to Pepper, all articles relating to the robot refer to its ‘emotional’ capabilities, often through the epithetical moniker of the ‘emotional robot’. This refers to the robot’s apparent ability to recognise emotions from facial expressions. This is part of the discursive practice of the Pepper narrative, established first in articles reporting the unveiling of the robot. Approximately half of the articles refer to Pepper’s ‘employment’ in shops and other businesses throughout Japan, but as can be seen in Table 6, below, articles differ in their representation of the motivation of this and the levels of positivity regarding this use.

Key themes in articles about Pepper

Theme	Number of articles
Emotion recognition	19
Robots in jobs	9
Japan is already in an age of robots	8
Robots taking jobs from humans	8
Companion for humans	5
Robots can solve/aid the issue of elderly care	5
Sex with robot	4
Robot taking over/uprising	2
Robots can solve/aid labour shortage	1
Japanese culture of robots	1

Table 6. *Key themes in articles about Pepper*

In some cases, Pepper’s use is pragmatic—the robot will help with the issue of Japan’s labour shortages, and the related problem of care for the increasing elderly demographic. These articles present Pepper as a viable solution for a real problem, similar to articles about Chihira and Kirobo, as seen in Tables 4 and 5, respectively. Table 7, below, collates examples of this depiction of Japan’s use of robots in a problem-solving capacity:

Examples of Japan’s use of robots as pragmatic

Chihira	The goal is to design a companion for the elderly and people with dementia, to offer telecounselling in natural speech, communicate through sign language, and allow healthcare to keep an eye on elderly people (<i>MailOnline</i> , 7 October 2014)
Kirobo	Of all the hardships faced, lack of company can be the most daunting. Could a talking robot alleviate the problem? (<i>The Independent</i> , 10 August 2013)
Pepper	During my visit I watched Pepper , an endearing 4ft humanoid programmed to read and respond to emotions, lead a group of patients in a singalong, followed by basic aerobic exercises. With its soothing childlike voice and enthusiastic hand gestures, the robot has stimulated residents who are often unresponsive to humans, according to staff.

Table 7. *Examples of Japan’s use of robots as pragmatic*

The danger of robots

While the examples of pragmatic uses for robots show Japan’s use of robots being presented positively, in other articles there is also a negative depiction of robots, which are taking jobs away from humans, as can be seen in the examples below:

Examples of references to robots taking jobs

<i>Metro</i> , 15 September 2015	The end is nigh. Robots will apparently take over 35% of our jobs by 2035.
<i>MailOnline</i> , 15 April 2016	Claims made by an expert in artificial intelligence predict that in less than five years, office jobs will disappear completely to the point where machines will replace humans.
<i>MailOnline</i> , 14 July 2016	it also refused to answer whether is [sic] was looking to take our reporter's job, simply waving and saying goodbye at that point
<i>MailOnline</i> , 21 July 2016	As robots increasingly make their way into the workforce, some have argued that they will soon be taking over many traditionally human jobs.

Table 8. *Examples of references to robots taking jobs*

As Table 9 below shows, some articles take this one step further and draw on Western popular culture to describe potential uprisings by robots, with references to robots like the Terminator (*Metro*, 5 June 2014). This language reinforces a discourse of fear, permeating articles about robots. Rhetoric in articles suggest an increasing pervasion of robots throughout all aspects in life.

Examples of references to robot uprisings

<i>Metro</i> , 5 June 2014	As any science fiction fan knows, Terminator robots could enslave us all. But our would-be cyborg overlords will have to get through Pepper first.
<i>The Independent (online)</i> , 22 July 2015	For all the stories about the perils of artificial intelligence, these machines are strangely disarming
<i>MailOnline</i> , 14 July 2016	[on Pepper not being able to answer whether it wants to rule the world] a worrying refusal that does not bode well for the future of humanity.
<i>The Sunday Times</i> , 22 October 2017	Yet in the West, the mantra that the " robots are coming" is still often seen as more of a threat to jobs than an opportunity.

Table 9. *Examples of references to robot uprisings*

While in many articles there is a sense of fear that reliance on robots could lead to a robot uprising, there were also articles that used the case of Japan to show that this did not have to be the case, pointing to the way Japan has produced robots that are friendly and people want to interact with them. While this is somewhat positive, it nevertheless reinforces a sense of difference between the reader, presumably British, and the Japanese. The British reader has apprehensions about robots, but not the Japanese.

In some articles, however, this is taken to the other extreme—that the Japanese are eccentrically passionate about robots, even to the point of a kind of techno-fetishism

and sexual inclinations towards the machines. Below are some examples of news articles that have made this association:

Examples of references to potential sex uses for robots

<i>Metro</i> , 9 January 2015	Toshiba has developed a Japanese Geisha-bot that will sing, talk to you – and potentially do a bit more.
<i>MailOnline</i> , 23 September 2015	Some experts now say sex robots far more sensitive, attractive and 'emphatic' than Pepper - which humans could seemingly fall in love with - are just a few years away.
<i>Express Online</i> , 23 September 2015	PEPPER is an advanced robotic companion that can offer emotional advice and make small talk with its owner. But just don't expect to have sex with it, its creators have warned buyers.
<i>The Guardian</i> , 29 September 2015	While many fret about a dystopian future in which robots turn on their human creators, experts on robot ethics have warned about the exploitation of the machines for sex.
<i>The Guardian</i> , 29 September 2015	[...] as sexual partners, Japan's new generation of android robots are off limits.
<i>Metro</i> , 29 September 2015	While he has very sweet eyes and all, we're not sure why (or even how) people would want to get down and dirty with him.

Table 10. *Examples of references to potential sex uses for robots*

The Chihira robot was referred to as a 'geisha' robot, implying that the robot had been designed for purposes of a sexual nature, though in the content of the article it makes no reference to the ways in which the robots are geisha, beyond being designed as an attractive Japanese woman. Rather, it is assumed that because the robots are made to look like Japanese women, they must be intended as geisha. The use of this word, too, evokes stereotypical depictions of Japan, specifically traditional Japan, as geisha are an old-fashioned concept, often used in an English-speaking context as synonymous with a Japanese prostitute, although this is not an accurate translation. The attribution of the 'geisha' description to the robot, a passive machine programmed to follow commands (here, give directions and answer simple questions), also invokes and reinforces the stereotype of Japanese women, and Asian women more broadly, as submissive and available sexually.⁴

In the case of Pepper, several articles took this association further by writing articles about the condition that those who lease a Pepper unit must not have sex with it (e.g.

⁴ The sexual availability of Japanese and Asian women is a stereotypical depiction sometimes referred to as 'yellow cab' or イエローキャブ (*Ierō Kyabu*). In the late 80s and 90s there was a brief sensation in the Japanese media about Japanese women rejecting Japanese men in favour of Western men. A study by Uzama in 2012 found that this belief was an influencing factor for some tourists to visit Japan (Uzama 2012, 147). For more information about the term, see Kelsky 1994.

Express Online, 23 September 2015). However, in articles the exact wording of the agreement is not given. Indeed, this is just one item on a list of eighteen 'prohibited' actions proscribed by SoftBank, among others including carrying out illegal activities, infringing intellectual property and copyright, and defamation (SoftBank Robotics, 2018), though these are unmentioned.

Within Saidian Orientalist discourse, the East is portrayed as lacking the morality of the West, and similarly within Techno-Orientalism, while Japan is technologically advanced, it is inferior to the West because it is morally inferior. In modern times, Japan's supposed immorality and sexual perversion has often been linked with *otaku* culture. Sharon Kinsella's book *Adult Manga: Culture and Power in Contemporary Japanese Society* (2000: 11), discusses the 'moral panic' that took place in Japan and internationally regarding the content of some manga, which depicted sexual violence as well as *lolicon* (cartoon girls that appear childlike) engaged in sexual activity. Hinton links this to Britain's particular situation where in the 80s and 90s, home media was subject to censorship to ensure children did not see anything inappropriate, including American horror movies and also Japanese anime (2015: n.p.). Anime was difficult to access and often assumed to be just tentacles and violence, and Hinton demonstrates that this image persists by once again taking the example of the BBC documentary *No Sex Please, We're Japanese*, in which Akihabara is presented as a hotspot for soft porn manga (2015: n.p.). Taken within the wider discourse where we already have articles about a 'geisha' robot, there are clear associations between the Japanese and sexual deviance, which these articles reinforce.

Kirobo, meanwhile, has also been included in this eccentric discourse. In 2016, Toyota appeared at technology expo CEATEAC in Tokyo, at which the author was in attendance. Here, the company showed off the commercial iteration of the Kirobo robot, the Kirobo Mini, which it had announced the previous year. While the robot was promoted as a pocketable companion robot, designed to fit into a car's drink holder, as we have seen above some articles claimed very different purposes: that the robot was a substitute baby for childless couples in Japan, or even that it served to 'stir' maternal instincts in Japanese women. This was linked to varying factors, such as the declining birth-rate, lack of interest in sex, and the busy work lives of the Japanese. Techno-Orientalist discourse is present here, too. Japan is presented as possessing advanced technology in the form of robots, but these robots are presented in the context of Japan's problems, such as an ageing population and a declining birth-rate. Its decision

to apparently choose technology as a solution is shown in a negative light, with the (erroneous) suggestion that Kirobo Mini could act as a surrogate child branded 'offensive' (*BBC News*, 3 October 2016).

Observations and interviews

Whilst attitudinally these discourses are different, they nonetheless position Japan as being either already in the future, technologically speaking, or working towards a futuristic society. By locating Japan in the future, Japan is distanced from Britain and the West temporally, in addition to its geographical and cultural distance. Indeed, in the examples shown above, this distance is used to emphasise Japan's difference to Britain and the West. What differs between the depictions is whether this difference is positive or negative.

In addition to exposing Orientalist discourse through the CDA, the state of robotics as portrayed in news articles was tested against interview and observation data gathered in Japan, in order to assess the degree to which news depictions Orientalised or otherwise exaggerated about the use of robots in Japan. Interviews were carried out with representatives from Chihira's manufacturer, Toshiba, and Kirobo and Kirobo Mini's manufacturer, Toyota. An interview could not be arranged with SoftBank, but one of the companies to have leased Pepper for retail use, Nestlé, agreed to interview.

Observing the Chihira Junco robot at the AQUA CITY shopping centre, it was evident that the description 'geisha' was inaccurate. While the news article (*Metro*, 9 January 2015) was describing the previous iteration of the robot, Chihira Aico, visually the two are identical, and Junco possesses more advanced capabilities, with more fluid movements and programmed to respond in Chinese. However, despite being more advanced than Aico, the interviewee from Toshiba said that Junco had no AI (artificial intelligence) and could not directly interact with people, although such features were in development (Hayes, 2016a). The claim that the robot would be able to act as a carer, 'sing, talk to you – and potentially do a bit more' (*Metro*, 9 January 2015) was not only shown to be an exaggeration, but evidence of confusion between the terms 'robot' and 'AI'. AI, which we will briefly define as the ability for machines to learn, reason, and correct itself. We may even extend this crude definition to include the possession of self-awareness. Importantly, a computer or machine possessing AI is capable of making decisions. Although robots can

possess AI, not all do. The robots described in this article do not, but rather are programmed to carry out specific tasks and to answer specific questions.

One of the aspects of Chihira that journalists picked up on was its human-like appearance, resembling a Japanese woman (or, as we have seen, a geisha). According to the interviewee, the robot *is* Japanese. That is, it was important that the robot resemble a Japanese woman for the purposes of establishing a relationship between the robot and those who interact with it (Hayes, 2016a). Furthermore, the interviewee demonstrated Self-Orientalism by stating that the Japanese are more readily able to accept robots than those from other countries, it being part of the culture (Hayes, 2016a).

According to an interview with a representative from Toyota, Kirobo Mini is intentionally childlike and is intended to provide ‘meaningful’ communication through its emulation of emotive responses (Hayes, 2016c), but the leap from this official narrative to the claims made in English-language foreign news sources is indicative of an attitude of Japan that is strange, pathetic and technofetishist; it is characterised and defined by its perceived difference. In the robot’s role, stated by the manufacturer itself, Kirobo Mini bears similarities to the ‘Assistant’ apps found on smartphones and in smart speakers, albeit anthropomorphised.

Regarding the reception of the robot, while at the time of the interview the robot had only just been announced and thus not on sale to the public, the interviewee was able to comment on the immediate media reception to Kirobo Mini. The interviewee was aware of reports about the robot being used as a surrogate baby, but said that this was not the intention (Hayes, 2016c). While the robot is certainly intended to provide a conversation partner to someone who is lonely, it lacks the context of *why* that person is lonely, namely because they are driving home from work with no one to talk to (Hayes, 2016c). Indeed, the article in *The Independent* (3 October 2016) makes no reference to the intention for the robot as a car accessory, not even the carry case designed to fit into a car drinks holder. Instead the article focusses on Japan’s population decline ‘where falling birth rates mean there are fewer and fewer children’, and suggests that Kirobo Mini is intended to fill this gap (3 October 2016).

Although the interviewee provided explanations that counter the Techno-Orientalist narrative of Kirobo Mini as a replacement for children, the interviewee nonetheless displayed similar Self-Orientalism to the interview from Toshiba. The interviewee said that the Japanese had a long history with robots and were thus more likely to accept them

than in other countries, citing robots from popular culture, such as Doraemon and robots in anime (Hayes, 2016c).

In an interview with a representative from Nestlé, one of the companies using the robot Pepper in a retail setting, the interviewee admitted that the robot was a marketing gimmick, designed to improve sales, due to shop staff not possessing adequate knowledge of their products (Hayes, 2016b). The company does, however, see real potential in the use of robots in a sales capacity and is continuing to develop the capabilities of the robots it has leased (Hayes, 2016b). This interviewee did not display any kind of Self-Orientalism in describing the success of the robot, but instead focussed on the effectiveness of it as a sales tool, acknowledging that it could be implemented in other countries where Nestlé operates.

Based on the author's own interactions with Pepper robots, the depiction of the capabilities of Pepper in the press is somewhat exaggerated. Most of the interaction with the robot is done through a tablet computer embedded in the robot's chest, rather than as a two-way conversation, as per the image perpetuated in the media. Moreover, while the robot has seen wide deployment, in the author's own observations, Pepper was rarely being used, or was switched off altogether, thus calling into question the depictions of Japan as robot-obsessed.

Indeed, an empirical study of Japanese attitudes to robots found that '[in] contrast to popular belief that the Japanese love robots, our results indicate that the Japanese are concerned about the impact robots might have on society and that they are particularly concerned about the emotional aspects of interacting with robots' (Bartneck *et al.*, 2007: 225). Although this does not negate the claim that the Japanese are generally more accepting of robots, it does demonstrate that this is not a blind willingness. When cultural explanations are taken away, Japanese attitudes towards robots are not necessarily different to anywhere else. For example, a 2018 paper by Jasmin Bernotat and Friederike Eyssel demonstrated that Japanese and German attitudes towards the acceptance of robots in the home were broadly similar, with both groups displaying anxiety towards robots (Bernotat & Eyssel, 2018).

MacDorman, Vasudevan and Ho (2009: 494) posit that Japanese willingness to work towards a robot-filled future is built upon a heightened awareness of the technology's current limitations, unlike the Western journalists who report on the topic. Instead, it could be argued that these depictions of robots in Japan tell us more about Western perceptions of robots and their usage in Japan, and also the limitations of these perceptions.

In the BBC Radio 4 documentary, *Misunderstanding Japan*, Christopher Harding makes the point that Japan is 'a country that's really a lot like the UK' (Harding, 2015), but that knowledge of the country is limited by its representation in the media. The issue is, however, that news is perceived as being an accurate representation of reality. If it were not, 'fake news' would not be such a contentious issue. There is an implicit trust in news reporting, particularly when it comes from sources such as the *BBC* or from publications such as *The Guardian* or *The Independent*, which, although British, have global readerships.

An Orientalism for every season

Techno-Orientalism, Self-Orientalism, Wacky Orientalism. While all different styles of Orientalism, they are rooted in the same categorisation processes that distinguish between the self and Other. The existence of multiple attitudes towards Japan's use of robots is less a contradiction, but rather represents the mutability and fluidity of Orientalism as applied to Japan.

By situating Japan in the future, where the 'idea of companion robots is already widely accepted' (*MailOnline*, 3 October 2016), Japan is portrayed through the lens of Techno-Orientalism. This is evident from the rhetoric of articles that employ a discourse of robots taking jobs or rising up, leading to a de-humanising of society. Here, Japan has become hyper-technified, and thus inferior to the West, which knows how to strike a balance.

Self-Orientalism was also evident in articles, wherein journalists had repeated the official discourse of the robots, most notably the repeated mention of Pepper's 'emotional' capabilities, which was described in SoftBank's original press release (SoftBank, 2014). The interview with Nestlé confirmed this, with the interviewer acknowledging that they have actively engaged in hype, using Pepper as a marketing gimmick, albeit a successful one (Hayes, 2016b). Moreover, the two other interviewees also perpetuated the notion of Japanese exceptionalism themselves by pointing to a Japanese culture of robots (Hayes, 2016a and 2016c). Indeed, the interviewee from Toshiba claimed that Japan's robot culture meant that the Japanese were more accepting of robots, and responsible for Japan's lead in the industry (Hayes, 2016a).

Wacky Orientalism is present, too, found in the negative portrayals of robots as solutions for childless Japanese or as potential sex partners. Japan's persistence in making robots shows that 'Japanese consortiums need to watch more films' (*The Guardian*, 27 June

2013), because, in the example of Kirobo, sending a robot to space can only result in it turning against humans.

These different kinds are activated in order to serve whatever depiction of Japan is needed at a particular time. Regardless of whether Japan is presented as a positive model for a technological future or a deviant, hyper-technified culture, it is nonetheless defined by its difference and opposition to the self, in this case the British news media, and by extension the British public reading the article.

Conclusion

This study examined the depictions of robots in Japan in British news articles written since the Triple Disaster of 11 March 2011. It particularly focussed on the underlying discourses in narratives about Japan, drawing on the theory of Orientalism and the three significant strands that have been developed with consideration to the case of Japan: Techno-Orientalism, Self-Orientalism, and Wacky Orientalism.

Analysis of reporting carried out by British news publications, both in print and online, between 2012 and 2017 show that an Orientalist framework is in place for discussing Japan, with the majority of the articles appealing to preconceived notions about Japan. What differed within these depictions was the kind of Orientalism that was applied. Traditional Orientalism as conceived by Said was for the most part absent from discourse pertaining to robots. Instead, Techno-Orientalist and Wacky Orientalist discourses were used to contextualise and provide an explanatory framework for the news articles. This study has shown commonality in the discourse about robots in Japan, but these articles were written by different journalists at a variety of publications. Further research is needed to understand why journalists write these articles, whether it is the product of a lack of knowledge about the subject, a belief based on personal experience, or the demands of the profession to write articles that will generate clicks.

By looking at articles from a variety of sources, this study has demonstrated that not only are there common assumptions in the British press about Japan and about robots in Japan, but that in many cases the article is less concerned with what is happening in Japan and more in its implications for Britain. Hargreaves, Inthorn and Speers found this in their study of press representation of Japan (Hargreaves, Inthorn & Speers, 2001: 29), but the case of robots in Japan is far less explicit. The articles sampled for this study all concerned the implementation or sales of robots in Japan, with no mention of their use abroad. In

spite of this, they are resituated within a British context. Thus, the negative attitudes towards robots in Japan say less of the successes of these robots and their implementation and more of implicit British attitudes towards the technology. Articles frequently made reference to robot uprisings and Terminators, tropes of Western popular culture, rather than Japanese culture. While typically made for humorous effect as opposed to a genuine fear, they subsequently reduce Japanese robotics to a novelty and part of the Wacky Orientalist discourse. Other articles appealed to the Techno-Orientalist discourse of Japan having too much technology and the technification of society by warning of the risks of robots taking human jobs.

The study differed from previous analyses of press depictions of Japan through its inclusion of observation and interview methods, which were used to assess the degree to which depictions of robots in Japan were exaggerated. In addition to showing that robots are not as widely used as reported and certainly not ubiquitous, by interviewing representatives from robot manufacturers Toyota and Toshiba, the study showed that the idea that Japan has a unique relationship with robots is promoted within Japan, demonstrating a Self-Orientalist attitude within Japanese robotics.

Robots and technology in general represent a useful example for examining the representation of Japan abroad. As this article has shown, since robots began to appear in factories in the 1960s, Japan has held the title of Robot Kingdom, even as it has lost ground to other countries and the Fukushima disaster revealed that its robots did not have the capabilities people thought. Will this discourse continue as developments in robotics progress and robots become more commonplace in everyday life in Britain as well as in Japan? In 2020 Japan will host the Summer Olympics and Paralympics, and Prime Minister Shinzo Abe has called for a 'robot revolution' (Kemburi, 2016: n.p.) and even proposed a Robot Olympics. While such an event would imply participation from robots worldwide, it will be interesting to see whether this has the effect of showing robots to be a global technology, or if it will reinforce Techno-Orientalist and Self-Orientalist, and perhaps even Wacky Orientalist notions of Japan as unique.

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ABOUT THE AUTHOR

Christopher J. HAYES is a researcher specialising in British media representation and perceptions of Japan. He co-organised the 2018 international workshop in Cardiff, and has since worked with MIRA as Communications Officer. He obtained his PhD in Japanese Studies from Cardiff University in 2019. His thesis examined depictions of technology and Japan in the British press. Japan is often presented as a highly futuristic country, full of robots and the like. However, in the last few years, another, contradictory discourse of Japan as low-tech has emerged. His research explores how both of these depictions are presented in the British press, asking how they can co-exist, as well as investigating the degree to which these depictions rely on stereotypes. He now works as Project Officer in the Centre for Japanese Studies at the University of East Anglia, UK. From September 2019, he will take up the post of visiting foreign researcher at the Kyoto Institute, Library and Archives for 6 months while he investigates the effects of the Rugby World Cup on foreign visitor perceptions of Japan and tourism.

