

Lafcadio Hearn and his Evolutionary Eco-Ethics in the 21st Century: Travelling through the Uncanny Valley of Exoticism in Robotic and Ghostly Japan

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Abstract

The present paper has a twofold aim. It firstly, excavates and extends previous literature on the uniqueness of Lafcadio Hearn's philosophy and in particular his part-Spencerian and part-Buddhist evolutionary ethics. Based on this framework, it argues for such a framework to be relevant for the examination of contemporary interdisciplinary challenges across psychological, environmental, and technological registers. This argument is assisted by the close examination of a case study in the ethical challenges posed in the fields of artificial intelligence, robotics, and digital privacy. Recent scholarship in these fields of increasing importance has observed a Western trend in importing Japanese/Shintoist values in their ethical scrutiny. The paper traces the history of this trend through the examples of three Western scholars whose frameworks pertain a Japanese-oriented approach. It further suggests the existence of a certain continuity in Japanese/Shintoist culture in highlighting the role of the eerie and the uncanny traced across the works of Hearn and those of roboticist Masahiro Mori, developer of the uncanny valley model. Synthesised, these observations lead the discussion towards recommendations for the establishment of a field for Hearn studies, which should aim, theoretically, at the better historical and philosophical understanding of Hearn's work, and, practically, at the application of Hearn's contributions to knowledge in contemporary universal challenges.

Keywords: Artificial Intelligence, Buddhism, Ethics, Lafcadio Hearn, Robotics, Uncanny Valley

Introduction and Context: Weaving Parallel Cobwebs

"And seeking inspiration from the deep irony of Buddha's smile, I theorize in parallel lines." (Hearn, 1927, p. 134)

Do you believe in ghosts in your machines? How do you feel when you encounter the social media profile of a friend who passed away last year? When was the last time you gave handshake with a person wearing a prosthetic arm? The present paper has a twofold aim as to the relevance of Lafcadio Hearn (Koizumi Yakumo [小泉八雲], 1850-1904) in contemporary social contexts and how Hearn's inter-, trans-, and outerdisciplinary approach to knowledge prior to the invention of such terms can be employed as useful navigation tool in dealing with current social, technical, ethical, and psychological complexities.

The first aim is case-specific and concrete: I will draw parallels between (a) a particular aspect of Hearn's work dealing with the eerie, the uncanny, and the contradictory as part of his broader ethico-aesthetic paradigm, being a repurposing of Japanese Shintoist principles towards an ecological universalism of Spencerian flavour, and (b) that of Japanese roboticist Masahiro Mori who coined the term "uncanny valley," widely used in robotics and prosthetics, further applied to aesthetics, which, combined with Mori's own form of Buddhism, suggests a



continuity in Japanese culture's close attachment to the eerie. This will be assisted by further remarks by (mostly Western) contemporary techno-ethicist scholars with focus on information and communication technologies who have recently been incorporating Japanese principles in their analyses of computer and robotic technology ethics (this has recently been termed as "the Japanese turn to AI and roboethics" according to Galanos and Reisel, 2020).

This will allow the second aim to unfold in the concluding section: a generalising invitation for research agenda which should explore ways to highlight Hearn's acute penetration into the heart of contemporary ethical challenges and will allow the reader to ask broader questions about the Western fascination with Japan and what that says about 21st century social challenges. Simply put, this paper wishes to be one of the basic works which future scholars might draw inspiration from when using research keywords such as "Lafcadio Hearn + climate change," "Lafcadio Hearn + technology," "Lafcadio Hearn + psychology," and so on.

So far, Hearn scholarship has been limited to explorations of his literary value (e.g. Stevenson, 2019), the ethnographic dimension of his interpretations of Japan (Allen and Wilson, 1995) or New Orleans (Star, 2001), and his very biography (Murray, 2016). With the exception of Goedhals' work (2020), very scarce references, have been made to his contribution to ethics and the peculiar blend of Herbert Spencer's philosophy combined with Buddhist principles in his intellectual maturity, resulting in a very early ecological ethics, or, as I intend to show, an "ethico-aesthetic paradigm" or "ecosophy" as described by Félix Guattari (2000).

The background of this research, firstly stemming from a personal fascination with Hearn's work as well as various aspects of Japanese culture and folklore, is the further result of at least three parallel academic endeavours. These include sociotechnical investigations of artificial intelligence (AI) and robotics, and in particular of the uncanny valley (Galanos, 2020) and the role of Japan in AI history (Nilsson, 2010). This has made me sensitive in hypothesising a certain continuity in Japanese culture linking its robotics development to its ancient animist doctrines; and that Hearn, as a Western "translator" of Japan to the West stands as a connecting link between a form of pre-modern Japan nearly lost to the Meiji Restoration and industrialisation, but reborn through the animist "survivals" (to employ a term by Hearn, 1905, p. 417) in contemporary robotics and AI. As a next step, with my colleague Mary Reisel from Rikkyo University, Tokyo, we investigated how this ancient surviving functions ethnographically in recent interactions between humans and the robotic AIBO pets by Sony (Galanos and Reisel 2020; while an early theoretical account of a similar framework can be found in Galanos, 2017).

The Emergence of Hearn's Evolutionary Ethics as a Product of his Circumstance

This section will focus on Hearn's work and will aim to answer whether one can speak of a philosophy or a set of ethics particular to Hearn. Being a constructivist, I can only treat Lafcadio Hearn's theoretical and scientific thinking as a product of his historical circumstance. Hearn's biographical itinerary is lesson in geography: born in Lefkada, Greece, moved to Dublin,



Ireland at age 2, switching between Tramore, County Waterford and Bangor, North Wales at age 7, moving to Yvetot, France at age 11, Durham, England at age 13, London, England at age 17, Cincinnati at age 19, New Orleans at age 27, Martinique at age 37, and finally Japan at age 40, in which he spent the last 14 years of his life until his death at age 54 (Murray, 2016). Such a list of places and numbers is by no means indicative of his tumultuous life, being a life of constant flux and resistance to a world which was on the one hand rapidly changing in light of industrialisation, and on the other filled with deeply entrenched values of authoritarianism and social inequalities. Reading his biography, the sociologically, historically, and psychologically inclined researcher is able to reflect upon the inextricable link between war's impact on family relations (based on Hearn's father Charles Bush Hearn's profession and eventual abandonment by both of his parents), mental health (given his mother's mental challenges), religion (from his resistance to Catholic dogma to his investigation of voodoo/hoodoo or Buddhist principles), social class structures and struggle (Hearn being the son of nobles, yet living homeless or in poor condition for long periods of his life), art and literature (in his detailed investigations of English, French, Greek, and Japanese forms of art, spanning from poetry and folksong to novels and entomology), and, most predominantly, everyday life (given that many of all previously mentioned domains are apparent in Hearn's work through his sharp descriptions of everyday ways of living from the regions he lived in). Two key details to remember, which will become relevant in the course of this section, are the following: (1) during his stay in Cincinnati and under guidance and influence of his publisher and friend Henry Watkin, Hearn was exposed to the Utopianist literature which fascinated Watkin; (2) Hearn was meant to be remembered for his deep explorations of the macabre and the supernatural; his books *Kwaidan*, *Shadowings*, and *In Ghostly Japan* are testimonies of this, while his earlier writings from New Orleans are also indicative of his inclination towards that theme. Howard P. Lovecraft recognised Hearn, as early as in 1927, as a precursor of the horror fiction genre in literature (Lovecraft, 1927, p. 99). As Allen Tuttle puts it, his life led him to settle in Japan, and build his unique interpretation of it, as such:

"Having fled the strong wills and broad shoulders of the West to a land of enchanted miniatures, where the lotus was actually eaten, he could not forget that he was still a spiritual alien, seeking absolutes in a world of relativity." (Tuttle, 1949, p. 85).

A polymath on the move, Hearn matches the archetype of a nomadic scientist, to echo French philosophers Deleuze and Guattari (1988, p. 423): the scientist who resists complying with the State imperatives of a static form of knowledge, taking advantage of all available resources to innovate according to given social needs, being on the move in order to enquire for novel resources. In such a quest, Hearn remained restless, at least until his settlement in Japan. I suggest, following Tuttle's above remark, that this settlement can be viewed as carrying a symbolic/philosophical connotation. If one views Hearn's biography as spiritual journey, Hearn as an absorber and interpreter of cultural elements and moral characters, Japan stood for Hearn as a final destination in such a journey, representing a nearly utopian way of living, based on virtues Hearn wished to promote, inviting the exploration of "regions of thought and emotion yet unexplored, or perhaps long forgotten" (Japan: An Attempt at Interpretation, 1904, p. 14). Such virtues are highlighted in his descriptions of the Japanese people and the



contrasts he draws with Western moral decadence, reflecting on Japan “becoming infected with Western moral poison” (correspondence with Ellwood Hendrick, as cited in Tuttle, 1946, p. 82). As Hearn notes:

“The more one sees of it [Japan], the more one marvels at its *extraordinary goodness, its miraculous patience, its neverfailing courtesy, its simplicity of heart, its intuitive charity* [...] Well, I have been fourteen months in Izumo; and I have not yet heard voices raised in anger, or witnessed a quarrel: never have I seen one man strike another, or a woman bullied, or a child slapped.” (Hearn, 1894, pp. vii, 239, my emphasis)

Hearn’s philosophy was very much influenced by the principles of Herbert Spencer, a thinker who was his contemporary and frequented Hearn’s writings. Hearn’s ethics, according to Tuttle, very much matured as a blend between Buddhism and Spencerianism. Spencer’s “evolutionary ethics” is based on the goal-oriented search for an “absolute morality” which “can only begin where the struggle for existence has ceased” (Tuttle, 1946, p. 85). In Spencer’s, and therefore Hearn’s, view of evolution, the world and every entity in it, must go through an infinitely decadent state in order to begin its improving; evolution is the passage of matter “from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity” (Spencer, as cited in Tuttle, 1946, p. 82).

Hearn’s life made a good case-study of this model, which allowed him, I suggest, to theorise about the model’s validity in the world at large; and that education should aim at acknowledging this necessity or prospect. In correspondence with Basil Hall Chamberlain, Hearn asks: “In order to comprehend the highest good, is it necessary that we must first learn the largest power of evil?” (Hearn, as cited in Tuttle, 1949, 83). Tuttle further notes that Hearn “equated [Spencerian] evolution to Buddhism” (Tuttle 1949, 85) and thus, as he wrote in one of his lectures, this Buddhist simplicity Hearn so much admired in everyday Japanese life, will be achieved by humanity only after a prolonged course of suffering; only then “humanity will at last, in the course of million of years, reach the ethical conditions of the ants” (Hearn, as cited in Tuttle , 1946, p. 83) and reach pure and simple “virtues rooted in instinct” (Tuttle, 1949, p. 83). It is therefore safe to speak of Hearn’s Spencerian ethics. The main principle, specific to Hearn, can be condensed in that to experience higher good one needs to experience the absolute evil. On a letter to Ellwood Hendrick, Hearn comments:

“As Spencer holds, absolute morality can only begin where the struggle for existence has ceased. This is not new. The appalling prospect is this, –How infinitely worse the world must become before it begins to improve at all! And surely education ought to be conducted with a knowledge of these things.” (Hearn, as cited in Tuttle , 1946, p. 82)

Tuttle showed that even before Hearn was known to have read Spencer’s work *The Data of Ethics*, in which the Spencerian utopia is outlined, and moral perfection is equated to ant societies, Hearn was also referring to the high morality of the ants already in one of his New Orleans writings (“...humanity will at last, in the course of million of years, reach the ethical conditions of the ants,” lecture, cited in Tuttle, 1949, p. 85). By looking at both sets of writings produced by Hearn in Japan and New Orleans, the theme of ghostly, eerie, and macabre stories is viewed as constantly interplaying with that of a call for a utopian society, or the



inability of the commercialised and industrialised character to appreciate this form of utopianism once it is encountered. Why those two themes? It is, therefore, my contention that Hearn's interest in the macabre is explained through the Spencerian lens in the form of the following question: Did Hearn explore the macabre in his quest for the necessary evil through which any society and character must pass through in order to reach moral perfection and natural mastery of "virtues rooted in instinct" (Tuttle 1949, 83)? In his own words: "In order to comprehend the highest good, is it necessary that we must first learn the largest power of evil?" (Hearn, correspondence with Basil Hall Chamberlain, cited in Tuttle, 1949, p. 85). This question veils a deeper one: is eeriness equated to evil? By reading Hearn's descriptions and literary depictions of the macabre, one doubts such an assertion: in Hearn's world, New Orleans and Japan locals are familiarised with the macabre and this is a predominant trait of their utopian morality. Occidental poisoned morality separates such uncanny events from everyday "normalcy," thus equating in common knowledge images of deformities, ghosts, zombies, and various supernatural phenomena with evil, villainous characters, and the overall perception of the abnormal. Hearn's emphases on the uncanny acts as an exercise of ethical symmetry towards the haunting and the non-haunting; both from a Shintoist and a Spencerian perspective, the eerie serves its purpose toward universal moral perfection. Ghosts, sometimes referred to as phantoms, can be viewed as mere parts of a reality which, from a Buddhist perspective, generally consists of phantoms. To admit the existence of phantoms-as-ghosts, is to also admit the nature of reality-as-phantom. And achieving the latter, is the key to following the flow of universal evolution. As Hearn puts it in his closing remarks to his half Spencerian-half Shintoist essay on ancestor-worship:

"The teaching of Evolution is that we are one with that unknown Ultimate, of which matter and human mind are but ever-changing manifestations. The teaching of Evolution is also that each of us is many, yet that all us are still one with each other with the cosmos; - that we must know all past humanity not only in ourselves, but likewise the preciousness and beauty of every fellow-life; - that we can best love ourselves in others; - that we shall best serve ourselves in others; - that forms are but veils and phantoms; - and that to the formless Infinite alone really belong all human emotions, whether of the living or the dead." (Hearn, 1896, pp. 305-306)

This symmetry between the living and the dead, part of Hearn's broader symmetry between familiarisation with the uncanny and quest for utopia, is akin to Guattari's call for a non-dichotomous cultivation of an ethico-aesthetical paradigm (Guattari, 2000). While capitalist regimes influenced human perception in a way so that ethics and aesthetics became separable (and largely commodified) items, often at odds with one another (what is attractive is not necessarily moral; what is ethical is not necessarily beautiful), Guattari's tripartite ecology of articulation between the registers of the environment, social relations, and human subjectivity, calls for a re-unification. (Interestingly, Guattari was equally fascinated with life in Japan as shown in a relevant collection of essays (Guattari, 2015).) Hearn appears to be aware of this ecological approach which equates the ethical with the aesthetical. As Donald Richie points out:

"What one usually discovers upon a return to longed-for origins is a utopia. Hearn consequently found in Japan surpassing beauty, an extraordinary charm, a lovable picturesqueness, and a place for himself. He



was an aesthete and so, he thought, were the Japanese. He worshiped beauty and, therefore, so did they.” (Richie, 1997, p. 10)

Such remarks about the connection between Hearn and further Western explorations of Japan, allow us to draw a further remark about Hearn’s perception of Japan.

The Other Side: Hearn’s Interpretations as Signs of Exoticism – the Paradoccidental View

Nevertheless, one would argue that Hearn’s interpretation of Japan was exactly that: an interpretation; or, more precisely, what in Barthean terms, Richie describes as a “fictive nation” (Richie, 1997, p. 12; see also the interesting reading by Goebel, 1993). Similarly, for New Orleans, S. Frederick Starr describes Hearn as the “man who *invented* New Orleans” (Starr, 2001, p. xi). Hearn’s “attempt at interpretation,” as the subtitle of his 1904 book reads, was exactly that: an attempt. Richie has shown that Hearn showcased no mastery over the Japanese language, committing important errors in his translations and transliterations. Nevertheless, and as if Hearn wished to employ self-sarcasm given his physical –blindness, he probably remained intentionally blind to Japanese culture’s exact external form in order to be able to romanticise indefinitely, as a protection against admittance of Japan’s weaknesses. In Richie’s words: “Ignorance was like a vaccination against a general contagion” (Richie, 1997, p. 14). Hearn’s life, in a sense, made an imperative that he glorifies his final destination and makes a pure (and purist) utopia out of it. This section will suggest that Hearn’s work can be situated among a set of Western authors whose fascination with Japan acted as a form of escape plan from a Western morality which proved to be insufficient for their thinking; with underlying tones of exoticism. Spencer died in 1903 and Hearn in 1904. Between the two authors and ourselves, one could attest that various forms of absolute evil have been reached: from World War II’s holocaust to the detriments of climate change, the world following Hearn and Spencer had good reasons to think of Japanese Shintoism, and Japan at large, as a realm which copes with paradoxes intentionally, because of its own philosophy which is precisely based on the acceptance of paradoxes: instead of living in a world of Beckettian absurdity where reason appears to be the norm, in which the absurd takes the form of disrespect against living beings and environment, it must be better if one lives in an oriental world where absurdity is known as the only reason, and to respect every being and the environment is the key to perceive every form of reason.

Indeed, I will term the Western view of Japan the *paradoccidental* view, in that it sees Japan as paradoxical, full of contradictory images, in its portrayals through occidental narrative (and occasional stereotyping or cases in cultural appropriation): from Zen gardens to highly developed robotics, and from samurai codes of ethics to interspecies pornographic paintings from the Edo period, Japan appears to be a land of contradictions to the untrained Western eye. This is apparent already in Arthur Koestler’s work *The Lotus and the Robot* (1961), being Koester’s exploration of Japanese culture. Although Koestler maintains a rather critical view, sometimes negative, on spiritualist practices, the very title of the book is indicative of the way in which he marvelled at Japan being simultaneously “Lotusland” and “Robotland” (Koestler, 1961, 165-188). Koestler is, in my view, correct in suggesting that the



contradictory image of Japan stems from the country's precise appreciation of contradiction as the basis of reason. Whereas the West has mostly been influenced by Aristotelian and Cartesian linear and sequential reasoning, with the best appreciation of contradictions being Hegelian dialectics in which two contradictory forces synthesise into a novel third one, Japanese Zen Buddhism forces the simultaneous validity of both contradictory statements. Zen koans, riddles posed by Zen masters to their students, often containing two or more contradictory commands train the student in accepting that reality (or: the phantom of reality) is found on grounds of simultaneous existence, akin to the wave-particle condition in quantum particle physics. The following well-known koan is indicative of this acceptance:

“Ma-tzu held up a stick and then said, ‘If you call this a stick, I will hit you with it. If you don’t call it a stick, I will hit you with it. Quickly, now, what is it?’ The use of language in this koan creates the threat of punishment no matter how you answer.” (Simpkins and Simpkins, 2011, p. 91)

Situations like this tend to dominate contemporary life, thoroughly mediated through technology. This assertion will allow the rest of the present essay to unfold. Hearn's appreciation of Spencerian-Buddhist evolutionary ethics was a precursor to a generalised Western interest in Japanese appreciation of contradiction, as a result of the increasing appearance of everyday riddles which appear as Zen koans. Some examples: you are now reading this paper about Lafcadio Hearn and technology, and I, the author, tell you: ‘If you believe this is written by a machine learning computer programme, I will prove you wrong. If you think this is written by a human being, I will prove you wrong. Quickly, now, is this the product of a computer or a human?’ Your confusion will remain the same before and after reading this, unless you accept, like Hearn, Guattari, or a Zen master might have suggested, that this paper is the simultaneous product of the human who wrote it, the sources consulted, the devices though and upon which it was inscribed, and most importantly, the reader who renders this meaningful at the present moment. This might consist of a certain early technological *satori* (the Zen Buddhist term for enlightenment).

The Czech-born philosopher of communication Vilém Flusser is a strong candidate in bridging these two parts of the present paper. His biography is abundant of parallels with Hearn's. Born 1920 in Czechoslovakia, migrated to London in 1939 during the Nazi occupation and lost his family in the concentration camps; he migrated to Brazil in 1941, whereby he began his university teaching career and published most of his work (a good portion of it being a cultural appreciation of Brazilian morals in comparison to European ones); after being dismissed from the university when the Brazilian Military Government's regime took over, he migrated back in Europe and lived in Italy, Germany, France until his untimely death on a car accident at the German-Czech border when he was attempting to visit Prague, his native city, for the first time since his first migration. Immersed in his contemporary art scene and philosophical circles while teaching at the School of Engineering in Brazil, influenced, among others, by media scholar Marshal McLuhan, Martin Heidegger's phenomenology, and various forms of spiritualism, Flusser's work was always a parallel examination of digital technologies as providers of utopian liberation and dystopian suffocation, spiritual and artistic enlightenment but also heralds of an automated Armageddon. In his autobiographical and philosophical text *Bodenlos* (translated as *Groundless*), Flusser situates his own journey into



Eastern (particularly Indian and Japanese) philosophy within a general turn of an ideologically saturated West towards an Eastern set of values which contains elimination of ideas (and therefore ideologies), being that purely practical; a lived praxis:

“The East was no longer the polar opposite of the West, but an open structure (like an anachronism) within which the West could be found. [...] The East was preferable to the West not because it knew better, but precisely because it did not know anything; not because it taught better values, but precisely because it taught no values; not because it had more profound faith, but precisely because it did not have faith in anything; not because it had a more perfect concept of reality, but precisely because it had no concept of reality. Eastern texts were to be read with an entirely different spirit than Western texts: not as theories, but as instruction manuals; as salvation techniques, not as ideologies.” [Flusser, 1973, pp. 67-68]

Flusser thus, refers to the benefits brought by the annihilation of thought as a technique to eliminate Western dichotomies between Being and Non-Being. However, as he later remarks, and as emphasised by Japanologist Irmela Hijiya-Kirschner (1994), this realisation allowed the West to impose its superiority over the East in that it understood lack of ideology as a form of “naïve materialism” in Marxist terms. Hijiya-Kirschner suggests the way in which such views of Japan, although well-intended, carried the seeds of exoticism, favouring certain portrayals of Japan over wider views; deeply interpretative according to Western projections, adjacent to the need for alternative frameworks of thought in light of ideological failure. In this respect, we can note a pattern of similarity between Hearn’s intentional romanticisation of Japan and Flusser’s exoticist approach. In a text written during Flusser’s philosophical maturity, when his own style of short techno-philosophical essays was established, he revisited the interplay between Eastern and Western moralities. In his view, Western industrialism originally valued maximalist aesthetics, large buildings, and voluminous factories. The East, slowly dominating the West technologically, which valued minimalism and emptiness, brought with it the datafication of microchips and slogans such as “less is more.” The Western absorption of such values, nonetheless, came with the distorting presupposition of dichotomies; resulting in a crisis of values, with appreciation of the small becoming equated with belittling:

“Ideal models were values. When the Industrial Revolution transformed ideal models into forms, it provoked the ‘crisis of values.’ The counter-revolution of ‘chips’ overcame the crisis of values. Once it transformed the models of forms into information, it turned them imperceptible. Values disappeared from humanity’s field of vision. What remains are no longer imperative functions. The microprograms undo the myth of models as they annihilate values. Thus, the shrinkage of models is dehumanizing. It devalues life. Life within a miniaturized context is absurd.” (Flusser, 1983, p. 82)

It should be noted that historically, Flusser’s keen insight into this peculiar intercultural movement took place in the context of Japan’s Fifth Generation Computer programme’s early development, a nationwide technological initiative to make Japan the world leader in robotics, artificial intelligence, and computer infrastructures, which stirred a chain reaction of similar programmes in the US, the UK, and the European Economic Community (Nilsson, 2010). This brings in the need to examine the co-development of interpretations of Japanese philosophy light of technology both in Japan (and therefore from a less exoticist perspective) and elsewhere. It will be shown, in the next section, how Hearn was able to go beyond simplistic



forms of exoticism, and although less methodical and more intuitive in his approach, was able to capture patterns and values in Japanese thought which survive in contemporary robotics and open up the question as to whether contemporary Western interpretations of Japanese values in technology ethics can assist a better understanding of Japanese thought as such.

Drawing Parallels Between Hearn's Exoticisation of Japan and the Contemporary Turn to Japanese Ethics in Artificial Intelligence, Robotics, and Smart Technologies

On the aftermath of World War II, and while Flusser was reflecting on the West's turn into the East, Masahiro Mori, born in 1927, developed prosthetics and early robotics applications in the late 1960s Japan. Mori was surrounded by an environment similar to Hearn's depictions: rich in ghost legends, realistic puppet theatre traditions (*bunraku*), and at the same time toy industries that produced anthropomorphic stuffed animals, and state-of-the-art robotics for the industry of the time. Mori, thus comparing human reactions towards objects with a human likeness introduced two graphs on an obscure Japanese journal of very low visibility, which were meant, however, to influence robotics design practices once the scientific community discovered this paper in the late 1990s. Mori's paper begins by suggesting an affinity/familiarity valley [*shinwakan no tani*] – a monotonically increasing and visually straightforward relation between point A at the bottom-left side of an x-y axis towards point B at the top-right side of it. Mori employed the metaphor of a mountaineer who aims to reach the top of a mountain, with this B point representing the idealised other human being. The more something resembles a human, the affinity towards it increases monotonically, as in cases of humanoid toys or robots (for instance, children's attachment to their teddy bears). However, the uncanny valley represents a significant dip in the line of affinity as soon as the relation between human resemblance and human behaviour is significantly distorted. Continuing with the mountaineering metaphor, Mori suggests that when the resemblance is "too much", the climber might fall in the "valley of bad feeling" (as per the *Kōjien* dictionary more precise definition of the uncanny; for a detailed exploration of the term's history of translation, see Galanos 2020). In Mori's (translated) words, based on his experience with electric prosthetic hands:

"[O]nce we realize that the hand that looked real at first sight is actually artificial, we experience an eerie sensation. For example, we could be startled during a handshake by its limp boneless grip together with its texture and coldness. When this happens, we lose our sense of affinity, and the hand becomes uncanny. In mathematical terms, this can be represented by a negative value. Therefore, in this case, the appearance of the prosthetic hand is quite humanlike, but the level of affinity is negative, thus placing the hand near the bottom of the valley." (Mori, MacDorman and Kageki, 2012[1970]: 99)

Later in his, otherwise brief, article that he refers to – possibly humanoid – robots: "Since the negative effects of movement are apparent even with a prosthetic hand, to build a whole robot would magnify the creepiness"; and as he concludes, "[w]e hope to design and build robots and prosthetic hands that will not fall into the uncanny valley" (Mori, MacDorman and



Kageki, 2012[1970]: 100). There are two particularly important things to note about Mori for the scope of the present paper. Firstly, Mori's article ends by reflecting about the reason which caused the development of such a feeling:

"Why were we equipped with this eerie sensation? Is it essential for human beings? [...] The sense of eeriness is probably a form of instinct that protects us from proximal, rather than distal, sources of danger. Proximal sources of danger include corpses, members of different species, and other entities we can closely approach. Distal sources of danger include windstorms and floods" (Mori, MacDorman and Kageki 2012[1970]: 99-100)

Secondly, a rather overlooked side of Mori is his strong Buddhism. Four years past publication of the aforementioned article, Mori published a book called *The Buddha in the Robot: A Robot Engineer's Thoughts on Science and Religion*. The main question addressed in the book is outlined on the back cover:

"What connection, you may want to ask, can there possibly be between Buddhism and robots? How can a mechanical device partake of the Buddha-nature? The questions are understandable, but I can only reply that anyone who doubts the relationship fails to comprehend either Buddhism or robots or both." (Mori, 1974: back cover)

Mori's simultaneous interest in Buddhism and eeriness appears to be compatible with the aforementioned role of eeriness in Hearn's evolutionary ethics. One of Hearn's less admired essays called *Nightmare-Touch* contained in his volume *Shadowings*, explores the nature of fear of ghosts: "What is the fear of ghosts among those who believe in ghosts?" (Hearn, 1900, p. 235, original emphasis). Hearn, like Mori about the nature of uncanny fear, suggests that the fear of ghosts is about proximal fear of touching, as opposed to distal dangers: "I venture to state boldly that the common fear of ghosts is *the fear of being touched by ghosts*, - or, in other words, that the imagined Supernatural is dreaded mainly because of its imagined power to touch. Only to *touch*, remember!- not to would or to kill" (Hearn, 1900, p. 237, original emphasis). Hearn concludes his essay precisely by situating the development of this fear in his evolutionary model:

"[T]hrough all the course of evolution, heredity would have been accumulating the experience of such feeling. [...] It might be doubted whether the phantasms of any particular nightmare have a history older than the brain in which they move. But the shock of the touch would seem to indicate *some point of dream-contact with the total race-experience of shadowy seizure*." (Hearn, 1900, pp. 245-246, original emphasis).

Could it be the case that Mori had read Hearn's work while thinking of the encounter with a cold prosthetic hand and the fall in the valley of eerie feeling? Or when asking those profound questions about the nature of the uncanny? I doubt this, given that nowhere in Mori's works Hearn is being mentioned; it would be safer to suggest that such curiosity is born in the Japanese environment across time, when interdisciplinary minds such as Hearn and Mori become exposed to similar cultural input.

Such explorations of fear continue in contemporary Japanese robotics, proving the theme as diachronic in the local culture. While the uncanny valley was becoming a standard



reference in robotics, an increasing amount of research initiatives began exploring this question through fMRI experiments. The following “total Turing Test” is illustrative. Human interlocutors were invited to guess whether presented entities were human or machine when encountering them “in person” (in contrast to communication exchange in traditional Turing tests). The human-looking robots possessed a micro movement function to appear more realistic, so it was expected that given the very short (2 seconds) duration of the test, most robots would pass for humans. Prominent roboticist Hiroshi Ishiguro extends Mori’s reflection based on empirical data:

“As the result of the experiment with 20 subjects, 70% of the subjects did not become aware they were dealing with an android when the android had micro movements. [...] Why do 30% of the subjects become aware of the android? What happens if the time is longer than 2sec.? In the experiment, the subjects felt a certain strangeness about the android’s movements and appearance.” (Ishiguro, 2005, p. 4)

Although Ishiguro does not explore the uncanny valley and robotics from an openly Buddhist perspective, around the same period, another Japanese scholar, Naho Kitano suggested that the Shintoist concept of *Rin-Ri* should be (a) on the forefront of any future ethical framework for robotics (the then emerging field of roboethics) and (b) that the Japanese people’s familiarity with the concept ensures their advantage in being world leaders in robotics (Kitano, 2006. According to Kitano, “literally, *Rin-Ri* means the reasonable way (or course) to form the order and to maintain harmonized human relationships” (Kitano, 2006, 81). Although, to my knowledge, Hearn does not refer to *Rin-Ri* in any of his works, *Rin-Ri*’s favouring of “the superiority of social harmonization over the individual subjectivity” (Kitano, 2006, 81) is compatible to Hearn’s evolutionary ethics examined above; whereas the animist dimensions of *Rin-Ri* is admitting “spiritual life in objects or natural phenomena” is in dialogue with Mori’s interest in robotic Buddhahood. Of further interest is that Kitano distinguishes between Western discussions on AI/roboethics, affirming Flusser’s point about Eastern philosophy as one of pure praxis: “[i]n Japan, the direction of such discussions is more practical than theoretical/philosophical” with *Rin-Ri* being “the study of the community, or the way of achieving harmony in human relationships” where “each individual has a responsibility toward the universe and the community” (Kitano, 2006, 79–80). From such a Shintoist perspective as a point of departure, which is responsible towards any entity, animate or inanimate, “this contributes to accelerate robot R&D, and after all, leads to legitimize the being of social robots in the human society with its consequent necessary regulations change” (Kitano, 2006, 82). My suggestion here is that Hearn’s translation of such Japanese principles to the West may further assist enriching work in AI/roboethics.

In 2015, Spyros Tzafestas’ volume on roboethics dedicated 21 pages to Japanese roboethics, extending such emphasis on the “[a]voidance of abstract concepts in several issues of life” and the priority of relations between humans, nature, and artefacts above the Western “hierarchical world order” (Tzafestas, 2015, pp. 156-158). Tzafestas contributes to the exploration of Japanese values that should be imported in roboethical frameworks, placing emphasis on virtues held by designers such as *Shinto* (relation to past), *seken-Tei* (everyday appearances), *giri* (duty), and virtues built into robots such as *iyashi* (healing, calmness), *kawai*



(cute), *hukushimu* (living), *nagyaka* (harmonious, gentle), *kizutuku-kokoro* (sensitive inner minds) (Tzafestas, 2015, p. 167).

Mireille Hildebrandt is another Western researcher of technologies, investigating intersections between law and smart technologies who has dedicated parts of her work in highlighting Japanese principles as an alternative perspective to Western understandings of privacy. Hildebrandt correctly points out that privacy itself was very alien a concept to the Japanese; the very word for privacy in Japanese is a loan-word (*purabashi*) while “the Japanese legislation on privacy and data protection has been enacted merely to comply with the demands of Western trade partners” (Hildebrandt, 2015, p. 104). This brings remarkable resemblance to Hearn’s observations about the role of trading in ports of his time in Japanese importing of Western impolite manners:

“Indeed I have never seen any real roughness anywhere that I have been in Japan, except at the open ports, where the poorer classes seem, through contact with Europeans, to lose their natural politeness, their native morals-even their capacity for *simple happiness*.” (Hearn, 1894, p. 239, my emphasis)

In her chapter, Hildebrandt continues in emphasising that even so, Japanese conceptions of privacy stem from an environmentalist approach to the term and whether a given environment affords privacy, as opposed to an individual owning privacy; thus suggesting that such an understanding may be much more relevant to contemporary discussions about variations of digital privacy, monitoring technologies, and institutions (Hildebrandt, 2015, p. 104). Like Tzafestas, Hildebrandt highlights a set of Japanese virtues found to be relevant in the development of ethical frameworks for digital privacy. These include, the inbetween (*aida*), politeness as “face” or “place” (*basho*), situated discernment (*wakimae*), and the culture of “as-if,” and the indulgence of restraint and acuity (*amaeand enryo-sasshi*), all of them being in agreement with Hearn’s descriptions in English of Japanese culture’s uniqueness as outlined above.

To close this drawing of parallels between an interdisciplinary array of works by authors specialising on various intersections between technology and culture, it is useful to show how Hearn’s ecological ethico-aesthetics preceded the Western reinvention of Japanese human-technology-environment relationship. The following passage from *Japan: An Attempt at Interpretation* is revealing about Hearn’s sharp observation of the connection between users, craftspersons, tools, and products. In his analysis of Shinto, contemporary debates and calls for a human-computer ecology pre-exist as early evolutionary seeds (a quick note: I have marked with “[sic]” all cases in which “his” is used as gender-neutral but preserved the places in which, for Hearn’s contexts, gender appeared as specific to occupation):

“The existence of the individual worshipper was ordered not merely in relation to the family and the community, but even in relation to inanimate things. Whatever his [sic] occupation some god presided over it; whatever tools he [sic] might use, they had to be used in such manner as tradition prescribed for all admitted to the craft-cult. It was necessary that the carpenter should so perform his work as to honour the deity of carpenters, that the smith should fulfil his daily task so as to honour the god of the bellows,- that the farmer should never fail in respect to the earth-god, and the food-god, and the scare-crow god, and the spirits of the trees about his habitation. Even the domestic utensils were sacred: the servant could not dare to forget the presence of the deities of the cooking-range, the hearth, the cauldron, the brazier,- or the supreme necessity of keeping the fire pure. The professions, not less than the trades, were under



divine patronage: the physician, the teacher, the artist -each had his religious duties to observe, his special traditions to obey. The scholar, for example, could not dare to treat his writing-implements with disrespect, or put written paper to vulgar uses: such conduct would offend the god of calligraphy. Nor were women ruled less religiously than men in their various occupations: the spinners and weaving-maidens were bound to revere the Weaving-goddess and the Goddess of Silkworms; the sewing-girl was taught to respect her needles; and in all homes there was observed a certain holiday upon which offerings were made to the Spirits of Needles." (Hearn, 1904, pp. 169-170)

From the above comparison of passages and collection of principles, it becomes increasingly more apparent that Hearn, in his keen insight on Japanese traditions managed to outline virtues which were rediscovered in worldwide scholarship about the role of such Shintoist virtues in technological research and development and the co-habitation with technological artefacts and deeply technologically mediated environments. With these in mind, some final remarks are to be made.

Closing Remarks: Conclusions and Future Agenda for a Discipline of Hearn Studies

The present paper covered a wide ground of intersections between Japanese culture and technology ethics, aiming to show that focus on Hearn's evolutionary ethics may act as helpful paradigm not only to understand how human-technology-environment relations ought to be, but also understand patterns of thought leading Western scholarship to seek salvation and occasionally exoticise Japan. I will present the paper's four key findings followed by recommendations for future research in what I would envisage as an emerging inter-, outer-, and transdisciplinary field of Hearn studies.

1. Western exoticist perceptions of Japan signify hopes and anxieties about Western capitalism, anthropocentrism, uncertainty, and its seemingly contradictory counterpart: dehumanisation by surrender to the machine. From the perspective of Hearn's Spencerian-Buddhist evolutionary ethics, the stage of social harmonisation can only be achieved once the source of anxiety is identified, contemplated, and become an object of familiarisation. Hence, exercises in terror, grotesque images, ghost stories, attempts at understanding the eerie and the uncanny, act as lessons in avoiding their physical manifestations in the form of massacres or environmental exploitation through capitalism, sexism, racism, speciesism, and other forms of social discrimination. Exoticism about Japan is often a collective or individual expression of social uncertainty, moral/political turmoil and the quest for liberation in the exotic-as-pure.

2. A combination of the teachings about the living/non-living in Shinto but also from contemporary observations about identifying the neurophysiological and social nature of the uncanny may assist such training exercises. Eeriness and uncertainty are vital for human's survivability and need to be taken seriously during any future ecological and ethical framework toward environmental harmony. What and how one fears is revealing about planetary needs in relation to human history. Hearn's theoretical works are to be closely investigated in this respect.



3. Hearn is probably one of the first Westerners who pinpointed towards this direction by forcing his readers to consider ghosts, zombies, death, the obscure, the grotesque, and the “paranormal” as parts of everydayness and build an ethics of acceptance of the macabre, however, opposing the elitist appropriation of death/scare tactics by the industrial domination. Hearn’s very life, constantly on the move, acts as an archetype of contemporary reinventions of nomadism – from the leisure of low-cost flights and the increasing amount of jobs involving international travel to forced political migration and asylum seeking, Hearn’s life becomes a symbol for contemporary physical and spiritual journeying; and how the two can be viewed as intrinsically linked.

4. Finally, and mostly based on the focus on AI and robotics, I suggest that post-war Japan’s relationship to robotics and artificial intelligence can be viewed as a continuation of the sensitivity towards the obscure which Hearn emphasised –while careful reading of Hearn’s work can be a guide to contemporary debates about ecology, sustainability, technology ethics in general, and responsible research and innovation.

As outlined in the beginning, these findings are but early attempts towards a more rigorous and systematic study of Hearn’s relevance to contemporary scholarship in philosophy, technology, environmentalism, psychology, sociology, just to name a few. This should be in line with Hearn’s humble approach to life: to prove Hearn’s value should be the tool; the craft should be the practical and effective change towards a more harmonised cohabitation with the environment.

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