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Religious Devices: A Survey of Technologies of Worship.

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Abstract

Responding to the unannounced spiritual mysticism surrounding contemporary technologies, a religiosity present in the prayer-like devotion of social media piety to the cultish intensity surrounding each iPhone launch, this paper aims to dispel presumptions of the spiritual in opposition to the technological by surveying a range of media devices specifically developed for religious purposes. More than connecting scholarship in technology, media and religion, this survey recommends a new arc in the cultural examination of technology. As curious media artefacts, religious devices are independently worthy of study but they also offer a material past to the so-called “religion of Silicon Valley” as well as providing insight to the rituals, superstitions and beliefs of technology users. While recent shifts in religious studies have propelled the field toward computer-mediated communication, this study moves beyond sociological and anthropological concerns to examine the hardware and software of spiritual technologies, thereby connecting the media turn in religious studies with the material turn in media studies.

Keywords

Religion, Technology, Devices

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Cover Page Footnote

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Introduction

When the Pentecostal televangelist Oral Roberts first hovered his hand over a camera lens and invited viewers to spiritually connect by touching their television screen, he did more than make tangible Marshall McLuhan's electronic network. He echoed a long history of electronic devices in the service of religion and spirituality. Beyond Roberts' conversion of television into the Christian faith, the field of religious gadgetry exploded through the twentieth century with devices including Digital Tibetan Prayer Wheels, Buddha Chant Boxes, Scientology E-meters, Christian Audio Bibles and Islamic Azan Alarm Clocks, all of which will be discussed here. Following this recent profusion of religious devices, what implications have emerged at the intersection of the mystical and mechanical? How do these effects manifest in a consumer society without technical understanding of the technologies they use? How are these misunderstandings exploited by both religious orders and technology sectors?

This paper highlights how technological devices have always been produced to enable and enact religious ideas, but also how religion is increasingly used as a rhetorical device to sell technology. At the heart of these projects by technology companies and religious organisations is an effort to reinforce the consumption of both by borrowing the rhetoric and authority of each. Today, I argue, this consumption constitutes a false idolatry, a devotion increasingly based on religious and technological connotations rather than actual benefits. Within a society increasingly saturated with technology but without knowledge of their technical functioning, what emerges is an accidental mysticism - or even religion - one founded on consumption of technological products. In arguing these claims, my primary target is not religion, nor religion's use of technology, but the manner in which technology use and consumption so easily embraces metaphysical and religious associations, divorced from ethical imperatives that religious structures can bring. As a resistance to contemporary techno-fantasies with mystical leanings, this paper calls for a critical understanding of religion and technology, their respective workings and deep historical connections.

Religious engagement with media technologies is not devoid of serious attention. Critical historian of technology David F. Noble traces the religious roots of Western technology, linking present day technological enthusiasm with the ancient Christian ambition of recovering humankind's lost divinity.¹ Technology Philosopher David Lewin posits religious orientation to be an "inescapable presupposition" of technology arguing that secular attitudes ultimately hamper any effective philosophy of technology.²

¹ David F Noble, *The Religion of Technology: The Divinity of Man and the Spirit of Invention* (The Penguin Group, 1999).

² David Lewin, *Technology and the Philosophy of Religion* (Cambridge Scholars Publishing, 2011): 2.

Media's most renowned scholar, Marshall McLuhan was not only a devout Catholic; but the rituals and tenets of Catholicism formed the moral and intellectual backdrop to his entire oeuvre. *The Gutenberg Galaxy*,³ for example, centres on Church history to explore the religious impact of the printing press, while *Understanding Media*,⁴ offers a pious moral warning against the idolatry of technology, concerns that are echoed here. But most notably of McLuhan, his often-repeated axiom: the "Medium is the Message" was a faintly coded allusion to the central figure of Christianity he held dear.⁵ "In Jesus Christ, there is no distance or separation between the medium and the message" McLuhan wrote.⁶ "It is the one case where we can say that the medium and the message are fully one and the same".⁷ McLuhan's articulation of his own techno-religious orientation destabilises the very critique of technological idolatry he sought to make.

Since the 2000s, there has been a noted "media turn" in Religious Studies.⁸ The multifarious connections between technology and religiosity have been widely mapped by scholars in the fields of Media Ecology including Meyer and Moors,⁹ White,¹⁰ and Forsberg.¹¹ Likewise, in Religious Studies the impact of technology has been explored by Mahan¹² and Campbell.¹³ While across the Religion-as-Technology paradigm, Mumford,¹⁴ Stahl,¹⁵ and Noble¹⁶ have each argued that technology is the religion of our time - albeit one that remains unannounced, inadequate, and fraught. The notion of consumer technologies operating as a defacto religion is what drives this survey. I begin by reviewing a series of technological devices comfortably embedded in the religious domain. The aim is

³ Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Canada: University of Toronto Press, 1962).

⁴ Marshall McLuhan, *Understanding Media* (Canada: McGraw-Hill, 1964).

⁵ Ibid., 7.

⁶ Marshall McLuhan, *The Medium and the Light: Reflections on Religion and Media* (Stoddart, 1999), 103.

⁷ Ibid, 103.

⁸ Matthew Engelke, "Religion and the Media Turn: A review essay" in *American Ethnologist* 37/2, (2010): 371-379.

⁹ Birgit Meyer and Annelies Moors, *Religion, Media, and the Public Sphere* (Indiana University Press, 2005).

¹⁰ Robert A. White, "The Media, Culture, and Religion Perspective in *Communication Research Trends* 26 (2007): 1-24.

¹¹ Geraldine Forsberg, "Media Ecology and Theology" in *Journal of Communication & Religion* 32, 1, (2009): 135-156.

¹² Jeffrey H Mahan, "Religion and Media". *Religion Compass* 6/1 (2012): 14-25

¹³ Heidi Campbell, *Digital Religion: Understanding Religious Practice in New Media Worlds*. (Routledge, 2012).

¹⁴ Lewis Mumford, *Technics and Civilization*. 2010 edition. (University of Chicago Press, 1934).

¹⁵ William Stahl, *God and the Chip: Religion and the Culture of Technology* (Waterloo, Ontario: Wilfrid Laurier University Press, 1999).

¹⁶ David F Noble, *The Religion of Technology: The Divinity of Man and the Spirit of Invention* (The Penguin Group, 1999).

to show that technologies are not scientifically impartial, but are shaped by the social and political epistemological contexts from which they arise. In doing so, I call attention to the contemporary fetishisation of digital devices to ask, what is the ideological background driving the devout production and consumption of these secular technologies?

For in the popular imagination, religion is regarded as in opposition to technology, and engagement with consumer electronics is understood as antithetical to spiritual worship. More broadly, religion is commonly cast as ancient, transcendent and sacred, and technology as material, modern and profane, yet such misconceptions overlook both new religions and ancient devices. As explored here, spiritual movements have always relied on innovations in technology to incite masses, spread belief, communicate with greater forces and facilitate rituals of prayer. The development of written language from oracle bones confirms that even the very earliest communication technologies evolved to converse - not with fellow humans - but with deities and supernatural forces.

Arguably the first electronic religious device was the ancient Hebrew Ark of Covenant. Said to have afforded telecommunication with the heavens, the Ark was assembled to strict specifications issued by the Hebrew God. On each side of the vessel, gold rings could be threaded with wooden poles to allow its transportation. It was, in this regard, the first mobile phone. It's design and materiality, noted Nicolai Tesla, also resembled a giant capacitor capable of storing electrical current dischargeable between the crowning cherubs with deadly force.¹⁷ Tesla's finding lends weight to biblical claims the Ark could marshal heavenly forces and lay waste to vast armies - a kind of ancient drone strike with co-ordinates called-in via cell phone. Religious devices are not just gadgets of convenience; they hold the capacity to wield magnificent forces of science, nature and the divine.

New media theorist Jussi Parikka's investigation of geological media conjures the deeply ancient in all electronics.¹⁸ The clever arrangement of rare earths into functional electronic constellations compels mystical thinking, perhaps lending credence to contemporary new-age practitioners who speak of powerful energies emanating from crystals. Budding radio engineers grasp the geological materiality of electronics first-hand when scratching a needle across galena crystal to scan the electromagnetic spectrum for radio signal. The early radio pioneers who first undertook such projects encountered voices in the ether speculated to be ghosts, aliens or beings of another dimension; proof of the geological materiality and metaphysical possibilities inherent to all electronic devices. But while these early technicians offered scientific reasonings for the inexplicable phenomena their

¹⁷ Nikola Tesla, *The Wonder World to Be Created by Electricity*. (Manufacturer's Record, September 9, 1915).

¹⁸ Jussi Parikka, *A Geology of Media* (University of Minnesota Press, 2015).

instruments produced, contemporary consumers lack the technical background to do so.

Today, rational understanding of electronic devices has faded from view. The emergence of modern design in the twentieth century coincided with the shrouding of the machine, obscuring not only its inner workings but the conditions of its production. This process has intensified with the replacement of the analogue for the digital. The bodies of transistor radios, television sets and audio players that once proliferated our homes have become roadside refuse while their functions have collapsed into smart phone apps, signalling the complete disappearance of distinct media devices and understanding of their internal operations. The once-visible workings of electronic devices are now concealed by scale within tiny microchips. As philosopher of technology Albert Borgmann has reflected: “When typewriters became electric, the intelligibility of their machinery began to be veiled in obscurity.”¹⁹ As a result, technology has become both nowhere and everywhere at once. Omnipotent. Ever present, but veiled in its ubiquity.

This disappearance heralds danger. When humans lose sight of cause and effect, peculiar meanings emerge. Explanations as likely based in metaphysics and religion than electronics and programming. Therefore, I argue, the material, ideological and operational history of analog devices - religious or otherwise - must be re-evoked before they disappear into the background of ubiquitous computing. We must seek to comprehend technologies while we may still observe their internal circuitry of resistors and capacitors, to recall of the rational engineering behind their functioning and the ideological framework from which they have come. This paper introduces the term Religious Devices to advance the idea that all devices arise from belief systems, but that while some openly facilitate religious ritual or worship, others are less transparently designed as idols of worship.

Defining Devices

In using the term ‘device’ in this discussion, I rely on Borgmann’s definition to mean an artefact, instrument, tool, gadget or mechanism, which may be physical or even conceptual; hardware or software. In taking up Borgmann’s terminology, I invite the philosophical implications of what he describes as the ‘device paradigm’ – to denote the mass appearance of devices in the mid-twentieth-century, and the way in which they are deployed and consumed in modern society.²⁰ In doing so, I aim to interrogate the aim of the device, or, the device of the device, examining their design and operation in religious service. More

¹⁹ Albert Borgmann, “The Moral Complexion of Consumption”, *The Journal of Consumer Research* 26/4 (2000): 418-422.

²⁰ Ibid.

specifically, this paper aims to highlight the symbiotic relationship between religion and technology showing how each ensures its own consumption through the technical or messianic rhetoric of the other.

Defining Religion

While definitions of religion vary, all share the notion of a belief in super-human powers within a particular system of worship and faith. A major sub-definition is “pursuits or interests that become ascribed with supreme importance” a meaning found in the Old French provenance of the word: *religio* (n-) meaning ‘obligation’ or ‘to hold in reverence’.²¹ Within this second definition, religion is removed from deities and instead refers to the passion or obsession to which objects and ideas are fixated upon without logic or sense. The result, in this context, is an uncritical idolatry in which consumption overtakes societal concerns. To illuminate the religious fervour that present consumer technologies mandate, this paper draws attention to the ancient connections of religion and technology. As expressed by Mumford, “Only as a religion can one explain the compulsive nature of the urge toward mechanical development without regard for the actual outcome of the development in human relations themselves”.²²

The most historically revered of all devices is undoubtedly the Gutenberg Printing Press, a machine that was immediately put into religious service printing Bibles. Lesser known is that the 1438 business partnership between Gutenberg, Dritzehn, Riffe and Heilmann to invent the printing apparatus had originally formed to manufacture ‘holy mirrors,’ collectable trinkets to be sold to the faithful on pilgrimage to the holy site of Aachen. The selling point of these holy mirrors was their purported ability to capture rays of light emanating from sacred relics; light that, once possessed, could serve as a potent talisman and transportable healing tool. While Gutenberg’s own credence in this Christian superstition is unclear, it is certain he intended to satisfy the colossal demand for these devices through a mass-productive stamping and embossing process that would prove crucial in the printing press to come. But Gutenberg’s expertise did not extend to calendar matters. He got the date of the pilgrimage wrong by an entire year (the Holy Relics of Aachen are exposed only for 10 days once every 7 years) meaning his team had to wait another twelve months to recoup their investment. Rather than dissolve the partnership, Gutenberg invited the group to collaborate in a secret venture in the interim - to develop a wooden printing press with movable type.

In *The Reformation as Media Event*, Read Mercer Schuchardt finds poetic comparisons between (1) the holy mirrors produced by Gutenberg’s team, (2) the press metal plate containing the printable text (also known as a mirror), and (3)

²¹ (Oxford Online Dictionary 2018)

²² Lewis Mumford, *Technics and Civilization*. 2010 edition. (University of Chicago Press, 1934): 365.

the Bibles themselves – text carrying devices that mirrored the word of God.²³ Each was designed to reflect holy rays of light - they were technological gadgets of a higher order. Yet for all their divine standing, the Gutenberg Bible and the printing press that had produced it quickly became entangled in a complex series of lawsuits leaving its namesake destitute. Gutenberg's legal dilemmas mirror the contemporary ecology of litigation between major device manufacturers today illustrating that the litigious, like the religious, constitutes an important trajectory of technology research. This tale also reveals how readily technology designers will produce devices for religious consumption.

Having established the historic-religious credentials of both technological devices and the discourse surrounding them, what follows is a survey of a collection of more contemporary religious devices. By no means exhaustive, these select examples underscore the religious dimensions of electronic media and reveal the technological embrace of a diverse variety of religious sects. In discussing each device, I briefly explore its history, circuitry and functionality within the denomination to which it is associated. What emerges is how a religious veneer is so easily applied to technology products, both through the design, the discourse in which they are embedded and the manner in which they are contextualised.

Divine Phones

The most worshiped of electronic devices today is the mobile phone. Evolving from an object of absolute luxury to one of unqualified necessity in three short decades, the mobile phone holds a near sacred position in the lives of many, and the device that best exemplifies the mobile phone's divine elevation is the iPhone.

In her book *When Religion Meets Newmedia*, Heidi A Campbell examines the messianic terminology used to describe the first iPhone at its 2007 launch.²⁴ Amid what had become a complex ecology of smart phone technologies, platforms and operating systems, the coming of the iPhone heralded a unifying standard for mobile technologies. The enormous anticipation of the device saw it bestowed the moniker: 'The Jesus Phone' which became a frequent characterization of the product in blogging, tech reviews, and ultimately the mainstream press. Campbell's discussion of the 'Jesus Phone' pries open the spiritual potential of all mobile phones while alluding to the specific religious aura enclouing Apple branded products, a subject that will be further elaborated. Additionally, Campbell's examination of "The koshering of the cell phone" within the ultra-orthodox Jewish community offers a useful case study of the religious-social shaping of technology.²⁵ I enthusiastically recommend Campbell's excellent body

²³ Read Mercer Schuchardt, *The Reformation as Media Event, The People's Book: The Reformation and the Bible* (Wheaton Theology Conference, IPV Academic, Illinois, 2017)

²⁴ Heidi A Campbell, *When Religion Meets New Media* (Routledge Palgrave Macmillan, 2010).

²⁵ *Ibid.*, 163.

of research into religious media and technology, but do not intend to further repeat her work here. Instead, I offer alternate examples of technological products whose religious associations are openly stated, beginning with the Buddha phone.

The Buddha phone arrived on the streets of Shenzhen in 2007. First named the Shaolin phone, it was in essence a customized Nokia 73. The gold-plated handset offered all the standard functionality of its secular contemporaries, but the Symbian S60 operating system also featured a virtual prayer room where Buddha and various Bodhisattva could be worshiped while ‘on-the-go’. Pressing the phone’s ‘jade button’ would activate an animated Buddha emerging from a lotus – the Buddhist symbol of purity.²⁶ The entire device was steeped in Chinese symbolism. The gold exterior and jade trimmings signifying honour and virtue while numerous Buddhist-inspired decorations adorned both the hardware casing and software operating system. Purportedly only 999 of the Shaolin phones were available worldwide, an auspicious number given that nine represents longevity. The scarcity of the Shaolin Buddha Phone was disrupted the following year by the release of the Odin 99. Available only in China, this device also presented a gold-plated exterior with diamond and jade accents, and included a collection of Buddha wallpapers.²⁷ Surpassing its predecessor, it featured a touchscreen interface, two cameras (one in front and one in the rear), and two sim-card slots. Extending the aesthetic established with the Shaolin Buddha Phone – The Odin 99 had no specific religious functions or associations outside of its appearance and customization, but offered Buddhists an opportunity to express their identity via a visible and material object.

²⁶ <https://www.gizmodo.com.au/the-strangest-cellphones-ever-sold-1670305256?r=US>

²⁷ Chinavision. “Golden Buddha Cellphone with Genuine Jade (Reserve Edition).” Chinavision. https://www.chinavision.com/china/wholesale/Cheap_Mobile_Phones/Cell_Phones/Golden_Buddha_Cellphone_with_Genuine_Jade_Reserve_Edition (accessed March 21, 2018).

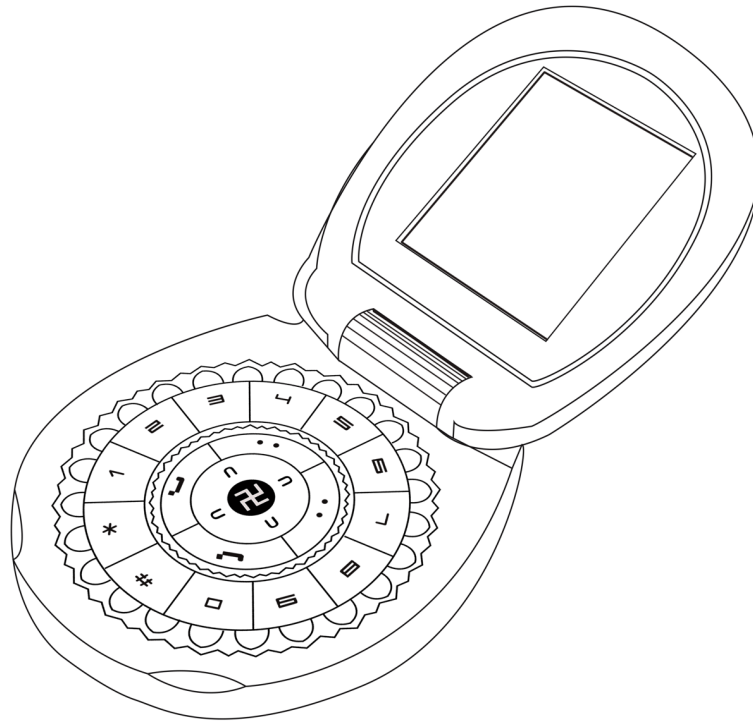


Fig 1. G57 Well-Wishing Golden Buddha Cellphone

The most expensive and ornate of the Buddha phones remains the G57 Well-Wishing Golden Buddha Cellphone. Retailing at \$1,750, it was the only device – its makers at Chinavision claim – to have received actual Buddhist blessings. Installed with features such as a Prayer Hall and Consecration Record Keeping, and permitting prayer input by BoPoMo or PinYin transliteration, Chinese Strokes or English text, the device appealed to a range of Chinese digital literacies. Aiming to rise above the kitsch of the previous Buddha phones, the object's distinct compact-like shape appeared to target an affluent and discerning clientele of Chinese Buddhist women (see figure 1). The limited edition G57 featured encrusted jade stone; pearl powder lacquer and a 24-karat gold finish and was hyped as “the single best phone for the successful businesswoman that wants to announce her elite status to the world.”²⁸ Unfortunately for such a traveller, the Golden Buddha Phone was only compatible with GSM on two frequencies: 900Mhz and 1800Mhz, preventing it from functioning in the USA, Canada or Mexico. As these phones plainly demonstrate, Buddhism is not a universally ascetic system of belief. In his study of material culture in Chinese Buddhism, Kieschnick observes that, in contrast to Buddhist orthodoxy in other regions of

²⁸ Andrew Robichaud, “Golden Buddha Mobile Packs Supreme Smartphone Serenity.” Trendhunter. <https://www.trendhunter.com/trends/golden-buddha> (accessed March 21, 2018).

Asia, Chinese Buddhists never adopted an explicit rejection of the material world. “On the contrary”, He writes “objects render the sacred tangible and proximate. Things allow one to communicate with deities and sense their presence.”²⁹ Kieschnick’s study underscores the importance of material culture to Chinese Buddhist writing, doctrine, texts and rituals since the religions migration from India in the first century.

The interconnected concerns of religious materiality and commodification is certainly not unique to Buddhism. Recent scholarship has brought to light the close relationships between religion and consumption globally. In her book *Religion and Commodification*, Vineeta Sinha examines the growing commodification of Hinduism,³⁰ a religion already equipped with an extensive menagerie of ritual paraphernalia while Pattana Kitiarsa’s *Religious Commodification in Asia: Marketing Gods* considers the shift of multiple religious institutions from traditional beliefs to material prosperity in a global ‘market of faiths’.³¹ Both books explore the theoretical implications of Asia’s changing religio-cultural landscape and demographics. More broadly, Coşgel and Minkler have examined how people with religious beliefs express the intensity and distinctiveness of their faith through the products they consume.³² Likewise, Vivian Qin has demonstrated via a series of experiments that individuals with strong religious beliefs tend to value their belongings more than those without religion, or with weaker religious beliefs.³³ Religious teachings, she concludes, not only emphasize contentment with one’s belongings, but can even lead to an overvaluation of material possessions. As the following example shows, the commodification of religious devices has seen them transfer across distant cultural and sub-cultural boundaries.

The Buddha Machine

Emerging alongside the Buddha Phone and Jesus Phone in the first decade of the new millennium, a curious device came to media attention for radically rebuffing the costly consumption of high-tech. The Buddha Machine was a small musical gadget whose zen foundations and low price seemed a bold statement against the increasingly complex, compact and converged mobile devices produced by Nokia, Motorola, Sony-Ericson and Apple. Produced by Beijing-based music duo Christiaan Virant and Zhang Jian (also known as FM3) the Buddha Machine was

²⁹ John Kieschnick, *The Impact of Buddhism on Chinese Material Culture* (Princeton University Press, 2003): 23.

³⁰ Vineeta Sinha, *Religion and Commodification*, (New York and London: Routledge, 2011).

³¹ Pattana Kitiarsa, *Religious Commodification in Asia: Marketing Gods* (New York: Routledge, 2007).

³² Metin Coşgel and Minkler Lanse, “Religious Identity and Consumption”. *Review of Social Economy* 62/3 (2007): 339-350.

³³ Vivian Yue Qin, “When Consumption Embraces Faith: How Religious Beliefs and Practices Influence Consumption.” PhD diss., (Duke University 2016).

based on electronic-recitation devices or *nianfo ji* used extensively within Hindu and Buddhist temples. The relatively recent emergence of electronic-recitation devices reflects changing working conditions among temple Monks. While Buddhist doctrine holds that a temple monk will chant praise of Buddha during hours of prayer, the constant low rhythmic chanting can become a punishing task when performed for hours at a time. For monks who are increasingly reluctant to sing for up to ten hours a day, mass-produced electronic-recitation devices eases their workload. While these electronic devices are not recommended as a direct substitute for human recitation, their invention has provided a welcome respite to monks providing chants for temple prayer and funeral rituals.

Millions of recitation devices have been produced in minor electronics factories around Asia. While largely unbranded and unregulated, all follow the same basic formula. Each contains a ROM chip holding a number of digitally encoded musical drones ranging in length from 1.5 to 40 seconds running in a perpetual loop. Powered by AA cell batteries, these devices come equipped with built-in headphone jack and/or speaker, a slide switch to move between chants, and a volume potentiometer that doubles as an on/off switch. The circuitry bundle is encased in solid colour plastic box about the size of a cigarette packet. The epitome of utilitarian simplicity, these devices are sold cheaply in markets and are sometimes freely gifted in temples and monasteries throughout Asia.

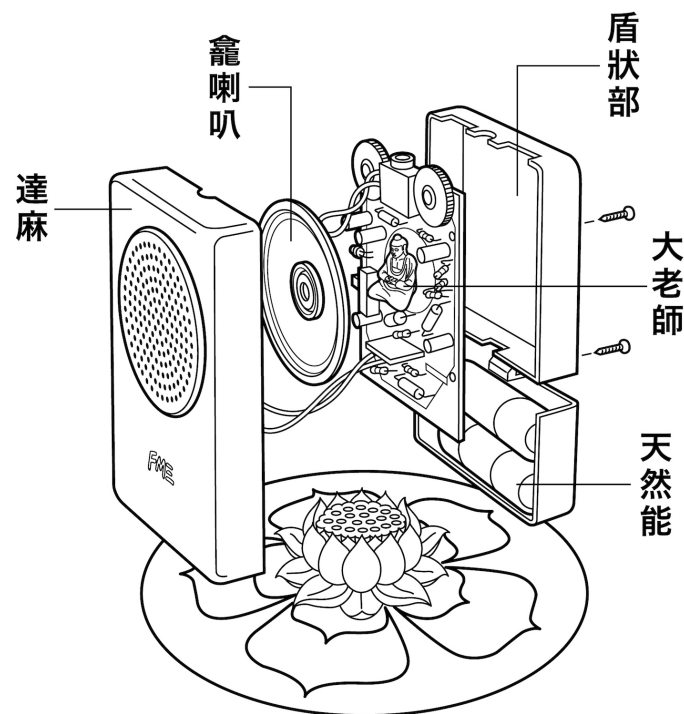


Fig 2. Fm3 Buddha Machine.³⁴

In the early years of the new millennium, recitation devices exploded from the religious domain across global electronic-music sub-cultures. In 2005, Beijing-based music duo FM3 developed their own chant loop player inspired by the religious recitation devices and the generative ambient music of Brian Eno. The resulting Buddha Machine (see Figure 2) launched to astounding success selling tens of thousands of units. Brian Eno purportedly purchasing over twenty, David Byrne compared them to the generative music of composer John Cage, and Philip Glass collaborated with the device and its inventors. More than cementing the artistic credentials of FM3, the Buddha Machine also served to bring attention to the religious devices upon which it was based, fuelling the consumption of these devices across the popular and secular mainstream.

Beyond transforming a religious article into a commoditised product, these recitation devices underscore a contradiction found across all religious devices. A common feature across religious orders is reverence for menial tasks – the notion that performing lowly and repetitive labour (cleaning, washing, chanting, prayer) delivers a grounding and humbling process that in-turn cultivates a proper disposition of humility. Devices, in total contrast, are designed to save time and effort. They help us escape the tedium of menial labour by outsourcing acts of ritual and drudgery to machines, but in doing so, adherents lose the building of the soul that such toil brings. This paradox sits at the core of Borgmann's 'device paradigm' and his critique of patterns of living all modern technology promote. Specifically, Borgmann argues, engagement with technology removes subjects from more authentic and satisfying ways of being.³⁵ A curious example of this outsourcing of religious labour is found in mechanical Buddhist prayer wheels and their recent digital counterparts.

Wheels of Prayer

Prayer wheels or '*mani lag khor*' found within Tibetan Buddhism were documented by a Chinese pilgrim around 400 C.E. in Ladakh, Northern India, but their use and evolution continues to the present day. In essence, prayer wheels are mechanisms that pray for you. Devices differ in design, but usually consist of a cylinder made from metal, wood, stone, or leather with the mantra *Om Mani Padme Hum* written in Sanskrit on the outside. At the core of the cylinder is a wooden or metal spindle with many thousands of mantras wrapped around it (or in the case of larger prayer wheels, millions). By spinning the wheel, the mantras

³⁴ Fm3 Buddha Machine, http://www.fm3buddhamachine.com/v2/?page_id=543 (accessed October 3, 2018)

³⁵ Albert Borgmann, "The Moral Complexion of Consumption", *The Journal of Consumer Research* 26/4 (2000): 418-422.

rotate around the spindle or 'Life Tree', an action that, for Tibetan Buddhists, brings similar meritorious effect as orally reciting prayers. In this way, the devout can outsource the act of prayer to mechanical devices powered by hand, wind, water or even electricity. The positive effect is increased when more copies of the mantra are included, and by spinning the prayer wheels faster, benefits multiply exponentially.

According to the Darma-Haven website, the Dalai Lama has stated that having the mantra on your computer allows your hard drive to function in the same way as a traditional *Mani* wheel. Similar pronouncements by other Lamas have seen the establishment of Tibet Tech, an enterprise dedicated to the research and production of digital Prayer Wheels. According to the Tibet Tech website as of 2018:

“Using DVD prayer storage technology, Tibet Tech Prayer Wheels with 8 DVDs contain over 84 billion prayers, making them the most powerful prayer wheels in the world. Just one spin of a Tibet Tech Prayer Wheel is equivalent to praying continuously for 2,675 years!”³⁶

While no formal sanctioning or legitimization of Digital Prayer Wheels exists within Tibetan Buddhism, nor is there any repudiation of the device or its effects. The lack of skill, attention or engagement on the part of their users to spin prayer wheels precisely creates the distance between faithful and faith that Borgmann decries in his device paradigm critique, expressly that devices relieve us not just from the difficult tasks for which they were designed but also of the world of meaning they invoked.

In a parallel argument, philosopher's Slavoj Žižek and Robert Pfaller have closely examined the delegation of personal beliefs to objects and mechanism in both religious and non-religious domains through the concept of interpassivity.³⁷ They identify the use of both Tibetan Prayer Wheels and Christian prayer candles to be interpassive rituals. In this framework, a religious individual is relieved of the burden of sincere participation in prayer by delegating the performance or practice of belief out to mechanical objects. They argue that by acting 'as if' prayer is occurring, but outsourcing the activity to a person or thing that is made to believe in one's place, the Tibetan and Christian faithful maintain a critical

³⁶ Tibet Tech Prayer Wheels website. <https://tibettech.com/cart/> (accessed on 2 March, 2018).

³⁷ Slavoj Žižek, *On Belief: Thinking in Action*, (Routledge 2001); Robert Pfaller, *Die Illusionen der Anderen*. (Frankfurt: Suhrkamp, 2002).

distance from their religion. Within such a device enabled structure, belief becomes subservient to the ritualised performance of belief.

Time and Place Keeping

Within Islam, the fundamental role of prayer cannot be outsourced to religious devices. *Salah* referring to the physical, mental, and spiritual act of worship observed five times daily constitutes one of the Five Pillars of Islam and acts as an individual's unmediated communication with, and remembrance of God. Yet the use of technological devices to orient and regulate prayer has full liturgical approval. In fact, the Qur'an specifically recommends the pursuit of knowledge and study of nature as means to discover signs of the Creator. In doing so, it inspires adherents to approach science both for its utilitarian value and as active components of spiritual worship. At the nexus of Islamic science and religion, timekeeping is among the most significant historical achievements. Islam's rituals of prayer require even the moderately pious Muslim to maintain precision awareness of time and direction at five intervals in the day. During the Islamic Golden Age (8th to the 14th century), this fuelled a religious fervour for the development of instruments of scientific exactitude in determining time and place. The most significant of these devices is the astrolabe.

While likely invented in fifth century classical Greece, the astrolabe was highly refined in the Islamic world from 800 AD onwards and was favoured for its capacity to calculate time and position from any location. By aligning the moveable brass dials to resemble the visible sky, the entire heavens, both seen and unseen, would emerge on the circular interface, as well as one's relative time and place within them (see figure 3). This made the device ideal for *qibla* calculations (the direction in which to face when praying). Indeed, most Islamic astrolabes feature a prayer line indicating daily prayer times. With mosques requiring exact alignment according to the *qibla*, astrolabes were invaluable tools to determine their orientation.

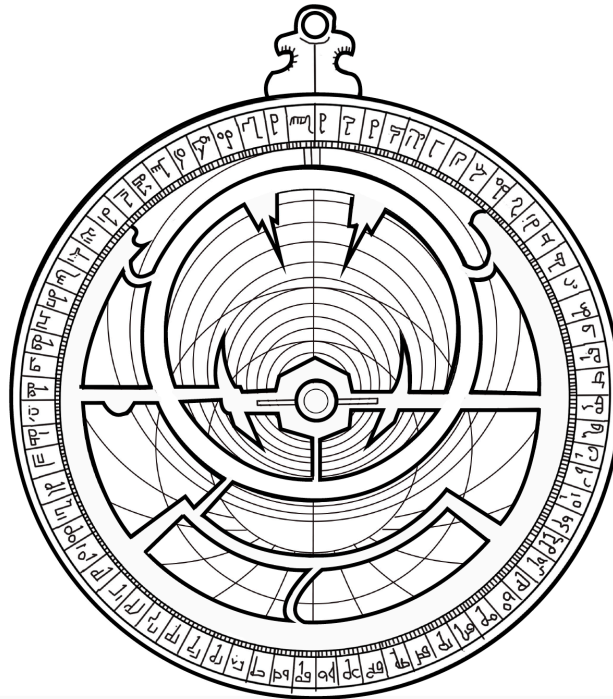


Fig 3. 15th Century Astrolabe.

The direct descendant of the astrolabe is the Azan clock. For the last century (in the absence of a nearby mosque) mechanical, electronic and digital Azan clocks indicate times and direction for Muslim Prayer. Where a secular clock may have one or two alarm functions, the Azan clock will feature five often-distinct alarms signalling each of the five prayer times (*fajr*, *zuhur*, *asar*, *maghrib* and *isha*). With the Islamic sequence of prayers strictly based on the position of the sun, but the *Hijri* calendar dependant on the moon, prayer times change subtly each day and not in correlation to the Gregorian calendar. The Azan clock calculates this complex and shifting window of prayer automatically. Azan clocks also often feature a compass to indicate the location of Mecca and therefore the direction of prayer.

Contemporary phones and tablet devices have obliterated the market for Azan clocks and Astrolabes. GPS, maps and tracking software are all installed as standard in order to let users (and technology providers) know exactly when and where they are, and precisely which way they are facing. In accepting these devices into our possession, we ourselves become possessions, moving from consumers to consumed. Our locations, consumer habits, friendship networks in-turn become the new currencies in a marketplace of user preferences behaviour. Through the uncritical embrace of mobile devices, we too completely surrender in the manner required of Islam, but to multiple gods of an entirely different order.

Indestructible Bibles

Numerous media platforms have played a key role in the liturgical elements of communal prayer and recitation within religious worship. As Jeffrey Mahan makes clear, religion has always been mediated and therefore studying the mediation of religion is necessary to the understanding of religion itself.³⁸ Nowhere have contemporary media devices evolved so idiosyncratically as among Christian missionaries.

Following the evangelical blueprint established by early Christian disciples, contemporary missionaries work to spread the gospel of Jesus, but today do so equipped with purpose built devices. These Bible audio books have been constructed to operate in inhospitable conditions as primary carriers of the Christian message. Examples include the ‘Omega Audio Bible’ a solar powered audio new testament, ‘The Proclaimer’ a hand audio cranked Bible player, and the ‘Military Bible Stick’, a robust and compact mp3 player targeted toward military service personnel. Among this assortment of apostolistic technologies, the MegaVoice brand appears to dominate the market. According to its inventors, the MegaVoice was born out of a struggle to maintain audio players in harsh climates, but was inspired by the practical resilience of pull-chord talking dolls. A noteworthy competitor is the hand-cranked ‘Saber Bible Player’ by Global Recordings Network (GRN). This multilingual audio book resides within a rugged hardwearing case, ensuring, according to GRN, that “more people will hear God’s word in their own languages for the first time.”³⁹ Steeped in vigorous evangelical righteousness, its makers recommend the device: “be given or sold ... to the ‘village chief’, for their private use or for sharing with the community.”⁴⁰

Because these devices operate in environments of contested and competing belief, their robustness as functioning objects not only ensures their longevity but also reflects well on the religion they transmit. The medium, to echo McLuhan, is the message. In a discussion on their website valorizing the durability of a related company product: the Messenger hand-wind cassette playback machine from 1981, (see figure 4) GRN refer to a curious incident in the field.

³⁸ Jeffrey H. Mahan, “Religion and Media”. *Religion Compass* 6/1 (2012): 14-25.

³⁹ Global Recordings Network Website. <http://globalrecordings.net/pt/saber-how-to-use> (accessed March 2, 2018).

⁴⁰ Ibid.

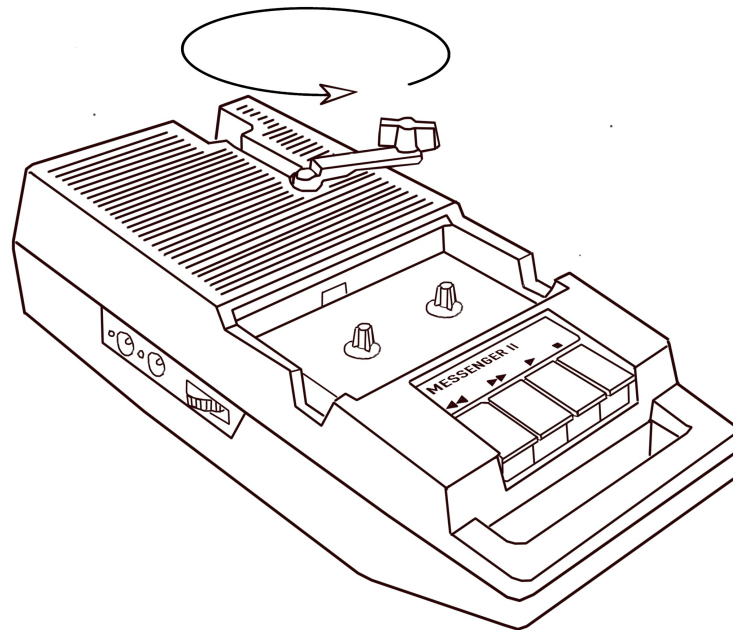


Fig 4. 1981 Messenger hand-wind cassette playback machine.

“One tribal group encountered a problem when their Messenger player failed to work. Their strong belief in the spirit world led them to the conclusion that it had been afflicted by an evil spirit. The evil spirit could be cast out of the machine by either throwing it into the fire, or smoking it out. Needless to say, neither was helpful to the Messenger. Another tribe believes that healing comes through immersion in water - also not helpful for a sick Messenger!”⁴¹

In this statement, we find a fascinating dialogue between rival belief systems in which an electronic device becomes the totem through which competing deities are projected. Two concepts become apparent. One is the process of sanctification - of how objects and devices can become imbued with religious meanings through a search for cause and effect. The other, more general implication is the capacity of devices to operate as containers for multiple deities simultaneously. Both lessons call attention to the adaptability of all devices to convey religious and non-religious messages.

It was this very adaptability that facilitated the explosion of televangelism in the 1920s and 1930s. Seizing on the rapid uptake of television and radio receivers as news and entertainment devices, Pentecostalism’s evangelical movement made an enterprising push into new media technologies, broadcasting a direct experience of their mega-church sermons into American homes. Through a close analysis of

⁴¹ Ibid.

televangelism within American culture, Quentin J. Schultze arrives at six characteristics that distinguish them.⁴² He notes that these congregations are ‘technologically sophisticated’ in their delivery and ‘expansionary-minded’ in their appeal. Highly charismatic preachers, Schultze continues, make certain the audiences are ‘experientially validated’ and in doing so the congregations are deeply ‘personality-led’. Notwithstanding the religious content and appeal, Schultze concludes these experiences are ‘entertainment-oriented’ to ensure the churches remain ‘audience supported’ through donations and regular viewership.

Although Televangelism ultimately dissipated in a cloud of controversies, technology companies have borrowed heavily from its energetic rhetoric. Today it is common to find individuals identifying as ‘technology evangelists’ and ‘angel investors’ within the cloistered communities of Silicon Valley. Although motivated by profits rather than by prophets, few can deny the spiritual underpinnings found throughout the Californian Ideology. The most religiously inspired of technology communities is undoubtedly Apple. Beyond its Jesus Phone already here mentioned, the company’s stores have been compared in media outlets to megachurches,⁴³ its followers described as religious devotees,⁴⁴ and its enigmatic cofounder Steve Jobs thought as messianic.⁴⁵ But in the myriad comparisons of Apple to religious sects, it is not Pentecostal evangelism to which recurring resemblance are drawn, but instead the Church of Scientology.⁴⁶

The IMeter

This brings us to the most contentious of all religious devices, and the one deserving of special attention, the Electropsychometer or E-meter used by the Church of Scientology. For all its controversy, the E-meter is a remarkably simple

⁴² Quentin J. Schultze. *Televangelism and American Culture: The Business of Popular Religion*. (Eugene, Oregon: Wipf and Stock Publishers, 1991).

⁴³ Spence, Ewan. “The Cult Of Apple And The Church Of Cook.” *Forbes*.
<https://www.forbes.com/sites/ewanspence/2015/10/13/apple-store-design-church-cult-apple/#5595230c2abf>
 (accessed March 21, 2018).

⁴⁴ Kennedy, Randall C. “The Church of Appletology.” *Betanews*.
<https://betanews.com/2012/09/21/the-church-of-appletology/> (accessed March 21, 2018).

⁴⁵ Osborne, Charlie. “Anthropologist ‘confirms’ Apple is a religion: Worship me, for I am Apple.” *ZNet*. <http://www.zdnet.com/article/anthropologist-confirms-apple-is-a-religion/> (accessed March 21, 2018).

⁴⁶ Dormehl, Luke. “Steve Jobs documentary director says Apple is a Scientology-like cult.” *Cult of Mac*.
<https://www.cultofmac.com/327440/steve-jobs-documentary-director-says-apple-is-a-scientology-like-cult/> (accessed March 21, 2018); Goldin, Katie. “The Dangerous Cult You Didn’t Even Know You Were A Part Of.” *Cracked*.

<http://www.cracked.com/blog/the-creepy-similarities-between-apple-scientology/> (accessed March 21, 2018); Kennedy, Randall C. “The Church of Appletology.” *Betanews*.
<https://betanews.com/2012/09/21/the-church-of-appletology/> (accessed March 21, 2018).

apparatus that measures the electrical conductivity of the skin or Electrodermal Activity (EDA). Otherwise put, it monitors perspiration. Devices to measure EDA were pioneered by Georgian physiologist Ivane Tarkhnishvili in 1889 and were popularized by early psychoanalyst Carl Jung before he abandoned EDA as a constructive instrument of therapy in 1906.

The contemporary E-meter came into Scientology in the 1950's via Volney Mathison, a polymath (chiropractor, radio engineer, psychologist and hypnotist) who became enthused by lectures given by Scientology founder L Ron Hubbard. Learning of Mathison's apparatus, Hubbard soon embraced the E-meter and the measurement of EDA to 'audit' the emotional complexes of the Church's adherents. Numerous autopsies of E-meters have revealed a curious mix of old and new technologies. Its primary module is a Wheatstone Bridge, a simple circuit first invented in 1833 to detect very small differences between two electrical impedances (in this case, resistance). Matheson's central contribution in his 1954 patent was to add an amplifier to the circuit making it more sensitive and therefore easier to use.⁴⁷

The logic behind the e-meter is almost identical to polygraph machines (lie detector). Both rely on perspiration and other bodily fluctuations as indications of emotional and sympathetic responses that lay beyond conscious control. But while a polygraph regards these fluctuations as signalling potential falsehoods on the part of a speaking subject, Scientology diagnoses these same fluctuations as engrams. Within Dianetics, the human mind is impaired by engrams, purportedly mnemonic traces of traumatic experiences, and when connected to an E-meter, a subject can be audited to reveal engrams that can be later eliminated leading to a significant improvement in a person's potential for action and success.⁴⁸ A failing shared by both lie detectors and e-meters is that any astringent question might provoke an unintended skin or perspiration response. Readings are easily biased by intimidation of the subject through perceived authority of the auditor and apparatus. But even more remarkable is that the E-meter's interface is completely without numbers. Scientologists reason that scientifically measurable resistance is unimportant weighed against how readings are interpreted by the Scientologist operator. This unchecked power wielded by the machine operator forms a central critique of Scientology's use of the E-meter. Besieged by legal complaints, the Church has, since the late nineteen sixties, been forced to comply with US federal court stipulating the publication of disclaimers declaring the E-meter as a purely religious artefact.

⁴⁷ Hugh B Urban, *The Church of Scientology: A History of a New Religion* (Princeton University Press, 2011).

⁴⁸ Stefano Bigliardi, "New Religious Movement, Technology and Science: The Conceptualization of the E-meter in Scientology Teachings". 3 (*Zygon* 51 2016): 661-683.

This classification of the e-meter as a religious artefact signals a crucial rupture in the lineage of religious devices. Thus far, the examples presented evidence continuities in the use of technological devices over time and across cultures. As shown here, while Christianity emphasizes storage and transmission (holy mirrors, print and audio books, televangelism) Buddhism in contrast focuses on automated processing (prayer wheels, Buddha boxes, and Islam accentuates spatial and temporal orientation (astrolabe, Azan clocks). But the relabelling of the e-meter from a therapeutic instrument to a religious artefact introduces a new religious trajectory. It foreshadowed the ultimate transcendence of the whole of Scientology from a self-help group to a religious organisation exempt from taxation. This reclassification provokes important questions about the social, legal and financial definitions of religious organisations and corporate entities within a highly competitive technological environment. What if, for example, the Apple Corporation embraced its resemblances to a religion and reinvented itself as such, thereby relieving it from technological, legal or ethical critique in the manner that the Church of Scientology has attempted to achieve? In this way, the E-meter offers a critical lens through which to examine all devices and their designers, religious and secular. Every device gives expression in how it shapes our thinking, what it demands of our bodies, and how it codifies the world. The simple materiality and functioning of devices belie their role in a larger framework of social and financial dynamics. By looking at the world through a critical approach to devices, the scale and creed of these frameworks take shape. In encouraging such critiques, the primary target here is neither Scientology nor Apple, but the commercial approach which sees all technology use and consumption so easily embrace metaphysical and religious associations, yet devoid the ethical examination and imperatives that religions bring. The necessity of such critiques grow as human attention becomes increasingly drawn into technology devices that evoke technological transcendence through consumption. This technology for technology sake constitutes a form of religion, a worship of false gods, one that warrants broader attention and critique.

Conclusion

This survey is contained to examples that best illustrate technologically facilitated religious beliefs and practices and their historical continuities, yet there remain many religious devices overlooked. These include Sikh Singh Gurbani Radio Players, Jewish LED Menorah, Hindu Gayatri Mantra Players, Hindu Diya Lamps, Quran Mobile Phones and Interactive Prayer Mats which have all escaped deserved attention. There also remains an eclectic array of spiritual paraphernalia potentially classifiable as religious devices that I do not address here. Objects such as Jewish Tefillin, Buddhist Vajra, Pagan pendulums, Native American dream catchers, Wicca crystals and New-Age geometric forms may all be deemed worthy

of examination as religious instruments and media artefacts. Collectively, these religious devices illustrate that technology is not simply the impartial application of engineering or scientific knowledge, but is itself the result of cultural practices reflecting the beliefs and values of individuals and societies. They also remind us to question – what are the cultural practices, beliefs and values of those that design, construct and sell the secular devices that we use? While it is too late to reverse out of our dependence on technological devices, we do well to comprehend them, understanding not just their material elements and internal operations, but also their workings within social, economic and religious ecologies at a global scale.

Today, smart phones constitute the central instrument of religious and secular interactions. With the average person accessing their phone eighty-to-one-hundred times per day, our relationship to our devices has clearly moved far beyond the utilitarian and into practices or ritual, worship and absolution. Even for the irreligious, smart phones evoke the spiritual, appearing to offer transcendence from the here-and-now by whisking us away to somewhere more exciting and important. For the pious, hundreds of apps support a diversity of religious practices, ensuring a digitized spiritual connection regardless of worldly surroundings. While traditional religious leaders lament the distracting nature of mobile devices for robbing worshippers the quiet meditation underlying all religious traditions, their protests cannot compete with the rising new gods.

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