From Autonomous Techno-Organism to Divine Instrument of the State: On the Demonology of Modern Iranian Material Culture and Technology, 1850-1941

Arshavez Mozafari[*]
Ph.D., University of Toronto

Demonic Technologies

If demonic technologies are viewed by poets not from the perspective of technophobic morality or conservatism, which argues for the preservation of bodily integrity and natural existence against such forces,[1] but in terms of their so-called "pathetic quality" of desiring integration with the world,[2] the outline of the present study can be sufficiently decoded. To put it differently, while the utilization of technology can,

[1]Douglas Kellner, "Virilio, War and Technology," in *Paul Virilio*, ed. John Armitage (London: Sage, 2000), 103-126; quote on 103.
[2]Martin Tropp, "The Monster," in *Mary Shelley's Frankenstein*, ed. Harold Bloom (New York: Chelsea House, 2007), 13-28; quote on 24.

from one perspective, pose a threat to the demonism of nature insofar as the demonic is in this case connected to natural portentiousness, mystery and creativity,[3] what the following will reveal is how modern Iranian material culture and technology went through a peculiar conceptual journey that witnessed inchoate and untamed demonic techno-organisms becoming assimilated into the secular nationalist religion of the state.

By way of exclusions, it should be stated forthwith that, by demonic technologies, one is not referring to the technologies of demons, such as bowls of plague,[4] nor can it merely be said that they are the products of the devil.[5] Demonic technology is not here the satanic "spirit of technicity" as "the belief in unlimited power and the domination of man over nature, even over human nature; the belief in the unlimited 'receding of natural boundaries,' in the unlimited possibilities for change and prosperity."[6] This is why the "dichotomy between a rationalistic-mechanistic world of human labor and a romantic-virginal state of nature"[7] is ultimately unsuitable in the present context.

The notion of demonic technology presented here is closer to the idea of the demonic as the quiddity of technology, that the two are inseparable. The rationalistic-mechanistic aspect of modern technology is initially absent and its core is teeming with a "wild and barbarian" nature.[8] Its suffocating "demonic power [...] finally bursts forth" after an initial silence for the purpose of extracting relative surplus-value[9] or carrying forth an ensemble of other misfortunes. "Technological animism"[10] and the

[3]Paul Tillich, *The Spiritual Situation in Our Technical Society*, ed. J. Mark Thomas (Macon: Mercer University Press, 1988), 59-60. See also Jacques Derrida, *The Gift of Death*, trans. David Wills (Chicago: University of Chicago Press, 1995), 2. Juxtapose this with Heidegger's less substantial notion of the demonic, which is separated off from mysteriousness. See Martin Heidegger, "The Question Concerning Technology," in Martin Heidegger, *Basic Writings*, ed. David Farrell Krell (New York: Harper and Row, 1977), 287-317; quote on 309.

[4]Eugene Thacker, "Three Questions on Demonology," in *Hideous Gnosis*, ed. Nicola Masciandaro (n.p.: n.p., 2010), 179-220; quote on 199.

[5]Heidegger, "The Question Concerning Technology," 307.

[6]Carl Schmitt, *The Concept of the Political,* trans. George Schwab (Chicago: University of Chicago Press, 2007), 94.

[7]Carl Schmitt, *Roman Catholicism and Political Form*, trans. G.L. Ulmen (Westport: Green-

wood, 1996), 10.

[8]Schmitt, *Roman Catholicism and Political Form*, 10. The idea that the technology of this period was connected to the notion of a lawless nature is, in an approximate way, relatable to the Cartesian conclusion, based on postulates related to natural objects, that there is "no basic difference between one's watch and one's pet dog," Thomas L. Hankins, *Science and the Enlightenment* (Cambridge: Cambridge University Press, 2003), 114.

[9]Karl Marx, *Capital, Volume 1*, trans. Ben Fowkes (New York: Penguin, 1982), 503. Though, unlike what Marx had in mind, demonic technology here is not a "lifeless mechanism which is independent of the workers, who are incorporated into it as its living appendages" (Marx, *Capital, Volume 1*, 548.), for the mechanism is alive upon first contact.

[10]Langdon Winner, *Autonomous Technology* (Cambridge, MIT Press, 1978), 36.

"technological sublime,"[11] notions directly connected to demonic artefacts, were in full effect in the nineteenth and early-twentieth centuries, and they were certainly not confined to the Iranian context alone. This period is also the starting point of the present paper, a time now conceived as having spurred the transfer of "human life [...] into artifice,"[12] a nightmarish development of the ancient designation of human property as animate instrument.[13] But this focus does not square with what is being considered here, for if an initial dichotomy were to exist, it would be between demonic technologies and Iranian subjectivities.

The confrontation between demonic technologies and Iranian subjectivities immediately thrusts to the fore a logic of non-instrumentality that must be overcome. In other words, initial indigenous contact with demonic technologies happened with the recognition of an "independent technical morality" that did not abide by user injunction.[14] Rather than the controlled "parliament of monsters" that captured the imaginations of fair-goers in Europe,[15] the demonic technologies that will be observed here emerge in the domains of conflict, communication, resource extraction and transportation, not sites of conventional spectatorial consumption. In the mid-nineteenth century, or the early period of our investigation, when the population had "not yet been transformed into a labor force separated from the means of production,"[16] there was nevertheless a separation between technologies and humans that demonological inquiry takes into account. With this in mind, it is clear how technical morality, which "fear[s] no limitation whatsoever,"[17] coincided with a boundless and directionless Nature. Independent technical morality behooves us to reconsider the notion of technological advancement as a mode of post-metaphysical neutralization, but even so, it has already been argued that even neutralization is the nest of the demonic.[18]

As will become evident, the line of demarcation that divided demonic technologies from Iranian subjectivities slowly dissolved when the demonism of these technologies became displaced in such a manner that the demonic became the focus of technological repudiation. Thus, supplementary to the well-established idea of monsters acting as "bestial or demonic alter egos," "the other face of humanity,"[19]

[11]See, for example, Zoltán Simon, *The Double-Edged Sword* (Budapest: Akadémiai Kiadó, 2003).

[12]Winner, *Autonomous Technology*, 34.

[13]Aristotle, *Politics*, trans. C.D.C. Reeve (Cambridge: Hackett, 1998), 6.

[14]Jacques Ellul, *The Technological Society*, trans. John Wilkinson (New York: Vintage, 1964), 96-7.

[15]William Wordsworth, *The Prelude: The Four Texts* (London: Penguin, 2004), 290.

[16]Herbert Marcuse, *One-Dimensional Man* (London: Routledge, 2002), 49.

[17]Ellul, *The Technological Society*, 134.

[18]Derrida, *The Gift of Death*, 35-6.

[19]Zakiya Hanafi, *The Monster in the Machine* (Durham: Duke University Press, 2000), 4.

this paper taps into the demonic alter ego of technologies that is cognized and subjugated by the state via these very same technologies. As opposed to the descriptional, taxonomic and defensive attitude towards traditional demons, there is a here a privileging of a transformational, interventionist and coercive stance that invasively reworks demonic monstrosity[20] in the service of an etatist rationalism. This manipulability leads us back to the inception of modern demonic technologies and how they themselves were the product of a series of reciprocal adjustments (usually in the form of augmentations) between demonic spirit and matter.[21]

There is what can be called a form of reverse automatism at work in this whole process. As opposed to technological progressivism's aim to achieve full automation at the practical level, the following will demonstrate how in the Iranian experience, an initial orgiastic, animistic and frenzied automation, which, in part, "exiles man to the irresponsibility of a mere spectator,"[22] became integrated into a disciplinary system that produced further "conditions of pacification"[23] and "obedience to a system of anonymous powers."[24]

Diremptive Strategy

This paper seeks to unravel the documented process of demonological diremption that was at work in Iran between 1850/1229 sh. and 1941/1320 sh., particularly within material reality. To be more specific, it concentrates on how imported technologies, once construed as demonstrably malignant, gradually became consumable as "objects of gratification."[25] Within the "jungle of procedures"[26] that assimilated these artefacts, central focus will be given to the ascendant hegemony of the early-Pahlavī state (1921-41/1300-20 sh.). Without having to cling onto the "universe of codification" that prioritizes the object of utilization[27] as a cog of modernization theory, here the movements that precipitated the act of instrumentalization will be explored, meaning the conditions of production.[28] In other words, prior to the rise of the authoritarian state as the "centrifugal force" that defies the boundaries of the royal court within the city,[29] it is important to appreciate the way modern technologies originating in the West

---

[20]Hanafi, *The Monster in the Machine*, 62.
[21]Hanafi, *The Monster in the Machine*, 75.
[22]Jean Baudrillard, *The System of Objects*, trans. James Benedict (London: Verso, 2002), 110.
[23]Marcuse, *One-Dimensional Man*, 19.
[24]Marcuse, *One-Dimensional Man*, 50.
[25]Karl Marx, "The Grundrisse," in Karl Marx and Friedrich Engels, *The Marx-Engels Reader*, ed. Robert C. Tucker (New York: W.W. Norton & Company, 1978), 221-293; quote on 227.
[26]Michel de Certeau, *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley: University of California Press, 1988), 32.
[27]de Certeau, *The Practice of Everyday Life*, 35.
[28]de Certeau, *The Practice of Everyday Life*, 44.
[29]Leo Marx, *The Machine in the Garden* (Oxford: Oxford University Press, 2000), 32.

interacted with Iran's lifeworld (*Lebenswelt*), which is inclusive of Perso-Islamic and pre-Islamic Iranian demonic elements. For example, when the word 'science' was translated into Persian as *'ilm*, it got caught up in the vortex of a pre-existing lexical geneology[30] that was relatively "undisturbed by the miraculous [post-Enlightenment] advance of technology and communications."[31] During the inchoate moments of modernization in early-nineteenth century Iran, modern technologies became embedded within intricate vernacular, iconographic and semiotic networks, and because our "view of history is so deeply colored by an appreciation, if not awe, of technology as an agent of change,"[32] it might surprise some that modern artefacts had trenchant connotations of a wild demonism. And though there is with new technologies a supposed "disrespect for ancient times,"[33] they nevertheless harbour an ancient malevolence. Through this dialectical interaction between ancient demonism and modern technology, a mutual augmentation occurred, resulting in the ominous emergence of a vacuous intensity at the heart of the demonic.

The separation of the demonic from modern technologies was not clean-cut, and this was compounded by how the two sides were never part of an initial totality, further prohibiting any attempt at puritanical alleviation.[34] As part of one of the "diremptions of modernity,"[35] modern technologies were made to aggressively confront the demonic in the mode of externality. Acting not as a method of social philosophy[36] but an act of unconscious disposal, the diremptive strategy dangles technology's core before its very eyes, similar to how the productivity of labour is presented as an "*alien power*" to the worker by capital.[37] Unlike the conventional understanding of reason as the power to consecrate unity in the face of divisive disruptions of a prior totality,[38] etatist reason in the early-Pahlavī period was diremptive. Though this is not an outright critique of the dialectic of enlightenment,[39] because Riżā Shāh

Reza Mansouri, "The History of Science in Iran from a Physicist's Perspective," in *Science and Innovations in Iran*, ed. Abdol S. Soofi and Sepehr Ghazinoory (New York: Palgrave Macmillan, 2013), 15-38; quote on 16.

[31]Franz Rosenthal, *Knowledge Triumphant* (Leiden: Brill, 2007), 336.

[32]Marx, *The Machine in the Garden*, 150.

[33]John Stuart Mill, quoted in Marx, *The Machine in the Garden*, 193.

[34]Gillian Rose, *The Broken Middle* (Oxford: Blackwell, 1992), 236.

[35]Rose, *The Broken Middle*, 240. This definition, for Rose, is meant to replace modernity "as a project." And indeed, as Habermas put it, modernity itself is defined by how it stabilizes itself not by adhering to a model from the past, but upon the break from the past itself (Jürgen Habermas, *The Philosophical Discourse of Modernity*, trans. Frederick Lawrence (Cambridge: Polity, 1998), 16.).

[36]Georges Sorel, "Appendix I: Unity and Multiplicity," in Georges Sorel, *Reflections on Violence*, ed. Jeremy Jennings (Cambridge: Cambridge University Press, 2004), 253-278.

[37]Karl Marx, *Grundrisse*, trans. Martin Nicolaus (New York: Penguin, 1993), 307.

[38]Habermas, *The Philosophical Discourse of Modernity*, 21.

[39]As was offered by Nietzsche (see Habermas, *The Philosophical Discourse of Modernity*, 85-6.).

Pahlavī (1878-1944/1295-1363 gh./r. 1925-41/1304-20 sh.), the monarch of this early period, attempted to fulfill its tenets, the moment of separation nevertheless served to highlight its internal contradictions. The diabolical technologies that once allowed Iranians access to demonic Nature—meaning ontological lawlessness—became the secularized divine technologies mandated to domesticate this realm of chaotic drives. The poetic primary sources that will be reviewed here have the "versatility" to make contact with the chaos outside the system of order.[40]

The four stages or movements that will be shortly encountered in full present how demonic Nature was refigured as a collection of phenomena to be confronted externally, as "inner's *own immediate* externality,"[41] away from its earlier immanence. Roughly chronological, these movements also reflected the piecemeal way in which the technologies were introduced as "discrete projects."[42] They were as follows: (i) When modern applied scientific knowledge in the form of novel technologies dialectically encountered and became entangled with Iranian demonism, the former bestowed onto the latter its indifference and ungovernability, thus allowing for the manifestation of demonic Nature. (ii) The tie that held modern technology and Iranian demonism firmly in place was forcefully cut by the state as the supreme ideological possessor of technical know-how. Technology finally lost its speechlessness and aimless striving in exchange for absolute submission to the reigning monarch. (iii) Finally, a manifested demonic Nature, as the product of the former union, became fully estranged from technology but was yet to relinquish its association with the demonic. (iv) Thus, while technologies adopted by etatist strategy were rehabilitated of their prior associations, the demonic never parted ways with the logic of ungovernability. With this, Iranian demonology fully evolved to its new form, and technology became imbued with the secularized divinity of the state. The two reconfigured sides engaged in a vitriolic and unceasing confrontation, though they experienced amnesia regarding their former unity. To begin, we explore the enigma of the serpentine rifle as a reflection of the first movement.

The Serpentine Rifle

A major ambition of the new Pahlavī state was to reduce the suspicion of modern technologies that had been present earlier during Nāṣir al-Dīn Shāh Qājār's (1831-96/1247-1313 gh.) reign, i.e. the Nāṣirī period (1848-96/1264-1313 gh.). One

[40]Friedrich Schlegel, *Philosophical Fragments*, trans. Peter Firchow (Minneapolis: University of Minnesota Press, 1998), 99.
[41]G.W.F. Hegel, *Phenomenology of Spirit*, trans. A.V. Miller (Oxford: Oxford University Press, 2004), 165.
[42]Daniel R. Headrick, *The Tentacles of Progress* (Oxford: Oxford University Press, 1988), 14.

particular object that had been subject to the ire of the period's demonologists was the rifle. In order to understand why, one must return to the exigencies that marked the dawn of the modern period in Iran. Successive Russian victories against Qājār armies in the early nineteenth century necessitated the overhaul of the armed forces under crown prince ʿAbbās Mīrzā's (1789-1833/1203-49 gh.) *niẓām-i jadīd* (The New Army), which included the incorporation of new arms.[43] Not only did the confrontation with Russian rifles expunge all possible sense of security inhabitants of Iran might have once had, the overhead costs of incorporating such advanced weaponry into the army's arsenal resulted in the straining of state coffers,[44] thus adding not so much to the desirability[45] of the weapon, but to its accursed quality. Because of the constant rotation of advisory teams which had resulted from altering diplomatic relations with host European powers, the inevitability of technological variations increased. This was due also to rapidly developing scientific achievements in the West,[46] which rendered older artefacts and components obsolete, the lack of local "industrial processes" needed to remedy deficiencies in material stock,[47] and the fact that each separate mission brought with itself similar but variegated replacement components that produced incompatibility issues.[48] Thus, even when the weapons were in Iranian hands, there were many times when they were dysfunctional, as if they were not meant for Iranian use to begin with.[49] Along with the drop off in domestic arms manufactures,[50] all these issues compounded to a boiling point where alongside geographical relocation of technologies and their cultural diffusion,[51] there existed nauseating demonic migrations, in this specific case, in the form of the serpentine rifle.

In the poem "Tufang" (Gun), written sometime during the Nāṣirī period, Dāvarī Māzandarānī (fl. 19th c./13th c. gh.) illustrates the rifle's enigmatic features. He

[43]Abbas Amanat, *Pivot of the Universe* (London: I.B. Tauris, 1997), 18. As one of the few innovations that helped to propel European nations ahead as colonial powers, firearm development took on unprecedented importance (Headrick, *The Tentacles of Progress*, 6.).

[44]Stephanie Cronin, "Building a new army: military reform in Qajar Iran," in *War and Peace in Qajar Persia*, ed. Roxane Farmanfarmaian (New York: Routledge, 2008), 47-87; quote on 78.

[45]Headrick, *The Tentacles of Progress*, 7.

[46]Headrick, *The Tentacles of Progress*, 9.

[47]Karl Marx, "On Imperialism in India," in Karl Marx and Friedrich Engels, *The Marx-Engels Read-er*, ed. Robert C. Tucker (New York: W.W. Norton & Company, 1978), 653-64; 653-664; quote on 662.

[48]Cronin, "Building a new army," 77.

[49]Indeed, as Headrick puts it, "Almost all the technological changes which affected the relations between the West and the tropics originated in the West or from the work of Western scientists and engineers; they were developed for the benefit of the West, or of some sections of Western society, with scant regard for their long-range impact on the tropics" (Headrick, *The Tentacles of Progress*, 7.).

[50]Cronin, "Building a new army," 79.

[51]Headrick, *The Tentacles of Progress*, 9.

starts by pondering the identity of this impenetrable entity which looks like a snake and is delightful to the senses, for even though it is not a reptile it sheds like one (*chih nām dārad ān mār-shikl-i rū΄īn-tan? / kih nīst mār va līkan chū mār muhrah-fikan*).[52] Māzandarānī›s attribution of an organic existence to the rifle feeds directly off of its newly perceived autonomous and organic status during the period[53]—a weapon that can determine the fate of a nation but cannot be properly handled by its test subjects.[54] Additionally, this construction feeds off the traditional Islamic symbolism of the snake as a punitive character,[55] but the crime that invokes its retributory intervention is either unknown or unknowable. As one of the forms in which occult spirits known as the jinn are said to take,[56] the snake's equation with a modern weapon allows for the diabolical occult to announce its union with the rifle. Māzandarānī continues by saying that when this reptilian entity sheds, it emits fire and smoke from its mouth, thus further revealing its beautiful physique (*bih vaqt-i muhrah-fishānī zi kām ātash va dūd / hamī barāvarad īn mār-shikl-i rū΄īn-tan*).[57] Contrary to the wear and tear of actual hardware, the serpentine rifle's self-activation actually increases its potency, thus fulfilling the snake's traditional regenerative quality.[58] The demonism of the weapon allows it to transcend degeneration by becoming an inscrutable *tour de force* that engages in the erasure of the surrounding "density of matter."[59]

The poem goes on to describe how small pieces accompany the serpentine artefact (*hamishah muhrah bih dunbāl būd mārān rā*),[60] a probable reference to the rifle's ammunition, but also reminiscent of early-Pahlavī human ecology where the derivational link between diabolical Nature and its never distant progeny,

[52]Dāvarī Māzandarānī, "Tufang [Gun]," *Armaghān,* 5-6 (1927/1306 sh.), 301. While this remark may, in part, be in keeping with the customary "adoration of beauty" in *Persian poetry* (Ehsan Yarshater, "The Persian presence in the Islamic world," in *The Persian Presence in the Islamic World*, ed. Richard G. Hovannisian and Georges Sabagh (Cambridge: Cambridge University Press, 1998), 4-126; quote on 99. it should also be construed as a new mode of sense perception based on novel historical coordinates (Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, trans. Harry Zohn and ed. Hannah Arendt (New York: Schocken, 2007), 217-52; quote on 222.)—the beauty of an incalculable evil.
[53]Unlike the perceived need to control man's "new [techno-]body" (Walter Benjamin, "One-Way Street," in *One-Way Street and Other*

Writings, trans. Edmund Jephcott and Kingsley Shorter (London: NLB, 1979), 45-104; quote on 104.), here it is necessary to control the new techno-body of an estranged instrument.
[54]As the "victims of progress," they test the "reliability of the product" (Paul Virilio, *The Original Accident*, trans. Julie Rose (Cambridge: Polity, 2007), 84.) and thus the bond between the imperial metropoles and Iran.
[55]Christian Lange, *Encyclopaedia of Islam*, 3rd ed., s.v. "Hell" (Leiden: E.J. Brill, 2007).
[56]J. Ruska, *Encyclopaedia of Islam*, 2nd ed., s.v. "Ḥayya" (Leiden: E.J. Brill, 1960-2005).
[57]Dāvarī Māzandarānī, "Tufang," 301.
[58]Ruska, s.v. "Ḥayya."
[59]Paul Virilio, *Negative Horizon*, trans. Michael Degener (New York: Continuum, 2007), 126.
[60]Dāvarī Māzandarānī, "Tufang," 301.

the *bachah shayṭānī* (satanic child), is established. This connection is enhanced when it is remarked that no sooner does the serpentine rifle pump out children from its womb than it becomes pregnant again (*hamī bizāyad va gardad dubārah ābistan!!!*).[61] Rather than simply being impregnated by an external source, like the deficient "metabolic vehicle"[62] known as the human mother, the serpentine entity, in an ultimate moment of autonomous self-regeneration, spontaneously becomes pregnant in the service of "instantaneous destruction,"[63]—for while pregnant women may need midwives, this one is completely self-sufficient (*zanān-i ḥāmilah muḥtāj agar bih qābilah and / qabūl-i qābilah īn zan nakard sarv-i alan* [sic]*!!*).[64] This notion of a self-sufficiency that pushes the world away from it is also embedded in the traditional idea of the snake's ability to sustain itself without necessarily feeding on other existents. Simply through respiration can it continue living.[65] When the serpentine artefact gives birth, its relationship with its children is marked by a sense of primitive ferocity insofar as while other mothers feed their newborns milk, this one forces her offspring to suckle on the blood of her enemies (*ghaẕā-yi kūdak agar shīr-i mādar ast chirā?! / khvurand khūn-i ʿadū kūdakānsh jā-yi laban!!*).[66] Nature's *shayṭānī* child is likewise thrown into the world and meant to fester in his illusions and mindlessness—an equally violent springing into life.

Snakes are, in the traditional discourse, intrinsically "hostile to man,"[67] and the same affectation is conveyed in the frightened fighter who stands before the boastful serpentine weapon (*kishad chū naʿrah-yi hal min mubāriz az dil-i tang / ravān-i mard-i mubāriz bitūfad andar tan*).[68] During pregnancy—when one would think that a mother is at her weakest—the reptilian entity is actually the most prepared for a vulgar display of power and speed.[69] In this moment, even the valiant eagle is unnerved (*chū ḥāmilah'st bitarsad az ū ʿuqāb-i dilīr*).[70] What contributes to this fear is the novelty of the weapon's appearance and what springs from its metal mouth (*zi āhanīn dahanash ātashīn sukhan khīzad / bih rūzgār kih dīd īn chinīn*

[61] Dāvarī Māzandarānī, "Tufang," 304.

[62] Virilio, *Negative Horizon*, 41.

[63] Paul Virilio, *Speed and Politics*, trans. Marc Polizzotti (Los Angeles: Semiotext(e), 2006), 150.

[64] Dāvarī Māzandarānī, "Tufang," 304.

[65] Ruska, s.v. "Ḥayya."

[66] Dāvarī Māzandarānī, "Tufang," 304.

[67] Ruska, s.v. "Ḥayya."

[68] Dāvarī Māzandarānī, "Tufang," 301.

[69] When thinking of the fear of the combatant and the speed of the pregnant artefact, it should "be carefully noted that fear and speed are in fact linked: in the animal world, speed is the fruit of terror, the consequence of danger. In fact, the reduction of distances by the acceleration of movement is the effect of the instinct for self preservation. *Speed being simply the production of fear*, it is flight and not the attack that prompts the violent distancing, the sudden burst of speed" (Virilio, *Negative Horizon*, 46.).

[70] Dāvarī Māzandarānī, "Tufang," 303.

dahān va sukhan!).[71] In a twist that holds significant implications, the novelty of the weapon's appearance becomes syncretically aligned with traditional avatars of evil. But what is most fascinating is how syncretism is not the exclusive relational form that exists between the rifle and traditional demonic signifiers. There is also what can be described as the trope of evil versus evil.

For instance, Genghis Khan (d. 1227/624 gh.), often presented as the historical and mythological Mongolian archenemy within the Iranian imagination,[72] is in this poem incapable of withstanding the reptilian artefact's attacks (*muqāvimat nakunad pīsh-i ḥamlah´ash Changīz*).[73] Māzandarānī is here not simply equating the rifle with a traditional avatar of evil, he is positing the two in direct opposition to one another and allowing the modern variant to supersede the older. Once this supersession is accomplished, the poet then moves on to equate this heightened power with another maleficent progenitor, the Zoroastrian hypostasis of evil: Ahrīman. He does this when he compares the effect of the internal mechanism of the loaded rifle being struck with the manner in which fire and smoke emerge from Ahrīman's mouth (*zi imtalā-yi shikam chun barāvarad ārugh / barārad ātash va dūd az dahān chū Ahrīman*).[74] There is here an unequivocal call for a new stage in demonological analysis because Ahrīman serves as the embodiment of that collection of forces given expression to by the amalgamation of traditional Iranian demonism and modern technology. The second movement illustrates the way the latter, in the form of oil extraction facilities, attempted to attain its independence from the parasitism of the demonic.

Demonic Oil Facility

Situated during the lead up to the early 1930s when the Pahlavī state was nearing its full eclipse of all manifest forms of opposition,[75] reflecting how the "*legally constituted* authoritarian government" was spilling over into a form of arbitrary rule that relied heavily upon the extra-judicial internal security apparatus,[76] the second movement accounts for the first and violent attempt to have modern technology removed from the altar of the

---

[71]Dāvarī Māzandarānī, "Tufang," 302.

[72]On this topic, see Anja Pistor-Hatam, "History and its meaning in the Islamic Republic of Iran: The case of the Mongol invasion(s) and rule," in *Perceptions of Iran*, ed. Ali M. Ansari (London: I.B. Tauris, 2014) 147-162.

[73]Dāvarī Māzandarānī, "Tufang," 302.

[74]Dāvarī Māzandarānī, "Tufang," 302.

[75]Afshin Matin-Asgari, "The Pahlavi Era: Irani-an Modernity in Global Context," in *The Oxford Handbook of Iranian History*, ed. Touraj Daryaee (Oxford: Oxford University Press, 2012), 346-364; quote on 352.

[76]Hadi Enayat, *Law, State, and Society in Modern Iran: Constitutionalism, Autocracy, and Legal Reform, 1906-1941* (New York: Palgrave Mac-Millan, 2013), 187.

demonic. While the two moments of transition—the political and the technological—can be posited here as being inextricably linked, I would like to focus on the moment of transition and not its aftermath, which has already been discussed in its links with, among other things, a repressed truth emerging as symptom,[77] and a remainder as the embodiment of a lack.[78] The task is to historicize content in a manner that smears epistemological borders,[79] and the movements described here participate in this exercise.

In 1927/1306 sh., during a time when the ominous threat of British military intervention lingered as a possible reaction to any disruptions in the uninterrupted flow of oil to the great power,[80] Malik al-Shu'arā Muḥammad Taqī Bahār (1884-1951/1302-70 gh.), along with other parliamentary representatives and ministers, visited two separate oil installations in ‘Ibādān and Masjid Sulaymān, located in southwestern Iran and operated by the Anglo-Persian Oil Company (APOC).[81] The poem that Bahār wrote on this occasion served as a point of mediation within the interregnum that separated the emergence of the autonomous serpentine rifle and the full etatist cooption of modern technologies. This is made clear in Bahār's remarks on what he saw in the barren deserts of the area. The diversion and sprouting up of the river Kārūn's water through the use of channeled fire (*āb rā az kārūn bih bālā burdah'and*), and the seemingly never-ending pipelines stretching throughout the desert (*naft rā bā lūlah sargard-i bīyābān kardah'and*) are said to not be manifestations of any miracle-working or spell-binding activities (*tā nagū'ī mu'jiz ast īn yā kirāmat yā kih siḥr*).[82] This strict delineation that separates modern engineering from extraordinary occult practices marks a shift away from the thought that inspired the reptilian artefact construction.

Bahār continues by stating how pre-modern occult practices have lost their explanatory power, no longer being able to unravel the secrets that have lain hidden for years within the heart of the earth (*sāl'hā īn rāz pinhān būd dar qalb-i zamīn*).[83] While secrecy—with its strong religious connotations—was an integral indicator of early Arabo-Islamic discourse[84] and the more important but less regarded dimension

[77]Slavoj Žižek, *The Sublime Object of Ideology* (London: Verso, 2008), 22.

[78]Žižek, *The Sublime Object of Ideology*, 54.

[79]Lorraine Daston and Katharine Park, *Wonders and the Order of Nature, 1150-1750* (New York: Zone, 1998), 17-8.

[80]Mohammad Gholi Majd, *Great Britain and Reza Shah: The Plunder of Iran, 1921-1941* (Gainesville: University Press of Florida, 2001), 246.

[81]Malik al-Shu‘arā Muḥammad Taqī Bahār, "Masjid Sulaymān," in *Dīvān-i Ash'ār-i Muḥammad Taqī Bahār (Malik al-Shu‘arā), Jild-i Aval* [The Collected Poems of the Poet Laureate Muḥammad Taqī Bahār, Vol. 1] (Tehran: Intishārāt-i Tūs, 1989/1368 sh.), 450.

[82]Bahār, "Masjid Sulaymān," 453.

[83]Bahār, "Masjid Sulaymān," 453.

[84]Ruqayya Yasmine Khan, *Self and Secrecy in Early Islam* (Columbia: University of South Carolina Press, 2008), 1.

inherent in the Shī'ī notion of *taqīyyah* (dissimulation), which calls for believers to conceal occult Imamate teachings from the gaze of outsiders,[85] in the case of oil exploration and extraction the only method of unraveling geo-secrets—or for the complex knots embedded in the dense earth to be untied (*'uqdaḥ'hā'ī būd mushkil dar dil-i khārā*)—is through the pressure of science (*bā fishār-i 'ilm*).[86] Perhaps an allusion to the first stage of the crude oil extraction process in which natural pressure forces the substance into an underground vertical pipeline, this pressure has a sense of compulsion associated with it. Not only does science divulge secrets once reserved for elite Shī'ī initiates, it is insistent in its disavowal of magic and the miraculous.[87] This is, of course, a defining moment for the technoscientific and modernizing Pahlavī state.

What is surprising, though, is the way the praise of modern engineering is interrupted when Bahār attributes a strong demonological character to the remaining objects under observation in the poem. For example, he remarks how the large metal tanks in the area have taken on the form of a black demon (*dīg'hā'ī āhanīn, bar hay'at-i dīv-i sīyāh*) and like the depths of hell, two blazing fires can be seen emerging from stacks in the distance (*hamchū dū dūzakh, dū nayrān-i mushta'il dīdam zi dūr*).[88] Problematizing the idea that preturnatural terms and logics, such as demonological vernacular, "hovered at the edges of scientific inquiry,"[89] here the demonic is located at the heart of "scientific pressure." Hence, the unity internal to demonic technologies, as propounded by Māzandarānī, is still intact, but now with added emphasis on scientific grounding, rather than their autonomous gesticulations. To put it in a different way, the demonic at this stage does not abide by the course of events that had monsters turning into natural wonders, and finally to objects of scientific analysis.[90] Here, the demonic coincides with applied science, and in their unity as demonic technologies, they confront what is considered to be retrograde, the traditional explanatory discourses internal to religious occultism. Interestingly enough, demonological "repugnance"[91] in

---

[85]Mohammad Ali Amir-Moezzi, *The Divine Guide in Early Shi'ism*, trans. David Streight (Albany: State University of New York Press, 1994), 230.

[86]Bahār, "Masjid Sulaymān," 453.

[87]As Bertrand Russell put it with respect to "Modern Christians" handling new scientific findings against the background of seemingly archaic religious formulations: "Modern Christians are indignant if one supposes that they still believe the ancient formulas, but they do not sufficiently recognize that only the pressure of science has

driven them into their present comparatively rational position." See Bertrand Russell, "Science and Religion," in *Russell on Religion*, ed. Louis Greenspan and Stefan Andersson (London: Routledge, 1999), 131-139; quote on 132.

[88]Bahār, "Masjid Sulaymān," 454.

[89]Daston and Park, *Wonders and the Order of Nature*, 13.

[90]Daston and Park, *Wonders and the Order of Nature*, 176.

[91]Daston and Park, *Wonders and the Order of Nature*, 202.

"Masjid Sulaymān" is not as heightened as it was in "Tufang," primarily due to the augmented presence of scientific ingenuity.

Repentant Telegraph Lines

In the 1933/1312 sh. poem "Chakāmah-yi Haft-khvān-i Pahlavī" (Ode to the Seven Trials of Pahlavī),[92] a play on the seven-staged rite of passage of Rustam, an Iranian mythical hero, it is not constitutionally sanctioned authoritarianism that is on display but rather the ascendance of arbitrary governorship based on the semblance of legality.[93] In this anonymous panegyric period-piece, what becomes immediately discernible is the way modern technology—in this case, telegraph lines—is emptied of its associations with the demonic. Even though this was an unavoidable Pahlavī prerequisite in the handling of technology, similar to the early moment in European modernity when mastery over nature became possible after its diremption from mind,[94] the telegraphic episode marks another instance in the odyssey of modern technologies in Iran and how they were touched by the demonic.[95] Part of an expanded "sense of the possible,"[96] the telegraphic moment exemplifies how etatist utilization of imported technologies was not instantaneous, but rather a point in the conceptual pacification of the technological. In addition to the "invention, development, and diffusion"[97] of technologies, the applied sciences were also embedded within sophisticated semiotic, cultural and proprietary struggles. This process ended in the Iranian claim of ownership over the utilized artefacts, thus marking the shift from imported object of imperial regulation[98] to Iranian artefact of national ascension.

[92]Anonymous, "Chakāmah-yi Haft-khvān-i Pahlavī [An Ode to the Seven Trials of Pahlavī]," *Armaghān,* 3 (1933/1312 sh.), 161-166.

[93]Enayat, *Law, State, and Society in Modern Iran*, 187.

[94]Descartes speaks of the distinction between mind and matter in the following way: "A substance may indeed be known through any attribute at all; but each substance has one principal property which constitutes its nature and essence, and to which all its other properties are referred. Thus extension in length, breadth and depth constitutes the nature of corporeal substance; and thought constitutes the nature of thinking substance. Everything else which can be attributed to the body presupposes extension, and is merely a mode of an extended thing; and similarly, whatever we find in the mind is simply one of the various modes of thinking." See René Descartes, "Principles of Philosophy," in *The Philosophical Writings of Descartes: Volume I*, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985) 177-292; quote on 210.

[95]For a related commentary on seventeenth century scientific careers, see Daston and Park, *Wonders and the Order of Nature*, 216.

[96]Daston and Park, *Wonders and the Order of Nature*, 219.

[97]Headrick, *The Tentacles of Progress*, 19.

[98]Headrick, *The Tentacles of Progress*, 6.

As part of nineteenth century modernization efforts and through funding provided by imperial powers,[99] the incorporation of Russo-British-run telegraph lines into Iranian society in part allowed Nāṣir al-Dīn Shāh to expand his authority beyond the court gates of Tehran to every province,[100] and telegraph stations began functioning as "mini-legations" for the furtherance of foreign imperial designs.[101] The transmission of information through such means also allowed for unprecedented state-led eavesdropping, which resulted in a reinforced security apparatus. While diplomatic cables, the negotiation of concessions, banking communications, commercial transactions, and other transmissions allowed for Iran's greater inclusion into the fast-paced international economic order, the stations also provided sanctuary for local modes of resistance against an increasingly robust state.[102] Although this utilization by social movements (as was evident during the rapid spread of information during the Tobacco Protest of 1891-92/1308-10 gh.[103] and the show of support by pro-constitutionalists all over Iran and the Caucasus during the early 1900s)[104] may in some measure redeem the construction of the telegraph lines, their inclusion in the Qājār's state office farming system,[105] their exploitation by the imperial powers to both integrate Iran into international capital markets and further their own paternalistic role over state and economic affairs, and finally their use by an increasingly informed autocratic leadership, quickly soured Iranian reception of the technology—a sentiment that was shared by many (quasi-)colonized societies.[106]

Riżā Shāh's early dealings with the question of telegraphy for the most part concerned this negative attribution. It was during his reign that the monopoly held by the Indo-European Telegraph Company was revoked, thus partially curtailing imperial designs.[107] Correspondingly, it is within the context of the Indo-European telegraph line (*tiligrāf-i Hind va Urūp*) that Riżā Shāh's fourth trial (*khvān-i chahārum*) commences. The monarch is portrayed in the same light as Rustam on his mount in the *Shāhnāmah* (Book of Kings), galloping towards a group of ghouls who are served by demons and beasts

[99]Hooshang Amirahmahdi, *The Political Economy of Iran under the Qajars* (London: I.B. Tauris, 2012), 28.

[100]Abrahamian, *Iran Between Two Revolutions*, 57.

[101]Amirahmahdi, *The Political Economy of Iran under the Qajars*, 29.

[102]Amirahmahdi, *The Political Economy of Iran under the Qajars*, 29.

[103]Abrahamian, *Iran Between Two Revolutions*, 73.

[104]Abrahamian, *Iran Between Two Revolutions*,

85

[105]Amirahmahdi, *The Political Economy of Iran under the Qajars*, 81.

[106]See, for instance, Nélia Dias, "Exploring the senses and exploiting the land: Railroads, bodies and measurement in nineteenth-century French colonies," in *Material Powers*, ed. Tony Bennett and Patrick Joyce (New York: Routledge, 2010), 171-189; quote on 185.

[107]Abrahamian, *Iran Between Two Revolutions*, 143.

(*rānd Rustam-vār dar khvān-i chahārum shāh Rakhsh / ghūl-zārī dīd dar vay dīv va dad khidmatguzār*)[108] who in part maintained the previously unassailable "protections and prohibitions"[109] of the cable lines. Although he initially uses a demonological theme that is more characteristic of traditional depictions of encroaching evil, mainly a neutral or divine space full of undesired, unsavory and maleficent elements, the poet later on moves into an understanding of technology that reveals a major strategy of the Pahlavī state. This becomes apparent when it is described that spiders, which are reminiscent of ancient Babylonian sorcerers, are spinning a web along the ceiling of the world (*'ankabūtānī bih saqf va bām-i gītī tār-tan / siḥr-kīshānī zi jādū'hā-yi Bābil yādgār*).[110] This moment is of crucial importance for a number of reasons. For one, we are dealing with a spider, one of the symbolic scions of evil and an entity traditionally known for its mathematical precision.[111] This exactitude is utilized to construct the world-encompassing web, a network[112] that actually represents the birth of global telecommunication. As in Bahār's "Masjid Sulaymān," "Chakāmah-yi Haft'khvān-i Pahlavī" begins with the unity of the demonic and the applied sciences, but there is a greater sense of active intentionality on the part of the demonic, that it is in possession of technical knowledge.[113]

While spiders are known for consuming flies,[114] the author of "Chakāmah-yi Haft'khvān-i Pahlavī" expresses surprise at how the arachnids in his poem are able to feast on human flesh (*'ankabūtān-i magas-afkan basī dīdīm līk / hīchkas nashnīdah hargiz 'ankabūt ādam-shikār*).[115] By going beyond the less harmful role of telegraph infrastructure as a perpetuator of anxieties and panics,[116] and bringing us closer to the appetite of the serpentine rifle in "Tufang," this section of the work disturbs the earlier association between the demonic and applied

[108]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.

[109]Dias, "Exploring the senses and exploiting the land," 184.

[110]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.

[111]J. Ruska, *Encyclopaedia of Islam*, 2nd ed., s.v. "ʿAnkabūt" (Leiden: E.J. Brill, 1960-2005).

[112]For more on this, see E. Thomas Ewing, "ʿA Most Powerful Instrument for a Despot': The Telegraph as a Trans-national Instrument of Imperial Control and Political Mobilization in the Middle East," in *The Nation State and Beyond*, ed. Isabella Löhr and Roland Wenzlhuemer (Heidelberg: Springer, 2013), 83-100; quote on 84.

[113]Daston and Park speak of how "preturnatural philosophy in some ways set the most demanding standards for scientific explanation [in Europe] in the late sixteenth and early seventeenth centuries" (Daston and Park, *Wonders and the Order of Nature*, 221.). In our case, the demonic itself was associated with the "most demanding standards" of scientific application.

[114]Ruska, s.v. "ʿAnkabūt."

[115]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.

[116]Robert Peckham, "Panic Encabled: Epidemics and the Telegraphic World," in *Empires of Panic*, ed. Robert Peckham (Hong Kong: Hong Kong University Press, 2015), 131-154; quote on 133.

science. At the same time, the depiction helps to clarify how telegraph lines "were transmitters of early colonial power,"[117] ensnaring humans with the inherent allure of an unknown but tantalizing form of communication. Due to telegraphy's ability to bring entire urban centres, provinces, empires and their colonies closer together, the amount of people getting caught in the web for later consumption is said to be numbered by the thousands (*yik bih yik uftad magas dar dām-i ṣayd-i ʿankabūt / vandar īn dām ādamī uftad hizār andar hizār*).[118] The surprise of the poet becomes increasingly noticeable as the work progresses. He asks, in a rhetorical way, who knew spiders were capable of spinning webs out of steel (*ʿankabūtī kay shinīdastī kih pīrāmūn-i khvīsh / bartanad az rū-yi āhan pūd va az pūlād tār*)?[119] As opposed to the Victorian metaphor of telegraph lines as the human nervous system, in other words, as transmitters of intelligence,[120] the syncretic logic that aggregated traditional demonic web-construction, modern metallurgy and telegraphic communication reflected the intrinsic unity of demonism and advanced technologies—an amalgam that was, at this stage, perceived as fracturable for the purpose of future utilizations. It is important to note how this diremptive strategy of separating off what can be called the 'transmission of demonic irrationality' was absent in the first two poems.

It is certainly true that, as Ewing claims, the "use of technology transformed tangible objects, such as wires, poles, and transmitters, into instruments of political power."[121] Reminiscent of the way telegrams were transmitted for the sake of either communicating secret messages to the benefit of the imperial powers or eavesdropping on the shah's subjects, it is noted in the poem that the enemy is present in the form of spy operatives who actively collude with actualizers of chaos and saboteurs *(khaṣm rā jāsūs va kishvar rā balā-yi nāgahān / fitnah-jū rā pāymard āshūbgar rā dastyār)*.[122] However, in this case, the demonic overrides the political, for it is with respect to spying that it is said that the carrier who transmits the revelation of devils is in actual fact the enemy of the carrier of glad tidings (*ḥāmil-i vaḥy-i shayāṭīn dushman-i payk-i surūsh*). This is followed by the customary assertion that Ahrīman is both inferior to

[117]Neil Parsons, "The 'Victorian Internet' Reaches Halfway to Cairo: Cape Tanganyika Telegraphs, 1875-1926," in *The Social Life of Connectivity in Africa*, ed. Mirjam de Bruijn and Rijk van Dijk (New York: Palgrave Macmillan, 2012), 95-122; quote on 112.
[118]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.
[119]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.
[120]Iwan Rhys Morus, "'The nervous system of Britain': space, time and the electric telegraph in the Victorian age," The *British Journal for the History of Science*, 33 (2000), 457-458.
[121]Ewing, "A Most Powerful Instrument for a Despot," 88.
[122]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.

and an enemy of the Creator (*dūst bā Ahrīman-i dūn dushman-i parvardigār*).[123] In what can now, in this context, be said to be the insubstantiality of the claim that the xenophilic justifications of European "colonizing activity a posteriori"[124] serve *as the basis of this poem, its author claims that internal associates or proxies exist* in the East to assist the thieves of the West (*duzd afshārān hamah dar sharq bar duzdān-i gharb*), thus resulting in the crime's fixity within the national realm (*duzd afshārī chinīn dar khānah chūn shud jāygīr / dastburd-i duzd andar khānah gardad pāydār*).[125] Due to the presence of these nefarious parties, this stage of the poem foregrounds the motif of demonic instrumentalization, which in-itself offers up the possibility of other instrumentalities.

In "Chakāmah-yi Haft-khvān-i Pahlavī," it is stated that in order to accrue more profits, metal lines are drawn everywhere, even in the desert and atop mountains (*bahr-i kasb-i sīm va zar dar kūh va hāmūn sīm-kash / sīm′hā-yi āhanīn sīm-āfarīn va zar-gusār*),[126] thus creating a "communicational geography."[127] The sparks that fly off these wires either during their construction or operation are a sight to behold for they are similar to a comet falling from the sky (*ātash-afshān dar zamīn hamchūn shahāb az āsimān / barq-angīz az ḥavādis̱ hamchū abr andar ayār*).[128] While the comet in this instance may appear to be connected to the *Sternschnuppenmythus* in surah seventy-two of the Qur'an in which angels pelt shooting stars at jinn attempting to eavesdrop on the heavenly assembly,[129] it is arguably closer in structure to the astrological bad omen.[130] This becomes evident when the people, in having to constantly evade the leaping sparks, are now paralyzed (*az jahandah-y barq khastah dast va gardan dar kamand*). Electric lightning grapples the legs of those who dare approach the lines without authorization (*vaz furūzān ṣā'iqah barbastah pā-yi rāhvār*), and the sparks turn into fires of chaos, prompting the people to bemoan the lack of a savior to wash down upon the flames like the sea (*ātash-i īn fitnah rā daryā kujā sāzad khamūsh*).[131] While undue focus is conventionally placed on the role

[123] Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 163.

[124] Aimé Césaire, *Discourse on Colonialism,* trans. Joan Pinkham (New York: Monthly Review, 2000), 45.

[125] Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[126] Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[127] Sujatha Sosale, "Mapping and modernizing the Indian Ocean Rim: Communication technologies under colonial Britain," *Global Media and Communication,* 10 (2014), 157.

[128] Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[129] Gerald Hawting, "Eavesdropping on the heavenly assembly and the protection of the revelation from demonic corruption," in *Self-Referentiality in the Qur'ān*, ed. Stefan Wild (Wiesbaden: Harrassowitz, 2006), 25-38.

[130] J. Knappert, *Encyclopaedia of Islam*, 2nd ed., s.v. "al-Nudjūm" (Leiden: E.J. Brill, 1960-2005).

[131] Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

of a monarchical redeemer,[132] my analysis is preoccupied with the rise of redemptive technologies. In order for this redemptive quality to solidify itself, an act of penance and rehabilitation must take place, and this is precisely what the poem goes on to describe.

When Riẓā Shāh—technology's absolver in this instance—is introduced in a formal manner approximately halfway through the poem, the realm's sorcerers begin trembling (*jādūvān bar khvīsh larzīdand*) due to the memory of their previous losses against him (*az shikast-i khvān-i pīshīn*). Through the intervention of the monarch, the wires transition from producers of vexing sparks to an entirely volcanic condition (*kardah sīm-i barq rā dar baḥr va bar ātash-fishān*),[133] reflecting their rehabilitative promotion and illuminative expansion throughout the country. A new period of symbolization is entered upon, one predicated upon a form of reverse engineering that negates demonic techno-autonomy[134] and re-inscribes technology as approachable, tactile and possible to master. After the momentous act of purificatory acquisition, the spiders re-emerge like dragons from a cave (*'ankabūtān sar barāvardah chū azhdar'hā zi ghār*)[135] to halt the king's access to the "source codes" of technological reality.[136] Their attempt to perpetrate a hundred thousand disturbances does not yield any positive results (*ṣad hizār āshūb kardand va nadīdand hīch sūd*), and the dark magic behind the production of the telegraph infrastructure is negated as the sorcerers fall from grace (*siḥr'hā bāṭil shud va uftād jādū-gar zi kār*).[137] What is intriguing is that after all the attempts at sorcerous bedlam, punitive electric shock and infrastructural sabotage, the first concern is not the tranquility of the body politic but rather the purified state of metal wires pregnant with electricity (*sīm'hā-yi āhanīn-andām ābistan zi barq*).[138] This is, of course, reminiscent of the serpentine rifle's pregnancy but with an added twist. In that case, the rifle was organic, in excess of human accountability, demonic, and able to "autogenerate variation,"[139] while the telegraph lines, empty now of the

[132]For one example, see Mehrdad Kia, "The Making of Modern Authoritarianism in Contemporary Iran," in *Modern Middle East Authoritarianism*, ed. Noureddine Jebnoun, Mehrdad Kia and Mimi Kirk (New York: Routledge, 2014), 57-77; quote on 62.

[133]Anonymous. "Chakāmah-yi Haft´khvān-i Pahlavī," 164.

[134]Frank Apunkt Schneider and Günther Friesinger, "Technology vs. Technology: 'Reverse Engineering' as a User Rebellion," in *The Art of Reverse Engineering*, ed. Günther Friesinger and Jana Herwig (Bielefeld: Transcript, 2014), 9-22; quote on 10.

[135]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[136]Schneider and Friesinger, "Technology vs. Technology," 14.

[137]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[138]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[139]This term is used in reference to cyborgs but it is also applicable here. See Arindam Dutta, *The Bureaucracy of Beauty* (New York: Routledge, 2007), 222.

sorcerer's spellbinding activity and free from the spider's dominion, are pregnant in a non-malicious and obsequious manner. In other words, as an expression of "soft determinism," which argues that technological determinism is the result of an early agential intervention,[140] the lines express a willingness to have their vital electric energies reallocated for the Pahlavī cause.

Now, in light of establishing how the history of technology being evoked here goes beyond the Enlightenment paradigm of technology qua "liberating force"[141] to the idea of technology in need of deliverance and pastoral guidance, the stanza in which the pregnant electrical telegraph wires despondently prostrate before the reigning monarch (*sar bih khāk-i pā-yi shah sūdand bā ṣad inkisār*) and proclaim their absolute allegiance and servitude to him (*bar khaṭ-i farmān tū rā dārīm sar pargār-vār*)[142] makes perfect sense. Such communication between technology and man is indicative of a "material hermeneutics"[143] and the transition from a solipsistic serpentine rifle to a communicative telegraphic infrastructure, for the latter speaks the moment it must redress its past involvements, and in doing so reveals to its new user a reality that was once inaccessible.[144] Only the ideologically-circumscribed technoscientific persona of the shah, as the embodiment of the state, can listen in, probe the meaning of, and respond adequately to the technology's mere presence. Through the telegraph lines, the shah achieves *"technological extension of primary perception through instrumentation."*[145] In an almost pleading and pathetically remorseful manner, the telegraph lines state how previously they were unable to see any friends they could turn to in the country, thus forcing them to abide by the edicts of past enemies (*dūst dar kishvar nimīdīdīm bar jā pīsh az īn / lājaram payraw shudīm az dushmanān pīrār u pār*). They add that their repentance will be conveyed through service and apology through devotion (*tawbah-yi mā khidmat ast u jān-fishānī i'tiẕār*).[146]

---

[140]Leo Marx and Merritt Roe Smith, "Introduction," in *Does Technology Drive History?*, ed. Merritt Roe Smith and Leo Marx (Cambridge: MIT Press, 1994), ix-xv; quote on xiii.

[141]Merritt Roe Smith, "Technological Determinism in American Culture," in *Does Technology Drive History?*, ed. Merritt Roe Smith and Leo Marx (Cambridge: MIT Press, 1994), 1-36; quote on 2.

[142]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 164.

[143]See Don Ihde, "Do Things Speak?: Materi-

al Hermeneutics," in *Postphenomenology and Technoscience: The Peking University Lectures* (Albany: SUNY Press, 2009), 63-80.

[144]Peter-Paul Verbeek, "Pragmatism and Pragmata," in *Pragmatist Ethics for a Technological Culture*, ed. Jozef Keulartz, Michiel Korthals, Maartje Schermer and Tsjalling Swierstra (Dordrecht: Kluwer, 2002), 119-125; quote on 121.

[145]Don Ihde, *Expanding Hermeneutics* (Evanston: Northwestern University Press, 1998), 53.

[146]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 165.

As a rejection of the theory of unproblematic technological adaptability and transferability instilled by modernization discourse,[147] the remorseful impotence of the telegraph wires represents a intermediary stage in this techno-historical saga and its associated re-orientation of power differentials. While previously in the case of the serpentine rifle the accent was on its inscrutable ability to advance the essence of weaponry in a frighteningly autonomous direction, now the technology is dependent on the state's largesse. Or, to put it differently, the state at this stage has taken on a definite "*technological texture*."[148] After all, it is when the electrical lines are brought into the shah's palace after being involved in the punitive roasting of the arachnid sorcerers (*jādūvān-i 'ankabūt az barq-i kayfar sūkhtand*) that he proclaims his willingness to fulfill his promises to the Iranian people (*'ahd'hā barbast va bā sawgand'hā kard ustuvār*).[149] This is symbolic of technology becoming embedded within state culture.[150]

The Mosaic Railway

In the final movement, encapsulated by Bahār's poem, "Tūfān" (The Storm),[151] the technological entrenchment within state culture is completed typologically, as envisioned by the equally typological structure of "Chakāmah-yi Haft-khvān-i Pahlavī." "Tūfān" demonstrates how the state was embedded in a "*postmodern pluriculture*,"[152] for notwithstanding its enduring attempt to live up to the edicts of modernization theory, its direct involvement in the diremption of technological artefacts naturally positioned it as a "countercurrent"[153] to the metropoles. It had to come to grips with how alongside the novel transfer of a technological artefact from the West, something in excess of—but nevertheless inextricably linked to—the object was simultaneously delivered. In addition to particularly configured relations of power,[154] a sense of familiar strangeness carried forth,[155] and this excess left open the space for indigenous demonic invasions to mingle with technological materiality. It is precisely the technological artefact qua mediation that contributed to the rise of a new demonological formation,

---

[147]"Cultural embeddedness is a matter of a technology-in-a-context where it *is* what it is only contextually. This is why there is also no such thing as a simple technology transfer. There is only a culture-technology transfer, for all technologies have a network of 'assignments' as Heidegger called them" (Ihde, *Expanding Hermeneutics*, 48.).

[148]Don Ihde, *Postphenomenology* (Evanston: Northwestern University Press, 1995), 13.

[149]Anonymous. "Chakāmah-yi Haft-khvān-i Pahlavī," 165.

[150]Ihde, *Postphenomenology*, 26.
[151]Malik al-Shuʿarā Muḥammad Taqī Bahār, "Tūfān [The Storm]," in *Dīvān-i Ashʾār-i Muḥammad Taqī Bahār* (Malik al-Shuʿarā), Jild-i Avval (Tihrān: Tūs, 1989/1368 sh.), 528-529.
[152]Ihde, *Postphenomenology*, 28.
[153]Ihde, *Postphenomenology*, 28.
[154]Ihde, *Postphenomenology*, 33.
[155]Ihde, *Postphenomenology*, 38.

giving new meaning to the "horror" of becoming-other.[156] As "technologically constituted,"[157] the new orgiastic and relentless demonism, as embodied by the reptilian weapon, gradually became separated off from modern technologies, as this paper has thus far shown. The fourth movement, epitomized by the railroad system in "Tūfān," is the staging area for the confrontation between the newly consecrated determinism of etatist technological forms and a fully externalized demonism. In other words, both sides of the equation, upon meeting in this final stage, have altered considerably. Each has been "posited by [the] other"[158] in that technologies have been given praxical and essential *depth* by the demonic, and the demonic has been given illogical *depthlessness* by the emergent technologies. And though they at one point formed a unity, there is finally a recognition of how the demonic is the "*inner being* of things *qua* inner," meaning the "*true background of Things*"[159] as Nature. The purpose of the railroad system was to cut through this background in the establishment of a rational order.

Iran's first six-mile stretch of rail was laid down by the Belgians in the 1880s amidst a flurry of imperialist concession-hunting, led specifically by Russia and Britain.[160] Depleted prospects of profitability[161] and intense rivalry between these powers hindered the development of more extensive networks,[162] but one of the earliest and most serious considerations of a trans-Iranian railway system emerged during the constitutional period as a result of this wrangling for regional supremacy.[163] Though it served a prominent position in what was called the "Iranian question," or how Iran would serve as an instrument of imperial strategy in the region,[164] the trans-Iranian railway project during this period was postponed indefinitely due to insurmountable deadlocks between Russia and Britain.[165] This was not taken wholly negatively internally, for there were prior instances of local resistance to the idea of introducing locomotives to Iran, such as from muleteers and clerics.[166] In the end, the nationalist prioritization of railway construction as a facet of national unification and progress[167] prevailed and was incorporated into Riẓā Shāh's vision

---

[156]Hegel, *Phenomenology of Spirit*, 11.

[157]Ihde, *Postphenomenology*, 55.

[158]Hegel, *Phenomenology of Spirit*, 85.

[159]Hegel, *Phenomenology of Spirit*, 86.

[160]Amirahmadi, *The Political Economy of Iran Under the Qajars*, 30.

[161]Abrahamian, *Iran Between Two Revolutions*, 13.

[162]Amirahmadi, *The Political Economy of Iran Under the Qajars*, 27.

[163]Mansour Bonakdarian, *Britain and the Iranian Constitutional Revolution of 1906-1911* (Syracuse: Syracuse University Press, 2006), 241.

[164]Bonakdarian, *Britain and the Iranian Constitutional Revolution of 1906-1911*, 331.

[165]Bonakdarian, *Britain and the Iranian Constitutional Revolution of 1906-1911*, 334.

[166]Abrahamian, *Iran Between Two Revolutions*, 72.

[167]Abrahamian, *Iran Between Two Revolutions*, 105.

of a modernized country.[168] There were momentary attempts at pushback, including in the form of work stoppages by railway workers seeking wage increases,[169] but this capital project sustained itself, eclipsing all previous small-scale schemes[170] when it came to completion in 1938/1317 sh. Though ultimately unprofitable and a primary impetus behind the forced abdication of Riẓā Shāh during the early stages of the Second World War, which involved the country's occupation by the Allies, the railroad nevertheless hastened troop movements and the urbanization of key city centres along its path, and promoted infrastructural development and national self-identity.[171]

It has been established in other works that in the European tradition—specifically during the rise of capitalism—technology was freed "from craft values [and] oriented exclusively toward profit,"[172] but in Iran the railroad system represented the moment of freedom from and confrontation with the demonic. This is laid out most acutely in Bahār's "Tūfān." Accompanying Riẓā Shāh on a trip to the southwestern province of Khūzistān in 1929/1308 sh., Bahār describes a fearsome storm (ṭūfān-i mahībī) hampering the development of the incomplete railway system. As their group travels by ship via the Kārūn river, the storm becomes so intense that two local commanders (ḥākim-i niẓāmī), sartīp (Brigadier General) Farajullāh Khān and sipahbud (Major General) Āqā Valī Fi'lī, are swept into the waters.[173] In this highly-charged and descriptive poem, Bahār borrows from the demonological ethos of the time by pitting the diabolical Natural order against the mythological[174] hubris of technological reason in the form of locomotive schemes. He remarks how the waters of the Persian Gulf began breaching and flowing through hell (khalīj-i Fārs guftī kaz maghākī / bih dūzakh rikhnah kard va rīkht ānjā), resulting in the rise of dark plumes of steam (bukhārī tīrah va tār).[175] At this juncture, it is clear that the earlier mode of triadic sublimity as technology-Nature-demonic has been reduced to an isolated demonic Nature transformed by its contact with applied science.

Bahār continues by saying how whales are tossed about in this hellish domain, all the while making noises that resemble thunder claps (nahangān dar chah-i dūzakh

[168]Abrahamian, *Iran Between Two Revolutions*, 132.
[169]Abrahamian, *Iran Between Two Revolutions*, 163.
[170]Szczepan Lemańczyk, "The Transiranian Railway - History, Context and Consequences," *Middle East Studies,* 49 (2013), 237-238.
[171]Lemańczyk, "The Transiranian Railway,"

242-3.
[172]Andrew Freenberg, *Between Reason and Experience* (Cambridge: MIT Press, 2010), 213.
[173]Bahār, "Ṭūfān," 528.
[174]Rod Giblett, *Sublime Communication Technologies* (New York: Palgrave Macmillan, 2008), viii.
[175]Bahār, "Ṭūfān," 528.

fitādand / vaz ishān ra'dsān barkhāst hurrā). As thousands of dragons with bodies like mountains march on the skies (*hizārān izhdihā-yi kūh-paykar / bih gardūn tākhtand az saṭḥ-i ghabrā*), Bahār begins to wonder, in Zoroastrian terms, whether Ahrīman has covertly been able to strike at Yazdān, or God (*tū guftī kaz nahān Ahrīman-i zisht / shabīkhūn zad bih Yazdān-i tavanā*).[176] Though the ultimate goal is to achieve autonomy from Nature,[177] in the background, even beyond the Zoroastrian cosmological narrative of Good vs. Evil, Nature is seen laughing like a lion and Time screaming like a mindless ghoul (*ṭabī'at khandah zad chūn khandah-yi shīr / zamānah na'rah zad chūn ghūl-i kānā*).[178] This idea of Nature's irrational ruination emerging in the form of a maniacal laughter, of course, is in line with the period's demonological tenor. As the traditional cosmic duality engage in battle, Nature and Time are situated in the background ridiculing the whole affair. But there is a twist because Nature is already integrated with the demonic so when the heavenly realm of order is punctured by the forces of evil, the force of the waves and torrential rain are added to the assault. However, the deterministic and stalwart positioning of the railway tracks, or the "crude conqueror" that is the train,[179] which Bahār mentions next, is an attempt to obviate the ferocity of the elements.

Thus, though the ground became inundated with water from every angle (*zamīn pinhān shud andar mawj-i bārān / kih az har sū darāmad bīmaḥābā*),[180] organic industrial harmony with nature experienced elsewhere[181] was sundered by the way the trans-Iranian railway was opening a path like that of Moses' (*khaṭ-i āhan mīyān-i mawj guftī / rah-i Mūsá'st andar qa'r-i daryā*).[182] Opposed to the Nature/demonic dyad is thus the coupling of modern technology and religious salvation, an instantiation of "narrative explanation and symbolic legitimation."[183] As a weapon of "total war,"[184] the railway is coordinated by the "cybernetic steersman[ship]" of telegraphy,[185] the technology that was cleansed in the previous movement. As it cuts through the water, the railway also ascends above matter[186] as it is

[176]Bahār, "Ṭūfān," 528.

[177]Giblett, *Sublime Communication Technologies*, 21.

[178]Bahār, "Ṭūfān," 528.

[179]Giblett, *Sublime Communication Technologies*, 7.

[180]Bahār, "Ṭūfān," 528.

[181]Giblett, *Sublime Communication Technologies*, 22.

[182]Bahār, "Ṭūfān," 528.

[183]Giblett, *Sublime Communication Technologies*, 28.

[184]Giblett, *Sublime Communication Technologies*, 34.

[185]Giblett, *Sublime Communication Technologies*, 39.

[186]Giblett, *Sublime Communication Technologies*, 105. Though Giblett is here speaking of the automobile, the observation also applies to the train in our case.

relentlessly[187] pushed to the sides in the introduction of a new technologically defined temporal lifestyle.[188] Simultaneously, the triumph of the "law of movement"[189] allows the state to "irrigate the territorial body"[190] and to feel at home[191] across the entire route through the creation of new fronts of assault.[192] In the same way that Moses' path across the Red Sea was unobstructed and relatively smooth for the escaping slaves, the railroad "desertifies" the topography of the nation.[193] Ironically, unobstructed movement and speed coincided with the obliteration of the constitutional desire for political freedoms,[194] but this was all in preparation for the assault against the lawless demonism of Nature.

[187]"For the conquering emperor, whose attack on the world never relents, a single day is like a thousand years and the conquered earth is reduced to the light of this single day--finally, the object of this conquest, that is of the king-of-the-road's desire, is assimilated to the speed of light" (Paul Virilio, *The Aesthetics of Disappearance*, trans. Philip Beitchman (New York: Semiotext(e), 1991), 70.
[188]Virilio, *The Aesthetics of Disappearance*, 110.

[189]Virilio, *The Aesthetics of Disappearance*, 108.
[190]Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (New York: Semiotext(e), 2002), 102.
[191]Virilio and Lotringer, *Crepuscular Dawn*, 71.
[192]Virilio, *Speed and Politics*, 85.
[193]Paul Virilio, *Open Sky*, trans. Julie Rose (New York: Verso, 2003), 81.
[194]Virilio, *Speed and Politics*, 158.