

Sauna Studies as an Academic Field: A New Agenda for International Research

Jack Tsonis

Overview

This article is a proposal for Sauna Studies as an academic field. Although previous sauna research exists in areas of health science and historical/cultural studies, it is scattered, unconnected, significantly non-English, and, to date, largely undigitized. An International Sauna Association does exist, and its two key members (the Finnish Sauna Society and the Deutscher Sauna Bund) produced interesting research from the 1940s to the 1990s. But this does not amount to a proper academic field, especially considering the global prevalence of saunas, steam rooms, and other types of hot-air bathing. To remedy this situation, an *International Journal of Sauna Studies* is being created. Commencing in 2017, the IJSS will have three sections: 1) Health Science; 2) History and Culture; and 3) Technology and Design. This article lays out a programme for Sauna Studies by exploring the history of sauna research, surveying existing literature, and suggesting research directions across the three areas. It is an exciting opportunity for international collaboration. The greater purpose of Sauna Studies is to promote physical and mental health around the world in a time of increasing stress and social fracture.

Why Sauna Studies?

The role that bathing plays within a culture reveals the culture's attitude toward human relaxation. It is a measure of how far individual well-being is regarded as an indispensable part of community life.¹

Sauna is one of the most joyful activities humanity has ever created. Thousands of years old, the invention sometimes known as the 'Finnish

Jack Tsonis is a lecturer in the Graduate Research School at Western Sydney University. He is also president of ASBA, the Australian Sweat Bathing Association (est. 2016), the twenty-first member of the International Sauna Association (est. 1956).

¹ Sigfried Giedion, *Mechanization Takes Command: A Contribution to Anonymous History* (Minneapolis, MN: University of Minnesota Press, 2013 [1948]), p. 628.

bath' has counterparts across the world – the neighbouring Russian banya to the Japanese *sentō* and *mushi-buro*, to the Islamic hammam and its Westernization as the Turkish bath, to the Mesoamerican *temescal* and the North American sweat lodges – all of which deliver the unique and blissful experience that Sigfried Giedion called “total regeneration”.² Recognised as a profoundly social form of bathing, the most famous celebration of this tradition is Mikkel Aaland’s classic book *Sweat* (1978).³ Since the mid-twentieth century sauna has become an increasingly global phenomenon, capturing the imagination, warming bones, and neutralizing stress from Norway to Antarctica.⁴

But despite its importance to human culture, sweat bathing has been largely overlooked by the academic world. Several attempts have been made to formalise the area, led by the International Sauna Association (ISA) and its members (especially the Finnish Sauna Society and the Deutscher Sauna Bund [DSB]). A flurry of work was conducted from 1950-1990, but impetus has faded and there has been minimal transference to digital research culture. Important studies remain undigitized and therefore practically invisible to the world, at risk of oblivion by fire or neglect. The Deutscher Sauna Bund has recently created an online *Datenbank für wissenschaftliche Fachliteratur zum Saunabad* to record many of these studies, but the system is difficult to navigate and its fruits

² Giedion, *Mechanization Takes Command*, p. 628. Regeneration can be obtained by means other than sweat bathing (e.g. a hot spring), but the combination of hot air and water vapour delivers a truly special form of mental and physical replenishment.

³ Mikkel Aaland, *Sweat: The Illustrated History and Description of the Finnish Sauna, Russian Bania, Islamic Hammam, Japanese Mushi-buro, Mexican Temescal, and American Indian & Eskimo Sweat Lodge* (Santa Barbara, CA: Capra Press, 1978).

⁴ Norway recently hosted the largest sauna in the world on the island of Sandhornøya in the Arctic Circle (the sauna was widely reported; however the record is not yet confirmed with Guinness World Records). See Soo Kim, ‘The world’s largest sauna opens in the Arctic Circle’, *The Telegraph*, at <http://www.telegraph.co.uk/travel/news/The-worlds-largest-sauna-opens-in-the-Arctic-Circle>. Accessed 13/08/2016. Please note that all websites cited in this article were last accessed on 13/08/2016, unless otherwise noted. Sauna is also practiced in Antarctica – I am unsure of the full extent, but the most interesting aspect is the ritual whereby a person can join ‘The 300 Club’ – by having a 200°F sauna when the outside temperature reaches -100°. It sometimes includes a naked run outside. See Svati Kirsten Narula, ‘On Getting Naked in Antarctica’, *The Atlantic*, at <http://www.theatlantic.com/international/archive/2014/01/on-getting-naked-in-antarctica/282883>. Scientifically, it is not yet known whether sauna actually warms the bones.

not easy to obtain, even for those proficient in German.⁵ Furthermore, neither the ISA nor its members are academic associations: they are not-for-profit sauna associations. The ISA promotes scientific work and has closely supported the academic achievements of the DSB and the Finnish Sauna Society, but there remains no fully academic association focused on sauna research. Russian doctors conducted detailed investigations into the banya in the nineteenth century, and after the Revolution most Soviet states developed detailed guidelines about sauna use. But until now, this information has not been studied in the West.⁶

Other scientific studies on the health effects of sauna can be found, and a systematic review in 2001 used information from 130 articles (the review is discussed below).⁷ I have also been able to locate substantial bibliographies in both Finnish and Swedish, but these are not publically available and the material itself generally even more difficult to find.⁸ Historical and ethnographic studies exist in journal literature, and there are numerous books on sauna, including some with a reasonable academic base. These works do not, however, constitute an academic field, nor even an academic sub-field. What exists is scattered with no coherence, direction, or cumulative momentum. Material is very difficult to find, and there is virtually nothing in the way of recent organised activity.

To remedy this situation, myself and several collaborators (including the ISA) are in the process of establishing the *International Journal of Sauna Studies* (IJSS) – a multidisciplinary publication covering three areas: 1) Health Science; 2) History and Culture; and 3) Technology and Design. To harness the energies of scholars from around the world, we are creating an International Sauna Research Network (ISRN) that is free

⁵ Launched in 2009, the database can be found at <http://www.saunaliteratur.de/htdocs/index.php>.

⁶ See n. 23 below.

⁷ Minna L. Hannuksela and Samer Ellahham, 'Benefits and Risks of Sauna Bathing', *The American Journal of Medicine*, vol. 110 (2001), pp. 118-126. Only a handful of studies have been published since this review, the most important being that of Laukkanen et al. from 2015 (see n. 38 below).

⁸ The Finnish bibliography (Anna-Maija Petilä, *Saunabibliografia vuoteen 2005*) was commissioned by the Finnish Literary Society in 2009. It includes over 2000 items, but the majority are non-academic (this is still useful for mapping cultural history, but less so for systematic analysis). The Swedish bibliography is a medical literature review with sixty six references, some of which are only tangentially related to sauna. My thanks to Risto Elomaa, president of the International Sauna Association, for providing both bibliographies.

for researchers and observers to join. To propel the journal and encourage collaboration we will host an international conference every two years – commencing in Helsinki, 2020, and aligning every fourth year with the congress of the International Sauna Association. Through these actions, the IJSS will bring Sauna Studies to its rightful place as a legitimate academic field. The journal will be fully open access (in line with the egalitarian ethos of sauna), and will prioritize partnerships with community groups, health authorities, technicians, and urban planners to ensure the work has wide public benefit.⁹

This article is an attempt to summarize the situation and make a preliminary sketch of the terrain. Let me stress that it is not a systematic review, which would require larger space and archival research in multiple countries. I am also confident that others will be able to point out various important works that have been missed. This is a preliminary investigation, not an authoritative survey. In that spirit, what follows is divided into sections covering precedents of sauna research (especially the ISA and related activity) and possible areas of enquiry (including examples of existing literature, and suggestions future research). It is rare in academic life to find an area on which little work has been done. But sauna fits this description.

Terminology and Scope

It is important to clarify the relation of sauna to *bathing* as a general activity of culture.¹⁰ Although dated and in need of revision, the typology proposed by Ivan Lopatin in 1960 remains useful from a technical perspective. Lopatin suggests four types of bathing: 1) *the pool or the plunge bath* (including the modern bathtub); 2) *the direct fire sweat bath*; 3) *the water vapor sweat bath*; and 4) *the mixed type*. The Finnish sauna

⁹ The *International Journal of Sauna Studies* will commence in late 2017. See www.saunaresearch.org. Expressions of interest can be mailed to info@saunaresearch.org.

¹⁰ There are several general books on bathing, but to my knowledge nothing strongly academic. The closest is probably Katherine Ashenburg, *The Dirt on Clean: An Unsanitized History* (New York: North Point Press, 2007). More common are pictorial surveys such as Françoise De Bonneville, *The Book of the Bath* (New York: Rizzoli, 1998), which are contemporary counterpart of works like L. C. Hill, *The Tale of the Tub* (London: Newman Neame, 1950). There is a good deal of nineteenth-century literature on bathing, but this will not be surveyed here.

falls under the third type – the *water vapor sweat bath* – as does the Russian banya, the Islamic bath, and others listed above.¹¹

Important note: although Sauna Studies gives priority to the Finnish type (largely on account of its global prevalence), the *International Journal of Sauna Studies* respects all cultural varieties and includes them in its scope. The Russian banya deserves special mention as fellow representative of the basic archetype; the main difference is that the Finns have exported their model around the world more successfully in the last 100 years. Sauna has been more successfully technified than the banya, allowing greater transference; cold war dynamics have shaped the situation too. Beyond this, Mikkel Aaland has documented cherished sweat cultures in other parts of the world. So the focus on sauna should not be taken as exclusive. The name is also more striking than alternatives: an *International Journal for the Study of Sweat Bathing* may be appealing on technical grounds, perhaps even cultural grounds – but experience shows that where “sweat bathing” confuses, “sauna” sparks curiosity. If the journal is committed to public impact, this curiosity should be leveraged. If other journals arise to fill different niches, all the better. There is plenty of room on the bench.

The principle of sweat bathing is a very hot room in which people sit, generally for 10-20 minutes at a time (sometimes much longer), usually followed by a cold shower or water plunge. The process is normally repeated, although wide varieties of practice obtain. Cooling down is an important part of the process, and is recommended in standard advice such as posters created by the ISA and its member associations. The use of ice-

¹¹ Ivan Lopatin, ‘Origin of the Native American Steam Bath,’ *American Anthropologist*, vol. 62 (1960), pp. 977-993. This typology needs significant elaboration, but it is a reasonable starting point (the typology needs sub-types, which Lopatin describes discursively but not taxonomically). Note that some modern saunas (usually in gyms and hotels) do not allow water on heating apparatus, making them a technified version of type (2), the *direct fire sweat bath*. The present article does not pursue this distinction, but it will be followed up at a later point. For now it can be said that such establishments are either: (a) conscious about health and safety implications, especially for uneducated sauna users (a legitimate but easily surmountable concern); or (b) driven by pecuniary motives, ranging from the use of cheap electric sauna heaters (not higher quality products from Finland and Sweden which are designed to take rocks and water) to prohibitions on water use (even with good heaters) on account of the increased electricity bill inherent in cooling the stove at regular intervals. Lack of education (amongst both providers and users) is clearly the underlying factor in both scenarios.

cold water immediately after heat (especially full-body immersion) creates a particularly strong physiological effect, inducing a brilliant tingling sensation and a great surge of vital feeling; however some people find this too exhilarating and prefer a more gradual return to normal temperature.¹² In older times cleaning was an important aspect of the sweat bath (captured famously by Albrecht Dürer in 1496); in modern times this function has moved to other facilities, mainly the shower cubicle. However this is not true in all parts of the world, as visitors to Istanbul, Seoul, and New York have experienced.¹³

The internal humidity varies across cultures: the Russian banya is traditionally more humid than a Finnish sauna (though they are often very similar); the hammam is usually wetter, and a modern steam room at least 90% humidity (if it is any good). The Turkish bath is often assumed to be wet like a hammam, but the original Victorian model was actually dry in the manner of Roman *thermae* (both heated by a hypocaust system). This will be discussed below.

Because moisture conducts heat to the skin more effectively than air alone (by releasing latent thermal energy), a steam room is very hot at 50°C, whereas a banya or sauna will be closer to 70°-80°, often between 80° and 100°, sometimes hotter (for example, my home sauna in suburban Sydney reaches around 110° on a daily basis). Some facilities have rooms

¹² The most detailed analysis I have seen that focuses specifically on ice water immersion is the 3-part study of Kyllikki Kauppinen: ‘Sauna, Shower, and Ice Water Immersion Physiological Responses to Brief Exposures to Heat, Cool, and Cold. Part I: Body Fluid Balance’, *Arctic Medical Research*, vol. 48 (1989), pp. 55-63; ‘Sauna, Shower, and Ice Water Immersion: Physiological Responses to Brief Exposures to Heat, Cool, and Cold. Part II. Circulation’, *Arctic Medical Research*, vol. 48 (1989), pp. 64-74; ‘Sauna, Shower, and Ice Water Immersion: Physiological Responses to Brief Exposures to Heat, Cool, and Cold. Part III. Body Temperatures’, *Arctic Medical Research*, vol. 48 (1989), pp. 75-86. See also Chris M. Bleakley and Gareth W. Davison, ‘What is the Biochemical and Physiological Rationale for Using Cold Water Immersion in Sports Recovery? A Systematic Review’, *British Journal of Sports Medicine*, vol. 44 (2009), pp. 179-187.

¹³ Mikkel Aaland describes the well-known cleaning routines of the hammam from his time in Istanbul (*Sweat*, pp. 19-27). For a good description of body scrubbing routines in the Korea, see Frances Cha and Elizabeth Eun, ‘Secrets of a Korean Scrub Mistress’, at <http://edition.cnn.com/2013/09/21/travel/korean-scrub-mistress>. I have personally experienced the *platza* routine at the Russian Turkish Bathhouse in New York, where you are taken into the hottest room, beaten with leaves soaked in soapy water, massaged for 15 minutes, and then directed to the ice bath.

with temperatures well above 100°. ¹⁴ Most large sweating rooms include benches at different heights, so that bathers can modulate between temperature levels. The interiors all have important differences that will not be considered here. A global typology is still to be developed.

In both sauna and banya, water is applied to hot rocks on a stove to create steam (differentiating them from a hammam or steam room). ¹⁵ In Finnish this steam is known as *löyly*, a precious word that also connotes “spirit” or “soul”, not unlike the Greek *pneuma* (breath, spirit). For avid sauna lovers, creating *löyly* is the best part of the sauna ritual: clouds of velvet heat waft around the room, lifting the humidity and encompassing the bather in a shroud of pleasurable warmth. ¹⁶ There are many variations on the theme – but these are the rudiments of sauna. This article (and the field of Sauna Studies generally) deals with this type of bath. The boundaries can be unclear at times, and Sauna Studies will be interested in all aspects of bathing. But the purpose of the field, led by the journal, is to

¹⁴ My favourite very hot room is the ‘Russian Room’ at the Russian Turkish Bathhouse in New York City. In this concrete-walled room, which is cooked overnight by massive gas oven, bathers are able to deal with the very dry c. 120C° temperature by dousing themselves with buckets of ice water from a well in the middle of the room. It is quite special – I am not aware of another facility with this wonderful feature. The most intense room I have seen documented is the Bul Hanzung Mok room at King Spa Sauna, NJ (“The Best Sauna in New Jersey”, according to the website). The room is around 220° Celsius – blisteringly hot even for sweat freaks. People wear clothing and blankets inside as protection from the harsh radiance. For a short account of the Bul Hanzung Mok room, see [Reasons to Love New York in 2012:] 67. Because You Can Take a Shuttle Bus From Koreatown to a 428-Degree Sauna in Which You Shvitz Next to Steaming Eggs: There are some very hot places to take a shvitz’, *New York Magazine*, Dec 17, 2012. The author reports that eggs are cooked in the sauna and later sold at the restaurant.

¹⁵ The terms ‘steam’ and ‘vapour’ have been used interchangeably for centuries, even though scientifically they are different states of water. ‘Vapour bath’ was the primary term in English until around 1950, but ‘steam bath’ has not been infrequent. Due to widespread colloquial equivalence, the IJSS sees no reason to insist on a distinction between steam and vapour in most normal instances – language is as language does. On the term ‘sauna’ itself, which became widespread after the 1960s, see n. 22 below.

¹⁶ See E. Helamaa and E. Aikas, ‘The Secret of Good *Löyly*’, *Annals of Clinical Research*, vol. 20, no. 4 (1988), pp. 224-229. This particular edition of the *Annals of Clinical Research* (a Finnish Journal) was the final one before it became the *Annals of Medicine* in 1989. The final 1988 issue was a special issue on sauna, making it a unique publication. It is interesting to speculate about the discussions that must have taken place in elevating sauna as theme for the final edition of the journal.

give unique and special focus to the tradition of hot-air bathing. It is a rich and exciting area with possibilities for global participation.

Precedents of Sauna Research

Sweat bathing is an ancient human tradition. It can take many different forms, but archaeological and ethnographic evidence suggests that it is at least several thousand years old. For good reason, Finland is the nation most associated with the practice. While sweat bathing was known over much of Europe in the pre-modern period, Finnish zeal for the sauna has made it a national icon: it even plays a key role in the *Kalevala*, the Finnish national mythology (but this is also related to the dynamics of nineteenth-century nationalism and the invention of a new Finnish identity independent of Sweden and Russia).¹⁷ Where industrialization disrupted traditional methods of bathing in most other countries, Finns retained the sauna, refined it technologically, and are almost uniquely responsible for its rise to global popularity in the twentieth century. The Olympics are an often-cited source of promotion, particularly the 1924 games in Paris (due to the success of Paavo Nurmi, the ‘Flying Finn’), the 1936 games in Berlin (where a sauna was built in the Olympic village to Finnish plans – apparently even with Finnish wood), and the 1960 winter games in Squaw Valley in California (which primed America for a sauna renaissance in the following decade).¹⁸

After World War II, the Finns also published sauna information in multiple languages to promote the practice, represented especially by a

¹⁷ The best academic account is L. M. Edelsward, *Sauna as Symbol: Society and Culture in Finland* (New York: Peter Lang, 1991). See especially pp. 179-199 on sauna as a symbol of national identity in the context of industrialization, modernization, and independence struggles. Russia can boast a similar level of love for the banya, but for various reasons it has not been elevated as a cultural symbol in quite the same way as sauna in Finland.

¹⁸ See P. Valtakari, ‘The Sauna and Bathing in Different Countries’, *Annals of Clinical Research*, vol. 20 (1988), pp. 230-235. The Olympics was particularly important for bringing sauna to Germany. Antonín Mikolášek has noted that the 1924 games led to the popularization of sauna in Czechoslovakia, see ‘The Incorporation of the Sauna in Sports Facilities in Czechoslovakia’, pp. 155-157 in Tier et al., *Sauna Studies* (n. 34 below). It is somewhat strange that the 1952 games in Helsinki are never mentioned in the list of important Olympics for sauna promotion, except by S. Hirvonen (see n. 24 below). On the impact of the 1960 games in America, see Matti Kaups, ‘From Savusaunas to Contemporary Saunas: A Century of Tradition in Minnesota, Michigan, and Wisconsin’, pp. 34-56 in Tier et al., *Sauna Studies* (n. 34 below), p. 51.

short book authored by H. J. Viherjuuri, first president of the Finnish Sauna Society.¹⁹ Migration has been another major factor, especially in the United States, and in lesser but still significant degrees around the world. Moreover, almost all Finnish embassies include saunas, and it is a well-documented component of Finnish diplomacy.²⁰ Finnish soldiers in United Nations peacekeeping missions have famously spread the practice, improvising where necessary, normally erecting a sauna as soon as possible at a new location. The Finnish Defence Force archives contain amazing photographs of soldiers using sauna during World War II, showing extraordinary dedication to the heat.²¹ Many people know that ‘sauna’ is the only Finnish word in the English language. This is a snapshot of how the word spread.²²

It is therefore not surprising that most serious efforts towards sauna research have been led by Finland. (Russian doctors conducted detailed investigations into the banya in the nineteenth century, and after the Revolution most soviet states developed official guidelines about sauna use

¹⁹ Originally published in Finnish in 1940, Viherjuuri’s book was abridged and translated into Swedish, German, and English, with a later American edition containing a new preface and appendix (*Sauna: The Finnish Bath* [Brattleboro, VT: The Stephen Greene Press, 1965]). My copy is the fourth printing of the US version (1978), which states that 24,800 copies of the US version were in print. This was certainly a popular book. See Aaland, *Sweat*, p. 93.

²⁰ See n. 112 below on sauna diplomacy. I have visited the Finnish Embassy in Canberra and can report that the sauna is excellent. Myself and other ASBA representatives met the Ambassador for a productive discussion about promoting what ASBA calls “the new Australian sauna culture”.

²¹ The World War II photographs are freely available online at <http://sa-kuva.fi>. Russian soldiers are also noted as spreading the banya concept in war (see Mikolášek in the note above). A recent news report by *Ukraine Today* also documented a makeshift sauna (of good looking quality) in use by soldiers on the front in eastern Ukraine. See ‘Ukrainian Soldiers Cope With Stress: Makeshift sauna used in war-torn zone’, at <https://www.youtube.com/watch?v=QX-Rs7qoVts>. Sauna at war is a topic in need of fuller study; Russian history must be considered here too, going back at least to Napoleonic times.

²² Although the term ‘sauna’ was known in the nineteenth century, it only became widespread in the 1960s. Prior to this the default term had been ‘steam bath’ or ‘vapour bath’, still visible in Sigfried Giedion, who uses neither ‘sauna’ nor ‘banya’ in *Mechanization Takes Command* (cf. n. 15 above). The 1960s also saw the popularization of Finnish sauna in the United Kingdom, entrenching the term in the Anglosphere. A detailed history of the word ‘sauna’ in English is an urgent *desideratum*.

– but all of this material remains inaccessible at present.)²³ It is sometimes remarked that Finland has almost as many saunas as people, and official statistics now estimate a total of over 2 million saunas for a population of only 5.4 million people. The keeping of this statistic (remarkable in itself) was first encouraged by the Finnish Sauna Society at the time of its formation in 1937.²⁴ Seeking to bring together local scientific and ethnographic research, and to promote/preserve sauna more generally, the formation of the Finnish Sauna Society represents the start of formal efforts. A report on their research laboratory was published as early as 1960 (including photos of a well-kitted test sauna), and they established partnerships with universities and medical colleges to conduct both health and technical experiments.²⁵ Apparently NASA even used the facility in 1959 to study re-entry into the atmosphere.²⁶ I am informed that the facility finally closed in 2006, and that most of the output is in Finnish. But the Society itself continues, and has maintained a quarterly sauna magazine for 70 years – no other country goes quite this far.

Germany was the other major force in early sauna research. The heat arrived with the Berlin Olympics in 1936 (rekindling memories of the old Germanic *Badestube*), and already by 1948 Victor Ott could write comprehensive medical monograph.²⁷ The Deutscher Sauna Bund formed

²³ Thankfully we will soon have a better picture when Ethan Pollock's forthcoming history of the Russian bathhouse is published. Pollock's work is discussed below (see n. 54).

²⁴ While writing this article I contacted Statistics Finland (the official government body) who confirmed that in 2015 there were 1,607,279 saunas counted in Finnish dwellings. This does not include summer houses (assumed number is around 0.5 million saunas), nor public saunas in apartments, gyms, pools, etc., therefore "this would give us the estimation that there are over two million saunas in Finland, but there is no exact figure of this" (email communication, July 15, 2016). On the history of this statistic and the role of the Finnish Sauna Society, see Olli Janhunen, 'Statistical Data on the Sauna', pp. 76-81 in Tier et al., *Sauna Studies* (n. 34 below). On the origins of the Finnish Sauna Society (Finnish: Sauna Seura), see Aaland, *Sweat*, pp. 90ff. and S. Hirvonen, 'Sauna-Seura, die finnische Sauna-Gesellschaft', *Sauna-Archiv*, vol. 1 (1958), pp. 59-60. Hirvonen reports that the first dissertation on sauna was accepted in 1933.

²⁵ P. Piironen and E. Äikäs, 'Das Forschungslaboratorium der Sauna-Seura', *Sauna-Archiv*, vol. 3 (1960), pp. 1-13. My understanding is that some members of the Society were also faculty at various universities.

²⁶ Aaland reports the story about NASA in *Sweat*, p. 87. As a bibliographic note, the pages in *Sweat* seem to be a little out of order, with p. 87 appearing to follow from p. 93.

²⁷ Victor R. Ott, *Die Sauna. Ihre Geschichte; die Grundlagen ihrer Wirkung; ihre Anwendung zur Prophylaxe und Therapie; mit einem Anhang: Bau und Betrieb der Sauna*

in 1947 and gained national registration in 1949, led by Dr Werner Fritzsche. Their aims sum up the nature of such national associations, namely:

to spread the idea of sauna bathing in Germany, to promote scientific research and technological progress in the area of sauna, and to advise all members of the association about sauna practice and sauna-cabin building, supporting them with a range of services.²⁸

They are still a thriving association to this day, with regular publications for members, a national sauna day (September 24), and even a *Saunameister* world championship!²⁹ Anyone who visits a sauna in Germany is likely to see signage from the DSB recommending correct procedure.³⁰ It is a fascinating institution. The Germans certainly have their own sauna culture.³¹

Similar associations were created elsewhere (including Austria, Switzerland, Norway, Sweden, and Japan), and in 1956 the first international sauna meeting was held in Bielefeld, hosted by the German, Swiss, and Austrian associations. Another meeting was held in Helsinki in 1958 with representatives from more countries in attendance. An international sauna society was suggested (with aims of promoting scientific research); statutes were even drawn up and published.³² While this association was not realised immediately, the Deutscher Sauna Bund

(Basel: Benno Schwab Verlag, 1948). Other books of this type were also published, including some by doctors of the Third Reich. This is a sensitive theme that will be addressed separately.

²⁸ Translated from the current text of the Deutscher Sauna Bund's website (<http://www.saunabund-ev.de/index.php?id=3>). For a short account of the Deutscher Sauna Bund, see Werner Fritzsche 'Development and Organisation of the German Sauna System', pp. 57-62 in Tier et al., *Sauna Studies* (n. 34 below).

²⁹ These aspects of contemporary German sauna are so interesting that they must be left for future discussion. Those interested can visit <http://www.saunabund-ev.de>.

³⁰ The signage is unchanged for at least 40 years. In August 2015 I saw the exact same placard that Aaland reproduces in *Sweat*, p. 94.

³¹ For a comparison of Finnish and German sauna cultures see Valtakari, 'The Sauna and Bathing in Different Countries', p. 232. Also Werner Fritzsche, 'Bestehen Unterschiede zwischen dem finnischen und dem deutschen Saunabad?', *Sauna-Archiv*, vol. 1 (1958), pp. 50-55. Having experienced both myself, I can confirm that Finnish practice is typically much more laid back than the structured nature of public sauna in Germany.

³² Werner Fritzsche, 'Internationale Sauna-Tagung 1958 in Helsinki (Finland)', *Sauna-Archiv*, vol. 1, pp. 89-96 (including the statutes of the International Sauna Association declared in 1956, and the officials elected in 1958).

took charge and created a scientific periodical called *Sauna-Archiv*. This journal ran from 1958-1980 and included high-quality material on a diverse range of topics. A similar *Internationales Sauna-Archiv* was published from 1984-1996. Regrettably, both are examples of key literature that remains undigitized.³³

Further congresses were held in Salzburg (1962), Munich (1966 and 1970), and again in Helsinki (1974), all of which contained at least some scientific research papers. The Helsinki congress was a particular catalyst, finally leading to the formalization of the International Sauna Association. The proceedings were compiled into an English language volume called *Sauna Studies* (1976), which hoped to launch a new era in sauna research.³⁴ Sadly it remains the only published volume of its kind. The ISA has held more successful congresses (especially Aachen in 1999; most recently in Vilnius, 2014). Some proceedings have been partly published, but nothing easily available and up to date, especially for English readers. This reflects the problem described above: sauna remains unexplored at a practical level and has no current academic representation. The ISA is a valuable institution with a wide global network (now including over twenty member countries) – but a new body with academic grounding is required to generate sustained research activity.

There are some other precedents for sauna research. Already by 1960 a Finnish review article reportedly listed over 600 items. The review itself is difficult to find, let alone the obscure items it refers to (presumably very few of which are in English), but it shows that sauna has long been a topic of interest.³⁵ The only accessible systematic review I have discovered is from 2001 concerning health science, which found 130 usable references.

³³ Fortuitously I was able to obtain the first three volumes of *Sauna-Archiv* at a bookstore in Helsinki in August 2015, before I understood their significance (the trip proved to be a catalyst for the present attempt to create a new academic field). With rare exceptions, I can therefore only cite material from these volumes. Full digitization of the series remains a desideratum that would not be hard to remedy.

³⁴ Harald Tier, Yrjö Collan, and Pirkko Valatakari, eds, *Sauna Studies: Papers Read at the VI International Sauna Congress in Helsinki on August 17–17, 1974* (Helsinki: Finnish Sauna Society, 1976). For an account of the congress, see individual chapters by the editors pp. 284-300. This rare book needs a modern counterpart.

³⁵ Harald Tier mentions the review in ‘Aims of Sauna Research’, the opening lecture of the Helsinki congress (*Sauna Studies*, pp. 12-17, here p. 13). Presumably it is similar to the 2009 review mentioned at n. 8 above, that is, including cultural as well as academic items.

The review was based on database searches, which obviously miss many earlier studies, although it indicates a baseline interest within the scientific community.³⁶ A similar study was published in 2006, and although not as comprehensive, it is a useful supplement.³⁷

Database searching also yields hundreds of hits across areas of history and culture, but an exact number of items is hard to determine because many items only mention sauna in passing, and sometimes the word is only contained in either an advertisement or conference notice within a journal. Proper articles number in the dozens, not hundreds. Whatever technological expertise exists seems almost entirely confined to folk traditions, popular books, and the private archives of sauna manufacturers: I am aware of very few properly technical articles outside *Sauna-Archiv* and the 1976 volume *Sauna Studies*.

Considering the global popularity of sauna (also a significant commercial industry) and its well-acknowledged benefits for physical and mental health (in a time where stress is an increasing social issue), it is remarkable that nothing beyond the ISA has taken shape, not even conversations in periodical literature. A Finnish longitudinal study from 2015 on sauna and cardiovascular health (published in *JAMA*) generated considerable media interest – but while it suggests positive health effects, “further studies are warranted to establish the potential mechanism that links sauna bathing and cardiovascular health”.³⁸ This type of refrain (“topic requires further study”) occurs in most sauna research.

Therefore the time is ripe to create a new international framework for sauna research. That framework will be the *International Journal of Sauna Studies*. The vision of the International Sauna Association – “[that] the results of research and practical experience in different parts of the world should be made available to all countries” through “organised international collaboration” – will finally have a chance to be realised. The infrastructure is being developed, so the remainder of this article will map research areas corresponding to sections of the journal: 1) Health Science;

³⁶ Hannuksela and Ellahham, ‘Benefits and Risks of Sauna Bathing’.

³⁷ Katriina Kukkonen-Harjula and Kyllikki Kauppinen, ‘Health effects and risks of sauna bathing’. *International Journal of Circumpolar Health*, vol. 65 (2006), pp. 195-205.

³⁸ Tanjaniina Laukkanen, Hassan Khan, Francesco Zaccardi, and Jari Laukkanen, ‘Association Between Sauna Bathing and Fatal Cardiovascular and All-Cause Mortality Events’, *Journal of the American Medical Association*, vol. 175, no. 4 (2015), pp. 542-548.

2) History and Culture; and 3) Technology and Design. Examples of existing research are discussed, along with gaps that deserve attention. The survey is provisional not definitive, aiming to lay down markers for discussion.

Health Science

Health science is the best represented research area, and will be the most important for attracting funding – policy makers need data. A systematic review called “Benefits and Risks of Sauna Bathing” was published in 2001, so it is possible to cover this section fairly quickly. The following areas (covered in the review) represent broad categories that any interested party can build on: 1) the cardiovascular system; 2) respiratory health; 3) dermatology; 4) endocrinology; 5) rheumatic diseases; 6) reproductive health; and 7) pediatrics.³⁹ Other database searching reveals scientific literature on sauna in areas of: 8) infrared therapy; 9) pharmacokinetics; 10) sport science; 11) hematology; 12) thermoregulation; 13) eating disorders; 14) sexual health; and 15) public health (hygiene/sanitation).⁴⁰

While this might seem like decent coverage, studies are meagre and further research is needed in every single area. Almost nothing is based on large-scale population studies, and the references clearly indicate that most researchers are not aware of the bulk of existing material. Taken positively, this represents an extraordinary opportunity for medical researchers interested in sauna. *Virtually every aspect of sauna’s effect on the human body requires further investigation.* The topic is surely important given the global prevalence of sauna and the positive effects that users routinely report.

One of the most pressing areas for research is cardiovascular health. Sauna is typically contraindicated for people with cardiovascular problems. But research suggests that this advice could be misplaced in all but extreme cases, and that sauna can even be beneficial as form of

³⁹ Hannuksela and Ellahham, ‘Benefits and Risks of Sauna Bathing’.

⁴⁰ Databases consulted in researching this article include JSTOR, PLoS ONE, Web of Science, and ProQuest. A more systematic presentation of these search results is under preparation (as noted above, quantifying database results is difficult for sauna research). In the meantime, the reviews by Hannuksela/Ellahham and Kukkonen-Harjula/Kauppinen (noted above) are accessible for those seeking detailed references on sauna and human health.

cardiovascular therapy or rehabilitation.⁴¹ Medical professionals and the broader public need clear information.

The same applies for rheumatic diseases. Hot-air bathing has traditionally been regarded as an effective therapy, and the nineteenth-century Victorian “Turkish” Baths were often explicitly advertised as such.⁴² But no real research exists. The topic is so large and important that someone could make a career out of it. This applies to other types of chronic pain management. Inflammation is a killer; sauna appears to help.

Another pressing topic is infrared sauna: this variety (invented over fifty years ago) is increasingly popular today, but almost no research exists.⁴³ This is a massive gap in the literature. Infrared sauna is a relatively new technology with large representation online (both products and information), so it deserves attention. Even though traditionalists do not regard infrared devices as saunas, that dispute is irrelevant for medical research. Infrared saunas work very differently (normally using far-infrared heat) but they have a similar effect to traditional sauna as a form of induced hyperthermia – they certainly make you sweat. The lower ambient temperature appears to make infrared saunas gentler on the heart, which

⁴¹ See, for example, Hannuksela and Ellahham, ‘Benefits and Risks of Sauna Bathing’; Laukkanen et al., ‘Association Between Sauna Bathing and Fatal Cardiovascular and All-Cause Mortality Events’.

⁴² Shifrin, *Victorian Turkish Baths* (see n. 55 below).

⁴³ The lack of authoritative information about infrared sauna is noted in Christian Dohrn’s interesting commercial handbook, *Der Saunatester: Das professionelle Sauna-Handbuch: Aus Theorie wird Praxis*, second edition (Hamburg: Tredition, 2016), p. 24. One exception to this lack of research is the program conducted by Dr Chuwa Tei of the Waon Therapy Research Institute at Kagoshima University in Japan. Tei has published dozen of papers on ‘waon’ therapy, a neologism from Japanese words for ‘soothing’ and ‘warm’. Claiming to have treated more than 50,000 patients in 23 years, the Waon Therapy website (<http://www.waon-therapy.com/en/index.html>) says the following: “Waon therapy is a kindly treatment approach for those who suffer from a disease, whatever it may be. The positive effects of the therapy are shown at the level of genes, molecules, and cells, and it regulates various systems throughout the body: vascular function, autonomic function, central nervous system function, and neuro-humoral factors. It also provides relaxing effects both physically and mentally to patients with intractable diseases who have high stress levels. Waon therapy provides them with physical and mental relaxation – in a word, it is a holistic therapy.”

may be beneficial for elderly people and others with coronary problems.⁴⁴ But more research is needed.

Moreover, information on infrared sauna is primarily represented by what can only be considered ‘fringe discourses’ – significant scrutiny must be placed on common claims circulating the internet about “detoxification”.⁴⁵ Proponents often claim greater effectiveness than traditional saunas due to the deeper penetration of infrared heat; but in my view such comparisons are misleading because they completely overlook the aesthetic and sensory dimensions that make traditional sauna so relaxing and replenishing. Beyond lacking heat, smell, and the ritualistic use of equipment (ladle and bucket), infrared saunas are much less social. They often require users to sit in a particular position against heat pads, therefore both posture and the number of users are predetermined. This makes them poor candidates for social gathering, which is one of the most important and beloved aspects of bathhouse culture and the reason that sauna has spread around the world. There are literally hundreds of articles about the health, technical and social aspects of infrared sauna that could be written. This again gives a sense of how much opportunity lies ahead in Sauna Studies.

Some key areas of health science have almost no representation at all: I would name mental health and psychology in particular. One of the most commonly reported aspects of sauna use is that it improves mood. Hundreds of studies could be conducted to obtain both qualitative and quantitative data on this claim in order to test the age-old wisdom that sauna makes people happy. I can personally report a post-sauna rush that is similar to the so-called ‘runner’s high’, but no literature clearly explains

⁴⁴ See the recent article of Antti Mero, Jaakko Tornberg, Mari Mäntykoski and Risto Puurtinen, ‘Effects of Far-Infrared Sauna Bathing on Recovery from Strength and Endurance Training Sessions in Men’, *SpringerPlus*, vol. 4, no. 321 (2015). This article undersells the social and sensory dimensions of traditional sauna, and at times it feels like an advertisement; but its conclusions are still interesting.

⁴⁵ See most recently Gogo Lidz, ‘The Easiest Way to Burn 600 Calories is By Sitting in a 150-Degree Box’, *The Cut*, at <http://nymag.com/thecut/swellness/2016/07/infrared-sauna-benefits.html>, a fine sample of the contemporary non-critical discourse surrounding infrared sauna. Astute observers will note that the picture in the article is actually a traditional sauna (made obvious by the bucket and ladle). This is probably because infrared saunas look strange, not comfortable; but the slight-of-hand is indicative of how the discourse tends to operate. Detail is usually secondary to soundbites. For an example of disingenuous vendor communication, see <http://drsircus.com/medicine/light-heat/far-infrared-sauna>.

what is happening in my body.⁴⁶ Stress science is a reasonably well-developed area – but there appears to be no sauna research under this disciplinary frame.⁴⁷

More generally, a new study from 2016 claims that whole-body hyperthermia “holds promise as a safe, rapid-acting, antidepressant modality with a prolonged therapeutic benefit” in people with major depressive disorders.⁴⁸ Given that sauna is not mentioned in the article, we have another solid area of investigation. Some work has been done on ‘sweat therapy’ as a collective practice – but like all studies, sample sizes are small and replications have not been attempted.⁴⁹ The same can be said for sauna as a form of rehabilitation, whether from drugs, delinquency, or eating disorders.⁵⁰

This is to say nothing of the possibility for public health research: for example, social support networks and improved physical and mental health outcomes, or studies related to sanitation and facility hygiene. A similar opportunity lies in workplace and organisational studies regarding the effectiveness of sauna and steam rooms around issues of burnout, retention, satisfaction, and performance – a trial that many workers would doubtless be happy to participate in. (Paramedicine would be a good case study, or nurses and doctors, as these are high-stress environments with well known problems of job retention.) Such projects have the potential to

⁴⁶ The three-part study of Kyllikki Kauppinen (n. 12 above) offers a decent description, but further studies are needed that focus systematically on sauna and ice water immersion.

⁴⁷ See for example Richard Contrada and Andrew Baum, eds, *The Handbook of Stress Science: Biology, Physiology, and Health* (New York: Springer, 2011), which does not mention sauna anywhere over 709 pages and 43 chapters.

⁴⁸ See Clemens W. Janssen et al., ‘Whole-Body Hyperthermia for the Treatment of Major Depressive Disorder: A Randomized Clinical Trial’, *JAMA Psychiatry* (2016), doi:10.1001/jamapsychiatry.2016.1031. See also Akinori Masuda et al., ‘Repeated Thermal Therapy Diminishes Appetite Loss and Subjective Complaints in Mildly Depressed Patients’, *Psychosomatic Medicine*, vol. 67 (2005), pp. 643–647.

⁴⁹ On sweating rituals as tools for group bonding, see Allen Eason, Stephen Colmant, and Carrie Winterowd, ‘Sweat Therapy Theory, Practice, and Efficacy’, *Journal of Experiential Education*, vol. 32 (2009), pp. 121-136.

⁵⁰ See A. Vähäsoini et al., ‘Unreported Sauna Use in Anorexia Nervosa: Evidence from the World-Wide-Web’, *Eating and Weight Disorders*, vol. 9 (2004), pp. 50–55; J. Phillip Gossage et al., ‘Sweat Lodge Ceremonies for Jail-Based Treatment’, *Journal of Psychoactive Drugs*, vol. 35 (2003), pp. 33-42; Stephen A. Colmant and Rod J. Merta, ‘Using the Sweat Lodge Ceremony as Group Therapy for Navajo Youth’, *The Journal for Specialists in Group Work*, vol. 24, no. 1 (1999), pp. 55-73.

influence policy makers and improve society. Everything about sauna and the human body stands open for investigation. Compared to other topics of research, this is a completely undeveloped field.

Technology and Design

Technical and design aspects of sauna are even more scarce in academic journals. Some examples exist in *Sauna-Archiv* and related ISA materials, but anybody searching today will find little online periodical material. There is surely more than I have been able to discover (limited to a few architectural scraps), but it appears that the vast majority of technical information about sauna exists in the archives of sauna manufacturers and not in the public domain. Some useful construction guidebooks exist, along with a reasonable scattering of internet information for those wishing to build their own sauna.⁵¹ But this it is not the same as a vibrant academic field to which research is constantly added.

To fire the imagination, technical topics covered by the International Sauna Association include: 1) “internal climatic conditions,” such as temperature, humidity, heat radiation, ventilation; 2) sauna stoves; 3) sauna stones; 4) interior sauna design; 5) adjacent shower facilities; and 6) architecture and sauna design.

The first and last are most common (especially articles on design principles and rules), but again I stress that in relative terms there is very little material.⁵² One of the few examples outside the ISA is a study from

⁵¹ The most professional design book I have seen is *Finnish Sauna: Design and Construction* (Helsinki: Rakennustieto, 2015; seventh edn.) by a group called The Building Information Foundation. Similar books include Allan Konya, *The Modern Sauna and Related Facilities* (Reading: Archimedia Press, 2011), as well as classics like Tom Johnson and Tim Miller, *The Sauna Book* (New York: Harper & Row, 1977) and John Virtanen, *The Finnish sauna: Peace of Mind, Body, and Soul: A Modern Guide to Sauna Usage, Planning, and Building for Full Sauna Enjoyment* (Portland, OR: Continental, 1974). Allan Konya's earlier book with Allewyn Burger, *The International Handbook of Finnish Sauna* (New York: Halsted Press, 1973), was endorsed by Harald Tier, then president of the ISA, whose foreword describes the book as “an important aid to the thousands and millions throughout the world who are building a sauna for themselves”.

⁵² For examples of technical research, see chapters in Tier et al., *Sauna Studies*, under the sections ‘Planning and Building the Sauna’ (pp. 83-112) and ‘Sauna Technology’ (pp. 113-157); these are interesting but quite limited. The full contents of *Sauna-Archiv* are still inaccessible (n. 33 above), but what I have seen indicates a primary focus on health and physiology. Some articles tend in a technical direction, for example, Piironen and Äikäs,

2015 that uses formal computer modeling of the human thermoregulatory system under extreme heat conditions to investigate what happened when a contestant died at the 2010 sauna championships.⁵³ This suggests the possible breadth of technical areas. I would summarise basic possibilities for technical research as follows: 1) engineering (sauna equipment and sauna building, including civil engineering); 2) analysis of different heating technologies; 3) development of sustainable technologies, especially solar power heaters; 4) green bathhouses: whole-of-complex sustainability (for example, heat capture and water usage); 5) formal modeling of human physiological responses to extreme heat; 6) thermodynamics and thermal ergonomics; 7) scientific analysis of *löyly*; 8) sauna aesthetics; and 9) sauna innovation. These topics could all conceivably command attention from researchers around the world. Currently, nothing exists.

History and Culture

The history and culture of sauna is a fascinating topic, but complicated to research. Somewhat similar to health science, a good baseline already exists; but unlike health science, historical and cultural research is largely dispersed over books and other physical media that are not easily accessible online. Much information exists in languages such as Finnish, Russian, and

‘Das Forschungslaboratorium der Sauna-Seura’; Helmut Brauckhoff, ‘Temperatur und Feuchtmessungen im Sauna-Room’, *Sauna-Archiv*, vol. 1 (1958), pp. 13-15; Richard Seeger, ‘Speicher- oder Dauerheizprinzip im Saunaofenbau’, *Sauna-Archiv*, vol. 3 (1960), pp. 113-121; Max Greiner, ‘Erfordernisse und Möglichkeiten der Wärmedämmung und Feuchteisolation beim Bau von Saunaräumen’, *Sauna-Archiv*, vol. 5 (1967), pp. 1-12. My favourite so far is Rudolf Mosebach, ‘Kleine Naturkunde der Gesteine – Welche eignen sich als ‘Saunasteine’?’, *Sauna-Archiv*, vol. 5 (1967), pp. 43-70, a spirited and very detailed account of sauna stones, which challenges the conventional wisdom that periodite is the only appropriate sauna stone (culminating in the pronouncement at p. 70).

⁵³ Muhammad Fadlisyah, Peter Csaba Ölveczky, and Erika Ábrahám, ‘Formal modeling and analysis of interacting hybrid systems in HI-Maude: What happened at the 2010 Sauna World Championships?’, *Science of Computer Programming*, vol. 99 (2015), pp. 95-127. To see an example of the competition (which is quite absurd, and not in a good way), see the short documentary film by Thomas Hilland simply called *Sweat* (London: Partizan Films, 2008), available at <https://vimeo.com/6176250>. The protagonist of this film (Timo Kaukonen) was one of the two contestants in the 2010 incident. He did not die, but suffered renal failure and massive burns, spending six weeks in a medically induced coma. The article by Fadlisyah et al. goes into extensive detail, and is an exemplar for technical studies of sauna and thermoregulation. It is largely theoretical, and therefore amenable to empirical elaboration.

German. Some English language journal articles exist, but the number is tiny relative to opportunity.

By far the most exciting contemporary work is that of Ethan Pollock, who has published two recent articles on the banya in Russian history and is currently completing a full-scale monograph.⁵⁴ Extensive use of archival sources (including some impressive quantitative analysis) lifts this work to the highest academic quality, and is a model for those in the humanities and social sciences aspiring to professional sauna research. Similar praise goes to the masterpiece *Victorian Turkish Baths* (2015) by Malcolm Shifrin, a lavishly illustrated and meticulously compiled study of the craze that swept the British Isles after 1856.⁵⁵

But these are rare examples. We have no authoritative general work, no encyclopaedias, no book series, no systematic analysis of national and industrial archives, and hardly anything in the domain of ethnography, sociology, and cultural theory.⁵⁶ Researchers in different countries are not connecting with each other to inspire new investigations and new transnational projects. A huge variety of work could be produced on both

⁵⁴ See Ethan Pollock, 'Real Men Go to the *Bania*: Postwar Soviet Masculinities and the Bathhouse', *Kritika: Explorations in Russian and Eurasian History*, vol. 11 (2010), pp. 47-76; Konstantin Kashin and Ethan Pollock, 'Public Health and Bathing in Late Imperial Russia: A Statistical Approach', *The Russian Review*, vol. 72 (January 2013), pp. 66-93. The former article is an exemplar of sweat bathing as social history. The latter shows how expansive Sauna Studies can be; the collaboration with Konstantin Kashin (a quantitative social scientist) shows the power of cross-disciplinary work. Pollock's monograph on the Russian banya is currently under contract with Oxford University Press.

⁵⁵ Malcolm Shifrin, *Victorian Turkish Baths* (Swindon: Historic England, 2015). As described in a review by Dave Day in *Social History*, vol. 41 (2016), pp. 328-330: "[Shifrin's] association with publishers Historic England has resulted in a lavishly illustrated volume that will appeal to all academic historians of the nineteenth century, most especially perhaps those interested in architecture and its interaction with the social history of the period. Shifrin has managed to bridge the divide between the 'coffee table' volume and the academic monograph, never an easy task, by combining visual appeal with meticulous, well-referenced research, and the end product will satisfy the expectations of most of the potential audience for his work." I agree with this assessment. A review essay is in development.

⁵⁶ Mikkel Aaland's *Sweat* might be counted as a general work, and it does contain a bibliography with decent references, but it is not an academic monograph. It is also currently out of print. Mikkel informs me that a reprint is being considered (personal communication, July 16, 2016). I have suggested that, if possible, a special waterproof (= sweatproof) edition be published.

historical and contemporary topics (including sociology and ethnography) if more people became interested. My own focus is mostly in this direction, so the rest of the article will map key research areas with a loose attempt at chronological synthesis.

The Early History of Sauna

It is impossible to determine when humans began using the hot-air vapour bath. It was presumably predated by Ivan Lopatin's second type, *the direct fire bath*, for which the required technology is rudimentary: control of fire and an enclosed space. The addition of stones to create vapour is a little more complex but still relatively basic, with a mound or hearth built upon a fire and heated for several hours.⁵⁷ Lopatin suggests (via an interesting etymological argument) that the ancestor of the modern log cabin was a semi-underground structure, a thesis corroborated with ethnographic evidence from remote areas of northern Russia where such structures were still in use.⁵⁸ Other works (including information published by the ISA) also suggest semi-underground structures as the primitive form of vapour bath. But no proper archaeological studies are cited, though claims are made in a way that suggests such information exists.⁵⁹ This is an area for researchers to investigate.

In terms of detailed historical reconstruction, Sigfried Giedion's *Mechanization Takes Command* (1948) remains unsurpassed, even if dated.

⁵⁷ See also Petri Kallio, 'The Etymology of Finnish *sauna* 'Sauna'', pp. 313-319 in K. Dekker, A. A. MacDonald, and H. Niebaum, eds, *Northern Voices: Essays on Old Germanic and Related Topics, Offered to Professor Tette Hofstra* (Leuven: Peeters, 2008). This short but detailed etymology suggests 'sauna' is derived from Proto-Finnic **sakna*, a borrowing from Palaeo-Germanic **stag^h-ná*, meaning 'stack', which is closely linked to 'stove' in many languages. It is unknown whether **stag^h-ná* also meant 'stove', but **sakna* "is the only Proto-Finnish reconstruction from which we can plausibly derive the abovementioned Finnic words for 'sauna' [Finnish, Ingrian, Karelian, Olonetsian, Votic, North Estonian, South Estonian, and Livonian]" (p. 314). Historical reconstruction is always tentative, but this is an important line of speculation.

⁵⁸ Lopatin, 'Origin of the Native American Steam Bath', p. 980.

⁵⁹ Even Edelswand has only one archaeological reference in the section 'The Origins of the Finnish Sauna' (*Sauna as Symbol*, pp. 27-30), and upon examination it is not an archaeological study, but an article in *Sauna*, the magazine of the Finnish Sauna Society, about reports of an ancient pit sauna (Pekka Laaksonen, 'Suomalainen Sauna-Aate [Finnish Sauna Thoughts]', *Sauna*, vol. 4 [1986], pp. 6-10). Kallio likewise only has drawings of ancient pit saunas, which were made for the Finnish Ministry of Foreign Affairs ('The Etymology of Finnish *sauna* 'Sauna', pp. 318-319).

An unlikely source of information at first glance (the book concerns the mechanization of daily life in Europe starting in the early modern period), Part 6 deals with “The Mechanization of the Bath”. Giedion is normally associated with architectural theory – but so helpful is his analysis of the history of sweat bathing that hereby and henceforth shall he also be known as an early pioneer of Sauna Studies.⁶⁰ The work demands its own treatment (along with major elaboration and some revision), but a basic summary is as follows.

Giedion suggests that for the origins of the sweat bath, “All signs point to the east, to the interior of the Asiatic continent” (p. 634). The primitive archetype is still found in Russia and Finland, which seems to have spread westward around the twelfth century. But it had also spread south to the classical world much earlier, possibly from the same direction (based on Herodotus’ oft-cited description of the Scythians [IV.73-5], a description for which striking archaeological corroboration exists).⁶¹

⁶⁰ Giedion’s other monumental work is *Space, Time, and Architecture* (Cambridge, MA: Harvard University Press, 1941), which is similar to *Mechanization Takes Command* in terms of finely detailed expositions that illustrate essential features of a period, culture, or style. For an overview of Giedion’s life, see Socratis Georgiadis, *Sigfried Giedion: An Intellectual Biography*, trans. Colin Hall (Edinburgh: Edinburgh University Press, 1993 [1989]), which focuses on Giedion as an architectural theorist.

⁶¹ Herodotus describes activities that appear to be sweat bathing in a section on Scythian mourning practices (IV.73-5) – however the description is not entirely clear for our purposes. The activity is explicitly described as bathing (IV.75.2), but it involves erecting a small tent, putting hot stones inside, and throwing hemp seeds onto the stones to inhale the smoke. It is therefore unclear whether the “howls of pleasure” he describes are the result of pouring water on the stones, or simply getting stoned. Everett Wheeler assumes the latter in Appendix E §12 (‘Scythian Use of Intoxicants’, p. 755.) of R. Strassler, ed., *The Landmark Herodotus: The Histories*, trans. A. Purvis (New York: Pantheon, 2007), where he speaks of “getting high” using “portable hash parlors”. This point is important because the Herodotus example is often cited as early evidence of sweat bathing (for example, in Lopatin, ‘Origin of the Native American Steam Bath’, pp. 982f.; Giedion, *Mechanization Takes Command*, p. 646; and Martti Vuorenjuuri, *Sauna Kautta Aikojen* [Helsinki: Otava, 1967], p. 16). We need to be more cautious here, especially about slippage between ‘vapour’ and ‘smoke’ (an important distinction, unlike vapour/steam as per n. 15 above). Items similar to those described by Herodotus have been found in a Pazyryk tomb from the Altai mountains; see Wheeler’s appendix for a brief discussion, and the text itself (p. 312, fig. 473) for an image. My understanding is that the items are on display in the Hermitage Museum in St Petersburg. A clear photograph of the equipment (estimated at c. 500-300 BCE) can be found in Grigore Popescu et al., *Siberia: Gli uomini dei fiumi ghiacciati* (Milan: Electa,

Almost five hundred years later, Strabo cites steam bathing practices of the Lusitanians of the Iberian Peninsula, who are said to imitating the practices of the Lacedaemonians (III.3.6), after whom the *laconicum* was named, the hottest room of the Roman *thermae*.⁶² Obviously the question of cultural diffusion is difficult (sweat bathing most likely developed independently in many places); for now a proper morphological discussion is deferred.

Bathing was a core part of the Greek gymnasium, but became dramatically enlarged as a cultural activity under the Roman Empire, being technified to monumental proportions well beyond the simplicity of the Eurasian archetype.⁶³ This aspect of bathing history is well documented in classical studies, but Gideon's treatment is fascinating as he spins a chronology from the gymnasium to the imperial Roman *thermae* and then to the development of the hammam in the East, with a focus on both architecture and sociology throughout. A map of Eurasia depicting a proposed historical "Itinerary of the Regeneration Types" (that is, a map of cultural diffusion) was drawn with a friend who had published on the hammams of Damascus, offering a hypothesis whereby the archetype originates beyond the Ural Mountains in Siberia. Interestingly, Ivan Lopatin suggests an alternative hypothesis, where the archetype originates in Finland. Lopatin's seems more persuasive, but it remains an open question.⁶⁴

2001), p. 140, fig. 134. It looks like a very small tent in which only a few people would fit at a time.

⁶² Very recent work has been published on some 'iron age saunas' from north-western Portugal, but description of the heating infrastructure itself is minimal. See Marco v. García Quintela and Manuel Santos-Estévez, 'Iron Age Saunas of Northern Portugal: State of the Art and Research Perspectives', *Oxford Journal of Archaeology*, vol. 34 (2015), pp. 67–95; Pedro Ángel Fernández Vega, Lino Mantecón Callejo, Joaquín Callejo Gómez, and Rafael Bolado del Castillo, 'La sauna de la Segunda Edad del Hierro del oppidum de Monte Ornedo (Cantabria, España)', *Antropología-Arkeología*, vol. 65 (2014), pp. 177-195.

⁶³ Even though Roman *thermae* typically represent the fourth or *mixed typed* (with the inclusion of pools), they contained hot-air sweating rooms (*tepidarium*, *caldarium*, *laconicum*, in ascending order of heat) which Giedion discusses pp. 632f. See also n. 65 below.

⁶⁴ For Giedion's map, see *Mechanization Takes Command*, p. 635. The cartographic 'Itinerary of Regeneration Types' was composed with Michel Echohard, author (with Claude LeCœur) of *Les Bains de Damas* (2 vols; Damascus: Institute Français, 1941 and 1943). The section pp. 628-650 outlines the narrative of the map. For Lopatin's alternative, see 'Origin of the Native American Steam Bath', pp. 986-990, especially p. 988 (Lopatin does not explicitly refer to Giedion, though Giedion is cited elsewhere in the article and

The entirety of this ancient period is of interest to Sauna Studies: from the simplest structures to the masterpieces of urban engineering, on all continents. Since the 1990s Roman balneology has become a well-developed area, but we need a digestion of results to confirm where investigations are still required; and Sauna Studies wants to focus particularly on *hot air bathing* in the classical record, not just bathing in general.⁶⁵ Hopefully specialists in Islamic culture will be able to enlarge our understanding of the hammam as a technological, religious, and social institution in history. Archaeologists and philologists working in other cultural zones (Africa, India, Asia, Oceania, the Americas) could make similar contributions. The legendary bath cultures of Asia are entirely overlooked by Giedion (other material exists, but fuller studies are needed).⁶⁶

Another topic in the early history of sweat bathing is the origin of the American sweat lodges: were they indigenous creations or a cultural

Lopatin clearly frames some aspects of his analysis in terms resonant with *Mechanization Takes Command*.

⁶⁵ The first definitive study was Inge Nielsen, *Thermae et Balnea*, 2 vols, trans. Peter Crabb (Aarhus: Aarhus University Press, 1990). More recent studies include Fikret Yegül, *Bathing in the Roman World* (Cambridge: Cambridge University Press, 2010) and Garrett Fagan, *Bathing in Public in the Roman World* (Ann Arbor, MI: University of Michigan Press, 1999). For the maturation of the field in the 1990s, see J. Delaine and D. Johnston, eds, *Roman Baths and Bathing: Proceedings of the First International Conference on Roman Baths held at Bath, England, 30 March – 4 April 1992. Vol. 1: Bathing and Society. Vol. 2: Design and Context* (Rhode Island, NY: Journal of Roman Archaeology Supplementary Series 37, 1999). A thorough bibliography with 2,611 items exists thanks to Hubertus Manderscheid's *Ancient Baths and Bathing: A Bibliography for the Years 1988-2001* (Rhode Island, NY: Journal of Roman Archaeology Supplementary Series 55, 2004), a continuation of his previous *Bibliographie zum römischen Badewesen: unter besonderer Berücksichtigung der öffentlichen Thermen* (Munich, 1988). Further bibliographic guidance from specialists will be welcomed.

⁶⁶ A good general book is Peter Grilli and Dana Levy, *Furo: The Japanese Bath* (New York: Kodansha America Inc., 1985). The focus is mainly on water bathing, but steam bathing is mentioned occasionally (for example, from the late classical period, pp. 62-63, and in the seventeenth century, pp. 70-71). See also p. 58 for a photo of a *kama-buro*, “one of the most ancient forms of bathing in Japan”, which is similar to the hanjeungmak (or ‘kiln sauna’) found in Korean jjimjilbangs (see n. 110 below). Aaland also provides interesting information on the Japan sweat bathing (*Sweat*, pp. 137-147), but proper academic studies are needed. For an evocative depiction of the Japanese bathhouse, see Miyazaki's classic film *Spirited Away* (Tokyo: Studio Ghibli, 2001). Thanks to Carole Cusack for reminding me of the film.

borrowing? The most likely answer is that they are independent (the technology is simple enough), but Lopatin and others have speculated about the possibility of Norsemen bringing the sweat bath in those fleeting settlements over one thousand years ago. In Greenland remains have been discovered of a Viking structure fitting the Eurasian archetype, so it is not impossible.⁶⁷ Original carriage over the Bering Strait also cannot be ruled out, but this would push the sweat bath back tens of thousands of years. Hopefully archaeology has more to say on the matter.

Sweat Bathing in the Pre-Industrial Era

Aside from the continual refinement of the hammam (which thrived and spread like Roman *thermae*), there seem to have been few major Eurasian sweat bathing developments in the millennium after classical antiquity.⁶⁸ The practice persisted to some degree in Europe even though it did not become part of Christian culture. More often, especially in Russia, sweat bathing was associated with folk traditions (aka ‘magic’). William Ryan’s *The Bathhouse at Midnight* documents the Russian case exceptionally well, and Finland has a similar set of traditions.⁶⁹ But more studies are required.

⁶⁷ The Greenland sauna is discussed in Aage Roussel, *Sandnes and the Neighbouring Farms* (Copenhagen: C. A. Reitzel, 1936), pp. 74-81. It is not explicitly called a sauna, but it clearly fits the description (see esp. pp. 76, 78). Lopatin does not mention Sandnes, but makes a particularly strong assertion about the likelihood of cultural transference from northwestern Europe, based on typological similarities. He is overly confident in my view, but it is an interesting argument (‘Origin of the Native American Steam Bath’, pp. 986-990).

⁶⁸ Aside from Giedion’s discussion of the hammam, see, for example, Heinz Grotzfeld, *Das Bad im Arabischen-Islamischen Mittelalter* (Wiesbaden: Otto Harrassowitz, 1970), which includes a range of Arabic source material in addition to archaeological data. For interesting details, see also Richard Boggs, *Hammaming in the Sham: A Journey through the baths of Damascus, Aleppo, and Beyond* (Reading: Garnett, 2010). Sadly, most of what Boggs describes will presumably have been destroyed in the devastating Syrian civil war that broke out in 2011 and continues to this day.

⁶⁹ William F. Ryan, *The Bathhouse at Midnight: An Historical Survey of Magic and Divination in Russia* (Philadelphia, PA: University of Pennsylvania Press, 1999). Ryan’s book earns its title because “the communal village bathhouse and midnight represent the conditions *par excellence* for popular magic and divination in Russia” (p. 50). Ryan does at least offer a better justification for using the term ‘magic’ than is usually the case (pp. 2-4); but let it be noted that I do not think the term has academic merit, irrespective of its long heritage. The categorization of certain types of folk practice as ‘magic’ is one of the most blatant residues of colonial ideology and Enlightenment hubris in contemporary discourse. This point requires a fuller defence on my part, which is forthcoming. In the meantime, for

Giedion talks of “the steam bath as social institution” in the European Middle Ages, and several direct historical references exist (beginning after the tenth century in the case of Russia and Finland). Albrecht Dürer’s famous “The Women’s Bath” (1496) depicts a room very similar to a sauna or banya, and Giedion says that this was “one of the thirteen vapour baths of fifteenth-century Nüremberg”.⁷⁰ But no source is offered for this highly detailed claim – trying to confirm Giedion’s assertion is an example the type of work that could be done on pre-modern cities all over the globe. How common was sweat bathing? What infrastructure existed? What else do we know?

The common narrative is that after the Reformation and Counter-Reformation, sweat bathing declined in most parts of Europe. Beyond changing social morals, bathhouses were becoming more unhygienic with increasing urbanisation and population growth.⁷¹ Even in Russia, where bathhouse culture remained popular, public facilities sank into squalid conditions. Pollock’s detailed statistical analysis strongly suggests that the distribution of banyas made no difference to mortality rates in the nineteenth century, and that bath numbers may even be positively associated with the spread of dysentery.⁷² But the banya survived the transition to industrialised modernity because it was beloved by the people. The ancient tradition was endorsed by (most) imperial doctors, and then strategically by soviet authorities, and in the postwar period the banya played an important social role in negotiating old and new Russian identities. Pollock’s forthcoming book will describe this history properly. The banya was regularly cited in Western travel writing after 1600;⁷³ Bryon

an illuminating critical history of the concept, see Randall Styers, *Making Magic: Religion, Magic, and Science in the Modern World* (New York: Oxford University Press, 2003). See also n. 102 below.

⁷⁰ Giedion, *Mechanization Takes Command*, p. 645. Giedion also cites a dispute in Switzerland between the bakers’ guild and that of “the bathmen”, who had been using the steam created in the bread-making process. Giedion says the bakers “resisted this injury to their trade” (p. 646). I hope someone is able to find evidence of this amusing episode, including the peculiar logistics that must have been involved.

⁷¹ See Ashenburg, *The Dirt on Clean*.

⁷² See Kashin and Pollock, ‘Public Health and Bathing in Late Imperial Russia: A Statistical Approach’.

⁷³ See the excellent article by A. G. Cross, ‘The Russian *Banya* in the Descriptions of Foreign Travellers and in the Depictions of Foreign and Russian Artists’, *Oxford Slavonic*

MacWilliams' new auto-ethnographic account of the Russian bathhouse bears witness to the ongoing strength of the tradition.⁷⁴

The Turkish Bath Arrives in the British Isles

The story of the so-called "Turkish Bath" is well known in broad strokes: it was brought to the British Isles in the 1850s by the writer, diplomat, and Member of Parliament, David Urquhart, who had been captured by the regenerative power of the hammam and other baths during his travels in Spain, Morocco, Greece and Turkey.⁷⁵ Urquhart is one of history's great thermovangelists, and certainly one of the most successful. Within years of the first bath appearing in Ireland in 1856 (through the initiative of Dr Richard Barter, in collaboration with Urquhart), the Turkish Bath spread around the British Isles like wildfire, with a bath even appearing in Sydney before London!⁷⁶

This comes out of an earlier trajectory where hydrotherapy – "the water cure" – was all the rage, especially after the work of Vincent Priessnitz at Gräfenberg became known around Europe. Other forms of health and leisure bathing were also emerging at this time. Giedion covers this history, including a discussion of Urquhart under the heading "Attempts at Total Regeneration, c. 1850".⁷⁷ Aaland mentions Urquhart in

Papers, vol. 24 (1991), pp. 34-59. Cross also mentions the decline of bathing culture in medieval Europe on p. 35.

⁷⁴ Bryon MacWilliams, *With Light Steam: A Personal Journey Through the Russian Baths* (DeKalb, IL: Northern Illinois University Press, 2015). The book is highly recommended, and contains some useful Russian references in the bibliography. Aaland likewise emphasises the strength of contemporary Russian bath culture (*Sweat*, p. 112). See also Mikhail Zoshchenko, *Scenes from the Russian Bathhouse and Other Stories of Communist Russia* (Ann Arbor, MI: University of Michigan Press, 1961).

⁷⁵ Urquhart's main work was *The Pillars of Hercules, or a Narrative of Travels in Spain and Morocco in 1848* (Richard Bentley, 1850). Shifrin paints a vivid picture of Urquhart's unbridled mission to establish the bath.

⁷⁶ The baths in Sydney were opened in 1859 at 15 Spring Street, Sydney, only about five kilometres as the crow flies from where I write this article (sadly it is long since gone). Baths appeared in London very soon after this in 1960, with far greater proliferation (*Victorian Turkish Baths*, pp. 142ff.). They had already reached Manchester and the Midlands a few years earlier from Ireland (see p. 51f., figure 7.1).

⁷⁷ A good general survey is Susan Anderson and Bruce Tabb, eds, *Water, Leisure, and Culture: European Historical Perspectives* (Oxford: Berg, 2002). On Priessnitz, hydrotherapy, and related currents, see Giedion, *Mechanization Takes Command*, pp. 660-676. See also the helpful older work by E. S. Turner, *Taking the Cure* (London: Michael Joseph, 1967).

passing too, as do other histories of bathing. But the 2015 publication of *Victorian Turkish Baths* by Malcolm Shifrin is a game-changing milestone that adds extraordinary depth to our knowledge of this period.⁷⁸ We learn minute details of how Urquhart collaborated with Barter to solve the technological challenges of hot-air bathing, and that the eventual solution was a modified version of the Roman hypocaust system. Barter realised the original vapour models were not hot enough for proper therapeutic effect, an insight seemingly based on his knowledge of the Russian banya.⁷⁹

Here we have a fascinating cultural intersection: travels inspired in Morocco and Turkey led to the establishment of something at first called the ‘Roman-Irish bath’ in Ireland, which was crucially influenced by the Russian banya. The new bath used dry air in the same manner as the Roman *thermae*; but it soon included the shampoo treatment (which had been popularized earlier by an Indian surgeon), and the institution was marketed by Urquhart and others as the ‘Turkish bath’ in the British Isles and beyond. This is a genuine blur of influence, and a rich topic for postcolonial study.⁸⁰

Shifrin also links Urquhart’s bath campaign to his political work on foreign affairs, including the establishment of activist committees (the Foreign Affairs Committees, or FACs) and the steering of two *Free Press*

Giedion also examines the development of private (domestic) vapour cubicles in the late nineteenth century, but these fascinating contraptions will be discussed at another time.

⁷⁸ See n. 55 above.

⁷⁹ See Shifrin, *Victorian Turkish Baths*, pp. 22f. This connection is not made explicit, but Barter had apparently used the Russian bath for therapeutic reasons (p. 22), and Shifrin gives Barter sole credit for realising the importance of heat in the design (p. 23). It would therefore seem that the banya influenced the early prototype designed by Barter and Urquhart. See also p. 92, where it is explained that Urquhart did not originally understand the importance of hot air.

⁸⁰ The only postcolonial study I am aware of that touches these issues is Kate Teltscher, ‘The Shampooing Surgeon and the Persian Prince: Two Indians in Early Nineteenth-Century Britain’, *Interventions: International Journal of Postcolonial Studies*, vol. 2 (2000), pp. 409–423. The shampooing surgeon is Dean Mahomed, who had published a treatise in 1822: *Shampooing; or, Benefits Resulting from the Use of the Indian Medicated Vapour Bath ... Containing a Brief but Comprehensive View of the Effects Produced by the Use of the Warm Bath, in Comparison with Steam or Vapour bathing* (Brighton, 1822). Teltscher also cites Michael Fisher, *The First Indian Author in English: Dean Mahomed (1759–1851) in India, Ireland, and England* (Delhi: Oxford University Press, 1996). Surprisingly, Shifrin scarcely mentions Mahomed, although I am informed that this was a restriction imposed by the publisher on a book that had already ballooned to over double the size of the original plan.

newspapers. One edition from June 21, 1856, even had two items: a piece by Karl Marx on the diplomatic history of the eighteenth century, followed by a piece on the introduction of the Turkish bath to Ireland – a conscious pairing by the editors on grounds that the transplanting of a cultural institution from East to West was a significant historical event. Shifrin explains that the Turkish bath had become “integral” to the lives of many involved in the production of the *Free Press* papers (under Urquhart’s influence), and that the papers were a key vessel for spreading “the Turkish Bath movement” across the country so quickly.⁸¹

Urquhart helped to finance the first public bath in Manchester by 1857, which proved so successful that only eighteen months later nine more baths had been opened by members of the FACs. At least thirty were established over coming years; they were amongst the first in England. Although not charity institutions, the ethos was one of self-help and spreading the means of regeneration to working-class people.⁸² Other commercial establishments flourished beyond Urquhart’s direct influence (soon numbering in the hundreds), but this is the fascinating social history of the Victorian Turkish bath and its arrival in the United Kingdom.

The book covers much more (the bath has all but disappeared; Shifrin documents what remains), but *Victorian Turkish Baths* is so detailed that it creates many new avenues of investigation. Shifrin captures the point:

Despite a burgeoning interest in the Victorian era... the history of its ‘Turkish’ bath is virtually unknown. You will not find it in works on British social history; it will rarely be included even in local histories, where some recognition of its past value to community is surely worth mentioning. So it is difficult to understand why such a fascinating subject has been neglected when its study can give us fresh insights into so many aspects of Victorian life.⁸³

⁸¹ Shifrin, *Victorian Turkish Baths*, pp. 32-33. He adds, “for undoubtedly it was a movement” (p. 7).

⁸² Shifrin, *Victorian Turkish Baths*, pp. 35-37.

⁸³ Shifrin, *Victorian Turkish Baths*, p. 5. According to p. vi, the last book on the topic was published more than a century ago. See Dave Day’s review (n. 55 above) for other research avenues opened up by *Victorian Turkish Baths*.

Sauna in the United Kingdom

Amidst the decline of the Turkish bath, a new cultural heat wave began in 1959 when Finnish sauna appeared in London, then Manchester.⁸⁴ The sauna seems to have properly arrived in Britain at an event in 1964, which is reported by the Finnish Consul at the 1974 sauna congress in Helsinki:

It was almost by accident that the sauna was introduced in conjunction with the “Finnish Fortnight” held in Birmingham, when a sauna cabin was donated to the City of Birmingham and installed in a disused Turkish bath. The new sauna establishment was an instant success, and aroused considerable public attention. ... The sauna is now accepted by the public bath world as an obvious amenity to be offered to the public, and it forms a regular subject in the curriculum of the students of the Institute of Baths Management.⁸⁵

Tens of thousands of people are now said to use sauna in the United Kingdom – but we need more information. I have not come across anything that properly investigates Finnish sauna in the British Isles, ethnographically or historically.

Finnish Sauna in America

The story is very different in America, where Finnish sauna has been rooted deeply by migration. Some saunas were even built in the seventeenth century by Finns who appeared in the first waves of settlement,⁸⁶ but it was not until the nineteenth century that enough Finns migrated to entrench the practice.

Several interesting studies narrate this history. The colony of New Sweden (1638-1655) brought early Finnish and Swedish settlers to the continent on the banks of the Delaware. The colony was short lived, but

⁸⁴ As reported by Michael Frayn, (‘Water Torture’, *The Guardian*, November 19, 1959), who describes the Manchester facilities with a wry flair (for example, “The sauna lasts for an hour without massage, an hour and a half with. At 15s 6d for the former, and 25s the latter, it is not the world’s cheapest way of mortifying the flesh”).

⁸⁵ Antti Sarkanen, ‘The Public Sauna in the United Kingdom’, pp. 108-112 in Tier et al., *Sauna Studies*, here pp. 108-9. At that time, Sarkanen was Honorary Consul for Finland in Birmingham. The fact that the sauna dovetails with the Turkish bath architecturally as well as chronologically is a remarkable oddity.

⁸⁶ Aaland even notes that some historians believe the original name of Philadelphia was Sauna, and that “Today, in the centre of the Philadelphia Navy Yard, a plaque marks the site of that first sauna” (*Sweat*, p. 99). The claim is also made by Aili K. Johnson, ‘Lore of the Finnish-American Sauna’, *Midwest Folklore*, vol. 1 (1951), pp. 33-39; see p. 33 where Johnson cites Finnish historian S. Ilmonen, who apparently mentions an early colonial map.

Terry Jordan and Matti Kaups argue that the settlers had a profound impact on the log-building traditions of the American frontier:

the eastern, interior Finns of Karelian and Savoian background, bearers of a well-developed, beautifully preadapted forest colonization cultural complex, were the most significant shapers of the American backwoods way of life.⁸⁷

Saunas were built at this time, but they did not persist, apparently dying out by 1740.⁸⁸ Little appears to have changed until the mid-nineteenth century, which saw a veritable explosion of immigration: between 1864 and 1914 more than 300,000 Finns arrived in the United States, largely settling in Michigan and Minnesota.⁸⁹ Canada saw over 50,000 arrivals in the decades to 1950, especially in Ontario.⁹⁰ The sauna came with them.

Appearing first on farms (almost every Finnish farm, where it was usually built as the first structure), then in small town bathhouses during the early twentieth century, this is when the sauna truly arrived in America. This history has been beautifully captured in Michael Nordskog's recent book *The Opposite of Cold: The Northwoods Finnish Sauna Tradition*,⁹¹ and more academically by Matti Kaups, a cultural geographer from the University of Minnesota-Deleuth.⁹² A few other snippets exist.⁹³ But during

⁸⁷ Terry Jordan and Matti Kaups, *The American Backwoods Frontier: An Ethnic and Ecological Interpretation* (Baltimore: John Hopkins University Press, 1989), p. 36. See p. 59 on saunas as common feature of the new settlements. See also Terry Jordan, 'New Sweden's Role on the American Frontier: A Study in Cultural Preadaptation', *Geografiska Annaler. Series B, Human Geography*, vol. 71 (1989), pp. 71-83, effectively a summary of the book (the article is based on a 1989 lecture). See also Thomas Horner, 'Sauna Baths Along the Delaware, 1638-1682', pp. 23-28 in *The American Swedish Historical Foundation Yearbook* (Philadelphia, 1971).

⁸⁸ Michael Nordskog, *The Opposite of Cold: The Northwoods Finnish Sauna Tradition* (Minneapolis: University of Minnesota Press, 2010), p. 45. See n. 91 below.

⁸⁹ Arnold Arlanen, 'Introduction' to Nordskog, *The Opposite of Cold*, p. xii.

⁹⁰ See the robust sociological study of Charles Sutyla, *The Finnish Sauna in Manitoba* (Ottawa: National Museums of Canada/Musées Nationaux du Canada, 1977; Canadian Centre for Folk Culture Studies, paper no. 24).

⁹¹ Nordskog, *The Opposite of Cold*, a visually compelling book. Although it does not contain many academic references, it is a valuable and important work, rich with photography and oral histories of saunas across the Lake Superior region. It provides excellent information that could be used in fuller academic studies of American sauna history.

⁹² Kaups' most important study (with Cotton Mather) is 'The Finnish Sauna: A Cultural Index to Settlement', *Annals of the Association of American Geographers*, vol. 53 (1963), pp. 494-504. See also 'A Finnish Savusauna in Minnesota', *Minnesota History*, vol. 45 (1976), pp. 11-20. Nordskog makes valuable use of the Matti Kaups papers collection at the

this time, sauna remained largely Finnish. It did not become a local American practice. This changed in the 1960s, when sauna suddenly arrived in the American consciousness. The 1960 winter Olympics in California played a role, as did Lyndon Johnson's Vice-Presidential trip to Finland in 1962, after which "Finland became a topic of conversation all across America... most of all, Finnish sauna."⁹⁴ Proof of this point might be seen in America's self-proclaimed "first sauna book", published in 1963.⁹⁵

The capitalist machine swung into full gear, and saunas started appearing around America. In the words of the executive of the Sauna Society of America (est. 1964):

In a land where a Cadillac in the garage, a swimming pool in the back yard and at least three major credit cards in the pocket are acknowledged symbols of high personal status, a private sauna became the biggest status symbol of them all.⁹⁶

However, this was not without consequence:

all kinds of entrepreneurs set up their shops and, taking advantage of the demand, started to promote, under the sauna name, the sale of all devices not even remotely – in appearance or operation – the traditional Finnish institution ... I could go on and on, describing other atrocities erected under the name of the sauna but, after all, most people had never seen a real sauna before, so a lot of so-called experts cashed in at the expense of the public in general, and the legitimate sauna dealer in particular.⁹⁷

The result was that sauna became ubiquitous across the United States, cementing the global popularity of the Finnish type (even if Finnish traditions did not follow). Sauna was suddenly a major commercial industry: they began appearing at gyms, hotels, health centers, and country

Immigration History Research Center, University of Minnesota. Hopefully other researchers can make use of this archive. Kaups is also a crucial part of the story: he was at the 1974 sauna congress in Helsinki where the International Sauna Association was formalized. He is even included in a grainy photo from the banquet (Tier et al., *Sauna Studies*, p. 293).

⁹³ For example, Richard Perrin, 'Log Sauna and the Finnish Farmstead: Transplanted Architectural Idioms in Northern Wisconsin', *The Wisconsin Magazine of History*, vol. 44 (1961), pp. 284-286.

⁹⁴ V. S. Choslowsky, 'Sauna in the United States', pp. 70-75 in Tier et al., *Sauna Studies*, here p. 71. Also see n. 18 above. Aaland also discusses the 1960s American sauna wave, including the Olympics (*Sweat*, p. 101).

⁹⁵ Saul Chalmer Olin, *Sauna, The Way to Health: America's First Book about the Sauna. A Guide Book to Better Health* (New York: Health Factor Books, 1963).

⁹⁶ Choslowsky, 'Sauna in the United States', p. 72.

⁹⁷ Choslowsky, 'Sauna in the United States', pp. 72f.

clubs around America. If you have ever been to a sauna in America and wondered why it seems so detached from the original social model of the Finnish and Russian archetype, this is why.

The picture is not this simple, of course, and there are good bathhouses across the United States. Typically they are not cheap (at least \$20 for a single entry to most places), but they can be found. A vibrant local sauna culture is emerging in Minnesota through the work of John Pederson and the 612 Sauna Society; and I have heard many stories at the Russian Turkish Bathhouse in New York (another excellent facility) about good sweating locations and subcultures around the US. For anyone passing through Los Angeles, I can recommend Wi Spa, a 24-hour Korean bathhouse complex that provides full-scale regeneration only 18 miles from LAX.

But capitalism still shapes sauna in America to a profound degree. Instead of preaching the social benefits of sauna, the Executive Director of the Sauna Society of America spoke to the 1974 Helsinki congress about the massive economic opportunity that Finland was missing in America (the speech hits quite a crescendo on this point). Even today, the body now known as the North American Sauna Society (America's member organisation of the ISA) pitches itself in a distinctly commercial frame, having launched around 1990 in cooperation with the Finnish Ministry of Trade and Industry and three sauna manufacturers.⁹⁸ The 1974 speech certainly emphasised a desire to preserve traditional Finnish sauna in the face of derivative abominations, and the North American Sauna Society has a similar orientation. But today, sadly, the group is almost dormant, and what does exist online aligns perfectly with the earlier commercial thematics. The discourse is also dominated by individual not social benefits – the whole situation is ripe for critical analysis. Historical, ethnographic, and demographic studies are required all over America too. There is much to be found.

A Note on the Contemporary American Sweat Lodge

Traditional sweating practices of indigenous American peoples have survived to the present, albeit in significantly compromised form under the twin forces of colonialism and capitalism. Several books and articles exist

⁹⁸ See <http://www.saunasociety.org/our-story>.

on the sweat lodge, including material showing that the practice is still valued today as a way of promoting physical, social, and mental health.⁹⁹ There have also been controversies about its use, which came to a head at the fifth Lakota Summit in 1993, where elders spoke against “pseudo-religious corporations [that] have been formed to charge people money for admission into phony ‘sweat lodges and vision quest’ programs”.¹⁰⁰

The Lakota Declaration provoked some strident response in online forums,¹⁰¹ and here we find another febrile postcolonial issue: what is ‘authentic’? When does this matter? What types of cultural borrowing are acceptable? When does someone cross the line in invoking Indigenous concepts if they themselves are not Indigenous? Suzanne Owen offers a good analysis of these questions, in a book that has the notable strength of drawing on theory from the critical study of religion.¹⁰²

⁹⁹ The most comprehensive academic work available is Raymond Bucko, *The Lakota Ritual of the Sweat Lodge: History and Contemporary Practice* (Lincoln, NE: University of Nebraska Press, 1998). Amongst articles on the mental health aspects of the sweat lodge, see Jeannette Waegemakers Schiff and William Pelech, ‘The Sweat Lodge Ceremony for Spiritual Healing’, *Journal of Religion & Spirituality in Social Work: Social Thought*, vol. 26 (2007), pp. 71-93; Michael Tlanusta Garrett, Edil Torres-Rivera, Michael Brubaker, Tarrell Awe Agahe Portman, Dale Brotherton, Cirecie West-Olatunji, William Conwill, and Lisa Grayshield, ‘Crying for a Vision: The Native American Sweat Lodge Ceremony as Therapeutic Intervention’, *Journal of Counseling & Development*, vol. 89 (2011), pp. 318-325.

¹⁰⁰ Wilmer Stampede Mesteth, Darrell Standing Elk, and Phyllis Swift Hawk, ‘Declaration of War Against Exploiters of Lakota Spirituality’. According to Raymond Bucko: “The original statement was passed on June 10, 1993 at the Lakota Summit V, an international gathering of US and Canadian Lakota, Dakota and Nakota Nations. It was also published in the *Eyapaha*, a newsletter from Manderson, SD on June 10, 1993, in Volume 2, Issue 22. The document subsequently appeared in Ward Churchill’s *Indians R Us?: Culture and Genocide in Native North America* (1994: 273-7). Electronically, as far as I can tell, the statement first appeared on the internet in a message on the Usenet ‘soc.culture.native’ discussion group on Sunday 22 August (1993) 18:40:05 GMT” (<http://puffin.creighton.edu/lakota/war.html>).

¹⁰¹ Bucko also hosted a webpage as a forum for responses. See ‘Responses to the Statement: War Against Exploiters of Lakota Spirituality’, at http://puffin.creighton.edu/lakota/war_resp.html. The posts date from 1996-2009. There are more than a thousand posts (it is quite a corpus), so analysis will be saved for another time.

¹⁰² Suzanne Owen, *The Appropriation of Native American Spirituality* (London: Continuum, 2008), which discusses the Lakota Declaration in detail. By “the critical study of religion” I mean a sub-field of Euro-American religious studies represented by the journal *Method & Theory in the Study of Religion*, and by scholars such as J. Z. Smith, Bruce Lincoln, and Russell McCutcheon (also Randall Styers, n. 69 above). The particular strength of this sub-

A further postcolonial question is about how to narrate the history of the sweat lodge. In this article, the topic is covered both in prehistory (above) and as a footnote to American sauna history (right here). This is vintage marginalization, reflecting historically embedded relations of power as manifest in language. All I can say in defence is that I have at least tried to be explicit about the problem, because recognising such dynamics is the first step towards fashioning new stories. How else might the complex history of the American sweat lodges be told in a global chronological survey? Everything depends on the aims of the story, but the question is important in any investigation.

Sauna in the Rest of the World

The preceding section points to issues of marginalization in the historiography of sweat bathing. This article has distilled much of the existing literature available in English, which shows an unsurprising tendency towards European history focused around Finland and Russia, with key supporting roles played by Germany and the United States. Foundations are given to Greece and Rome; the Victorian Turkish Bath now stands in new light; the hammam remains exotic.

What about sauna in the rest of the world? The International Sauna Association has member associations from over twenty countries: where is the national history of sauna in these places? Norway and Sweden have very strong sauna cultures, but standard works never explore this in detail. Sweden in particular has rivaled Finland in sauna heater manufacturing, so commercial and trade histories also need to be written.¹⁰³ The Austrian Sauna Society at one time even “campaigns vigorously to have the heavy initial electricity fee on sauna stoves revoked” – an amusing episode in need of documentation. Kenya is a member of the ISA, but this appears to

field is the close attention it pays to language and taxonomy, that is, the discursive strategies used by social actors to construct identity and authorize power. ‘Religion’ is not seen as a unique domain of social life, except to the extent that it usually provides social groups with an authoritative existential framework against which all other action is interpreted. For the classic statement of methodological rules and principles in the critical study of religion, see Bruce Lincoln, ‘Theses on Method’, *Method & Theory in the Study of Religion*, vol. 8 (1996), pp. 225-227.

¹⁰³ The most famous Finnish brand is Harvia, and the most famous Swedish brand is Tylo. There are several other brands in the global market, but no full list exists online and it is not easy to give a precise number.

be the result of Finnish expat connections. What about sweat bathing on the rest of the African continent?¹⁰⁴

We need proper histories of the Baltic countries, as well as other Slavic countries, all of whom play a part in what has formerly been called “the Great Russian Sauna”, but who tend to get overshadowed by Russia itself.¹⁰⁵ A traditional smoke sauna in Estonia was recently placed on a UNESCO Heritage list,¹⁰⁶ and the practice runs deep across Eurasia. The recent soviet legacy is yet to be document and unpacked, but Ethan Pollock’s work will start to plug this gap. Another region is central Asia: especially areas like Kazakhstan and Mongolia. I have heard many stories, but academic material is lacking on the history of sweat bathing in these regions. Mongolia is one of the most recent members of the International Sauna Association: we need contemporary histories here too.

Hungary has not even been mentioned so far, even though it has one of the most interesting bath cultures in Europe. Heavily influenced by Islamic and Ottoman culture, the baths of Budapest are legendary, and friends of mine who have visited report much the same as travel writers from the eighteenth century.¹⁰⁷ But I am not aware of anything

¹⁰⁴ Aaland mentions Africa briefly in *Sweat* (pp. 134-5), noting a few old ethnographic snippets but declares that, “little information is available” (p. 135). Hopefully Sauna Studies researchers can uncover more.

¹⁰⁵ Thankfully this conflation is generally avoided in scholarly work: e.g. Ryan, *The Bathhouse at Midnight*, who raises the problem “What do I mean by Russia?” in his introduction (pp. 5-6), noting that he includes Ukrainians and Belorussians despite primary focus on Muscovite and Imperial Russia. See also the important earlier study by Igor Varhos, *Zur Geschichte und Folklore der grossrussischen Sauna* (Helsinki: Acad. Scientiarum Fennica, 1966). For a handy English summary of Varhos, see the review by Felix J. Oinas in *The Slavic and East European Journal*, vol. 11 (1967), pp. 481-484.

¹⁰⁶ More precisely, “Smoke Sauna Tradition in Võromaa” was inscribed on the Representative List of the Intangible Cultural Heritage of Humanity at the Ninth Session of the Intergovernmental Committee in Paris, November 2014 (Decision 9.COM 10.16). Further details are available on the UNESCO website for those interested. See <https://www.youtube.com/watch?v=3WoiQWWWhiY> for a UNESCO video of the smoke saunas. See also n. 116 below.

¹⁰⁷ For example, John S. Morritt, *The Letters of John S. B. Morritt of Rokeby: Descriptive of Journeys in Europe and Asia Minor in the years 1794-1796*, ed. G. E. Marindin (London: John Murray, 1914), ch. 3 (‘From Venice to Constantinople’), p. 47 on the ‘Turkish Baths at Buda-Pest’. Giedion also mentions Hungary in connection with the morphological trajectory from ancient Syria as part of his ‘Itinerary of the Regeneration Types’ (*Mechanization Takes Command*, p. 636).

comprehensive (or even preliminary) that documents this history. Giedion offers a gesture in the direction, but his story goes elsewhere. The Magyars are also part of the Finno-Ugric peoples, adding another level of investigation (were the Magyars preadapted to receive the Ottoman bath so fully?). Strangely, Hungary has no member in the ISA.

Mexico and South America are also missing from this survey. Several works on the Mexican *temescal* exist (there is some good archaeological and textual material), but fuller studies of the whole continent are required.¹⁰⁸

East Asian countries are rarely discussed in histories of sweat bathing, except for a standard nod to Japan. In general it is difficult to isolate sweat bathing specifically from the regenerative bathing practices of Japan, China, and Korea, but Japan has become an integral member of the International Sauna Association, and has taken up Finnish sauna to a major extent in addition to local bathing practices.¹⁰⁹ Korea's version of the sauna is the *hanjeungmak*: a hot room, typically made of fired clay (sometimes called a 'kiln sauna', similar to the Japanese *kama-buro*), whose history and provenance are not covered in Western academic literature. Kiln saunas are usually part of *jjimjilbangs*, Korean bathhouses with multiple rooms.¹¹⁰

China is never cited in histories of sweat bathing (surely there is more to the story) – but it now plays a major role in the international sauna industry, selling a vast amount of sauna equipment in the global market. Fascinatingly, China has representation in the International Sauna Association: the Guangdong Grandeur International Exhibition Group Co.,

¹⁰⁸ See Frank Cresson, 'Maya and Mexican Sweat Houses', *American Anthropologist*, vol. 40 (1938), pp. 88-104 (a useful complement to Lopatin). Aaland provides some handy notes on the history of the *temescal* (*Sweat*, pp. 176-186).

¹⁰⁹ See Aaland, *Sweat*, pp. 96-97.

¹¹⁰ There is virtually no academic information about the *hanjeungmak* or *jjimjilbang* in English language journals, as far as I can tell. One article turned up, but it is by Japanese researchers based on a study in southern Izu, Shizuoka Prefecture: Shinya Hayasakaa et al., 'Effects of Charcoal Kiln Saunas (Jjimjilbang) on Psychological States', *Complementary Therapies in Clinical Practice*, vol. 14 (2008), pp. 143-148. Plenty of basic information about Korean bathing can be found online, including in journalism and travel guides, but academic work is needed. Surely good historical information exists in books and Korean archives. Wi Spa in Los Angeles (mentioned above) has a contemporary version of mixed-gender *jjimjilbang*, where everyone wears shorts and rather uncomfortable t-shirts. The gender-segregated baths downstairs are much better: the real deal for those seeking regeneration.

Sauna Studies

Ltd – which hosts the China International Sauna & Spa & Pool Fair (to my knowledge the largest expo of its kind in the world, rivaled only by the Interbad trade fair held biennially in Stuttgart). Here we meet sauna and capitalism again.

Jewish culture has likewise not been mentioned so far, but represents further ground for historical and ethnographic investigation. Jewish-American culture has given rise to ‘the shvitz’ (Yiddish for sweat), which can apply to sweat bathing as both noun and verb: for example, “I’ll see you at the shvitz” and “Let’s shvitz”, respectively. This is native lingo in places like New York and the Midwest. What about shvitzing in the rest of the world, including Israel? Studies are lacking.

Sauna and Sociology

Sociology is particularly important for Sauna Studies, because it supplements ethnographic observation with critical social analysis. This is where Sauna Studies will justify itself as a valuable addition to the human sciences in the twenty-first century. The foregoing survey shows that sweat bathing has a fascinating history. It is a unique form of bodily regeneration that has persisted for a reason. While the practice has countless global variations, something common to virtually all sweat bathing is a profoundly social element. Understanding these social dynamics at a detailed academic level is not simply interesting: it is essential for strong and persuasive policy recommendations. By documenting the culture of sweat bathing and linking it with wider civic projects of community and society, Sauna Studies will promote health and wellbeing in a holistic and creative way. Good science in this domain should always work in tandem with good qualitative research.

Some helpful sociological studies already exist: these should inspire new investigations. An obvious example is L. M. Edelsward’s monograph on Finland, but an updated analysis is definitely required.¹¹¹ We also need better sociological histories of sauna as a technology of international diplomacy: Finnish President Urho Kekkonen famously held major Cold War negotiations in his private sauna, and there are many other Finnish examples.¹¹² Vladimir Putin saw out his first election to the

¹¹¹ See n. 17 above.

¹¹² The definitive account of Finnish sauna diplomacy (including Urho Kekkonen and Martti Ahtisaari) is the speech delivered by Finnish Secretary of State, Pertti Torstila, at the XV

Russian presidency in a banya;¹¹³ Angela Merkel was having a regular Thursday night sauna with a friend when the Berlin Wall fell.¹¹⁴ The latter examples are not diplomacy *sensu stricto*, but they show that sauna can (and should) be studied in connection with global politics, especially as a site of informal communication.

A very interesting sociology of Austrian sauna culture exists, where the author analyses sauna in the frame of ‘every day history’ (*Alltagsgeschichte*), specifically leisure history.¹¹⁵ The work provides a model for how other national sauna cultures could be studied. Another valuable article has been published on the smoke saunas of Estonia, where the authors treat heritage production as “a selective process conducted by tourism entrepreneurs, in which personal memories, stories and material settings are displayed or performed in order to make them experienceable for the public”.¹¹⁶

Christopher Poulos’ excellent sociological and ethnographic study of Jewish-American shvitz culture is similarly helpful, providing a model

International Sauna Congress 2010, May 27-28 at the Tokyo Dome Hotel. See ‘Sauna Diplomacy; the Finnish Recipe’ at the website of the Ministry of Foreign Affairs for Finland, at <http://formin.finland.fi/public/default.aspx?contentid=193756> (last accessed July 30, 2016).

¹¹³ “Yeltsin, who often made key decisions of his presidency in the bania, was not the only Russian leader to recognize the connection between the bania and manliness. After voting for himself, Vladimir Putin waited out the 2000 election to the presidency in a rural bania” (Pollock, ‘Real Men Go to the Bania’, p. 67, n. 55).

¹¹⁴ Werner Reutter, ‘Who’s Afraid of Angela Merkel?: The Life, Political Career, and Future of the New German Chancellor’, *International Journal*, vol. 61 (2005/2006), pp. 214-226. See p. 218: “until November 1989 Merkel was not attracted by politics at all. Her nonpolitical attitude might best be described by the way she passed 9 November 1989, i.e. the day of the fall of the wall, which was a Thursday. On Thursdays Merkel used to go to a sauna with a friend of hers. Even though she was aware of the famous press conference at which the allowance to travel to West Germany had been made public she did not alter her routine. After she had left the sauna she heard that the borders had been opened. Thus, instead of having a beer with her friend she visited West Berlin. She returned to East Berlin not too late, though, because she had to get up early the next morning, as she later recalled.”

¹¹⁵ Gilbert Norden, ‘Saunakultur’ in *Österreich: Zur Soziologie der Sauna und des Saunabesuches* (Vienna: Böhlau Verlag, 1987). See pp. 13-16 on the orientation of the study.

¹¹⁶ Ester Võsu and Helen Sooväli-Sepping, ‘Smoking Out Local Traditions? Identity and Heritage Production in Southeast Estonian Rural Tourism Enterprises’, *Electronic Journal of Folklore*, vol. 51 (2012), pp. 77-108. This is the same region recognised by UNESCO; see n. 106 above.

for how researchers can analyse social practice in specific bathhouses and local subcultures. The article is made especially interesting through Poulos' sophisticated use of cultural theory (issues of embodiment, ritual, and gender) and the philosophy of communication (re: identity and the performance of culture).¹¹⁷ Studies like this could be done around the globe. Bathhouses are theatres of the social.

And, of course, bathhouses have often been theatres of sexuality. Beyond a number of studies in sexual health, some good templates exist for sociological and theoretical analysis of queer bathhouse culture.¹¹⁸ But more analysis is required. Pia Lindman and John Christ also offer a model for theorizing sauna, gender, and the sensual body in a political frame.¹¹⁹ Many types of contemporary embodiment theory might take interest in the subversive space of the bathhouse.

Conclusion

This article shows that sauna is not just a bath. In all forms, across all lands, sweat bathing is a social institution. It is greatly beloved by those who use it, and it provides deep physical and mental regeneration. Yet it is hardly represented in academic literature. This must change. It is not a question of trivial interest. It goes to the core human wellbeing. Academic research should benefit the public. The *International Journal of Sauna Studies* will work stridently in this direction.

Most pressingly, we need hundreds of high-quality studies about the health effects of sauna, including longitudinal and transnational projects. Mental health is perhaps even more important than physical health, given the increasing stress of the twenty-first century and the

¹¹⁷ Christopher Poulos, 'Shvitzing/Kibitzing: Bodies, Communication, and 'Communion' in a Men's Locker Room', *Cultural Studies: A Research Volume*, vol. 4 (1999), pp. 193-215.

¹¹⁸ See e.g. Martin S. Weinberg and Colin J. Williams, 'Gay Baths and the Social Organization of Impersonal Sex', *Social Problems*, vol. 23 (1975), pp. 124-136; Alison L. Bain and Catherine J. Nash, 'Undressing the researcher: feminism, embodiment and sexuality at a queer bathhouse event', *Area*, vol. 38 (2006), pp. 99-106. On sexual health research, see n. 40 above.

¹¹⁹ Pia Lindman and John Christ, 'Sauna as Cultural Practice: Two Art Projects and a Video', *Rethinking Marxism*, vol. 15 (2003), pp. 197-211.

challenges of light-speed urbanisation.¹²⁰ Sauna does not cure all ailments, but it is relaxing in a deep and unique way.

Correspondingly, we need technical studies of bathhouse infrastructure and bathhouse equipment. This will improve scientific health research, will improve user experience more generally, and will encourage innovation towards sustainable practices so that humanity can enjoy the good heat without also consuming the earth. The more efficient we can make heating technology, the more it can be incorporated into basic human infrastructure.

The history of sweat bathing and its continued cultural use are far too interesting to be so neglected. A vibrant story can be told, if only researchers will start looking. This human story will fuel interest in Sauna Studies, it will empower scholars to collaborate internationally, and it will provide a qualitative background against which scientific and policy research can take place.

The research directions suggested in this article can all be undertaken without a critical edge. But if anyone is motivated by social justice concerns and wants to analyse sauna in this way, Sigfried Giedion offers a good lead:

The role that bathing plays within a culture reveals the culture's attitude toward human relaxation. It is a measure of how far individual well-being is regarded as an indispensable part of community life.

This is a social problem. Should society assume responsibility for guarding health and promoting well-being, or is this a private matter? Is it a duty of the state to provide the agencies of relaxation regardless of cost? Or should it regard its people as mere components of the production line, leaving them to their own devices as soon as they have finished their work?¹²¹

For all of human history, powerful members of society have exploited the bodies of less powerful people for private gain. This continues today at a global scale, despite the promises of the Industrial Revolution and liberal democracy. In a world of plenty, too many people are being worked into the ground. The wellbeing of all humans is not a priority for capitalism.

¹²⁰ For an optimistic take on the challenges facing humanity in the age of the machines, see Martin E. P. Seligman, *Flourish: A Visionary New Understanding of Happiness and Well-Being* (New York: Simon & Schuster, 2012). See footnotes 123-124 below for a more critical take on the challenges.

¹²¹ Giedion, *Mechanization Takes Command*, p. 628.

The global economy will not change any time soon. But something we can change is attitudes towards physical regeneration and care of the body. In recent centuries bathing has become an almost entirely individual affair. Everyone with the means to do so bathes in private.¹²² This reflects (amongst other things) the atomizing forces of modern capitalism. Especially under contemporary neoliberalism, the civic solidarity that underpins the project of democracy is being systematically eroded.¹²³ Globalisation is being steered by a bankrupt ideology that suffocates the social.

I believe that sauna can play a positive role in addressing some of these problems. At a social level, it brings people together. At an individual level, it makes the body feel alive. The world is only getting faster, and the previous century shows that technological progress will only lead to more deadlines.¹²⁴ Emancipation from work is a mirage – nothing will change. Instead, societies need to find effective ways to help people regenerate inside this storm of movement. That is why the *International Journal of Sauna Studies* is so important. Anecdotal evidence is clear that sauna makes people feel healthy, happy, and whole. But anecdotal evidence counts for nothing at the funding table. If researchers begin to take sauna seriously, then governments will too.

¹²² Giedion speaks of “mere ablation to be performed in the swiftest routine”, juxtaposed against the ideal of “total regeneration” (*Mechanization Takes Command*, p. 628). This is a theme worthy of exegesis.

¹²³ Amongst the wide body of literature on neoliberalism, see Wendy Brown, *Undoing the Demos: Neoliberalism's Stealth Revolution* (New York: Zone Books, 2015). Brown's work is particularly helpful for understanding how neoliberalism renders all social and political life in economic terms, and how this erodes the very idea of a *demos* who craft their freedom together. Paul Verhaeghe provides a good account of how neoliberalism feeds our competitive, individualist tendencies at a pervasive cultural level, in *What About Me? The Struggle for Identity in a Market-Based Society* (London: Scribe, 2014). For me this recalls the message of Peter Kropotkin: we flourish by working together. See *Mutual Aid: A Factor of Evolution* (London: Heinemann, 1902).

¹²⁴ For a fascinating but dense study of the contemporary pace of life, see Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2015). More readably, see Jonathan Crary, *24/7: Late Capitalism and the Ends of Sleep* (London: Verso, 2013). More forcefully, see David Graeber, ‘On the Phenomenon of Bullshit Jobs’, *STRIKE! Magazine*, at <http://strikemag.org/bullshit-jobs>. As Graeber notes, “The answer clearly isn't economic: it's moral and political.”