Wallpaper to Die For

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The Victorian home is often portrayed in literature and art as one of beauty, comfort, and warmth whether it be in the sumptuous mansions of the aristocrats, the less ostentatious homes of the middle class or the cozy cottage dwellings of the working class. These representations are a façade for behind the walls of many of these houses of the nineteenth century lurked a quiet and slowly poisoning agent that produced a sickening and often lethal environment. The culprit was arsenic and its use to provide the vibrant colours in wallpapers greatly sought by the consumers resulted in numerous illnesses and death. Little was done by Parliament curtailing the use of arsenic as economics and trade outweighed their concerns for the health of the nation. It was the consumers determination aided by the health and medical officials and the press that forced the manufacturers to cease production of wallpaper containing arsenic and thereby exercising a dynamic influence on consumerism in the late Victorian Era.

The prevalence, the use, and the accessibility of arsenic was astounding. It was everywhere, available to anyone, and found in a vast array of products which included food, toys, candles, clothing, paper products, and rat poison. It was used as a cure for a variety of ailments. "During the nineteenth century, arsenic became fashionable as an ingredient of cure-all tonics. This infatuation led to the mass poisoning of the Victorian world through medication, adding to the mass poisoning from interior décor."[1]

The use of arsenic as a healthy dietary supplement was published by *The British Medical Journal* in 1862, referring to the arsenic eaters of Styria, a mountainous region located in southeast Austria:

> Arsenic-eaters are robust persons . . . Men who commence at 18 have been known to live to 76. They take arsenic because they wish to be "strong and healthy," and preserve themselves against all kinds of diseases. Persons out of health rarely take arsenic . . . Arsenic-eaters it is evident, belong to a healthy class of individuals.[2]

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[1] Andrew A. Meharg, *Venomous Earth* (New York: Macmillan, 2005), 94.

[2] "Arsenic Eating". *The British Medical Journal* 1, no. 55 (1862): 68-69. www.jstor.org/stable/25230037.

Added to this prolific use of arsenic as a product in daily life, accidental poisonings were not uncommon especially in children such as the case noted in *The Times* of two young boys who had consumed household ornaments:

> Last week an inquest was held at Ashford on two brothers who were poisoned by eating ornaments of a twelfth cake. Professor Taylor said that upon making an analysis of the stomachs of the deceased children, he found there a large quantity of arsenic which, had caused death. During the last two years he had met with ten fatal cases of children eating these ornaments.[3]

Arsenic poisoning as a method for murder was not new and had existed for centuries. With its availability, lax restrictions, and limited forensic science to determine deliberate action on the part of the poisoner, it was viewed by those so inclined as a perfect method to ensure the demise of any person or persons one wished to dispose of.

The fact that arsenic was used in so many products, was sold by any vendor, and cases of poisoning on the rise, medical associations put pressure on the government to regulate arsenic sales:

> At the prompting of the Provincial Medical and Surgical Association (the forerunner of the BMA) and the Pharmaceutical Society, both of which bodies were at least as much concerned with securing professional advantage as with safeguarding the public, government legislation was introduced.[4]

The Arsenic Act of 1851 put in place regulations on the sale of arsenic, "by confining sales to adults and compelling them to record their identities, in the presence of witnesses, in a 'poison book' kept by the vendor."[5] A further step was taken to protect the public with the Pharmacy Act of 1868 which limited the sale of arsenic and placed it solely in the hands of the *Pharmaceutical Society*. The Arsenic Act did little to regulate and restrict the use of arsenic on a national scale:

> The Act tackled only the counter trade in pure arsenic; commercial users were unaffected by the legislation . . . an unknown degree of chronic arsenic poisoning occurred as the result of exposure to the wide range of arsenically coloured products

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[3] "Caution to Parents", *Times*, 29 Jan. 1853, p. 7. *The Times Digital Archive*, http://tinyurl.gale.com/tinyurl/CFRaa6.
[4] P.W.J. Bartrip, "How Green Was My Valance?: Environmental Arsenic Poisoning and the Victorian Domestic Ideal", *The English Historical Review* 109, no.433 (1994): 893.
[5] Bartrip, *The English Historical Review*, 893.

in regular domestic use.[6]

What was not known in the mid nineteenth century was the very real and very dangerous use of arsenic in wallpaper. This was a much more onerous hazard and many illnesses and deaths from arsenic in the wallpaper were misdiagnosed as cases of diphtheria, cholera, dysentery, and in some cases 'mysterious illnesses'. Wallpaper had been in use for centuries mainly as luxury items using colours derived from plant pigments and creating the desired green wallpaper by combining blues and yellows which was a highly sought after product. Popularity and affordability increased "… when the Industrial Revolution and increasing urbanization greatly expanded the ranks of homeowners who could afford such luxuries."[7]

In 1775, the German chemist Karl Scheele discovered arsenic acid and with further experimentation produced a dangerous toxic green colour known as Scheele's green. Others also began producing man-made arsenical pigments. "With the onset of mass production, man-made pigments were needed to meet an ever-growing market clamouring for new and exciting products."[8] The cost of wallpaper was no longer prohibitive to the general public as it was being mass produced early in the nineteenth century due to new technology, the abolition of taxes and duties on paper, and an unlimited supply of imported wood pulp. These factors all combined to drive the cost of wallpaper lower for the consumer. Lighting within the home also drove the demand for wallpaper. "As homes got lighter, the need for reflective wallpaper decreased, and wallpapers darkened. Deep reds and greens came to dominate the Victorian interior, the green supplied by copper arsenic salts."[9]

In 1839 the German chemist Leopold Gmelin "…noted that damp rooms with green wallpaper often possessed a mouse-like odour, which he attributed to the production of dimethyl arsenic acid within the wallpaper."[10] The wallpaper he was referring to was Scheele's green and he voiced his concerns in the *Karlsruhe Zeitung,* hoping to alert the public to the possibility of a

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[6] Peter Bartrip. "A 'Pennurth of Arsenic for Rat Poison': The Arsenic Act, 1851 and the Prevention of Secret Poisoning." *Medical History* 36, no. 1 (1992): 53–69. doi:10.1017/S0025727300054624.
[7] James C. Whorton. *The Arsenic Century.* (Oxford: Oxford Press, 2010), 205.
[8] Meharg, *Venomous Earth*, 66.
[9] Ibid., 67.
[10] Jessica Haslam, "Deadly Décor: A Short History of Arsenic Poisoning in the Nineteenth Century," *Res Medica* 21 no.1 (2013): 76, https://doi.org/10.2218/resmedica.v21i1.182.

serious health hazard. In Britain cases of poisoning were becoming more prevalent. Dr. Thomas Orton a Medical Officer of Health established that the death of all four children of a family in the Limehouse District of London in 1862 was caused by the arsenic in the wallpaper known as Scheele's green. More cases of illness and death were being reported and all were attributed to wallpaper. In 1857 Dr. William Hinds of Birmingham reported symptoms of illness experienced by himself in his own home years earlier. His sickness was acute whilst in his study but disappeared when he removed himself from that location. He made his findings public only after the same symptoms were reported by others. An analysis "…of the green pigment in the paper . . . found it full of arsenic, and promptly had the paper removed."[11]

Articles raising red flags about the wallpaper appeared in medical journals more and more. *The Lancet* printed a letter from Dr. Thomas Orton in 1862 who had treated numerous adults and children for arsenic poisoning and came to the conclusion that "[n]umerous correspondents from all parts of England made complaints of illness, enclosing green arsenical paper, and I replied. In all cases I received a letter of thanks, acknowledging that in carrying out my instructions they were well."[12]

In 1871 a lengthy letter was written by a person not a member of the medical profession and printed in *The British Medical Journal* regarding the danger of arsenic in green wallpaper and in order to improve public health both the medical profession and the general public needed to act:

> Hitherto it has been generally supposed that only papers entirely green, and of a very bright shed of green, were arsenical; but the fact is, as proved by the analysis of eminent chemists, that *every paper which contains any green in the pattern, no matter how little, or of what shade, as a general rule contains arsenic, and is, therefore injurious to health.*[13]

By 1877 the poisoning of the public had not abated. "*The Times* printed scores of hard-hitting articles about arsenic keeping stories of human misery and poisoning in the public eye."[14]

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[11] Whorton, *The Arsenic Century,* 206.
[12] Thomas Orton, "On Poisoning By Green Wall-Paper," *The Lancet* 80 (1862): 517, doi:10.1016/S0140-6736(02)41836-3.
[13] "Arsenic In Wall-Papers," *The British Medical Journal* 2, no. 551 (1871): 101, www.jstor.org/stable/25230037.
[14] Lucinda Hawksley, *Bitten By Witch Fever*, (London: Thames & Hudson, 2016), 159.

Newspapers such as *The Times* of London with a wide readership a received steady stream of letters to the editors:

> How can arsenic be detected in wallpaper? Many readers of "Londoners" valuable paper in *The Times* of Friday would be glad to know if there be any method of testing which can be easily used by householders either when buying paper or after it is on their walls.[15]

By the 1880's consumers' health and safety concerns were voiced in the lay press, reports were published by the medical profession and *The National Health Society* organization ensured national awareness of the arsenic threat:

> As more and more physicians were bearing witness to such cases, a movement to ban the use of copper arsenite in the manufacture of home goods was gathering momentum. . . in its way stood an equal body of industrialists dismissing the claims as fanciful.[16]

The wallpaper manufacturers were in denial. Green wallpaper production was big business and the industrialists involved in its production had no intention of losing profits. They brushed off claims of injury and death as accidental poisonings, suicides, and homicide. "They were hardly medical experts and their judgement was necessarily influenced by their economic interests."[17] The most prominent wallpaper designer of the period was William Morris. His creations and designs were beautiful, in great demand, and filled with arsenic. He was quick to rebut any reports that his wallpaper was dangerous and as late as 1885 his correspondence to an acquaintance clearly stated his opinion:

> As to the arsenic scare a greater folly it is hardly possible to imagine: the doctors were bitten by the witch fever … My belief about it all is that doctors find their patients ailing, don't know what's the matter with them, and in despair put it down to the wall papers when they probably ought to put it down to the water closet, which I believe to be the source of all illness.[18]

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[15] W Wilson, "Mysterious Illnesses," *Times*, January 13, 1885, *The Times Digital Archive*, http://tinyurl.gale.com.proxy.lib.uwaterloo.ca/tinyurl/CFncrX.
[16] Haslam, "Deadly Décor: A Short History of Arsenic Poisoning in the Nineteenth Century," 77.
[17] Whorton, *The Arsenic Century,* 208.
[18] William Morris Letter to Thomas Wordle, 1885 in *Bitten by Witch Fever*, Hawksley, 164.

As a director of the Devon Great Consols mining company which produced a huge amount of arsenic, his disbelief may well have been profit based. In that regard Morris certainly had a capitalist bent but portrayed himself in the political sphere as a socialist:

> . . . developing into Britain's most famous Marxist. As a campaigner against industrial pollution he was the progenitor of the 20th century Green movement. . . . For a Marxist and environmental activist though, he had a remarkable association with arsenic.[19]

Public demand for arsenic-free wallpaper did eventually force Morris to create wallpaper using pigments produced from vegetable dyes.

Leaning heavily on the side of the industrialists and manufacturers was the British Parliament. "The strength of *laissez-faire* ideology discouraged social reform except in circumstances of loud and insistent demand, where resistance threatened the government's hold on power."[20] The government was strong under the leadership of Liberal Prime Minister William Gladstone and the pressure groups were weak and unable to form a cohesive front as a lack of understanding of both the scientific and medical data and findings remained inconclusive and open to debate:

> How could arsenical wallpaper generate health problems when the medical Profession safely prescribed arsenic in the treatment of a number of ailments and there were well-attested examples of arsenic eaters remaining fit and healthy Since these questions elicited no satisfactory answers until the 1890's, there was always doubt about the justice and wisdom of bans and proscriptions.[21]

Across much of Europe most governments had banned the use of arsenic in homes but the British government was not prepared to take any steps to interfere with the marketplace. "Why Britain was so reluctant to follow these examples remains something of a mystery, but general political lassitude, an impulse not to restrict British manufacturing growth and the considerable profits from arsenic mining doubtless played a part.[22] With no laws in place and a general unease,

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[19] Meharg, *Venomous Earth*, 75.
[20] P.W.J. Bartrip, "How Green Was My Valance?: Environmental Arsenic Poisoning and the Victorian Domestic Ideal", *The English Historical Review* 109, no.433 (1994): 910.
[21] Bartrip, *The English Historical Review*, 911.
[22] Hawksley, *Bitten By Witch Fever*, 223.

". . . consumers took a vote against the poison . . . they voted with their feet, taking their business to manufacturers who guaranteed non-arsenical products.[23]

Monies were no longer going into the pockets of those unwilling to produce safer products and by the end of the nineteenth century production of arsenical wallpaper had ceased. A Home Office report in 1896 reported, ". . . that the industry had by then largely reformed itself and had substituted vegetable dyes for arsenic ones."[24]

The consumers' efforts had a profound effect on the manufacturing and selling of wallpaper loaded with arsenic, an issue that the British government was aware of but did nothing to regulate to ensure the safety of the public. An astute public decided how their money would be spent and on what, garnered results ". . . achieved, not by legislation, codes of regulation and a system of government inspection, but by the power of the press, the operation of the market-place and the exercise of consumer preference.[25]

A new power had evolved in the Victorian Era the power of consumers whose purchasing power applied pressure for change. Regulations and restrictions on the use of arsenic in wallpaper were never enacted through parliamentary reforms but the later nineteenth century consumers in Britain advocated, pushed, and demanded protection and succeeded. It allowed them to inhabit homes that provided them with safer living conditions at least in the walls that surrounded them.

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[23] Whorton, *The Arsenic Century*, 221.
[24] Meharg, V*enomous Earth*, 91.
[25] Bartrip, *The English Historical Review*, 913.

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