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Disease, DPs, and DDT: A Global Health Perspective on the History of Refugee Relief

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Abstract

At the end of the Second World War, millions of men, women, and children shared a similar experience: delousing, at the hands of Allied armies and relief agencies, to prevent the spread of infectious disease. The procedure lasted seconds. In studies of displaced populations in this period, its effects upon them are commonly presented as invasive, humiliating, and, for some, reminiscent of Nazi abuse. Adopting a wider lens, this article explores how events and developments in a global range of settings shaped demands for effective delousing as well as the character of measures devised to achieve it. Harnessing fresh perspectives on how delousing was managed, delivered, and experienced, the article also advances understanding of how refugees responded to it.

Keywords: public health; global health; typhus; DDT; war; refugees; migration

Introduction

At the end of the Second World War, millions of men, women, and children shared a similar experience: delousing at the hands of Allied soldiers and relief workers. The purpose of this measure was to assist in controlling the spread of louse-borne epidemic typhus. Across Europe, North Africa, the Middle East, and Asia, the recommended method was much the same: the blowing of powdered insecticide up sleeves, dresses, and trouser-legs, and down waistbands, collars, and shirtfronts, to provide protection against infestation. At first, dust-pumps, handheld and plunger-pushed, were typically used for the job. By the end of the war, pneumatic hoses, powered by air-compressor and operated by trigger-release, were increasingly in use. For one person, the dust-pump procedure commonly lasted about sixty seconds. In film of U.S. soldiers delousing German women and children with power-hoses in 1945, it was over, for each recipient, in less than ten.¹

Historians rarely exhibit much interest in this practice beyond its ability to illustrate the activities of Allied relief regimes and the portentous war record of DDT, a chemical insecticide in worldwide use within a few years of the war and exposed as a dangerous pollutant only later.² On the occasions when consideration is given to how people responded to being deloused, however, the effect of the dust-pump/power-hose process

¹ <https://www.britishpathe.com/video/delousing-operation>.

² See, for example: David Kinkela, *DDT & the American Century: Global Health, Environmental Politics, and the Pesticide that Changed the World* (Chapel Hill: University of North Carolina Press, 2011), 12–46.

is routinely presented as distinctly unpleasant. “Most DPs [Displaced Persons] retain one bitter memory of the [DP] camps’ health activities,” Mark Wyman states of their experiences in Europe at the end of the war: “the ‘dusting’ with [louse-killing] DDT powder in the delousing campaigns, aimed at blocking the spread of typhus.”

Dusting greeted them upon their arrival, was repeated in succeeding months, and continued until every nook and cranny of their living areas, clothing, and bodies were familiar with DDT powder.

They hated it . . .

UNRRA Team 158 at Nammen, Germany, reported that ninety of every hundred DPs suffered the dusting “very unwillingly . . . or try to escape . . . and sometimes succeed. That operation is most unpopular.”³

“DDT dusting was resented as undignified and violating,” claims Paul Weindling, pointing to film footage showing “reactions of disgust.”⁴ “[M]any women found this ritual cleansing and spraying humiliating, as others did on their behalf,” Linda McDowell observes of Latvian DPs. “One young refugee, for example, recalled with indignation that ‘I saw some official put a duster gun, a flea powder dispenser, up my 15 year old sister’s skirt and down her blouse.’”⁵

Similar reactions have been perceived beyond Europe’s borders. In a study of narratives about the Allied occupation of postwar Japan, Yoshikuni Igarashi relates a story of a Japanese journalist “enduring the feeling of humiliation without saying anything” when “two American GIs with DDT dispensers” arrived in the editorial room to spray everyone, including one woman employee who tried to run but came back “crying, with white powder covering even her hair—a point of female pride.” Foucault-like, Igarashi interprets such “sanitization of Japanese bodies” as “a means of producing docile bodies.” He describes delousing “encounters” as “humiliating experiences for many Japanese” and “material proof of Japan’s humiliation” by the United States. He presents the recollections of Japanese novelist Nosaka Akiyuki (of having anti-louse powder forced inside his underwear by “a dispenser which looked like a horse’s penis”) as a tale of “symbolic rape.”⁶

What follows is a study dedicated to demonstrating how events and developments in a diverse range of settings shaped the demand for effective louse-destruction as well as the techniques devised to achieve it, and to deepening understanding of the responses of those who found themselves being deloused. It begins by highlighting ways in which this demand and these techniques were intimately linked to a range of geopolitical phenomena—from wars and conflicts to colonialism and international philanthropy—that brought people, nations, armies, and commerce into contact with environments where disease was perceived to make life perilous, and where the boundaries of worlds that various authorities deemed healthy and hygienic were felt to require policing. The article then considers delousing in the context of how recipients experienced it. Drawing predominantly on primary sources, from instruction manuals to postwar recollections, particular attention is paid to how the practice was performed with paraphernalia—dust-guns and power-hoses—wielded in ways that could be experienced as decidedly uncomfortable

³ Mark Wyman, *DPs: Europe’s Displaced Persons* (New York: Cornell University Press, 1998), 50.

⁴ Paul Weindling, *Epidemics and Genocide in Eastern Europe 1890–1945* (Oxford, Oxford University Press, 2000), 397–8.

⁵ Linda McDowell, *Hard Labour: The Forgotten Voices of the Latvian Migrant “Volunteer” Workers* (London: UCL Press, 2005), 76.

⁶ Yoshikuni Igarashi, *Bodies of Memory: Narratives of War in Postwar Japanese Culture, 1945–1970* (Princeton: Princeton University Press, 2000), 67.

and intrusive. The article's final section, focused principally on how DPs in Germany and Austria in 1945–46 reacted to delousing, aims especially to underline the limits of terms like “disgust” and “humiliation.” As historian Lyndal Roper remarks of fear: “It’s only a beginning: it doesn’t tell us where the ‘fear’ fits into the subjectivity of individuals and groups [or] what perceptions or which experiences should have led people to feel [it].”⁷

In these ways, the article seeks to respond to Peter Gatrell’s calls for work that links refugee experiences to “broader questions in political, cultural and social history”⁸ and explores “how the modern refugee came to be construed as a ‘problem’ amenable to a ‘solution.’”⁹ DP encounters with delousing provide a vivid snapshot of vulnerable populations at a transitional moment of moving, or being forced to move, from a condition perceived to be different and threatening to one deemed to be more acceptable. As such, they underline a resonant range of issues pertinent to global health challenges and refugee care, from the pressures on populations of wars and other crises to perceptions of how infectious diseases spread and should be controlled, the motivations behind international and philanthropic interventions, the problems of quick-fixes powered by simplistic narratives of success and rolled out in different settings (problems that can become “acute,” as Sean F. Johnston puts it, “when we consider communities, species and environments without a voice”),¹⁰ the implications of mishandled and misunderstood measures (a variation on sociologist Robert K. Merton’s theory of unintended and unanticipated consequences),¹¹ and gender and cross-cultural dynamics. The diversity of DP responses to delousing, meanwhile, encourages acknowledgement of the psychological dimensions of encounters like these and their potential implications for considerations of well-being and effective help.

Pests, Pestilence, and Pesticides

Six-legged, wingless, greyish, and flat, the human body louse is about the size of a sesame seed. It is also a serious and present threat to human health. Spread between people by physical contact, it lives mostly in the clothing and bedding of infested individuals and lays its eggs (nits, which take a week or two to hatch: a female typically lays fifteen a day) on or around clothing seams, especially those closer to the body’s warmer and hairier corners, and feeds on blood to survive. Intense itching, caused by an allergic reaction to bites, is a common symptom of infestation. Scratching can cause sores, which, together with bite wounds, expose the body to the risk of life-threatening infection. Epidemic typhus, a bacterial disease carried by lice, spreads when a louse infected by feeding on the blood of an infected host travels to the body of another, then infects that new host, via the sores and wounds, with its excreta or, if the host has scratched it, its crushed body parts. Symptoms begin within a week or two and include any or all of headaches, nausea, diarrhoea, coughs, fevers, chills, muscle aches, stomach aches, mental confusion, high temperatures, and a distinctive skin rash. Internal bleeding, gangrene of extremities, delirium, and shock can follow, leading to death within days.

Thus, entomology, ecology, epidemiology, and louse and human biology are among the disciplines able to inform understanding of delousing in the Second World War. But lice

⁷ Quoted in Frank Biess, “Forum: History of Emotions,” *German History* 28:1 (2010), 67–80, 71.

⁸ Peter Gatrell, “Refugees: What’s Wrong with History?,” *Journal of Refugee Studies* 30:2 (2017), 170–89, 177.

⁹ Peter Gatrell, *The Making of the Modern Refugee* (Oxford, Oxford University Press, 2013), 5.

¹⁰ Sean F. Johnston, “The Technological Fix as Social Cure-all: Origins and Implications,” *IEEE Technology and Society* 37:1 (2018), 47–54, 53.

¹¹ Robert K. Merton, “The Unanticipated Consequences of Purposive Social Action,” *American Sociological Review* 1:6 (1936), 894–904.

have infested humans for thousands of years.¹² Developments in human knowledge about the louse and its disease-carrying capacity are also important in fathoming 1940s' perceptions of these little creatures as a menace to be systematically destroyed. Considering human activities, interests, and relationships beyond the laboratory is instructive, too. Charles Nicolle, for instance, the French bacteriologist who, in 1909, established that lice transmitted typhus, formulated his Nobel Prize-winning theories while director of the Pasteur Institute in Tunis, capital of France's then-colony of Tunisia, where he based his observations partly on Arab inmates of Tunisian prisons.¹³ Also influential in shaping ideas about the louse as a major threat to human health was a growing appreciation of the ability of typhus, especially in time of war and upheaval, to overwhelm large human populations.

By the beginning of the Second World War, scientific understanding of typhus had reached a point where certainty was felt about the louse's role in at least two million deaths in Russia between 1919 and 1922¹⁴ and its ongoing potential to devastate human health across Europe and Asia especially. Knowledge of that sort contributed, in turn, to widespread expectations that this new conflict would precipitate fresh and formidable outbreaks. Published in 1942, the warnings of the British Government's chief medical officer for London, Melville D. Mackenzie, were not unreasonable given his experiences with typhus as a relief worker in Russia in 1921–22 and his twelve-year international career as a League of Nations epidemiologist. Conditions in Europe “at the end of the present war” would “set the stage for a widespread outbreak of typhus fever which will be epidemic, if not pandemic,” Mackenzie wrote.

The disease spreads rapidly under conditions of famine and over-crowding, and is particularly associated with movements of populations. These operate in several ways. The disease may be brought into a hitherto uninfected area by soldiers, refugees, prisoners of war, etc., returning to their homes. . . . [A] dangerous movement of people may be [further] initiated by the occurrence of cases of typhus in their midst. Fear of contracting the disease combined with the terror of the appearance and acts of delirious patients is soon widespread. Transport of food and fuel quickly breaks down, starvation threatens, the sick are abandoned, often in the roads, the houses are deserted and the terrified people flee from the infected area into a neighbouring [one]. . . carrying the disease with them.

In the chaos that, for one reason or another, is commonly co-existent with a typhus epidemic, reliance cannot be placed upon the numbers of cases notified. The doctors are grossly overworked during an epidemic, there are generally no laboratory facilities, and the disease is very difficult to diagnose. . . . In Russia it was sometimes possible to base an estimate on the proportionate number of women with recently shaved heads seen in the streets, as all cases on admission to hospital for typhus were closely shaved [to reduce the scope for infestation].

Mackenzie stressed the importance of killing lice to control spread, the bathing and shaving of anyone potentially exposed to the disease, and the disinfection of clothing by applying boiling water, dry heat, or steam. Additional steps could be inspection cordons

¹² Rezak Drali et al., “Studies of Ancient Lice Reveal Unsuspected Past Migrations of Vectors,” *American Journal of Tropical Medicine and Hygiene* 93:3 (2015), 623–5, 623.

¹³ See, in particular, Kim Pelis, *Charles Nicolle: Pasteur's Imperial Missionary: Typhus and Tunisia* (Rochester, N.Y.: University of Rochester, 2006).

¹⁴ David K. Patterson, “Typhus and Its Control in Russia, 1870–1940,” *Medical History* 37:4 (1993), 361–81, 376–9.

and disinfection posts at border points, military and police assistance to handle refugees, and “every effort” made to reduce infestation among indigenous populations.¹⁵

Contemporary medical journals and manuals demonstrate widespread international agreement on the enormity of the threat that typhus then posed. “Typhus clings to the steps of the conqueror as well as to those of the defeated,” begins one May 1940 article in *Le Concours Médical*, a leading French medical journal. The author was George Fischer, a former senior military medical officer, and he was quoting another medical officer, Achille Kelsch, who had become a respected professor at the school of military medicine at Paris’s Val-de-Grâce military hospital. “Triumphant or fleeing, the armies carry it with them,” Fischer continued, still quoting Kelsch, “and sow it among the populations met.” Fischer’s article was mainly a summary of how typhus had affected various nations’ armies in the First World War. He coupled it with his own thoughts about the disease—a subject, he noted, “very topical today”—and was definite about the threat still posed. Epidemic typhus, he considered, was “perhaps the most contagious disease of all infectious diseases” and “a particularly serious disease for armies in the field,” its “invasive march . . . subject to human movements, whether [those of] vagabonds, nomads, soldiers, [or] prisoners, and this march is irregular, capricious, but always dominated by human contact.”¹⁶ “Typhus fever has been one of the scourges of armies since prehistoric times,” declared a British Army manual on tropical diseases published the following year, “and it remains a menace today wherever the vicissitudes of military service prevent the efficient cleansing of the person and clothing.”¹⁷ Writing in 1942, Leon Owczarewicz, a bacteriologist and senior medical officer in Poland’s armed forces-in-exile, warned in his own army’s medical journal that “if this war ends in the cold season, a great [typhus] pandemic is likely to occur in Europe, like the one that broke out after Napoleon’s return from Moscow.”¹⁸ In 1943, reports—grossly exaggerated as it turned out—were received from the Polish underground of 250,000 typhus cases, encouraging some observers to fear the worst.¹⁹

The same year, introducing an international bibliography of scientific studies on man’s vulnerability to typhus and lice, F. C. Bishopp, a leading U.S. government entomologist, observed that, “as lice are the sole transmitters of the disease, their control is the most logical and effective method of dealing with this malady.”²⁰ That remark demonstrates an additional influence on efforts to cope with typhus’s spread: the fact that effective vaccines were slower to develop than accurate understanding of the means of transmission. Consequently, international measures of typhus control among large civilian populations remained variations on the established themes of lice-prevention and lice-destruction. Preventive steps still meant cleanliness, to be achieved by bathing and hair removal, together with close attendance to the risks of reinfestation. The best means of destruction was still considered to be heat. Various mechanical methods existed for applying dry heat or steam to clothing and kit. All were cumbersome, slow, and

¹⁵ Melville D. Mackenzie, *Medical Relief in Europe: Questions for Immediate Study* (London: Royal Institute of International Affairs and Oxford University, 1942), 35–44.

¹⁶ Fischer, “Le typhus dans les armées en campagne,” *Le Concours Médical* 62:19 (1940), 781–4, 781, 782–3 [author’s translation].

¹⁷ *Memoranda on Medical Diseases in Tropical and Sub-Tropical Areas, 1941* (London: HMSO, 1941), 244.

¹⁸ Leon Owczarewicz, “W sprawie epidemiologii duru plamistego w Polsce i Rosji,” *Lekarza Wojskowego* 34:4 (1942), 204–8, 211–12, 214–22, 204.

¹⁹ United Nations Archives, New York City (hereafter UNA), S-1271-0000-0072-00001, “Poland’s Requirements as to Medical Relief and Rehabilitation,” report by Polish Ministry of Labour and Social Welfare Health Department, undated but ca. 1944–45.

²⁰ F. C. Bishopp, “Introduction,” in *Bibliography on Lice and Man, with Particular Reference to Wartime Conditions*, comp. Mary E. Grinnell and Ina L. Hawes (Washington, D.C.: Government Printing Office, 1943), v.

drained resources, but available pesticides were not as effective: for example, the British Army's preferred delousing powder for much of the war, an organic insecticide made from the roots of the derris plant, killed lice but not their eggs, so was recommended as "supplementary" to hot air and steam.²¹ When the United States entered the war, its army's latest field manual on sanitation similarly recommended heat as the principal solution to delousing kit and clothes. As for methods of reducing and removing lice from the human body, they remained the usual: baths, showers, and shaving.²²

Such were the typhus control measures typically in place throughout the West in the first years of the war. The situation was much the same elsewhere. Steam and dry heat were the Red Army's delousing methods of choice. Extracts from a Red Army medical textbook, reproduced in a report on Soviet medical data collected by a Japanese Army medical officer visiting Germany in 1941, explain that the Soviets' preferred technology was a horse-drawn or motorised contraption capable of cleaning clothing with hot air or steam at rates no faster than twenty-five items in thirty minutes, while soldiers in the field could be provided with a sizeable complex of "walk-through" showers and other disinfesting equipment so long as "a wide, open area" could be found to house it all. These measures, the textbook stressed, "must be fully carried out at all times": a dangerous disease like typhus "must be wiped out by the most energetic means."²³ "During military operations in the Russian territories of the Far East, the greatest precautions must be exercised," echoed a Japanese Army medical research report, drawn up in 1942, looking ahead to conflict there and the accompanying threat of typhus and other diseases: "These afflictions can cause immediate, large-scale deterioration of fighting strength."²⁴ Until the end of the war, Japan's own recommended methods of louse control were chiefly of the heating type.²⁵

Fears of the effect on nations' war efforts of lice-borne typhus fuelled efforts to find better solutions, especially when the fighting threatened to draw armies into regions known to be vulnerable to the disease. An additional stimulant to the search was Japan's entry into the conflict and its control of swathes of Asia, which meant the end of Allied access to ingredients in existing pesticides such as pyrethrum, an insect-killing chemical found naturally in chrysanthemum flowers grown in Japan, and derris root, much of which came from Indonesia. But to account for why the Allies turned to Dichloro-diphenyl-trichloroethane, commonly known as DDT, which, by 1945, would be their preeminent delousing agent, a still-wider lens is helpful. DDT was a chlorinated hydrocarbon first synthesised in 1874 by an Austrian research student at the University of Strasbourg; its properties as an insecticide emerged only in 1939, however, when Paul Müller, a scientist employed by J. R. Geigy, a Swiss chemical company, rediscovered the formula when searching for a way to control the Colorado potato beetle, a pest native to North America that had been transported to Europe in the nineteenth century and was now threatening Switzerland's potato yields. Geigy judged it to be highly effective as a pesticide—DDT's immediate results and long-lasting toxicity were considered especially impressive—as well as safe to humans. In 1942, seeking to exploit this success and benefit

²¹ *The Control of Epidemic Typhus, 1942* (War Office: London, 17 June 1942) [author's copy].

²² *Basic Field Manual: Military Sanitation and First Aid (FM 21-10)* (Washington, D.C.: Government Printing Office, 1940), 94–7, 103–6.

²³ Electronic Reading Room, Central Intelligence Agency (hereafter CIA ERR), CIA-RDP80-00809A000600260152-4, "Standard Duties of Soviet Military Medical Corps" (translation of Japanese article based on information collected in Germany in February 1941 and drawn up for the Japanese Army Medical College, 1942).

²⁴ CIA ERR, CIA-RDP78-03109A000500010012-1, "Epidemics of the Far Eastern USSR" (Translation of Immunological Research Report No. 364, 1942).

²⁵ Sumimoto Toshio, *Senryô hiroku* (Tokyo: Mainichi Shinbunsha, 1965), 70–72.

commercially, the company's U.S. representatives then passed samples to the United States Department of Agriculture. These were presented as a cheap pesticide for potential use in agriculture. Subsequent testing by State Department entomologists, at a time when research interests were increasingly and officially geared to assisting "defense activities," highlighted its promise as a powerful louse-killer.²⁶ In May 1943, it was recommended to the U.S. military for that purpose. Within a year, the DDT-dusting efforts of Allied medical and sanitation personnel, in line with their mission of conserving military manpower and resources, were being widely hailed in the international press for delivering the Italian city of Naples from a dangerous typhus epidemic.

It is difficult to exaggerate the impact upon DDT's journey to worldwide notoriety of the acclaim accorded to its supposed triumph at Naples: an episode quickly lauded as "a milestone in the field of public health and disease control"²⁷ and "one of the finest achievements of modern preventive medicine."²⁸ On the heels of the retreating Germany army, Allied forces had entered the city, earmarked to be a major logistics hub, in October 1943, to find its sanitation shattered by bombing, its population overcrowded, unclean, and swollen by refugees, and typhus taking hold. Organised and resourced mainly by the U.S. Army, what followed was a thorough, well-executed, and citywide control programme that successfully stemmed the epidemic within weeks. Although DDT received most of the credit ("To the wonder drugs of war medicine we must now add DDT," declared the *New York Times*),²⁹ the effort had been multipronged and the most important measure was probably a robust and painstaking programme of case-finding and contact-delousing using dust-guns filled with pesticides that were not, in fact, DDT. What also helped was the ability of a modern military force to impose its will on the bodies of more than a million people.

Naples also encouraged Allied commanders to believe that their forces now possessed the knowledge, technology, and skills to do future delousing well. "Typhus is one of the easiest of all epidemic diseases to deal with," the U.S. Army's chief malariologist in Italy declared in 1944: "2 ounces of 10 per cent DDT per person is ample to stop any typhus epidemic anywhere. In fact the consensus seems to be that 1000 pounds per 10,000 people should do the trick."³⁰ "Is there anybody who has had experience with delousing with the old steam methods who would like to prepare a program for the delousing of 73,000 people?" Brigadier General Leon Fox, a typhus specialist who had coordinated much of the work in Naples, asked an audience in early 1945, referring to the number of Neapolitans deloused on the busiest day. "You would have had to have a thousand times more equipment than we had, and, I imagine, a hundred times more personnel. I wonder if the women [deloused with our techniques] would have lined up to undress, to be bathed, to have had their heads shaved."³¹ Convinced of its value, the United States War Production Board gave DDT the same priority as penicillin.³² By March

²⁶ John C. Perkins, "Reshaping Technology in Wartime: The Effect of Military Goals on Entomological Research and Insect-control Practices," *Technology and Culture* 19:2 (1978), 169–86, 173.

²⁷ National Archives and Records Administration, College Park, Md. (hereafter NARA), RG 112 Entry 343 Box 20, Foreword by Brigadier General G. S. Parkinson to "Epidemic Typhus in Naples 1943–44," 1945.

²⁸ Stanhope Bayne-Jones, "Typhus," *American Journal of Nursing* 44:9 (1944), 821–23, 821.

²⁹ "The Conquest of Typhus," *New York Times*, 4 June 1944.

³⁰ NARA, RG 112 Entry 343 Box 21, Letter, Colonel Paul F. Russell to Major O. R. McCoy, 10 June 1944.

³¹ NARA, RG 112 Entry 343 Box 25, "Modern Methods in the Control of Typhus" (transcript of talk by Brigadier General Leon Fox, 5 March 1945).

³² William A. Hardenbergh, "The Research Background of Insect and Rodent Control," in *Preventive Medicine in World War II, Volume 2: Environmental Hygiene*, ed. John Boyd Coates and Ebbe Curtis Hoff (Washington D.C.: Governmental Printing Office, 1955) 251–269, 260.

1945, when Allied forces entered Germany, vast stockpiles of DDT and dust-guns were in place.

Again, a lens wider than one fixed on mainland Europe reveals a richer background against which the response to the Naples outbreak can be understood. Central to preparing and coordinating that response had been representatives of the United States of America Typhus Commission (USATC), a national agency created by President Roosevelt in 1942 to improve methods of controlling typhus, plus a team from the Rockefeller Foundation. As one historian has written, “the early history of DDT cannot be told accurately without understanding that the [Rockefeller] Foundation was possibly the only organization of all the American institutions involved that had the technical experience to field-test DDT for public health purposes, and that could rapidly develop DDT into an applied technology.”³³ For months prior to Naples, both organisations, with the Foundation leading, had involved themselves in testing various anti-lice powders, including DDT, as well as devising and developing mechanical methods for their quick and efficient application to large numbers of people. Settings for field trials stretched from North America to North Africa. Trial subjects, chosen for the ease with which they could be studied and because most were already louse-infested, ranged from American conscientious objectors (who volunteered to be infested) and homeless New Yorkers (who were paid to take part)³⁴ to rural villagers in Mexico,³⁵ Egypt, and Algeria,³⁶ German and Italian prisoners of war in Morocco, Tunis, and Sicily, and, through the offices of parasitologist Edmond Sergent, director of Algiers’s Pasteur Institute, over one hundred louse-infested inmates of the city’s Maison-Carrée prison, most of whom were Arabs.³⁷ In July 1943, the latter were used for the first trials of DDT as a body-lice pesticide,³⁸ echoing the colonial work of Charles Nicolle thirty-five years earlier.³⁹ Testing also established the value of the dust-gun as a speedy means of dusting people without making them undress.⁴⁰ Had dust-guns not been used, wrote the Rockefeller team that deployed them in villages in Algeria, “the [trial] program among the Arabs would have been impossible because religious and social taboos would have prevented the disrobing of Arab women.”⁴¹ How these women felt about being dusted while still in their clothes was not discussed.

Technologies and Techniques

“We ran a two-way convoy,” begins a passage in the memoir of a U.S. Army soldier who served in Germany driving trucks during the final days of the war: “up [to the fighting

³³ Darwin H. Stapleton, “A Lost Chapter in the Early History of DDT: The Development of Anti-Typhus Technologies by the Rockefeller Foundation’s Louse Laboratory, 1942–1944,” *Technology and Culture* 46:3 (2005), 513–40, 539.

³⁴ Alison Bateman-House, “Men of Peace and the Search for the Perfect Pesticide: Conscientious Objectors, the Rockefeller Foundation, and Typhus Control Research,” *Public Health Chronicles* 124 (2009), 594–602, 596.

³⁵ William A. Davis, Felipe Malo Juvera, and Pilar Hernandez Lira, “Studies on Louse Control in a Civilian Population,” *American Journal of Hygiene* 39 (1944), 177–88.

³⁶ Fred L. Soper et al., “Notes on Experience with Powders in the Control of Typhus in Italy, 1943–1945,” in *Memorias de la Primera Reunión Interamericana del Ifo, 7 a 13 octubre de 1945* (Mexico: Secretaria de Salubridad y Asistencia), 441–51.

³⁷ Fred L. Soper et al., “Louse Powder Studies in North Africa (1943),” *Archives de l’Institut Pasteur d’Algérie* 23:3 (1945), 183–223

³⁸ *Ibid.*, 191–205.

³⁹ Charles Nicolle, Charles Comte, and Ernest Conseil, “Transmission expérimentale du typhus exanthématique par le pou de corps,” *Comptes rendus de l’Académie des Sciences* 149 (1909), 486–9.

⁴⁰ Soper, “Louse Powder Studies in North Africa (1943),” 184, 188–9, 221.

⁴¹ Soper, “Notes on Experience with Powders,” 443.

lines] with ammunition and gas, back with prisoners of war or displaced persons. We got a lot of displaced persons because we were bombing the cities and the [advancing] Infantry was pushing [them] back behind them.” He continues:

There were a lot of things [that happened] that you won’t hear about in story books. When we were taking the displaced persons back, we had to delouse everyone with DDT, because they were full of lice. We would stick that delousing gun down between their breasts and give them two shots, pull their skirt up and give another dose of powder. Everyone got it. Some would protest. Others would giggle and go on. They had to be deloused or they wouldn’t get a ride.⁴²

It is not difficult to imagine that the minds of young men in such settings were not always on soldiering or related jobs at hand. But care should be taken to avoid assuming that this is a story of someone exploiting their own privileges and someone else’s vulnerabilities for reasons of personal gratification and gain. “More [historical work] needs to be done to engage with gendering social experience [in refugee contexts],” Peter Gatrell has rightly written, “taking into account the sheer magnitude of violence inflicted on displaced women of all ages by men in positions of authority.”⁴³ Leaf through the extensive instructional literature on delousing issued to Allied service personnel and relief workers in this period, however, and a clearer picture develops of why so many DPs and refugees, especially women, seem to have experienced Allied-delivered delousing as invasive and degrading. It is an image that comes into sharper focus if attention is additionally given to the ease with which delousing could be administered poorly.

A process of procedures drawn up by the USATC in November 1943 illustrates clearly how delousing with powdered insecticides was intended to be done. Based on experience in North Africa, it became the template for instructions to Allied units and aid agencies on how to do delousing and was reapplied wholesale across Europe and later Asia; consequently, the recommended routine is worth reproducing as the Commission laid it down:

1. Dust inside of the hat, dust the hair, and replace hat on head.
2. With arms extended at shoulder height at the sides, insert delivery tube up first the right and then the left sleeve, and pump powder in between the skin and inner garment.
3. The delivery tube is next inserted at the back of the neck and a liberal charge of powder shot down the back.
4. The tube is next inserted inside the clothing from in front and powder sprayed first on one side, then on the chest, and lastly on the other side.
5. The tube is next inserted, after the trousers are loosened, inside the innermost garment and a good dose of powder delivered to the crotch and pubic area. With the tube still in contact with the skin, the underclothing is powdered, special attention being paid to the waist and side seams.
6. With the trousers still loose, the tube is inserted down the rear of the pants next to the skin and powder is shot down over the buttocks and rear of the crotch.⁴⁴

⁴² Max E. Jordan with Gloria Jeane Jordan Knapp, *Through My Eyes* (Private Publication, 2012).

⁴³ Peter Gatrell, “From ‘Homelands’ to ‘Warlands’: Themes, Approaches, Voices,” in *Warlands: Population Resettlement and State Reconstruction in the Soviet-East European Borderlands, 1945–50*, ed. Peter Gatrell and Nick Baron (London: Macmillan, 2009), 1–22, 11.

⁴⁴ Stanhope Bayne-Jones, “Typhus Fevers,” in *Preventative Medicine in World War II: Volume 7: Communicable Diseases: Arthropodborne Diseases other than Malaria*, ed. John Boyd Coates and Ebbe Curtis Hoff (Washington, D.C.: Government Printing Office, 1964), 175–274, 217. As Bayne-Jones noted, versions of an accompanying diagram, depicting a man being dusted, received “an almost worldwide circulation.”

No mention was made of whether women or children should be dusted differently, or, indeed, of any need to distinguish soldiers from civilians at all. A later version stressed the importance of properly dusting women's braided hair but otherwise confined its sex-specific techniques to this: "When skirts are worn, nozzle should be inserted next to the skin when possible and the entire waistline powdered directing the powder downward. When privacy can be obtained the duster should be inserted under the skirt, when there is no opening at the waist."⁴⁵

Manuals and memoranda based on that document were circulated widely and reproduced its procedures more or less consistently, regardless of considerations of cultural sensitivities or other differences in local conditions (Figure 1). Thus, for instance, instructions issued to British military units in recently liberated Greece in January 1945 under the heading "Anti typhus measures in tps and civs [troops and civilians]" talked only of dusting soldiers and included this type of unqualified instruction: "Loosen trousers, insert tube between skin and innermost garment and powder generously crutch [sic] and pubic area. . . . Insert tube down rear of pants next to skin and powder buttocks and rear of crutch."⁴⁶ Guidance issued to U.S. military forces made no such distinctions either.⁴⁷ Nor did most manuals produced by the United Nations Relief and Rehabilitation Administration (UNRRA). These included a document entitled "A New Panacea" that aimed to explain, for UNRRA health workers in the field, the character and benefits of DDT: Claiming to "summarize the procedure of DDT treatment of groups of populations as it was done, e.g., in the North African theatre and more recently in Italy," this document included the same, simple instruction about giving "a good shot" to "the crotch and pubic area. The tube is [then] inserted down the rear of the pants and the same procedure is done."⁴⁸ "Women will be dusted by a woman orderly," advised one set of British instructions, unusually, but little else was different: "Where a skirt is worn, dusting may be carried out as for men. Where a dress is worn, dust should be blown upwards from underneath the dress instead of downwards from the waistband."⁴⁹ The only variation on this theme in the standard UNRRA manual on DP medical care, published in May 1945, was that, ideally, men and women should be deloused in separate rooms.⁵⁰ A rare mention of children features in plans for a typhus control programme in Berlin in 1945–46: "Babies are treated by inserting the nozzle under their clothing at several places and blowing in a few blasts of powder. The hair should also be dusted."⁵¹

The limitations and implications of official guidance were one thing. In practice, these instructions possessed considerable potential to be followed poorly or not at all. In a survey of wartime anti-typhus work published after the war, John C. Snyder, a typhus specialist and Rockefeller man who had served with the USATC, wrote proudly of the "vigorous delousing campaign" waged by the Allies in Germany in 1945, the "excellent way in which the typhus control program was organized," and the "skillful organization in the application of the new methods of delousing."⁵² But a less positive image emerges

⁴⁵ National Archives, Kew (hereafter TNA), FO 1012/122, "Procedure for Powdering (prepared by the U.S.A. Typhus Commission)," 1944.

⁴⁶ TNA, WO 204/9008, "Notes on the Control of Epidemic Typhus in Greece" (circulated under covering letter, "Anti typhus measures in tps and civs," 14 June 1945).

⁴⁷ See, for example: *Louse Control Manual (NAVMED 653)* (Washington D.C.: Bureau of Medicine and Surgery, U.S. Navy Department, February 1945).

⁴⁸ UNA, S-1271-0000-0072-00001, "A New Panacea: DDT" (undated but 1944–45).

⁴⁹ TNA, FO 1012/122, "Anti-Typhus Measures," 8 September 1944.

⁵⁰ UNA, S-1242-0000-0073-00001, "Medical Manual: Health and Medical Care of Displaced Persons," May 1945.

⁵¹ TNA, FO 1012/122, "Program for the Prevention and Control of Typhus Fever in the City of Berlin 1945–1946" (undated but 1945).

⁵² John C. Snyder, "Typhus Fever in the Second World War," *California Medicine* 66:1 (1947), 3–11, 7.

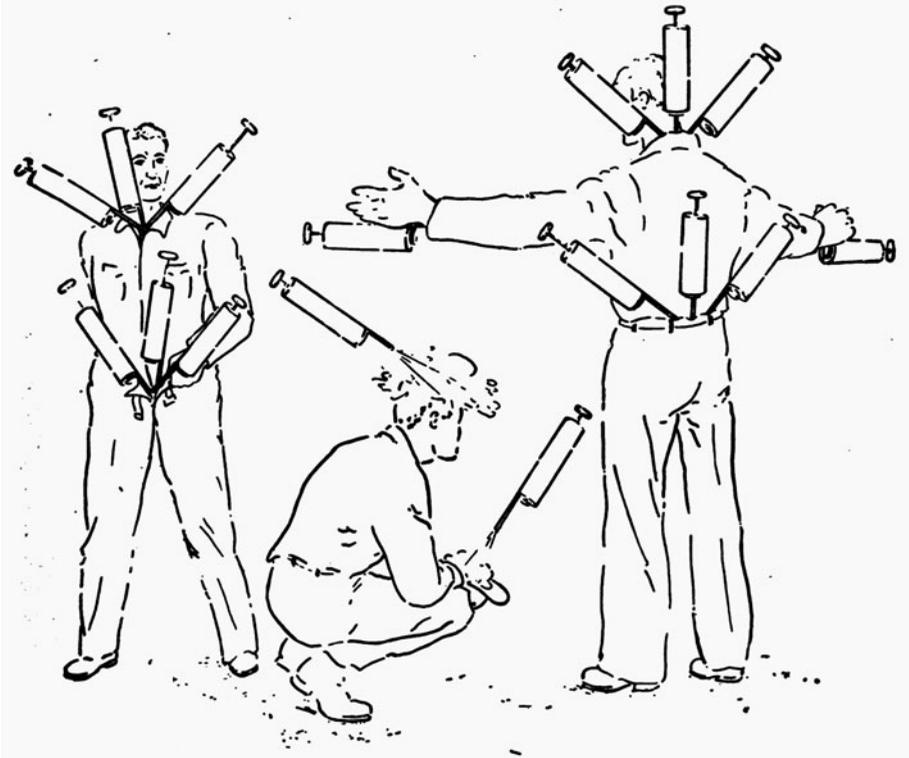


Figure 1. Standard U.S. Army directions for using hand-pumps and DDT to delouse individuals, 1945. (From *DDT Insecticides and Their Uses*, U.S. War Department Technical Bulletin 194, August 1945.)

from the Commission's contemporary reporting. The observations of Jason F. Berry, a USATC officer sent in spring 1945 to inspect U.S.-administered prisoner of war and DP camps in Germany and Austria, illustrate this well. Berry's task was to observe delousing procedures in those locations and provide instruction if required. What he found alarmed him. A particular problem, he recorded, was the attitude of U.S. Army soldiers to doing delousing, such as that of eleven men of the Twentieth Armored Division, manning a DP camp near the Austrian town of Ranshofen, whom he had tried to train in hand-duster work in May:

They were easy to instruct and initially performed the work in a satisfactory manner. As soon as the newness of the job diminished, however, constant supervision was necessary. Such comments as "First we fight this war with an M1 rifle, now it's with an M1 Dust Blower" were much in evidence. It is felt that personnel from the medical corps (who have a greater basic comprehension of the job to be done) or men from non-combat troops will prove more satisfactory in dusting work. Likewise it is believed better results can be obtained if men are assigned solely to delousing work rather than temporarily "detailing" them to man dust-guns.

Berry recommended that "the most economically practical method of accomplishing mass delousing" was by use of a "power duster and a permanently assigned mobile crew": even "the best and most interested workers become fatigued and careless after

two or more hours work with hand dusters.”⁵³ Problems were not confined to the consequences of assigning bored soldiers to delousing work. In many locations, U.S. military authorities supposedly responsible for the practice were doing so with marked inefficiency. Of conditions at Dachau, which he visited in June, Berry noted how “DPs and liberated PWs were being divested of old clothing, dusted in the nude with a power duster, and then issued new clothing. It was pointed out that one of the primary objectives in dusting is to impregnate the clothing with DDT, whereupon the individual will have some protection in the event of subsequent infestation with lice.” In some camps the availability of bathing and swimming facilities led to individuals washing themselves clean immediately after dusting. In most places he saw “too many” instances where “individuals were allowed to come through the dusting line without shirts or all of their outer garments, and frequently clad only in shorts.” Almost everywhere he watched “people shaking dust from their clothing after being dusted.” Conscious of another complication—that communication between the U.S. Army and those being deloused was poor—Berry recommended that “an intelligent interpreter be made available at each dusting site to explain briefly the limitations and capabilities of DDT louse powder. Inasmuch as a high percentage of the DPs and released PWs cannot read, and are of such varied nationalities, this method is felt superior to the plan of issuing [explanatory] leaflets to each individual after dusting.”⁵⁴

A further complication noted by Berry was a widespread American habit in these camps of employing DPs to do delousing. This was not a case of soldiers shirking responsibilities: for various reasons, from perceptions that priorities for Allied manpower lay elsewhere to a compassionate desire to give people employment, military planners and relief workers shared a commitment to using DPs as workers whenever and wherever possible. Moreover, many DPs seemed keen and capable of work. Possibly unhelpful in this regard was an apparent belief in senior Allied circles that delousing was not very difficult. “There will always be plenty of local labor available in a locality experiencing a typhus outbreak,” considered a senior U.S. Army medical officer who had helped co-coordinate the intervention at Naples, “and hand dusting is easily taught and adapted to all types of operations.”⁵⁵ After touring a few DP camps in recently liberated parts of Germany, one senior UNRRA officer similarly argued that tasks like delousing were ones that DPs could easily perform: “All they lack is direction and someone to get them essential supplies.”⁵⁶ Jason Berry, deploying a professional eye, and whose own stopping-off points included Dachau and Mauthausen, felt differently. “Repeatedly it has been noted that DPs employed in this work do not understand, nor can be made to understand, the work that they are attempting to do,” he wrote. “Even after thorough instruction, proper dusting is not accomplished.” At a DP camp near Göppingen, for example, he had watched four U.S. soldiers trying to get some Russian DPs to operate a power duster. “During the course of a two hour dusting period it was necessary to relieve four of the DPs from this job. These individuals took the matter as a huge joke and handicapped proceedings in general by blowing powder in the faces of people being dusted, or were so incompetent in their duties that it was necessary to replace them.”⁵⁷

⁵³ NARA, RG 112 Entry 31 (ZI) Box 1112, Memorandum by 2/Lt Jason F. Berry, “Observations on Dusting Techniques in Third and Seventh Army Areas,” 9 June 1945.

⁵⁴ *Ibid.*

⁵⁵ NARA, RG 112 Entry 343 Box 21, Letter, Colonel William S. Stone to Major Clarence L. Guyton, 1 June 1944.

⁵⁶ UNA, S-1302-0000-3819-00001, “Assembly Centres in Germany: Field Reports of Chief UNRRA Liaison Officer to SHAEF (G5): Report of UNRRA Liaison Officer 12 Army Group,” April 1945.

⁵⁷ NARA, RG 112 Entry 31 (ZI) Box 1112, Memorandum by 2/Lt Jason F. Berry, “Observations on Dusting Techniques in Third and Seventh Army Areas,” 9 June 1945.

Cases of perceived inefficiency like this may have had complex causes. Tensions between DPs and Allied soldiers in Europe are well documented,⁵⁸ while many DPs were simply incapable, mentally or physically, of doing the most basic tasks well. Camps “must be run by the DPs,” one UNRRA officer wrote in late 1945, acknowledging the benefits of being in control of one’s life; but many Jewish survivors, he felt, still “lacked the morale or the discipline needed.” This was not a criticism, he stressed, explaining, by way of illustration, how plans to send a sanitary engineer to improve conditions at Landsberg camp in Bavaria had quickly foundered “because the Jewish DPs were in no psychological condition to pitch in and do the work involved. . . . [E]ngineers cannot accomplish anything for these people; what they need are psychiatrists.” And Landsberg was not the only spot like it: “Stories of this nature can be expected out of Regensburg, Ingolstadt, Wolfratshausen, as well as Feldafing and other areas caring for Jewish DPs.”⁵⁹ Since liberation, as other UNRRA records explain, Feldafing, for example, had been associated “with the survivors of the worst Nazi excesses at Dachau, Buchenwald, etc.” and devoted “primarily to a large-scale task of controlled feeding for victims of extreme malnutrition. The center received hundreds in a condition of complete physical helplessness, at the point of mental breakdown, from protracted suffering. Their recovery had to be accomplished amid the collapse of Germany under the severest handicaps in facilities, supplies, and transportation.”⁶⁰

Fear and Loathing

As illustrated by Leon Fox’s comments above, Allied commanders widely perceived these new methods of delousing to be more humane and less invasive than stripping people naked and shaving heads down to the scalp. But narratives that confine themselves to discussing delousing in these terms have limited analytical power. There is nothing intrinsically invasive or inhumane in the action of one animal removing another from a third: for some primates, mutual grooming encourages social bonding and even boosts oxytocin.⁶¹ Training a stronger lens on DPs’ delousing experiences in Germany and Austria, this closing section aims to enhance understanding of some deeper influences. In addition to the dynamics that clearly left women especially discomfited, these ranged from the psychological impacts of Nazi abuse to the mental and physical ordeals of forced migration and fresh feelings of resentment at being required to conform to Allied relief regimes.

In some studies of the experiences and psychology of concentration camp survivors, discomfort at being deloused is interpreted as a reaction to past Nazi atrocities. Michael Dorland, a Canadian communications scholar, presents the reluctance of some Dachau survivors to undergo U.S. Army–delivered delousing as evidence that the practice “had become synonymous with gassing.”⁶² This seems to be an oblique reference to the fact that, in multiple locations where gassing took place, the responsible authorities had sought to disguise the killing process by implying that gas chambers were harmless showers. (“We saw the gas chamber,” recorded a member of one UNRRA team after inspecting Dachau. “Over the iron

⁵⁸ For contemporary published accounts, see, for example, Leo Srole, “Why DPs Can’t Wait: Proposing an International Plan of Rescue,” *Commentary* 3:1 (1947), 3–24; and Joseph A. Berger, “Displaced Persons: A Human Tragedy of World War II,” *Social Research* 14:1 (1947), 45–58.

⁵⁹ UNA, S-1302-0000-3819-00001, telegram, “Jackson” to London, 12 December 1945.

⁶⁰ UNA, S-1302-0000-3819-00001, “Feldafing Displaced Persons Center: Press Facility visit, Thursday, 9th August, 1945”.

⁶¹ Marcela Benítez et al., “Urinary Oxytocin in Capuchin Monkeys: Validation and the Influence of Social Behavior,” *American Journal of Primatology* 80:10 (2018), <https://doi.org/10.1002/ajp.22877>.

⁶² Michael Dorland, *Cadaverland: Inventing a Pathology of Catastrophe for Holocaust Survival* (Lebanon, N.H.: Brandeis University Press, 2009), 42, 58.

door there is the word *Brausebad*—‘Shower baths.’ . . . I wondered why the SS troubled to make this little deception. I suppose it was again German practical sense—no struggling or resistance. Or perhaps they had pleasure in it, as in a grim joke.”⁶³)

It is certainly the case that, in camps of that type, past experiences may have contributed to survivors becoming distressed by the relief efforts of their liberators. For example, numerous testimonies from British soldiers and relief teams in Bergen-Belsen concentration camp, liberated in April 1945, indicate that interventions of various types were interpreted as hostile or harmful (Figures 2 and 3). “A high proportion still exhibited signs of terror when approached,” a British Army psychiatrist recorded of hospitalised survivors a month after liberation, “and it was painful to watch one of the first batches of patients who had been selected for X-rays of chest. They struggled, cried and screamed as if they were being taken away for some form of torture.”⁶⁴ One medical team reported:

Patients who were brought into the ward where there was inevitably some apparatus about shouted “nicht crematorium.” If a syringe was used to collect samples or an attempt made to set up an intravenous drip they again shrieked “nicht crematorium” and curled up shaking in the bed. It had been the habit in the camp for the [German] doctors to inject people with benzine [sic] or petrol when alive to induce a temporary paralysis so that they could be taken to the crematorium as dead.⁶⁵

Comparable reactions were observed when, compelled by staff shortages, German doctors and nurses were recruited to help with hospital treatment. “The patients are naturally terrified of being looked after by Germans even under supervision,” another medical worker recorded.⁶⁶

Care should be taken with Dorland’s comment that concentration camp survivors equated delousing with gassing, however. As Paul Weindling points out with reference to other Holocaust settings, delousing, as Nazi authorities administered it to new arrivals in these places, was a brutal procedure feared and loathed in its own right:

At the Czarnieckiego prison in the Litzmannstadt ghetto Sala Pawłowicz experienced the shaving of hair as robbing her and her companions of their self-esteem and as de-sexualizing, “their faces were shrunken, their eyes seemed larger and deeper, and they looked like a new sex neither masculine nor feminine. They were no longer girls but something less.” The verdict of Eugen Kogon at Buchenwald was that “This so-called induction ceremony was a thorough and complete indignity to human personality.” Guards took sadistic pleasure in shaving female hair, lacerating skin, conducting body searches for valuables and inflicting showers for their sexual gratification. The Auschwitz commandant, Rudolf Höss, gloated over the naked bodies of the first batch of French women prisoners. Kay Gundel’s experience epitomised the stripping of identity on entering Auschwitz: “In a few moments all hair and body hair was gone. Tears fell in that room as the last precious thing was stripped from us . . . [and] turned me into this sexless, nameless creature.”

⁶³ UNA, S-1253-0000-0396-00001, quoted in Letter, J. A. Edmison (Senior UNRRA officer, Supreme Headquarters Allied Expeditionary Force) to Fletcher C. Kettle (Deputy Director, DP Division, UNRRA European Regional Office), 9 June 1945.

⁶⁴ Wellcome Library, London, RAMC/1218/2/12-17, “Belsen concentration camp,” report by Major R. J. Phillips, 31 May 1945.

⁶⁵ Janet Vaughan, Charles Dent, and Rosalind Pitt Rivers, “The Value of Hydrolysates in the Treatment of Severe Starvation,” *Proceeding of the Royal Society of Medicine* 38:7 (1945) 395-7, 395-6.

⁶⁶ W. R. F. Collis, “Belsen Camp: A Preliminary Report,” *British Medical Journal* 1:4405 (1945), 814-16, 815.



Figure 2. Delousing in Belsen, May 1945. A former inmate being dusted by pneumatic power hose. (©IWM, BU 5467)

As Weindling writes, delousing in such settings was “as much a psychological as a physical torment.”⁶⁷ The limited ability of Allied liberators to engage in gentle caregiving may also be noted, as it was by the liberators themselves. Among the huts and in the hospital at Bergen-Belsen, for example, British soldiers and relief workers, struggling to provide effective treatment to tens of thousands in need, found that compassion had to be rationed or people would die. “The aim was to deal with them as quickly as possible,” one soldier remembered: “every hour that we were dealing with them . . . we knew we were building in a high degree of surgical shock. . . . And the proof of this, of course, was all too obvious by the number of people who died on us.”⁶⁸

Connecting distress around delousing to the traumas of concentration camp survivors provides limited insight into most DP experiences and responses, however. Vast numbers of DPs deloused at the end of the war had not been held in the camps. Even Holocaust survivors have left accounts of being unmoved by the practice. In *The Reawakening*, Primo Levi, who survived Auschwitz, describes the experience of being power-hosed in

⁶⁷ Weindling, *Epidemics and Genocide in Eastern Europe*, 292.

⁶⁸ Imperial War Museum, London, sound recording no. 15540, Terence Charles McQuillin (recorded 28 June 1995).



Figure 3. Delousing in Belsen, May 1945. An emaciated male survivor being dusted by German nurses employed by the British Army. (Photographed by Sergeant C.H. Hewitt of the British Army's No.5 Army Film and Photo Section. ©IWM, BU 5473.)

a camp in Austria as memorable for its strangeness but otherwise unremarkable. “Everybody accommodated himself to the treatment,” Levi writes, “swearing or laughing from the tickling,” save for an Italian naval officer who, when “chaste but rough” American hands moved to dust his fiancée, “placed himself decisively in between.” For Levi, the procedure was principally significant as the moment of “purification and exorcism” in which “the West took possession of us. . . . [I]t was easy to perceive behind the concrete and literal aspect a great symbolic sideshow, the unconscious desire of the new authorities, who absorbed us. . . . to strip us of the vestiges of our former life, to make of us new men consistent with their own models, to impose their brand upon us.”⁶⁹

Reports on Operation Swallow, a scheme by which hundreds of thousands of ethnic Germans within Poland’s postwar borders were dispatched by train to British-administered Germany, demonstrate that discomfort around delousing was not confined to the Third Reich’s victims, while also underlining other concerns at work.

⁶⁹ Primo Levi, *The Reawakening* (New York: Simon and Schuster, 1995), 202–3, 22.

Some of those Germans had elected to go but the Poles had ejected most, and everyone had to be deloused on arrival. “Generally it can be said that the Swallows do not object,” a British officer wrote of the cleaning process, “but an exception has been found in the case of catholic [*sic*] nuns”:

These nuns have been living a very cloistered life and it obviously was a little upsetting for the more intimate details of their delousing to be witnessed by others. Orders have now been given that nuns passing through the camp may be deloused in a private room either by one of their own members or by a woman of their own faith attached to the camp.

The same officer reported “that a high percentage of old people appeared faint after passing through the dusting room but the medical report tends to show that this faintness was not connected with the use of DDT powder. It is rather a reaction after their entry into the British zone.” Whether or not that reaction was caused by the ordeal of being evicted, relief at reaching Germany, some other reason, or a combination of reasons, is not apparent from that report. But it may be pertinent to note, as the British did at the time, that, when Operation Swallow commenced, “the warning notice [to leave Poland] varied from two hours to practically no warning at all. . . . In fact one group of nuns informed this HQ that they were given such short warning to get out that some of them had to robe themselves in the street while the snow was on the ground.”⁷⁰

Other responses to delousing suggest tensions with Allied authority. In 1946, a British Army officer commanding a quarantine camp at Lavamünd in Austria recorded friction between his staff and eighty-three Czech DPs recently arrived from Yugoslavia because the latter “would not submit to the dusting as is customary on arrival.” He observed, though, that they had also “refused to obey the standard orders of the camp” and “arrived with quantities of cigarettes and tobacco of which they tried to sell the cigarettes at 1 Schilling each to my camp police. . . . From the very first these people were troublesome.”⁷¹ Reading that report, a British officer of the Allied Military Government in Austria noted that “the whole incident appears to have arisen from resentment at being subjected to any kind of order,” adding that “a similar attitude was also adopted by a number of Czech citizens who were in Furnitz Quarantine Camp at about the same time.”⁷²

It is also the case that delousing was far from universally loathed. Evident in several interviews preserved in the archives of the United States Holocaust Memorial Museum are expressions of relief, even delight, at becoming lice-free. “They sprayed me with DDT and it was just great,” remembered Bella Jakobowicz, who, aged eighteen, was liberated at Bergen-Belsen.

All the movement, all the itching . . . stopped. All the lice . . . that were killing me, that were biting; all of it stopped. . . . I was at peace. It was a wonderful feeling. I’m forever grateful to DDT.⁷³

⁷⁰ TNA, FO 1052/324, “Third Report on Swallows,” by Major E. M. Tobin, undated but sent under covering note dated 25 May 1946.

⁷¹ TNA, FO 1020/2459, Report, “Alleged Subversive Activities in Lavamund Camp,” 20 May 1946.

⁷² TNA, FO 1020/2459, Note by Senior Military Government Officer, HQ Military Government Land Kärnten, 17 June 1946.

⁷³ United States Holocaust Memorial Museum, Washington D.C. (hereafter USHMM), RG-50.042.0028, interview with Bella Tovey, formerly Bella Jakobowicz (recorded 30 January 1992).

When infested, recalled Welek Luksenberg, a survivor of Auschwitz and Flossenbürg, “your flesh is like in a heat, eaten by lice. . . I always felt the DDT stopped it. . . All of a sudden you’re like in space. . . All of a sudden it’s all quiet.”⁷⁴ Contemporary sources, too, record reactions of this type. In 1945, one French UNRRA volunteer reported to his colleagues how his brother-in-law’s niece, deported to Germany in 1942, had suddenly reappeared in Paris—“small and thin, little more than skin and bones. . . actually 18 years old, but. . . none could have guessed her to be more than 10”—and, prompted by the sight of his UNRRA uniform, warmly recalled her recent experience of delousing. “[A]t first I was afraid of it,” he recorded her as saying. “All of us, we were afraid of it. . . But later on, we started to love it. The lice ceased to bite and eat us and when the powder began to disappear, we begged the UNRRA people to put some more on us as we were afraid that the lice would come back.”⁷⁵

Conclusion

Delousing at the end of the Second World War was more than an uncomfortable measure of preventive medicine introduced to deal with infested humanity, as published histories of DPs and Holocaust survivors tend to present it. Blend the viewpoints of public health planners and military commanders with perspectives from below, and a picture emerges of a practice at once forged by factors as diverse, inter-connected, and transnational as research experiments on human and louse populations in Mexico and Morocco, threats to Swiss farming posed by beetles imported accidentally from the Americas, the wartime inability of the West’s pesticide-manufacturers to purchase Japanese chrysanthemums and Indonesian derris root, and the role of a global conflict in uprooting millions of people from their homes and exposing them to the threat of infectious disease. Also apparent is that narratives of success around this seconds-long intervention helped to establish DDT’s status as a technological miracle of worldwide renown. Include the experiences of those who underwent delousing, and a picture develops of a wealth of impacts and side effects, as well as a more nuanced image of how measures usually labelled as hated and violating were actually perceived: among DPs in Germany and Austria, for instance, individual reactions ranged from revulsion and resistance to relief and provide insight into mental and physical health, gender dynamics, power dynamics, emotions, and past experiences. The deeper influence of context and culture, from humanity’s fear of infectious disease to its habits of armed conflict, also becomes more visible. So does the fundamental fact that it takes a human to fashion inanimate substances into a working dust-gun and choose how to wield them, just as it does to give meaning to those actions by interpreting them as loathsome or humane.

Funding Statement. The research for this study was supported in whole by the Wellcome Trust (203132/Z/16/Z); for the purpose of open access, a CC BY public copyright licence has been applied.

Acknowledgements. The author is grateful to Jeong-Ran Kim for her assistance with Japanese sources, and to this special edition’s editors, anonymous reviewers, and editorial staff for their helpful edits and advice.

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⁷⁴ USHMM, RG-50.030.0140, interview with William Luksenberg, formerly Welek Luksenberg (recorded 14 April 1991).

⁷⁵ UNA, S-1254-0000-0049-00001, UNRRA Weekly Report 15, 2 June 1945.

Cite this article: Bailey R (2022). Disease, DPs, and DDT: A Global Health Perspective on the History of Refugee Relief. *Itinerario* 46, 233–250. <https://doi.org/10.1017/S0165115322000080>