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A sensorial No Man's Land: corporeality and the Western Front during the First World War

Matthew Leonard

University of Bristol, UK

ABSTRACT

During the First World War in France and Belgium life on the Western Front was predominantly lived below the surface. The proliferation of hitherto unimaginably powerful weaponry rendered surface existence untenable. This retreat into the earth necessitated a complete revision of soldiers' somatic engagement with their immediate environment. In my work as an archeologist of modern conflict landscapes, I have devised a methodology which combines archeological exploration with participant sensation or "sensory ethnography" to interrogate these complex, ambiguous and often dangerous subterranean places. In this article I show that as the war destroyed it also created new realities in which the senses were forced to work together like never before under the pressures of industrialized warfare. My work suggests how a holistic investigation (grounded in sensorality) of particular modern conflict landscapes can take the form of an ethnographic archeology, or an ethnography of the dead, demonstrating the potential for archeology and anthropology to work together in the increasingly interdisciplinary field of modern conflict studies.

KEYWORDS

Senses; warfare; conflict;
First World War;
subterranean;
interdisciplinary; landscape

During the dead of night in late November 1916, somewhere on the Arras sector of the Western Front in northern France, Private Leonard Smith crawled slowly out into No Man's Land from the relative safety of his trench. The landscape he inched across was the product of more than two years of war. Mixed in with the churned up earth and mine craters were shattered trees, ruined buildings, barbed wire, abandoned rifles, unexploded grenades, and the remains of dead soldiers. To navigate all of these obstacles Private Smith's senses had to be keenly attuned to the environment. Eyes widened in the darkness, feeling his way with hands and feet, he strained to hear the slightest sign that he might have been discovered. This was a place where the smallest mistake could have cost him his life.

Camouflaged and moving as quietly as possible he slithered on his belly toward a predetermined spot deep inside the German barbed wire defenses – a lone tree previously identified as the ideal location for an observation post. Yet his mission was not to spy on the enemy but to sketch the tree in detail, expertly recording its outline, color patterns and textures in pencil, in the dark, on mud stained paper, and while smothered in the filth of the battlefield. Private Smith lay silently for hours completing his painstaking task, mere yards from a German command post, before retreating slowly and quietly back to the safety of his own lines. Smith's sketches were used to create a facsimile of the lone tree, made of iron and

steel, and his eye for detail ensured it was painted and textured to exactly mimic the original. Soon thereafter, a team of engineers somehow managed to remove the original tree, roots and all, erect the metal facsimile in its place and link it to a pre-constructed tunnel, which itself had been dug in silence over the previous days. The soldier who then crawled through the claustrophobic tunnel in silence and quietly climbed the fake tree's internal metal ladder was able to observe the enemy officers while hiding in plain sight amongst the metal branches, and quietly listen to every word they uttered.

Private Smith recorded his mission into No Man's Land, along with many other such adventures, in a diary written longhand on scraps of notepaper while at the front (Smith 2009, 7). After the war he collated these memories, pairing them with the many sketches and illustrations he had made while in the trenches. He never really intended to publish his collection, and it remained hidden for years until his great-nephew, David Mason, "excavated" it from a long-forgotten cardboard box. In 2009, Mason published the work under the title *Drawing Fire*. In keeping with his Great-uncle's design, the reproduced diary itself contains no page numbers reflecting the time and conditions during which it was created.

The story of Private Smith's tree is surreal, almost incomprehensible, but by no means uncommon. Figure 1 shows a similar structure exhibited in the Plugstreet 1914–1918 Experience museum at Ploegsteert in Belgian Flanders. That this arboreal facsimile existed (along with many others) may seem incongruous, perhaps ridiculous, but the Western Front was a place where the usual, predominantly visual ways of sensing the landscape were suspended and the sensorium was mired in confusion. This was a sensorial No Man's Land unparalleled in its lethality, where men burrowed ever deeper into the earth to create a place that, however alien, made sense, or more accurately, could be made sense of.

In *Downcast Eyes*, the intellectual historian Martin Jay has written eloquently of the "crisis in vision" that was precipitated by the First World War. Drawing on the work of Paul Fussell (2000), Eric J. Leed (2009) and others, he describes how:

The Western Front's interminable trench warfare ... created a bewildering landscape of indistinguishable, shadowy shapes, illuminated by lightning flashes of blinding intensity, and then obscured by phantasmagoric, often gas-induced haze. ... When all that the soldier could see was the sky above and the mud below, the traditional reliance on visual evidence for survival could no longer be easily maintained. The invention of camouflage and the disappearance of differences in uniform between men and officers added to the experience of war as at once a frightening reality and a not so grand illusion. According to Leed, 'The invisibility of the enemy, and the retirement of troops underground, destroyed any notion that war was a spectacle of contending humanity The invisibility of the enemy put a premium upon auditory signals and seemed to make the war experience peculiarly subjective and intangible (Jay 1993, 212–3).

The quote from Leed points to the extent to which the Great War not only plunged vision into crisis, but also effectively upended the conventional western hierarchy of sensing by prioritizing sound over sight. The withdrawal from sight also foregrounded an intensely haptic engagement with the landscape. As Santanu Das has observed, in the experience of most soldiers embedded in the trenches, the sensescape of the Western Front was more felt than seen. Das (2008, 39) coined the term "slimescape" to evoke the ambiance of the battlegrounds as consisting not only of dirt and slime but also the "organic wastes; industrial debris, iron scraps and rotting flesh" that contributed to its unwholesome nature.



Figure 1. An example of a facsimile tree/listening post in the Plugstreet 14–18 Experience Museum, Ploegsteert, Belgium. The Western Front defied the senses, it was a place where things were rarely as they seemed, and even nature could not be trusted. (Copyright Author)

In this article I explore how the use of industrialized weaponry, heavy artillery and terrifying new weapons such as poison gas forced life underground, and how this necessitated a complete revision of soldiers' somatic engagement with the environment. My work suggests how a multi-disciplinary investigation (grounded in sensoriality) of particular modern conflict landscapes can take the form of an ethnographic archeology, or ethnography of the dead, demonstrating the potential for archeology and anthropology to work together in the increasingly interdisciplinary field of modern conflict studies.

A sensorial No Man's Land

The conflict landscapes of the twentieth century are palimpsests, with multiple periods of time layered together, each responding to the other and informing the whole. These places also contain powerful emotional connections to the present. Every year, tens of thousands of people visit the Western Front in search of a relative's final resting place or a familial connection with the war. Industry and commerce thrive on this influx of visitors and the many more who visit annually on holiday. Museums, "preserved" areas of battlefield, and hundreds of cemeteries and memorials dot the landscape, promoting a history of the

Western Front almost impossible for most to fully appreciate, and disguising the deeper and darker strata that lie beneath.

The industrialization of conflict led to the creation of myriad new technologies for killing and maiming. Airplanes first appeared over the battlefield in 1914. Tanks soon followed, and submarines patrolled the oceans in ever increasing numbers, already making redundant the incredibly expensive and cumbersome Dreadnought battleships. By 1918 almost all the main belligerent countries were committed to motorization. In the Second World War all these new technologies were developed further. Winterton (2017) has written of the fraught sensorial experience of being in a Lancaster Bomber over enemy territory, completely removed from the outside world. Along with tanks and submarines aircraft became a small and confined microcosm, within a larger conflict landscape. An appreciation of the human experience of these landscapes is essential if the objects themselves are to make sense to us.

The Western Front is a mortuary landscape, a place where hundreds of thousands lie buried in cemeteries, and many others whose bodies were never recovered (colloquially known as “the missing”) exist in name only, letters carved into glistening stone memorials. It is a still-lethal environment, due to being littered with unexploded ordnance, and in parts still inaccessible to the public. Yet all of this hides something much deeper, the subterranean landscapes of the war that still exist beneath the reclaimed fields. It is here that the daily experience of so many is preserved, sealed off from the march of time, largely forgotten or misunderstood. The Western Front has become “polychronistic” (Howes 2018) and cannot be understood in terms of a single timeline. Landscapes never stay the same (Bender 1993), and the way they change over time is as important as the way their individual strata retain the corporeal remnants of the past.

With few now remaining who experienced the Second World War, and none who experienced the First, sensorial anthropology and archeology can shed new light on the corporeal experience of the past (see e.g. Hamilakis 2014; Skeates 2010). Beneath the Western Front is a mostly forgotten landscape that has changed like all others, yet because it has remained largely untouched by humans for almost a century it has aged far slower than most. So well preserved are many of these landscapes that to enter them offers a sensorial experience analogous to that of the First World War combatant, at least to some degree. It is in these liminal spaces that the potential for an ethnography of the dead exists, somewhere between the “meeting points of materiality and temporality” (Hamilakis 2011, 405).

An archeology of twentieth century conflict contributes to an “archaeology of us” (see Leonard and Briethoff 2019). In combination with material culture studies and the methodology of participant sensation that comes out of sensory anthropology (after Howes 2019), it has laid the foundations for this ethnography of the dead. Saunders’ work on *Trench Art* (2003) exposed the inherent power that resided in the very *stuff* of war and *Matters of Conflict* (Saunders 2004) brought together a diverse range of research focused on an anthropology/ archeology of the First World War. More recent work has included Moshenska’s (2010) examination of the sensoriality of gas masks, Burchell’s (2014) research into how Royal Marine Commandos learn to move silently and skillfully through sensorial connections with the landscape, and Winterton’s (2017) work on the sensory signature of Second World War airmen, to name but a few.

Before 1914, battles were usually fought on well-defined and largely visible battlefields. Industrialized war changed this. With the onset of airpower, battlefields became 3-dimensional entities seemingly without limits. As the old soldier Charles Edmond Carrington recalled after

the Great War, the traditional notion of battle was amplified on the Western Front, 'In fifty years I have never been able to rid myself of this obsession with No Man's Land and the unknown world beyond it. On this side of our wire everything is familiar, and every man is a friend, over there, beyond the wire, is the unknown, the uncanny' (Carrington, quoted in Leed 2009, 14). The First World War was waged in the air, on the surface, and beneath the ground. Artillery pulverized the earth, destroying everything in its path while simultaneously creating new and deeply ambiguous landscapes above and below ground.

So dangerous was this new type of battlefield that the dead often littered the ground for months and even when it was possible to bury the corpses they were regularly brought back to the surface by the impact of high explosive shells. This was no place for the living and men burrowed as deep into the ground as they could, desperate to avoid the onslaught above. The traditional spaces of the living and the dead were inverted – the living below, the dead above. As a consequence of living in the dark, or behind the earthen walls of a trench, vision lost its primacy in the sensorium, replaced by touch and hearing. The close proximity of the living to the dead, and to an earth poisoned with cordite and human waste also amplified the senses of taste and smell creating a palpable sensory layer to the battlefield.

Poison atmosphere

One of the more lethal, and certainly most terrifying weapons used during the First World War was poison gas, which would be smelled long before it could be seen. Poisonous gas assaulted the senses for the first time when used by the Germans on the Eastern Front at Bolimov in January 1915 (Zalewska 2016). It was fired into the Russian army ranks via artillery shells filled with non-lethal toxins similar in nature to tear gas and was largely ineffective. Before long, far more deadly variants were being deployed from large cylinders half-buried in the ground, hidden from the enemy. When the wind conditions were right it was released to drift silently across No Man's Land, often with disastrous consequences if the wind changed direction, as the British found out to their detriment during the Battle of Loos in late September 1915.

As the war progressed, so did the technology of killing, and the artillery corps learned how to deliver the poison more accurately and efficiently. The two main types of gas used, phosgene and mustard, were green or yellow in color, and their clouds could often be seen billowing across the front. By November 1918, 63 different types of poison gas had been used on various fronts. Some smelled distinctive; the odor of mustard gas reminded soldiers of horseradish (Arthur 2003, 262) and chlorine carried the distinctive aroma of pear drops (Terraine 1982, 160). Nevertheless, the overwhelming stench of the battlefield regularly rendered these smells less distinctive, unless the gas was used in high concentrations, as it was during April 1916, when the chlorine could be smelled from 15 miles away (Terraine 1982, 160). Once technological advancements allowed the gas to be transmitted via accurately fired shells, it was the sound they made as they landed that alerted soldiers to their presence long before the eyes or nose. Although as Owen described, tired men, their senses battered, would often be "drunk with fatigue; deaf even to the hoots of gas-shells dropping softly behind" (Owen 1995, 64). Gas interfered with sound in other ways, as it affected the throat so badly it weakened men's ability to speak, forcing them to become a "whispering army" (Arthur 2003, 263).

Once detected, protective masks were donned that severely impeded some senses while simultaneously creating new sensorial experiences. In any type of gas mask breathing became difficult, especially when running, and the types of material used along with the closeness of the fit formed further haptic modulations of the body. The French soldier André Pézard wrote of the experience of wearing a mask during a gas attack:

You do not see clearly with the glasses, which make you sweat around the eyelids. You have the mechanism, which dances on your nipples. The air heats up in the box of potassium. That scorches you from the bottom of your lungs to your kidneys. The brain begins to turn. The rubber cannula makes you want to throw up, and the saliva runs out of the corner of your mouth (Smith 2007, 79–80).

The use of gas masks was a key element in the sensorial experience of a First World War soldier. As Moshenska (2010, 614) notes, gas masks were designed to shield the sensorium from the effects of gas but in the process often created a restrictive sensory experience completely removed from the visceral sensuality of the “external” battlefield beyond the mask. In effect, they created “an anesthetic shield against an anti-anesthetic weapon” (Moshenska, 2010, 614). Sight was restricted in all types of mask, but in the early and often cruder models, the senses of smell and taste were not restricted. They were assaulted. These early efforts to block out the gas were often no more than a handkerchief or rag soaked with urine, further contributing to the olfactory discomfort. The mouth and nose are directly connected and work together, with smell acting as the vanguard for taste, protecting the body from harm. Here, this defense was willingly breached as urine, once expelled from the body, was immediately recycled into a life-saving substance and returned to protect against a greater danger.

For those that failed to react to the poison clouds in time the consequences were severe. Even a small exposure produced a terrible itching and burning sensation in the eyes and throat. Inhaling too much resulted in death through drowning, as liquid built up in the lungs. The effects of gas were so alien and overwhelming to the sensorium that many were killed or terribly injured because they simply did not understand what was happening. Witnessing men clawing at their throats as they drowned on dry land had to be balanced with the deeply unpleasant experience of wearing a mask, in which many thought they would suffocate. As the French *Poilu* André Pézard recalled, even in the safety of a dugout the gas could destroy the minds of men:

There are the guys who go crazy, who take out the cannula to call for their mothers. They swallow the poison gas, they begin to cough, to spit, to vomit up their guts. They run for the door, they howl, they demolish the partitions by hitting them with the pumps or with their heads, until we go to collect them (Smith 2007, 80).

The German Stormtrooper Ernst Jünger remembered how he was unable to wear his mask during one attack as he had been running too fast and was out of breath. The eye pieces had in any case steamed up so badly his vision had “whited out”. Faced with temporary blindness and asphyxiating inside his mask, he tore off the device and tried to outrun the lethal cloud (Jünger 2004, 79). Once the danger had passed men were left with ghastly after effects. Jünger recalled how the day after an attack he was able to:

Marvel at the traces the gas had left. A large proportion of the plants had withered, snails and moles lay dead, and the horses that were stabled in Monchy for use by messengers had watering eyes and muzzles. The shells and ammunition splinters that lay all over the place had a fetching green patina (Jünger 2004, 82).

Mary Douglas (2002, 2) described how “as we know it, dirt is essentially disorder”. It is the job of the senses to make order from chaos, to protect the body in an unfamiliar place (see also Edensor 2007) but the Western Front pushed the boundaries of that place, and the limits of what the body and mind could cope with. Attempts to understand this ambiguous landscape using the senses individually could be a death sentence. Survival required a synesthetic approach. Clouds of poison gas, ear-shattering explosions, thick, all-consuming mud, piles of corpses and an all-pervading stench created an overwhelming combination of sensorial stimulation, and the result was that soldiers recoiled from this reality into the only place they could feel safe, down into the darkness of dugouts, tunnels, caves, and subterranean galleries.

Making sense of the underworld

The phenomenologically-influenced fieldwork I conduct in the Western Front’s preserved subterranean conflict landscapes has helped to establish a holistic and somatic understanding of front line existence. My methodology is deliberately interdisciplinary, using a mixture of quantitative and qualitative techniques, desktop research and regular, sustained archeological fieldwork in northern France augmented by the practice of sensory ethnography or “participant sensation” (Howes 2019).

Official regimental histories, unit war diaries and quotidian reports from the front lines all provide valuable information on frontline life. They discuss how underground landscapes were constructed, the speed of excavations, what tools were employed, the number of men working in a given sector, whether there was electric light, the enemy’s proximity and much else besides. This discourse is complemented by the unofficial, personal records kept by many soldiers on the front line. These usually took the form of diaries or letters home, but also sketchbooks, paintings and photographs, and together this material culture forms a fundamental pillar of my methodology. Many sensory clues can be teased from this historical evidence; how individuals felt beneath ground, levels of sickness (physical and mental), the speed of tunnel construction (and therefore how attuned tunnelers were to their immediate environment), which nations were involved and how their performance differed, what the state of morale was, and how successful operations were at keeping the enemy at bay. As useful as this documentation is, however, it has obvious limitations, and a purely historical study of the subterranean Western Front is found wanting. A more ethnographic approach demands that we physically research these landscapes, spend time there, understand the environment first hand, and participate in a life that no longer exists.

It is not possible to conduct research in subterranean conflict landscapes alone. A highly professional and tight-knit team is essential and accordingly I work with my colleagues in the Durand Group when on fieldwork. The Durand Group is a private organization dedicated to the investigation of military subterranean features, consisting of around 30 members, all of whom have different specializations. The Group is comprised of academics, serving and ex-forces personnel, explosive ordnance specialists, trauma doctors, translators, surveyors, tunnel engineers and a filmmaker. Together, we have explored many miles of tunnels across the Western Front (and beyond), painstakingly recording their physical dimensions and the material culture within, in particular the thousands of items of graffiti and carvings that line the walls of the many underground haunts.

This record provides priceless quantitative information that enables recurring themes to be established and cultural responses to life at war to be identified. For example, there are

definite differences between different nations' graffiti. French soldiers tended to prioritize patriotism and religious allegiance, whereas German graffiti tends more toward information-based signage. The British regularly just left their name and unit and the Canadian troops tended to leave as much personal information as possible including name, service number and even home addresses (see Leonard 2016).

Despite the importance of these meta-data sets, it is the addition of more qualitative research that enables a reconstruction of the subterranean sensorium of war. As noted previously, much of the Western Front's underground world has remained largely sealed off and untouched since 1918. These places are as they were, albeit removed from the dangers of battle, allowing for a type of ethnographic research, akin to Yannis Hamilakis' (2011) "archaeological ethnography" or, perhaps more applicably, what David Howes has called an "archaeology of perception" (Leonard and Briethoff 2019). Totally recreating the past is impossible but doing an archeology of the subterranean world of the First World War makes it possible to gain at least a partial sense of the soldier's experience of these places by spending time in them oneself.

Working in oppressive and dangerous environments requires a highly developed group spirit, a trust in each other and a shared conviction that "no one is ever left behind". While conducting fieldwork, my Durand Group colleagues and I share a moderate-sized house in France that forces us to live in close proximity to each other. We sleep 3 to a bedroom, eat our meals together, and share the more mundane tasks such as cooking and cleaning. This fosters an esprit de corps, trust and friendship, all elements vital to my research.

Once we arrive at our workplace time is spent ensuring that all the required equipment is available and that each team member knows their role. Rebreathing canisters, medical equipment including a defibrillator and specialist stretcher, air monitors, gas detectors, helmets, lighting, communications and safety harnesses are all checked and rechecked before anyone goes underground. Often the original entrances (albeit re-engineered by us) are used for ingress, lending a verisimilitude to the journey below, as we experience the change in sensorial engagement with the world so familiar to those acting likewise a century ago. We work in small teams, each member focused on their own safety and that of his or her colleagues.

Almost immediately upon descent, the change in temperature is noticeable. Chalk is an insulator, maintaining a tunnel's atmosphere at around 11 degrees Celsius all year round. It takes time for the body to acclimatize to its new environment. Helmeted heads bang on the low ceilings, footing is initially uncertain, breathing labors as the lungs adjust to the fall in oxygen levels, and hands search out the tunnel walls, so the body and mind can define their new environmental parameters. The air fills with chalk dust kicked up by heavy boots struggling for grip as we go further underground, coating the lips and nasal passages with a fine powder. The smell of sweat and body odor becomes noticeable in the sterile olfactory environment and after only a few meters the usual sensorial relationship we share with the surface world is almost inverted as touch replaces vision, and the constant beeping of the air monitors floods the ears.

Unlike so much archeology that requires excavation to reach the objects being sought, my research takes place in an already excavated place. Material culture ranging from the seemingly endless graffiti and carvings that line the tunnel walls, to military and personal equipment, mine charges, grenades, shells and small arms ammunition that seems ubiquitous are all only hidden by darkness, revealed by the passing of bright

torchlights across the walls and floor. The traditional archeologist's trowel is of little use. Here the senses become the tools that do the "digging".

Subterranean landscapes are places where a presence of absence is palpable, almost tangible. Missing are the original occupants, yet the objects and artifacts that underpinned their life are all still present, and so is their sensory shadow. Methodologically, the prior and detailed knowledge of war diaries and personal associated discourse interacts with the intense sensory experience of being in these landscapes. Lost voices almost echo along the narrow passageways as we walk, stumble, and crawl along in the absent presence of those long departed. As suggested above, the subterranean landscapes of the Western Front are places where an ethnography of the dead can be forged. My colleagues and I substitute for those who previously inhabited this world, and our participation allows for an observation of the past conducted in the present, immersed in the same landscape of those we study.

Subterranean conflict landscapes are multi-dimensional artifacts, ambiguous palimpsests of time and space that represent a complex existential/object/landscape relationship for those that occupied them. Studying such spaces solely with regard to their physical structure elides the realities of the creation of landscape, and so attempting a more aggregate study of soldiers' experiences underground offers a fertile area for research. Many tunnels and cave complexes were used for years, often by different nations as the front lines ebbed and flowed. Accordingly, they experienced a change of use depending on their proximity to the front, and the sensorial reality of their occupation often changed too. However, some underground systems were created for particular purposes and this uniqueness allows for a better analysis of their corporeal values.

Vimy Ridge, Northern France 1916–2018

On 9 April 1917, atop Vimy Ridge in Northern France, the allies achieved one of the most impressive victories of the entire war. In an attack largely led by Canadian forces, the Germans were routed in just a few hours. Key to the success was the use of more than a dozen infantry assault tunnels, known as subways. These were essentially communication tunnels which allowed men to travel from the rear to the front completely underground and safely get close to the enemy lines while sheltered from the maelstrom above. The subways at Vimy Ridge still exist, although all except a small, managed, section of one of them are off limits to the general public. All were similar in construction, and the sensorial engagement of those that occupied them differed little.

Significant renovation has rendered a sizeable length of the Grange Subway at Vimy accessible to the public, albeit at the cost of authenticity. It is accessed down spacious, concrete steps designed to minimize accidents. Inside, behind a large metal door, the walls and roof have been stabilized with tons of concrete and reinforcing wire, the floor has been leveled and smoothed, and artificial lighting has been added along the entire length. Incongruously, it is a safe place; well-lit, roomy, ventilated and neutral in taste and smell. Small signs guide visitors along and at several points iron gates seal off side tunnels and inclines down into the wider system. The guided tour is brief, and visitors obtain only the most rudimentary appreciation of the First World War soldier's engagement with the underground.

The very existence of the Grange Subway raises important questions as to the relevance of these sanitized landscapes, and indeed whether they should even be maintained. Nevertheless, it does offer people a glimpse of a world they are unable to explore in any other way. The dangers inherent in researching these landscapes are made clear to those who visit the Grange tunnel. By the entrance steps is a small plaque dedicated to Lt Col. Mike Watkins, a founder member of the Durand Group, who was tragically killed when a trench collapsed while searching for a tunnel entrance.

Despite the limitations of the Vimy memorial site, it serves as an informative cross-section typical of so much of the Western Front. Here, a museum, visitors' center and gift shop can be found near to imposing memorials and quiet cemeteries. Much of the closed-off area of the site is pitted with innumerable shell-holes, many of which still contain microscopic fragments of the missing. Beneath all this is an extensive, multi-level network of British and German tunnels, all inaccessible to the wider public, hidden beneath a limited and sanitized version of the subterranean world.

My research in the nearby Goodman Subway and the wider La Folie British fighting tunnels (which also connect the two subways) has enabled a comparison between the "raw" Goodman tunnel and the "sanitized" Grange ([Figure 2](#)). While little is known operationally about events in the Goodman Subway on 9 April 1917, the Grange is better documented. This latter information, when combined with the material culture from both tunnels, and the first hand, ethnographic experience of being in both places, can provide a better appreciation of the events below ground. These particular subways were ephemeral landscapes fixed by time and date as they were constructed and used solely for the attacks on Vimy Ridge. Here, in the space of just a few hours, powerful sensorial exchanges between men and landscape occurred that left a material yet multi-vocal record embedded in their sensorial ambience.

The subways beneath Vimy had to be constructed as quickly and efficiently as possible, and without the enemy's knowledge. On the evening of 7/8 April 1917 almost a thousand men moved into the tunnel to prepare for the attack. They were kept there for just under 36 hours ([Robinson and Cave 2011, 227](#)), in the most terrible conditions. A large, 50,000-gallon underground reservoir in the Goodman Subway hints at the numbers involved in the attack and the logistical difficulties this entailed, but today there is little obvious evidence as to the misery they endured. During the conflict, any useful materiel (particularly metal and wood) was removed from the tunnels to be recycled and used elsewhere, so often these landscapes can appear empty to the untrained eye. However, evidence of the human story is still legible through the hundreds of inscriptions that line the chalk walls, hinting at what the soldiers felt at the time. These items of material culture range from simple signatures to more elaborate carvings and are a valuable, albeit often ambiguous, record of those 36 hours in the dark of 7/8 April 1917.

As the hour of battle approached, gas and high explosive shells pulverized the German positions only a short distance away. Outside, the noise was deafening, as Gunner Frank Ferguson recalled:

Was awakened this morning before daylight by a terrific bombardment. What a sight in the dim light as the guns put down the barrage for the boys to go over and try for Vimy Ridge. What a terrible racket as all the guns on the front blended into one continuous roar and the flashes from them made the effect of a great electrical storm ([Cave 2009, 125](#)).



Figure 2. The Goodman and Grange Subways, Vimy Ridge, France. The image on the left is of the Goodman tunnel as first “discovered” by the Durand Group. The Right-hand image shows the sanitized Grange tunnel, which is open (and safe) for tourists to visit. Copyright Durand Group/Steven Green.

In the subways this noise was more felt than heard as the terrific vibrations caused by the relentless artillery barrage resonated through the walls, ceiling and floor. This caused the tunnels to fill with dust, choking the air, clogging equipment and contaminating supplies of water and food. The men were not able to leave, and the limited sanitation facilities quickly failed. The air filled with a nauseating stench, soon mixed with the reek of vomit. The French soldier Henri Barbusse described how a dugout appeared after just one night’s occupancy,

It is the trench. It is carpeted at the bottom with a layer of slime that liberates the foot at each step with a sickly sound; and by each dugout it smells of the night’s excretions. The holes themselves, as you stoop to peer in, are foul of breath (Barbusse 2003, 4).

To alleviate the almost unbearable physical and mental stress soldiers were told to sit (on the already soiled floor) to allow air to circulate. None were allowed to smoke due to the close proximity of explosives, but many did anyway, thickening the air with tobacco smoke. Muscles ached and cramped, and claustrophobia smothered. Even though it was April, the ground outside was covered in a thick blanket of snow which left the earth waterlogged. Gradually water seeped into the tunnels by which time it was more effluent than melt-water – a putrid mix of trapped gas, human remains, excrement and the detritus of war. As the men battled with the conditions their sense of place was further impaired by the way the eyes struggled to process their situation in the dust filled, dimly-illuminated darkness. They were supposed to remain silent, too. All would have known how close they were to the German lines and how easy it would have been

for the enemy scouts, struggling through their own nearby tunnels, to hear the presence of so many men underground through the earpieces of their geophones.

Despite the danger and the deprivations they entailed, subways nevertheless offered relative safety. They were deep enough to be impervious to all but the heaviest artillery and the presence of so many bodies in such close proximity increased warmth and feelings of (relative) security. Sounds were dulled and even though the tunnels continually shook, the conditions underfoot were far better than on the surface. When the attack came, everything changed. As the men ran from the tunnel into No Man's Land they were confronted with icy air, ankle-deep snow, a hail of machine gun bullets, the screams of the wounded and dying, and ultimately the life-and-death struggle of hand-to-hand combat in what was left of the decimated German positions.

Discussion

We have a unique and personal relationship with the artifacts and landscapes we create, or as Miller (2010, 60) notes, "objects create people as much as people create objects", and the senses play a pivotal role in the way this relationship is perceived (Howes and Classen 2014, 13). The common perception of the Great War's battlefields, and particularly the Western Front, is largely formulated through grainy black and white film and photography. We then apply this understanding to the many personal diaries (such as Private Smith's) and official regimental records of battles (all of which were subject to official censorship) to build up an image of life on the front lines of the war, yet to many who occupied these places very little was actually seen, rather it was experienced through a combination of the senses.

During the conflict aerial photography came of age, allowing commanders to see the battlefield in detail as never before. Millions of these images were used to direct the movement of troops and plan huge attacks, yet the reliance on this visual media elided the corporeal reality of existence on the ground. In the dirt of the trenches little could be seen, and everything could be felt (see Saunders 2009).

"But what of place as heard and felt?" asks Steven Feld (1999, 94). The acoustic properties of underground landscapes are vital to our understanding how they were created and used. It is common to find warnings scrawled on tunnel walls reminding those present of the dangers of sound. To the First World War tunnelers the role of sound was far more important than that of sight in understanding and navigating place.

Through spending time "inside" a culture's landscape and experiencing it corporeally – even after 100 years and in peacetime – it becomes possible to better appreciate the realities of its existence. Implicit in the sensorial approach developed here to investigate the subterranean Western Front is to realize the inherent ambiguity of this multi-layered palimpsest.

The theoretical framework I have adopted and refined during my research interrogates the human experience of being in a trench, dugout or tunnel system, appreciating that the agency of those who occupied these places during the conflict is still embedded in the medium and materialities being discovered and interpreted (See Gell 1998, 103). Archeology is essential to uncovering these objects, and sensory anthropology is the key to understanding them. The fieldwork I have undertaken in these esoteric places over extended periods of time represents a step toward what I have called an ethnography of the dead, participant sensation of a long-gone liminal culture. The individuals I study cannot

be observed in their daily life, they cannot be interviewed. Yet this silence is not an impassable barrier. Their landscapes still exist relatively undisturbed. The material culture they created remains hidden within these places. The multitude of documentation describes daily routines in detail, and spending time participating in so many of the same experiences underground as those of 1914–18 creates room for empathy. I experience the same sensoriality, many of the same dangers and the same relationship with a dark and strange world. This holistic and interdisciplinary methodology reveals how emotions, experiences and the relationship with landscape are objectified in a conflict's material culture (Miller 2010; Kuchler 1988), and how social ideologies and practices can be conveyed through their sensory values (Howes 2005, 4). Conducting an archeology of the present, or an ethnography of the past, offers the potential for a new path of progress toward understanding our violent history.

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Notes on contributor

Dr Matthew Leonard B.A (Hons), M.A. PhD. is a conflict anthropologist and modern conflict archeologist. He studied at the University of Bristol and his work explores the corporeal engagement with twentieth and twenty-first century conflict. His doctoral research focused on the subterranean worlds of the Western Front during the First World War and he continues to conduct regular archeological and anthropological research in France and Belgium. Matthew is a member of the Durand Group and works with several commercial, academic and governmental organizations with regard to the centenary of the First World War. He has been widely published both commercially and academically and he has contributed to numerous television documentaries on various aspects of the First World War.

References

- Arthur, M. 2003. *Forgotten Voices of the Great War*. London: Ebury Press.
- Barbusse, H. 2003. *Under Fire*. London: Penguin Books.
- Bender, B. 1993. "Stonehenge - Contested Landscapes (Medieval to Present-Day)." In *Landscape Politics and Perspectives*, edited by B. Bender, 245–279. Oxford: Berg.
- Burchell, M. 2014. "Skilful Movements: The Evolving Commando." In *Bodies in Conflict: Corporeality, Materiality and Transformation*, edited by N. J Saunders and P Cornish, 208–218. Abingdon: Routledge.
- Cave, N. 2009. *Vimy Ridge*. Barnsley: Pen and Sword.
- Das, S. 2008. *Touch and Intimacy in First World War Literature*. New York: Cambridge University Press.
- Douglas, M. 2002. *Purity and Danger*. Abingdon: Routledge Classics.
- Edensor, T. 2007. "Sensing the Ruin." *The Senses and Society* 2 (2): 217–232. doi:10.2752/174589307X203100.

- Feld, S. 1999. "Waterfalls of Song: An Acoustemology of Place Resounding in Bosavi, Papua New Guinea." In *Senses of Place*, edited by S. Feld and K. Basso, 91–135. Rochester: Boydell and Brewer.
- Fussell, P. 2000. *The Great War and Modern Memory*. New York: Oxford University Press.
- Gell, A. 1998. *Art and Agency: An Anthropological Theory*. Oxford: Oxford University Press.
- Hamilakis, Y. 2011. "Archaeological Ethnography: A Multitemporal Meeting Ground for Archaeology and Anthropology." *Annual Review of Anthropology* 40 (1): 399–414. doi:[10.1146/annurev-anthro-081309-145732](https://doi.org/10.1146/annurev-anthro-081309-145732).
- Hamilakis, Y. 2014. *Archaeology and the Senses: Human Experience, Memory, and Affect*. Cambridge: Cambridge University Press.
- Howes, D. 2005. "Introduction." In *Empire Of The Senses*, edited by D. Howes, 1–17. New York: Berg.
- Howes, D. 2018 in Pub. "Digging up the Sensorium: Archeology Branching into Sensory Studies." In *The Routledge Handbook of Sensory Archaeology*, edited by J. Day and R. Skeates. Abingdon: Routledge.
- Howes, D. 2019. "Multisensory Anthropology." *Annual Review of Anthropology* 48 (1): 17–28. doi:[10.1146/annurev-anthro-102218-011324](https://doi.org/10.1146/annurev-anthro-102218-011324).
- Howes, D. and C. Classen. 2014. *Ways of Sensing: Understanding the Senses in Society*. London: Routledge.
- Jay, M. 1993. *Downcast Eyes: The Denigration of Vision in Twentieth Century French Thought*. London: University of California Press.
- Jünger, E. 2004. *Storm of Steel*. London: Penguin Classics.
- Kuchler, S. 1988. "Malangan: Objects, Sacrifice and the Production of Memory." *American Ethnologist* 15 (4): 625–637.
- Leed, E. J. 2009. *No Man's Land: Combat and Identity in World War One*. New York: Cambridge University Press.
- Leonard, M. 2016. *Beneath the Killing Fields: Exploring the Subterranean Landscapes of the Western Front*. Barnsley: Pen and Sword.
- Leonard, M. and E. Briethoff. 2019. "Warfare and the Senses: Archaeologies of the Senses and Sensorial Archaeologies of Recent Conflict." In *The Routledge Handbook of Sensory Archaeology*, edited by J. Day and R. Skeates, 281–292. Abingdon: Routledge.
- Miller, D. 2010. *Stuff*. Cambridge: Polity Press.
- Moshenska, G. 2010. "Gas Masks: Material Culture, Memory, and the Senses." *The Journal of the Royal Anthropological Institute* 16 (3): 609–628. doi:[10.1111/j.1467-9655.2010.01642.x](https://doi.org/10.1111/j.1467-9655.2010.01642.x).
- Owen, W. 1995. "Dulce Et Decorum Est." In *The Wordsworth Book of First World War Poetry*, edited by M. Clapham, 64–65. Ware: Wordsworth Editions.
- Robinson, P. and N. Cave. 2011. *The Underground War: Vimy Ridge to Arras*. Barnsley: Pen and Sword.
- Saunders, N. J. 2003. *Trench Art: Materialities and Memories of War*. Oxford: Berg.
- Saunders, N. J. 2004. "Material Culture and Conflict. The Great War, 1914–2003." In *Matters of Conflict. Material Culture, Memory and the First World War*, edited by N. J. Saunders, 5–25. Abingdon: Routledge.
- Saunders, N. J. 2009. "Ulysses' Gaze: The Panoptic Premise in Aerial Photography and Great War Archaeology." In *Images of Conflict: Military Aerial Photography and Archaeology*, edited by B. Stichelbaut, J. Bourgeois, N. Saunders, and P. Chielens, 27–40. Newcastle Upon Tyne: Cambridge Scholars Publishing.
- Skeates, R. 2010. *An Archaeology of the Senses: Prehistoric Malta*. Oxford: Oxford University Press.
- Smith, L. 2009. *Drawing Fire*. London: Collins.
- Smith, L. V. 2007. *The Embattled Self. French Soldiers' Testimony of the Great War*. New York: Cornell University Press.
- Terraine, J. 1982. *White Heat: The New Warfare 1914–18*. London: Book Club Associates.
- Winterton, M. 2017. "The Sensory Signature of Being an Airman in a Second World War Lancaster Bomber Aeroplane." In *Modern Conflict and the Senses*, edited by N. J. Saunders and P. Cornish, 237–255. Abingdon: Routledge.
- Zalewska, A. 2016. "The 'gas-scape' on the Eastern Front, Poland (1914–2014): Exploring the Material and Digital Landscapes and Remembering Those 'twice-killed'." In *Conflict Landscapes and Archaeology from Above*, edited by B. Stichelbaut and D. Cowley, 147–165. London: Routledge.