

Weapons, Imperialism, and the Military Science of Mass Killing

JULIEN POMARÈDE*
University of Liège, Belgium

This article deepens our understanding of the relationship between weapons and imperialism by arguing that weapons do not just express imperial ideologies but actively organize and operationalize imperial domination through the technoscientific knowledge of warfare. Focusing on French field artillery during the Indochina War (1946–1954) and through archival research, it conceptualizes weapons as sites where military technoscience, Orientalism, and imperial anxieties converge. The article shows how artillery translated fears of Western military modernity being defeated by a racialized “Asian-Communist” adversary into technoscientific logics of mass violence. Through its operational routines—targeting, abstraction, measurement, and calibration—artillery rendered the Viet Minh simultaneously as a civilizational threat and as a technically disposable, undifferentiated mass. Situating artillery alongside adjacent forms of modern long-range lethality, such as airpower, the article demonstrates that these dynamics were not artillery-specific but part of a broader technoscientific making of mass killing rooted in imperial histories of warfare. Artillery helped construct Indochina as a battlespace where large-scale destruction appeared militarily intelligible and ideologically justified, contributing to a technoscientific-Orientalist ordering of the early Cold War in Asia. The article makes two main contributions. First, it shifts the analysis beyond treating weapons as objects of imperialism to conceptualizing them as technoscientific entities that operationalize and reproduce imperial relations through rationalized forms of military expertise. Second, it shows how the normalization of racialized violence under the guise of technoscience operates at a structural level, impoverishing strategic reasoning, reproducing global inequalities, and sustaining open horizons of escalation, instability, and coercive violence.

Este artículo profundiza en nuestra comprensión de la relación entre las armas y el imperialismo dado que argumenta que las armas no solo expresan ideologías imperiales, sino que organizan y operacionan de forma activa la dominación imperial a través del conocimiento tecnocientífico de la guerra. El artículo se centra en la artillería de campaña francesa durante la Guerra de Indochina (1946–1954) y conceptualiza, mediante la investigación archivística, las armas como espacios donde convergen la tecnociencia militar, el orientalismo y las ansiedades imperiales. El artículo pone de manifiesto cómo la artillería tradujo los temores de la modernidad militar occidental al ser derrotada por un adversario «asiático-comunista» racializado en lógicas tecnocientíficas de violencia masiva. La artillería representaba, a través de sus rutinas operativas (búsqueda de objetivo, abstracción, medición y calibración) al Viet Minh, de manera simultánea, como una amenaza civilizacional y como una masa técnica y desechable, indiferenciada. El artículo sitúa la artillería junto con formas adyacentes de letalidad moderna de largo alcance, tales como el poder aéreo, lo que nos permite demostrar que estas dinámicas no eran específicas de la artillería, sino parte de una creación tecnocientífica más amplia de la masacre masiva que se encuentra en las historias imperiales de la guerra. La artillería ayudó a conceptualizar Indochina como un espacio de batalla donde la destrucción a gran escala parecía militarmente comprensible e ideológicamente justificada, contribuyendo a crear un orden tecnocientífico y orientalista de la primera guerra fría en Asia. El artículo realiza dos contribuciones principales: En primer lugar, el artículo desplaza el análisis ya que, más allá de tratar a las armas como objetos del imperialismo, las conceptualiza como entidades tecnocientíficas que operativizan y reproducen las relaciones imperiales a través de formas racionalizadas de experiencia militar. En segundo lugar, el artículo demuestra cómo la normalización de la violencia racializada bajo la apariencia de tecnociencia opera a nivel estructural, empobreciendo el razonamiento estratégico, reproduciendo las desigualdades globales y sosteniendo horizontes abiertos de escalada, inestabilidad y violencia coercitiva.

Cet article approfondit notre compréhension de la relation entre les armes et l'impérialisme en soutenant que les armes ne se contentent pas de refléter des idéologies impériales, mais organisent et opérationnalisent activement la domination impériale à travers les connaissances technoscientifiques de la guerre. En se concentrant sur l'artillerie de campagne française pendant la guerre d'Indochine (1946–1954) et à travers des recherches d'archives, il conceptualise les armes comme des lieux où convergent la technoscience militaire, l'orientalisme et les angoisses impériales. L'article montre comment l'artillerie a traduit les craintes de voir la modernité militaire occidentale vaincue par un adversaire «asiatique-communiste» racialisé en logiques technoscientifiques de violence de masse. À travers ses routines opérationnelles, ciblage, abstraction, mesure et calibrage, l'artillerie a présenté le Viêt Minh à la fois comme une menace civilisationnelle et comme une masse indifférenciée, techniquement oblitérable. En plaçant l'artillerie aux côtés de formes adjacentes de létalité moderne à longue portée, telles que la puissance aérienne, l'article démontre que ces dynamiques n'étaient pas spécifiques à l'artillerie, mais s'inscrivaient dans une construction technoscientifique plus large de la tuerie de masse, enracinée dans l'histoire impériale de la guerre. L'artillerie a contribué à faire de l'Indochine un espace de combat où la destruction à grande échelle apparaissait comme militairement intelligible et idéologiquement justifiée, contribuant ainsi à une mise en ordre technoscientifique et orientaliste du début de la Guerre froide en Asie. Cet article apporte deux contributions principales. Premièrement, il déplace l'analyse au-delà du traitement des armes comme des objets de l'impérialisme pour les conceptualiser comme des entités technoscientifiques qui opérationnalisent et reproduisent les relations impériales à travers des formes rationalisées d'expertise militaire. Deuxièmement, il montre

*Corresponding author: University of Liège, Belgium. Email: julien.pomarede@uliege.be

Julien Pomarède is Associate Professor of International Politics at the University of Liège (Belgium) and Founding Director of the recently created Centre for the Study of War and Violence. Prior to this position, Julien Pomarède has been a postdoctoral fellow at the University of Oxford (Wiener Anspach Fellowship) and the Université libre de Bruxelles. He is the lead promoter of the multi-year research project “WEAPONS” (funded by the Belgian Fondation nationale pour la recherche scientifique), which consists in the historical sociology of armaments in combat. Julien Pomarède published his works in academic journals such as the *European Journal of International Relations*, *Security Dialogue*, *Review of International Studies*, *Critical Military Studies*, *Cultures & Conflicts* and *Critique internationale*. His book adapted from his PhD dissertation on NATO's counterterrorism has been published under the title, *La fabrique de l'OTAN: Contre-terrorisme et organisation transnationale de la violence* (Editions de l'Université de Bruxelles, 2020).

comment la normalisation de la violence racialisée sous le couvert de la technoscience opère à un niveau structurel, appauvrissant le raisonnement stratégique, reproduisant les inégalités mondiales et entretenant des horizons ouverts d'escalade, d'instabilité et de violence coercitive.

The role of technologies and techniques in imperialism has given rise to a substantial interdisciplinary literature. Scholars show that empires and imperial dynamics rely not only on political authority or coercion, but on the infrastructural, administrative, medical, and logistical organizations that make imperial rule possible. Railways, ports, telegraph lines, mapping practices, medical interventions, and other bureaucratized and techno-scientific modes of knowledge shaped how colonized territories were governed, and rendered legible (Adas 1989; Anderson 2006; Aguiar 2011; Headrick 2010). These works demonstrate that imperialism operates as much through routinized technical practices as through overt domination, with technologies and techniques functioning as constitutive elements of imperial rule that organized space, bodies, and social life within global hierarchies. As part of this research agenda on imperialism and technologies, a more specific focus on weapons has emerged, revealing their role in the subjugation of orientalized populations (Satia 2014) and the production of disproportionate and genocidal levels of violence, whether during the European colonial wars (Hull 2005), the World Wars (Chamberlin 2025), the Indochina conflicts (Turse 2013; McHale 2009), and the War on Terror (Barder 2021, 185–210).

Challenging the classical-realist framework that sees weapons as means to enhance state's power and manage the international balance of power (Mearsheimer 1983), the added value of this critical viewpoint has been the reconstruction of the epistemic foundations that make weapons central materialities in the dynamics of social control, domination and global hierarchies. To advance the understanding of the role of weapons in imperial dynamics, the article argues that it is important to examine not only weapons as “symbols,” “vectors,” or “objects” of imperial coercion but how their underlying operational procedures and technoscientific knowledge embody imperial dynamics. The key argument of the article is that weapons do more than symbolize civilizational hierarchies; they strengthen it through their technoscientific knowledge. The article shows that weapons' technoscientific logics reproduce and help to contain “imperial anxieties,” defined as a recurrent psycho-political condition of empire in which ruling projects are haunted by the sensed limits of their power, the fragility of their authority and the instability of the hierarchical identities that sustain domination (Sajed 2024; Gani 2021; Fischer-Tiné 2016). Developing this argument, this article makes two contributions. First, it shows that weapons are not reflections of imperial ideologies but material and knowledge sites from which imperialism is actively enacted through violence. The imperial history of weapons is not just a matter of justifying their destructive power through civilizational claims. More fundamentally, the imperial history of arms is also the history of their technoscientific construction, and orientalism functioned as a constitutive support of this technorational validation. Second, the article demonstrates that this process normalizes mass destruction. When orientalized Others are rendered intelligible via the technoscientific logics of weapons, their elimination appears permissible, even rational. Imperialism becomes supported by the technoscience of violence,

turning warfare into a machinery that makes large-scale orientalized killing seem instrumentally rationally sound. The ultimate consequence, as I will argue in the conclusion of the article, is the detachment of war from strategy and its alignment on a perilous yet highly destructive fantasy of imperial domination.

To do so, the article focuses on French field artillery in the Indochina War, a major and particularly destructive decolonization war of the twentieth century (Goscha 2022) during which France fought the Viet Minh insurgency to maintain its colonial rule from late-1946 until the defeat at Dien Bien Phu in May 1954. By taking also inspiration from the broader postcolonial and socio-technical body of literature on modern weapons and military functions like airpower and targeting, I show the ways in which artillery's violence contributed to the re-assertion of the technoscientific-oriental superiority of the West over the sub-human Viet-Minh Other, thereby consolidating the orientalized military hierarchies of the global Cold War in Asia. In other words, the operationalization of artillery was a particularly vibrant, destructive site from which France intended to handle and contain its existential anxiety against the “Yellow Peril” during the global Cold War in Asia.

To trace the imperial character of the technoscientific foundations of weaponry, the article mobilizes essentially two sets of sources. It is based primarily on archival materials from the Indochina War preserved by the Service Historique de la Défense (SHD). These records, recently declassified by the French state since 2020, offer insights into the military and orientalized dynamics of the conflict. The article specifically focuses on the Vietnam campaign which, absorbing most of the French military resources, provides a rich context for exploring the articulation between technology, imperialism, and technoscience of killing. This research engages with the archives not as historical documents telling a factual political-military (operational) history but as reflections of the technoscientific-orientalist ideologies that shaped (post)colonial military practices. In the archives, I paid close attention to the explicit presence of orientalist dynamics. Artillery reports and assessments, for example, describe the Viet Minh using orientaling or paternalistic language—terms such as “indigenous,” “rebels,” or even animating metaphors—casting them as both a technoscientific adversary and a civilizational threat. The article also re-embed the archival material within a broader textual corpus, most notably officers' memoirs. From this angle, memoirs from the Indochina War provide particularly valuable insights, helping illuminate and contextualize the larger and more structural orientalism surrounding military technoscience. Memoirs offer access to the affective and cultural dimensions in the understanding of force by soldiers. These first-hand accounts reveal the extent with which military personnel internalized and enacted orientalized perceptions of the enemy, as well as how they made sense of the weapons they operated (Satia 2014; Woodward and Jenkins 2018; Dyvik 2016).

The article is structured in three parts. The first section theoretically formalizes my claim of the technoscientific-

orientalist articulation of weapons, by situating the study of artillery within the broader (critical work on the) family of modern lethal technologies and functions like airpower and targeting. Second, I explore the encapsulation of Indochina through artillery into the more structural global Cold War order in Asia from a technoscientific-orientalist standpoint, arguing that this dynamic was driven by the French Army's obsessive desire to maintain the dogma of artillery's validity acquired in the World Wars. The third part examines the technoscientific-orientalist operationalization of artillery at combat, focusing on battlefield transparency and the quantification of violence. I conclude by arguing that the articulation of military technoscience and orientalism severs war from strategy. The technoscientific-orientalist sense of superiority ultimately sustains a dangerous fantasy of domination that ends up in encouraging endless, sterile escalations and the sustainment of global inequalities and open horizons of violence.

Weapons, Imperialism, and the Technoscience of Mass Killing

The critical literature on weapons and imperialism has mainly studied the way in which the weapon, as a technological symbol of civilizational superiority, has produced orientalized hierarchies. Modern armaments were crucial in asserting the purported racial superiority of European powers and maintaining imperial order, either through the global circuits of the political economy of Western guns industries (Satia 2018), through more contemporary forms of arms control (Stavrianakis 2011), or through open violence. Armed with machine guns, air power, and artillery, European armies were able "to crush any rebellion against colonial rule and cut off the possibility of resistance" (Neocleous 2013, 582; Satia 2014) while minimizing risks to their own soldiers. Colonized populations were not considered worthy of soldierly sacrifices, reserved to the conventional confrontations among "civilized" nations. The literature also explores the extreme violence driven by technological fetishism. Italo Brandimarte (2023, 532) shows that the use of chemical weapons in the Abyssinian War was fueled by an overzealous belief in air technology's capabilities, mirroring the fascist ideals of Mussolini's regime. Likewise, Elisabeth Hull (2005, 67) and Pryia Satia (2006) demonstrate respectively that the German army's cult of technological superiority underpinned the genocidal rationale in the colonization of Southeast Africa, and that the British orientalized mystic of air power created the cultural conditions for the imperial policing of the Middle East in the interwar period.

Recent literature has significantly advanced our understanding of how weapons participate in global hierarchies of violence, illuminating weapons as objects with deep symbolic and cultural significance and tracing their role as vectors of imperial destruction. Building on these insights, there is room to further explore the technoscientific knowledge that gives weapons their military utility. Attending to this dimension can enrich our understanding of how orientalist logics operate, not only as reflected through violent technologies, but as articulated within the knowledge that produces them. Examining this articulation more largely helps guard against an implicit imaginary in war studies in which military technoscience appears as a separate domain, a kind of techno-world detached from imperial ideologies and motivations. In this spirit, the article proposes a complementary shift in focus: from weapons as imperial objects to weapons as dynamic materialities and knowledge of imperialism.

To comprehend this dynamic, we must examine the military sets of knowledge behind weapons, or what Antoine Bousquet (2009) names the *technoscientific way of war*, defined as "the attempt to impose order over chaos, to exert control where it most threatens to elude, and to find predictability in the midst of uncertainty" (10). Rooted in the rationalism of modernity and the industrialization of war, military technoscience has framed warfare, and ultimately victory, as controllable and predictable through abstraction and predictive modelling. Since the seventeenth century, Western military institutions have cultivated a scientific vision and rationalization of war shaped by geometric representations of the battlefield, cartographic planning, quantification practices, and simulations such as war games (Wasinski 2011). Weapons occupy a central place within military technoscience. They are integral to this scientific rationalization of war, designed, tested, and deployed as instruments through which control over uncertainty is achieved. Weapons are epistemic devices that help render the enemy knowable and the battlefield governable. Their design and deployment involve technical considerations and political decisions about who counts as a threat, what kinds of destruction are permissible, and how violence should be calibrated (Shah 2017; Ford 2020).

As Jacob Kripp (2025) unveils in the Korean War, operational research transformed racialized enemies into abstract problems to be rendered predictable, fusing racial and technoscientific logics. While sharing this concern with the intelligibility of racialized enemies through war technologies, this article proceeds to a double shift, the first being the focus from how war is modeled and imagined in research contexts to how violence is actually performed through weapons on the battlefield. This is not simply about race becoming knowable within military science, but about mass destruction being normalized and executed through the technoscientific/racialized articulation of weapons. This article excavates weapons as turning imperialism into a scientific routine of mass destruction, including in the shelling of villages, and how this violence contributes to stratify an international order based on technoscientific-racial superiority. Second, I argue that what is at stake is not only the orientalization of the enemy or the technoscientific control of war, but also the civilizational legitimacy of the weapon itself. Artillery's relevance as a symbol of Western military modernity is an object of technoscientific and orientalized anxiety. The fear extends beyond the ungovernability of the enemy to the weapon's ability to impose (imperial) order. The weapon became a site from which modern orientalized and technological hierarchies were both enforced and questioned.

French field artillery in Indochina offers a good illustration of how weapons' technoscience has long underpinned civilizational hierarchies in destruction. Although gunpowder originated in China, artillery was rapidly appropriated and transformed within Europe from the late Middle Ages onward, becoming deeply entangled with the rise of absolutist states and the consolidation of European military science. Over time, this process produced a distinct Westernisation of artillery. Its Eastern origins faded from view as the weapon became a cornerstone of European, and particularly French, technoscientific warfare. It was even more visible in the Napoleonic era. Napoleon, a former artilleryman, embodied a broader cultural faith in technoscientific superiority, and his reforms, like the standardisation of cannon types and the concentration of large batteries of guns over specific targets for decisive firepower, cemented artillery's place at the heart of the French military (Rothenberg 2000).

The nineteenth century entrenched this trajectory further. The industrialisation of Europe accelerated innovations

in metallurgy, ballistics, rifling, and breech-loading, while French colonial campaigns in Algeria, Madagascar, Tonkin, and the Opium War in China provided laboratories for testing artillery's capacity to overcome environmental and topographical constraints beyond Europe. The archival material I collected from colonial artillery reveals how officers perceived these lands in orientalist terms of mysterious natural environments that challenged and resisted the technoscience of the weapon, thereby viewing these campaigns as opportunities to expand the spatial limits within which their batteries could operate and fire, which inevitably led to reinforce the belief that technical mastery conferred civilizational authority.¹ The Franco-Prussian War of 1870 further intensified this mindset. Shocked by German advances in rifled and breech-loading guns, the French military concluded in their doctrinal debates that only greater reliance on destructive artillery firepower could avert future defeats.² By the early twentieth century and the maturation of the industrial revolution, aerial reconnaissance revolutionised artillery reconnaissance, and the First World War elevated artillery to an unprecedented scale of destruction. The industrialized deluge of fire on the Western Front, coupled with relentless innovation in calibres and shell types that aimed at breaking the front but ended up feeding the stalemate, became the modern culmination of the belief that technoscientific superiority guaranteed strategic advantage (Pomarede 2026). It is largely within this history that French artillerymen in Indochina interpreted their own role, repeatedly invoking the memory and authority of the Great War to make sense of their weaponry and to reassert a civilizational hierarchy they believed was inherent in technoscientific mastery.

Even though artillery has its own history, as I have just outlined, and even if artillery's historical imagery may differ from that other weapon systems—less romanticized than aerial bombing (Satia 2014; Brandimarte 2023), more entangled with the mud and horror of ground combat (Audoine-Rouzeau 2008, 255–257)—the logics it activates are not unique. Rather than treating artillery as an isolated or idiosyncratic form of military force or violent civilizational embodiment, it is more productive to situate it within the broader family of modern weapons, airpower, missiles, naval gunfire, and, more recently, drone-mediated strikes, all of which share the capacity to affect ground targets at distance. This wider constellation of weapon systems is governed by very similar technoscientific challenges: identification, mapping, ballistic calibration, quantification, and the reduction of complex human and natural environments into targetable entities.

A substantial amount of critical work on airpower, drone warfare, missiles, and targeting (Bousquet 2018; Kaplan 2014; Reichborn-Kjennerud 2025; Renic 2018) has established how such technologies and practices rely on abstractions that convert adversaries into grids or patterns that can be rationally managed and destroyed. Approaching artillery through this wider literature allows to clarify that its apparent ordinariness on the battlefield is not the exclusive product of the military unquestioned faith in their technoscience. The very

sense of technoscientific normality that surrounds modern weapons, or even military logistics (Attewell 2020) and bases (Vine 2011), should be more questioned as emerging from, and shaped by, imperial histories of violence. This is why it is all the more important to question the technoscientific/civilizational nexus of weapons (Renic 2026). What is ultimately at stake is determining the depth to which imperialism has sustained and perpetuated the use of arms. If weapons have been so closely intertwined with imperialism, it is because the civilisational claims surrounding their violence has been supported by the technoscience of war. The point here is precisely to argue that imperial experiences enabled the scientific consolidation of the value of weapons and of their violence, which facilitated their use and expansion across the globe. In other words, the relationship between arms and imperialism is not simply a matter of civilizational justification, but also a process of technoscientific validation through which weapons—Western weapons in particular—are affirmed as effective means of mass killing regardless of the terrain on which they are deployed. And orientalist claims were in support of this technoscientific drive of the weapon. Ultimately, resisting the violent excesses of imperialism requires challenging the very technoscientific practices that underpin war, weapons, and which give material and technorational sense to orientalist and racialized forms of domination.

In our case, it means that artillery became “normal” within modern warfare because imperial contexts rendered mass destruction thinkable as a disciplined, civilized, and rational military activity. Indeed, the military debates that have shaped heavily orientalised theatres of operation—whether in Algeria, Vietnam, Afghanistan, Iraq, or lately Gaza and Iran—are filled with technical discussions about the constraints that dense urban environments, rural valleys, reliefs, or vegetation impose on weapons employment. These concerns about observation, calibration, circulation, the obsessive quantification of strikes and air sorties, and the presumed “opacity” of indigenous environments closely mirror the debates that unfolded in Indochina around the use of artillery. Therefore, French artillery in Indochina is taken as having the potential to exemplify a larger dynamic: its practices were embedded in imperial anxieties about terrain, population, and the enemy, while at the same time reinforcing technoscientific modes of knowing and striking the battlefield that recur across a wide range of weapons. While considering its own history is important (and especially its mystified relationship with the trenches of the Great War as we shall see), situating artillery alongside adjacent weapons and military functions demonstrates that what emerges is not an artillery-specific pathology, but a broader making of modern mass killing in which orientalist distinctions are continually reproduced and operationalised through the technoscientific, rationalizing knowledge embedded in the weapon itself. Seen in this light, artillery becomes a representative entry point for understanding how weapons and imperialism co-produce one another across diverse wars and types of targeting. Extending this line of inquiry to other weapons would make it possible to grasp the broader contours of this dynamic and appreciate the full scope of the phenomenon.

As a consequence, and in terms of conflict, the Indochina War offers an interesting case to explore these dynamics for two reasons. First, this conflict was openly racialized, fought by a European colonial power seeking to reassert control over a colonized population that declared its independence. French political and military elites framed the war as de-

¹A detailed discussion of these archives would exceed the scope of this section, but I can indicate some of the key artillery collections held at the Service Historique de la Défense in Châtellerauld: GR3W219-220 (Algeria), GR3W183 (China Expedition), and GR3W221 to 223 (Madagascar, Tonkin, Morocco).

²See the discussions within the artillery services from the 1900s up to the eve of the First World War, which were driven by the need for greater artillery firepower following the defeat at Sedan. Collection GR2W96 to 99.

fending civilization against Asiatic barbarism and communism (McHale 2009; Barder 2021: 157). The second reason relates to the orientalization of the conflict through artillery, and the Cold War order in Asia more generally. This is crucial, not just for showing how weapons support orientalism, but because it demonstrates that the technological relation of war with imperialism is in no way linear but made up of resistance and stabilization. The article shows that this contingency manifests in the technoscientific institutionalization of an anxiety about the inferior Other defeating the civilized Self's technological superiority.

Exploring this friction starts with noting that the military value of artillery as a central weapon in bringing victory, or at least successes, in war, largely theorized in the open battlefields of North America and Europe, faced challenges in Indochina. Embedded in the complex human and topographical horizontality of ground combat, artillery was ill-suited to counterinsurgency campaigns in forests, mountains, deltas, rice fields, and villages. Making Indochina a militarily thinkable terrain for artillery was not self-evident, and seeing the historical efficacy of artillery under so much stress against "the Viet" created military and racial anxieties. The French army's relentless effort to export the continental validity of artillery's violence was hindered by the orientalized Viet Minh. As Barkawi and Stanski argue, "orientalist constructions are profoundly vulnerable to war's contingencies [. . .] But a war characterized as occurring between East and West always threatens to blow up categories of meaning. Its events are likely to challenge and destabilize even the most adroit and flexible frames of interpretation [. . .]. The dependence of the definition of the self on that of the other is a key vulnerability exploited by such battlefield upsets" (Barkawi and Stanski 2012: 10). The potential ineffectiveness of a weapon central to industrial wars amongst the most technologically advanced nations against an inferior enemy was lived as an imperial anxiety, endangering a military order based on technoscientific superiority. It is through this friction that the orientalized function of artillery is visible. The prospect of artillery failing against the Vietnamese insurgency sparked fears of civilizational inversion: the West's prominent rational instrument of destruction rendered useless by the Asian-Communist Other.

In Indochina, the French attempt to reassert artillery's efficacy was not just a tactical necessity but a technoscientifically supported orientalized effort to reaffirm Western superiority against the "yellow peril," a mythological portrayal of the Viet Minh as an existential threat to Western civilization (Barder 2021: 157). Increasing the use of artillery fire over the course of the war, the French military transformed the Indochinese terrain into targetable sectors and Viet Minh fighters into killable abstractions. Through technoscientific artefacts such as fire tables, geometric visualization, and quantification of enemy eliminations, artillery supported the attempt to (re)stabilize France's status as an imperial power. This technoscientific-orientalized making of an unthinkable artillery defeat enabled the normalization of counterinsurgency violence and global hierarchies. The technoscience of artillery violence supported the orientalization of "the Viet," framing the struggle as upholding Western civilization against Asian communism during the global Cold War. Artillery bombardment drove the French attempt to militarily control the physical terrain and the oriental conception of the East, structuring the conflict in terms of military logic and the civilizational hierarchies of the Cold War world order.

From the Somme to Tonkin: Artillery, the Asian-Communist Mysticism and the Troubled Cold War World Order

This section explores how the technoscientific-orientalist making of artillery in Indochina enacted the global Cold War order in Asia. This dynamic of ordering was deeply embedded in the World Wars' legacy on French artillery in Indochina. The European World War battlefields profoundly shaped artillerymen's views of their operations in Indochina. Among all the records consulted, only one mentions the deployment of colonial artillery since the nineteenth-century Indochina conquest. The World Wars, especially WWI, were considered a pinnacle of "brutality" (a term frequently emphasised), embodying a level of violence desired but unattainable in Indochina. In the lessons from the Black River battle between December 1951 and January 1952 in Hoa Binh, a North Vietnamese artillery commander explained: "The violence of the attack requires firing at a European rate, density, and consumption. The supply must therefore not be less than [. . .] six hours of fire" (C.F.T.N.V. 1952, 2). For the commander, linking Indochina to European artillery warfare was integral to the notion of brutality:

"I - Artillery seeks to destroy enemy personnel and military assets.

On personnel and on any moving target, the most considerable effects are obtained by sudden and brutal fire, taking the enemy by surprise and destroying him before he has time to take cover or avoid capture.

To ensure surprise, it is important that these shots be fired from the outset. Their brutality results from the concentration, on the same target, of the greatest possible number of guns discharging a large series of projectiles in a very short time.

II—To achieve as brutal a concentration as possible, it is therefore necessary to use several artillery units [. . .]. The brutality of fire is a necessary condition to their effectiveness, particularly in this country where the enemy knows how to use the terrain in a very short time. (Colonel De Winter 1954, 3)

This extract shows a deep and unshakeable belief in artillery's military value. Because artillery hit so hard, and such "brutality" necessarily produces palpable effects on the enemy as demonstrated in the interstate deflagrations of the World Wars, it was bound to work in Indochina against an insurgency. The belief in the military value of artillery was not linked to the weapon's violence alone, but to its technoscientific rationality, according to which this brutality is efficient only if following a series of parameters. De Winter's words illustrate that the military value of the weapon's brutality, that is, its ability to secure a victorious outcomes in combat, derives from the knowledge that rationalizes this violence through considerations of time, concentration of fire and target numbers. The faith placed into the military effects of artillery's calibrated brutality appears as even more entrenched and unquestioned that De Winter's report dates from 1954, the year of the French defeat after 8 years of military action that led to a deadlock. The structuring reference to the Great War is decisive. As Sinisa Malešević explains, modern weapons like machine guns or artillery during WWI "was a potent symbol of the new industrial era—a mass-produced and highly efficient industrial weapon created for mass slaughter. Its quintessential modernity was emphasised by its alienating and dehumanising character, [. . .] with quantity of death surpassing quality of fight" (Malešević, 2010:127). The Great War having established the relationship between mass destruction and military effectiveness, its

application to reorder the coloniality of Indochina seemed suitable.

I suggest that these technoscientific considerations fostered imperialism. The military could not conceive that the inferior Viet Minh could defeat the supremacy of artillery. This impossibility of thinking the defeat of artillery came with orientalist friction and fear. As such, the technoscientific foundations of artillery was as much a source of orientalist anxiety as a rational epistemological foundation that allowed to handle and canalize this imperial anxiety. For General Raoul Salan, Commander of the French Expeditionary Corps between 1952–1953, the “mystique of the Viet Minh” (1971, 320) was the key threat to French artillery. Salan’s comparison to Verdun expressed the French colonial anxiety that a culturally inferior enemy, driven by fanaticism and using rudimentary materials, could undermine France’s modern artillery:

“The [. . .] Viet Minh is, in my opinion, the most formidable adversary the French have faced since Verdun. He is stronger than the Germans because it combines quality with an active and fanatical mass. [. . .] This worries me as the dry season arrives because the attacker [. . .] is going to rush into our system [. . .]. Day and night, [. . .] the Viet Minh soldier tirelessly rehearsed the silent approach, the continuous dynamiting of the network, and the attack on the blockhouse by leaping after the bazooka blasts. He learned to use a woven straw shield called *pozit*, which protected him from our artillery shrapnel, and a woven bamboo shield called *caiphen*. These devices are pushed as close as possible to the post [. . .] to limit the effects of our artillery. [. . .]” (1971, 326).

The association of the Viet Minh with fanatic Asian masses armed with rudimentary weapons typified the “Yellow Peril” during Cold War conflicts involving Western powers (Kripp 2025). In Salan’s words, this orientalizing was refracted through artillery, seen as limited due to the Oriental way of war, comprising fanaticism, mysticism, and human masses. The limits of artillery’s brutality symbolized a troubled world order, where inferior Asians could counter modern organized violence—artillery fire—as effectively as a technologically advanced nation like Germany during the Great War.

Salan’s perception of the Viet Minh underscores the importance of enmity in assembling the weapon, imperial orientalism, and the technoscientific. The transformation of the Viet Minh army with support from Communist China is noteworthy. Before 1950, the Viet Minh used basic equipment, avoiding direct confrontations. After receiving Chinese military aid, the Viet Minh modernized, adopting a more formal structure. They maintained guerrilla tactics while launching large-scale assaults, with failures such as in Na San, and successes at Cao Bang and Dien Bien Phu. The Viet Minh’s military reinforcement destabilized the military value of artillery, leading many officers to recognize parity between the two armies. This destabilization was more ontological—referring to the distribution of military resources—than epistemic. The former pertains to perceiving the Viet Minh as a conventional rather than an irregular force, while the latter involves the orientalist identification with the Other. The Viet Minh became a strategic competitor through its military conventionalization but remained culturally distinct and dangerous.

This *orientalist conventionalization* of the enemy through artillery had two key sources. First, artillery’s effectiveness was beyond doubt. Recognizing any unique aspects to the Indochina conflict would have contradicted the belief in the cultural superiority of advanced technological force, as demonstrated on European battlefields of the World Wars.

As De Winter explained: “Whatever the specific conditions of operations in Indochina, a certain number of principles for the use of artillery are no less intangible: they have existed for all times and in all countries. Failure to observe them considerably reduces the efficiency of the Army [. . .]” (Lieutenant-Colonel De Winter 1953, 1). If the Viet Minh army was modernizing, the brutality of artillery was even more relevant due to its effectiveness against regular armies. This maintained the belief in Western technological superiority. Confronting a stronger army required military maneuvers resembling earlier twentieth-century European battlefield practices, which stabilized the French army’s faith in its military-civilizational superiority against a still culturally inferior enemy. Paradoxically, the Viet Minh’s modernization after 1950 both heightened and contained French imperial anxiety, as reflected in General Salan’s 1952 instructions to artillery corps. While acknowledging the challenge posed by the Viet Minh mystical masses to artillery as seen before, he stressed that the weapon could produce better results on this militarily transformed enemy:

“This year, we saw an increase in the number of large-scale confrontations with the Viet Minh, who, thanks to the support of Communist China, proclaimed two years earlier, now had substantial military resources. The sense for mass action was lost for an entire period, when artillery could not play its traditional role in a form of warfare that was more guerrilla than pitched battle. Changes in the form of combat, particularly during 1951, meant that artillery had to return to the normal, rational use of an instrument of force, which is only fully effective when efforts are concentrated on a limited point of application.” (Commandement en chef en Indochine—General Salan 1952, 3)

Second, the belief in artillery’s brutality was embedded in the wider geopolitical and orientalizing confrontation structuring the global Cold War order. Leveraging the Cold War context and the risk of Chinese intervention threat in Indochina, France redefined the conflict as a messianic battle against communist expansion in Asia to gain US military support. During his command of the French Expeditionary Corps (1950–1951), General De Lattre appealed to the US for additional artillery guns, shells, logistics, and radio communications, emphasizing the crucial need for superior firepower and technology to defeat the Viet Minh (1988, 340; 366). As De Lattre repeatedly emphasized in his US tours, “the Korean War, the Indochina War, it’s the same war, the war of Asia” (1988, 340). The US military aid reinforced the technoscientific-orientalized articulation of French artillery warfare in Indochina and its encapsulation in the larger “war of Asia” during the bipolar era. This support was not only about getting more lethal means. It was also about the military knowledge structuring these means on the battlefield, which was to be improved thanks to the US backup in reconnaissance techniques, targeting and the ways to better concentrate fire.³ In other words, the US support bolstered the French belief in Western technoscientific advancement as a critical solution to defeating the obscurantist forces resulting from the connection between the “weak,” “monkey-like” Indochinese mentality with the communist totalitarian project (De Lattre 1988, 36; 345–352). As Alexander Barder observes, the Viet Minh’s (and later Viet Cong’s in the American Vietnam War) Asian mysticism was seen as even more threatening culturally and militarily by Western powers, because heightened by superior equipment and communist ideology (2021, 155–157). It echoes De Lattre’s vision of “the Tonkin, irrigated by Chinese support, as

³See, for instance, the SHD series “Aide américaine” in the Indochina War records (GR10H1824 to 1829).

a keystone of the defence of South-East Asia [and] one of the fronts of the Free World” (1988,384). Artillery bombardments became a focal point for militarily defeating the Viet Minh and in the operationalization of the Cold War order, positioning French artillery as key in defending Western civilization against the Eastern existential threat. The US aid in artillery was the material embodiment of a civilizational solidarity in a global East–West contest characterized by “a close interdependence [. . .] between Europe and the Far East. [. . .] I am convinced that by stopping the spread of Communism in Asia, we can delay the conflict that threatens Europe” (1987,180).

Having explored artillery’s technoscientific-orientalist encapsulation of Indochina within the global Cold War in Asia, we now need to understand how this ordering emerged from violence on the battlefield.

The Imperial Operationalization of Artillery: Battlefield Transparency and the Quantification of Violence

In terms of military operationalization, artillery was first integrated into the technoscientific-orientalist ordering of Indochina through battlefield transparency. Spatial transparency is vital to Western warfare. Daniel Oberg notes, “the military architecture arguably displays an obsession with rendering space and time visible through authority and control. Typically, when a military force is deployed, it establishes a whole life-world [communications, weapons, logistics, etc.] along with it” (2016, 1140). This imperative has long structured not only artillery but the broader family of modern weapons, airpower, missiles and drones, that depend on making enemy space legible enough to strike. As Bousquet shows in *The Eye of War* (2018), Western warfare is saturated with attempts to conquer the friction of terrain and human unpredictability through the development of means of mapping and visualization (like photographic air reconnaissance during the Great War or sensors more lately) that promise a transparent and governable battlespace. Artillery in Indochina thus participated in the same technoscientific drive than in later operations in Algeria, Vietnam, Afghanistan, Iraq, Gaza, and Iran, where forests, jungles, mountains, rural villages, and densely urbanized cities have been repeatedly conceived as environments that resisted transparency and therefore demanded intensified means of surveillance and targeting technologies. Seen in this broader light, artillery’s integration into French operations was not unique but part of a broader Western effort to transform opaque colonial or “oriental” terrain into a visible and strikable battlespace. Indeed, artillery in Indochina is part of this obsessive desire for transparency. Its mystified brutality was largely validated and theorized by Western forces in conventional theatres where the fairly open visibility of the confrontation allowed reconnaissance techniques to expand (Bousquet 2018, 126–127). Indeed, artillerymen often cited the Great War as their visual ideal due to the horizontal clarity of the no-man’s land separating the trenches, allowing for acute observation of the shells’ physical impacts. In an annual report, the Commander of artillery in North Vietnam concluded: “It is certain that the action of the Artillery mentioned above is resolutely exceptional. [. . .] It [this example] took the Artilleryman back to the best days of 1914, to the happy era when the Captain Commander, mounted on his caisson [. . .] could himself see the results of his shots” (Colonel De Winter 1953, 4). The situation strongly differed in Indochina. French artillery corps were frustrated by the region’s complex topog-

raphy (dense forests, deltas, mountains, villages) and enemy’s fluidity:

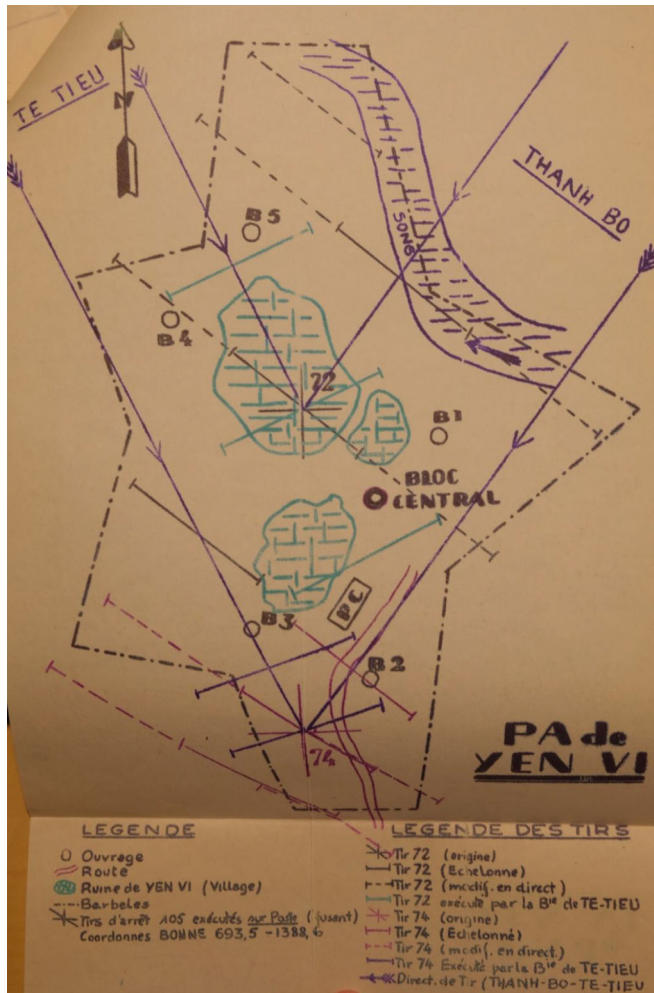
“The originality, if any, of the Indochina War came from the terrain and the enemy. [. . .] The terrain in Indochina is tyrannical for the artilleryman in terms of observation, which is paralysed, and the movement and deployment of batteries, subjects to imperious limitations. [. . .] But, above all, what we have not yet experienced in a European war is the character of surface war [*“guerre en surface”*] that the Indochina campaign possesses to the highest degree. The enemy is everywhere, there is no rear position, no safe route. . . [. . .]” (Colonel Durand 1954, 3–5)

These difficulties in militarily ordering the Indochinese environment in contrast again with the nostalgia of the Great War—this mystified visual archetype—heightened civilizational anxieties about the limitations of modern weaponry. The technoscientific tension in artillery spatiality was also cultural. The Viet Minh’s fluidity that limited the brutality of artillery was both technoscientific and orientalized. The French military used the “yellow wall” metaphor to express the futility of deciphering the Asian adversary (Cadeau 2013, 245) and difficulty in getting intelligence on Viet Minh locations for artillery strikes. The Viet Minh Other embodied this “mythology of Asian inscrutability,” integral to the Western colonial psyche (Said 1979, 52). This technoscientific-orientalist convergence of artillery extended to identifying enemy forces with animals. Associations of the Viet Minh with ants, wasps, or flies were widespread metaphors in the French Army, especially regarding artillery’s action due to difficulty of massing fire against an animal-like agile enemy fighting from its natural environment (De Brancion 2002, 126). The enemy’s guerilla everywhere-ness was as much perceived as a military technique as an orientalized animality. For Colonel Paul Vanuxem,

“The enemy’s onslaught [*“déferlement”*] was like an anthill. They came from everywhere, a hundred meters away, fifty meters away, ten meters away, right into the middle of our ranks. They were always coming out from behind every stone, every bush, as if from nature itself [. . .]. They were like insects charging from all sides, screaming, blowing their trumpets; we did not know who to fire. It was a deluge of murderous ants” (quoted in De Latre 1988, 99–100).

In the same vein, Commander Marcel Bigeard explained about the operations in Tonkin that “pounding the Viet was like using a sledgehammer to hit a fly!” (1994: 41), suggesting the difficulty faced by French artillery against the animal agility of the enemy. By likening the Viet Minh to relentless insects, French artillery reinforced the orientalization of the war in Indochina as a battle between Western civilization and an animalistic foe. Artillery strikes were the technical response to the technoscientific-orientalist opacity of the battlefield. The brutality of shelling served to illuminate the enigmatic foe. Beyond combat, bombarding was a technoscientific-orientalist catalyzer of revelation. Shelling sought to make the mystical inscrutability of the enemy comprehensible to the Western war technoculture. Fire concentration maps fueled this lethal desire for transparency. Saturating areas with shells forced it into visibility under the technoscientific gaze, uncovering insights into the terrain around French soldiers. This diagram depicts ten distinct ballistic types of shots fired around the Yen Vi outpost (PA) in November 1953 during a Viet Minh attack (Colonel De Winter 1953). In De Winter’s words, the translation of artillery shots into geometric diagrams “made knowable what was usually not.” Shells were to “breach,” “get to know” the Viet Minh inscrutability:

PICTURE



Despite doubts among the French artillery corps about the effectiveness of their bombardments, shelling remained an unescapable horizon: “It is not easy to assess the results obtained; the C.R. of activities mention: “goal achieved,” “V.M. dispersed,” “corpses on the ground,” “automatic weapon neutralised,” “attack stopped.” Most of the time, we do not have the opportunity to go and see the effects of our fire. [. . .]. If I have succeeded [. . .] in proving that artillery knows how to adapt to such circumstances and in giving the certainty that, despite the difficulties, it can be useful, I will have achieved my aim” (Lieutenant-Colonel Crespin 1949, 36–37). Officers also reported to order massive fires without even knowing what their units were shooting at (Chef d’escadron Ephère 1952, 2). It was especially the case for the harassment and interdiction missions, which refer to continuous or sporadic fires aimed at disrupting enemy activities, lowering morale, and inflicting casualties. Such missions, not performed on clear military objectives of destruction but on areas where the enemy was supposedly present, were the object of critiques by French high command. Despite their central place in the war, these shots—“missing their target 9 times out of 10” (Chef d’escadron Bas 1949, 19)—were considered as wastes of ammunitions due to their uncertain results and the overall impossibility in the Indochinese terrain to observe the direction and targets of fire.

Despite such uncertainties, the cultural belief in the superiority of advanced technologized force remained irremovable and fed the sustinment of this violence. The Orientalized dehumanization of the Viet Minh was central to the

belief that, even if the bombings had little effect, their psychological impact could still justify their execution. Artillerymen valued and desired the power of guns against the “Asian indigenous” (“*indigènes asiatiques*”), reputed in the French army for yielding only to force and fearing shelling (Colonel Gonnet 1948, 13). The animalistic metaphor was again decisive. The explosive power of shells and “all-out fire” (“*tirs tous azymuts*”) technique of harassment and interdiction actions were seen as desirable solutions to stop waves of “swarming Viets” (“*Viets grouillant*”) which “infested” and “rot” (“*pourris-sent*”) the terrain surrounding French soldiers and defenses (Brancion 2002, 139–142; 160). Firing, even if strategically ineffective, was valid due to the enemy’s perceived animality. His animality and fanaticism deprived him of reason (Salan 1971, 321–322), so the only option was to pound him, and artillery brutality catalyzed this desire for imperial reordering. “The Viet” was culturally dehumanized by artillery from three perspectives: his fanatical Asian character, totalitarian communism, and primitive animality made him triply predisposed to accept submission to colonial rule only by brute force. Since bombardment targeted sub-human animalized creatures, it had to have impact, at least at the primitive psychological level of imposing submission through brute force. Bombarding was a means of confrontation, acquiring knowledge throughout the opaque battlefield, and asserting the cultural invincibility of Western violence. Destructions are critical aspects of imperial anxiety, which

“emerges here from the recognition that the target, somehow, might not get it, might not quite understand the meaning of your violence. You punch. You pummel. You blast. You bomb. And you desperately, desperately, want the other to understand, to at least acknowledge what you are doing to them as you intended it for them. [. . .] However extreme its violence, colonial power awaits, apprehensively, an interpretive validation from the other.” (Pham and Muppidi 2012, 112)

Artillery also generated a technoscientific-orientalized sanitation of violence through quantification. Modern artillery is intimately linked to quantification, particularly since World War I. With the industrial deluge of energy on the battlefields of the Great War, quantification became a central political-military grid of intelligibility. During my research in the Great War and Second World War archives in both France and the United States, I found that artillery, both conventional and chemical, was saturated with quantitative debates about how many shells should be fired, how many were actually expended and how many targets had been hit. It is largely through these indicators that success in these wars has been assessed. And similar quantification practices have permeated other forms of targeting: the Vietnam War’s infamous body-count system that treated the amount of killing as a metric of progress, including in the heavy use of artillery strikes (Turse 2013: 90–93); NATO’s 1999 Kosovo air campaign, where the success of the air war was measured through the number of Serbian targets struck and sorties flown (Rowe 2000); and recent US–Israel war in Iran, publicly discussed and exposed in terms of munitions expended and the quantity of civil-military infrastructures degraded (US Department of War 2026). Across these cases, quantification acts as a technoscientific rationale that abstracts violence into measurable outputs and thereby transforms war into a managerial activity governed by metrics. Artillery thus exemplifies, but does not monopolize, a broader technoscientific dehumanization that frames destruction as data, rationalizing lethal force through presumably objective numbers (Lindee 2020). This practice of quantification persisted in Indochina. As in the Great War for instance, a substantial proportion of archives regarding artillery corps in In-

dochina comprises reports detailing the quantitative dimensions of combats. The effectiveness of artillerymen's actions was largely expressed in quantitative terms, whether in shots fired or damages caused to Viet Minh ranks and installations. An operational report by an artillery corps in North Vietnam details a Viet Minh ambush in Bao Yen:

"11 DECEMBER 1951

AMBUSH [. . .] OF BAO YEN

1) A convoy [. . .] going from TRUNG-HA to TU-VU and transporting ammunition to the 3rd battery of the GACAOF [. . .] falls into a very large ambush set up by the V.M. [. . .].

V) ARTILLERY ACTIVITIES:

1) Types of shots fired

- Automatic weapons neutralisation shots
- Shooting at personnel
- Shots fired at entrenched personnel

2) Consumption

- 2nd GACAOF battery: 317 shots

3) Results

- Rebel losses:

57 fresh graves were found in the village.

About a hundred killed (confirmed by later information)." (*Chef d'escadron Cormery 1952*, 28)⁴

An extensive body of literature underscores the importance of quantification in asserting the power of the modern state (Davis et al. 2012) and imperial domination across various domains, including accounting, trade, taxation, and health policies (Woodward and Jenkins 2018; Marsden and Crosby 2005; Kripp 2025). The quantification of the living is not reducible to imperialism, but it has an imperial genealogy: from its deployment in colonial fiscal regimes to its use in measuring, classifying and disciplining subject populations, quantification has functioned as a tool through which empires rendered foreign territories legible and governable. It provided imperial administrations with numerical abstractions that transformed complex social realities into governable entities, reducing human beings to statistical categories, erasing their individuality and humanity. Therefore, quantification obscured, silenced the lived realities of colonized populations, dehumanizing them and presenting them as objects to be managed, rather than as individuals with agency, which contributed to objectify and naturalize, under the guise of neutral numbers, the civilizational hierarchies of imperialism (Brennan and Power 2022). Following this line of thought, and in keeping with the article's aim to sketch an imperial history and role of military technoscientific knowledge—here of quantitative practices in particular as outlined in the previous paragraph—the argument here is that the technoscientific dehumanization in artillery quantification in Indochina connected to the orientalist dehumanization of the Viet Minh, reproducing their visualization as an undifferentiated mass to be obliterated, stripped of individuality or humanity. In other words, imperial quantification was also military. The orientalist perception of the Viet Minh as a subhuman mass was mirrored in the technoscience of violence, where their presence was measured through the impersonal tallies of artillery rounds and destruction. As shown in the report extract on the Viet Minh ambush in Bao

Yen, behind the sanitized figure of enemies killed in artillery science, lied the faceless "rebels" to the civilized order.

Such processes of quantification reinforced the ontology of the Viet Minh as faceless, expendable, and indistinguishable from its environment, enabled and reproduced through the brutal application of artillery. This technoscientific-orientalist dehumanizing process began early in the Indochina War, starting with the indiscriminate shelling of Haiphong and Hanoi by naval and field artillery between November 1946 and February 1947. The bombardments aimed to crush the burgeoning anticolonial rebellion following Ho Chi Minh's declaration of independence of Vietnam in September 1945. Both sieges caused thousands of civilian deaths and razed entire portions of the cities (Bénot 2005: 101). Artillery's violence constituted an appealing and imperial repressive force, as shown in the top military commanders' vision of the strikes. For Georges Thierry d'Argenlieu and Admiral Jean Valluy, respectively High Commissioner of France in Indochina and Commander of French forces in the Far East, the bombardments were meant to "reinstatate order" by "teaching these traitors a lesson" (quoted in Bénot 2005, 100; D'Argenlieu 1985, 353), reflecting a common imperial tactic of escalating violence to collectively punish and crush immediately any opposition to colonial rule (Benton 2024, 149–151). Operational reports mention the effectiveness of artillery firepower against the "indigenous elements" (*éléments indigènes*) who were "roaming" (*rodaient*) the city (Lieutenant-Colonel Pourdieu 1947). This brutal, orientalized attempt at the colonial reordering of Haiphong and Hanoi was based on quantified violence, transforming the population into an amorphous mass, translated into numbers of shots fired, destruction carried out and executed. In his *Enseignements à tirer de la participation de l'artillerie aux opérations actuelles en Extrême-Orient*, Lieutenant-Colonel Pourdieu stated:

"Battle of Haiphong:

In general, the targets were treated simultaneously, with each battery being assigned its own target. The fuel consumed was relatively high given the gas generally consumed in Tonkin. The 1/R.A.C.M. fired 644 rounds on 23 November, 501 rounds on 24 November and 923 rounds on 25 November. But the results were stunning: Haiphong was cleared in 4 days.

Battle of Hanoi:

The operations to reduce the Sino-Vietnamese district of Hanoi [. . .] also involved the use of significant artillery resources. On 14 February 1947, the operation [was] to clear and clean up the southern part of the indigenous city. [. . .] Firing lasted from 6.30am to 9.30am; [. . .] each battery [. . .] was allocated a block of houses to destroy. [. . .] A lot of shots were fired: 188 rounds of 102M2, 120 rounds of 155, 142 rounds of 105M3. [. . .] The results were eloquent: on the night of 18 to 19 February 1947, the last defenders in the Sino-Vietnamese district gave up the fight and we occupied the entire indigenous city." (Lieutenant-Colonel Pourdieu 1947, 2–3)

The shelling of Hanoi and Haiphong inaugurated the deployment of the technoscientific-orientalist dehumanizing desire to reorder Indochina, illustrating what Italo Brandimarte also identifies in the Italian chemical bombing of Abyssinia in 1935–1936. For Brandimarte, "processes of racialization are not limited to the 'dehumanization' of abject bodies, but also involve the dispossession of experience and its detachment from the category of the human. [R]ace [. . .] is also vaporised and coded within [military] dynamics" (Brandimarte 2023, 546). From Hanoi and Haiphong to further operations, artillery in Indochina paralleled the Orientalized dehumanization of the Viet Minh, framing their resistance as a chaotic force to be obliterated (or punished) through quantifiable violence.

⁴All words in capital letters (often section titles) are original.

The bombardments of Haiphong and Hanoi also suggest that the technoscientific-orientalist ordering of Indochina through artillery emphasized precision and the quantified economical use of force. The development of artillery firepower in the early twentieth century led to reflections on its rational use. Western armies, particularly the French during the Great War, conceived artillery efficiency as ensured by precise, ammunition-conserving concentrations rather than dispersed deluges of fire (which did not prevent the persistence of harassment fire, less economical but with a psychological aim) (Strachan 2012, 116–117). Modernity has made artillery even more desirable that it was poised to harmonize large-scale destruction with the rational cults for accuracy and calculated munitions expenditure. These principles persisted in Indochina:

“A—ARTILLERY IS THE WEAPON OF POWERFUL, WIDE AND DEEP FIRE

POWERFUL refers to the quantity of explosives that can be fired on a target.

WIDTH and DEPTH qualify [...] the surface of fire [...].

Using artillery for objectives that do not require power [...] is wasteful [...].

B—ARTILLERY IS THE WEAPON OF BRUTALITY

[...]

The neutralising effect [...] depends on the surprise and the density of explosives. [...] It is therefore recommended [...] to set fires covering the entire target, with instantaneous density.

C—ARTILLERY IS THE WEAPON OF PRECISION

[...]

Precision covers all areas of shooting:

- definition and exact location of the objective [...].

Precision [...] will make it possible to obtain [...] a BETTER RENDER OF THE WEAPON.” (Lieutenant-Colonel De Winter 1953, 1–4)

Therefore, as this extract suggests, the technoscientific quantification of artillery did more than portraying the Viet Minh as an anonymous, undifferentiated mass to be annihilated. It also operationalized violence in a way framed as economic and rational, reinforcing the perception that the Western rational way of war could subdue the chaotic, irrational and terrorist Asian Other (Labrousse 1996; De Lattre 1988, 54). The shelling of villages was crucial in this quantitative reproduction of the racialized reordering of Indochina. Often seen as backward and resistant to modernization in the French colonial psyche, villages became symbols of a primitive, uncivilized way of life (Ministère de la Défense nationale 1950, 133), and, as such, prone to adhere to the Viet Minh totalitarian propaganda (Labrousse, 1996) By framing the village and Viet Minh this way, the French reinforced an orientalist imaginary, portraying the conflict as a civilizational struggle between the enlightened West and backward East. The shelling and burning of villages were often accompanied by this mixture of military considerations relating to the territorial and social entrenchment of the Viet Minh in the local communities and their orientalized visualization as mysterious and backward entities (Ainley 1955, 30–31; Bergot, 1977: 125–127; Ely 2011 [1954], 81–82, 127–135). From this perspective, artillery’s role in village destruction was framed as an economic and rational response to Viet Minh’s regressive hold on villages.

The drive to use force “economically” by quantifying every aspect of artillery’s violence was a deeper affirmation of the Western belief in scientific control, a means of reasserting civilizational authority through the rationalization

of destruction. The village, in this view, was a symbol of resistance to Western modernization, further feeding and enacted through the rationality of quantifying bombardments against both collective infrastructures and inhabitants. The bombardments of Haiphong and Hanoi were the first episodes of this process. Lieutenant-Colonel Pourdieu’s lessons clearly demonstrate the economic obsession within artillery. The numbers, in gas and ammunitions spending, reflected a profitable balance between resources used and the “stunning” (Haiphong) and “eloquent” (Hanoi) results obtained against the “roaming indigenous.” What happened in Haiphong and Hanoi at the very beginning of the war was about to spread all over Indochina, both in terms of indiscriminate shelling and of rationalizing such force through quantification. Within days, artillery units could fire hundreds of shells at villages inhabited by civilians and (suspected) Viet Minh elements, targeting also rice fields and supplies vital for the regional socioeconomic life and food subsistence (McHale 2021, 190–191). As General Chassin bluntly explained, the “only solution [...] in this colonial war was [...] to starve people to death,” “by destroying all the rice of Indochina” (1956, 139). For example, artillery units were ordered on January 6 and 7, 1953 “to completely destroy a series of villages” in Tonkin (Lieutenant-Colonel Gavet 1953, 2). The final report states: “On January 7, from 9.15 am to noon, 692 rounds were fired at the village of Phung Thon (117J1) [...]” (Lieutenant-Colonel Gavet 1953, 3). During the seventeen days of *Opération Dromadaire* (April 28–May 15, 1952, in the Red River Delta), French field artillery fired 12,924 shells, with daily peaks of more than 1,900 shells, on villages and rice fields (Lieutenant-Colonel Prigent 1952: 11). Shelling sometimes caused major fires, such as in Hoang Xa (in the North of the Black River region), where French artillery fired over 120 rounds between 3 pm and 5 pm on 31 December 1951 (Chef d’escadron Cormery 1952). These types of after-action reports, systematically accompanied by fire tables detailing the number and types of shells used, and the destruction inflicted per target coordinates, illustrate how quantification transformed artillery strikes into a rationalized method of warfare that supported orientalist tropes. “The rebel” was a central and omnipresent category of meaning amidst these quantification procedures of shelling villages. On one side, it served to flatten distinctions between combatants and civilians, legitimizing indiscriminate shelling through a quantitative grammar that reproduced the orientalized association of the village with the Viet Minh anticivilization project. On the other, the “rebel” helped to make sense of the village through the Western technoculture of war, by discussing the quantitative parameters of artillery fire that would optimize the elimination of the Viet Minh’s territorial entrenchment. In other words, the quantification of villages under fire simultaneously enacted an orientalized punishment against communities (suspected of) harbouring Viet Minh communists, and rendered this violence intelligible within the technoscientific logic of war. By turning villages into numerical targets associated with the “rebels” to French colonial enterprise, artillery fire became an economic and civilizational response to the terrorist Other.

From Indochina to Gaza and Tehran: on the Weapons’ Engineering of Imperial Devastation

The aim of this article was to deepen our understanding of the relationship between weapons and imperialism. Using French artillery in the Indochina War as a focal point, the article argued that weapons not only reflect but also actively

participate in the imperial ordering of the world through its underlying modern technoscience of mass killing. It has demonstrated how artillery supported and intersected with the civilizational anxieties of the French military through destructive actions. Therefore, the contribution of this article lies in two interrelated insights. First, it shows that the weapon scientifically supports imperialism. It is not applied to the battlefield or to the weapon as an object or vector; it is supported by the technoscientific logics that govern the intelligibility and making of destruction. Artillery demonstrates that weapons help produce the orientalized enemy not only as dangerous, but as spatially and technically disposable. The Indochinese terrain became a source of civilizational anxiety when artillery, the emblem of Western military rationality and superiority, struggled to impose order. In response, the French military intensified its reliance on artillery, relying on quantification and firepower to restore intelligibility in the destruction of the Other. This reaction reveals that the military imperative to dominate intersected with the orientalist imperative to reaffirm Western superiority, especially in the wake of anti-colonial resistance.

Second, the article unveils the intertwining between the normalization of mass destruction and the technoscientific support of imperialism. By intersecting orientalized difference with ballistic calculations, fire tables, and fire instructions, the French military transformed Indochina into a killable space, where large-scale destruction appeared necessary, even reasonable. As resistance increasingly disrupted the coherence of the battlefield, the military responded by turning to impersonal and measurable forms of destruction to reassert control. Through this dynamic, the mass violence of counterinsurgency, openly targeting civilian populations, infrastructures, food and crops, was rendered militarily rational and civilizationaly defensible.

This argument has implications beyond Indochina. As insistently argued in the article, artillery is not taken here as a special case, but as a revealing example of a wider pattern. As one of the most institutionalized and widely deployed weapons in the history of modern warfare, it illustrates that orientalism and technoscientific rationality routinely intersect in the battlefields of modernity. This intersection, whether through artillery, airpower, drones, or AI targeting, is a recurring feature of global warfare. From the United States in Vietnam and Iraq, to contemporary Israeli operations in Gaza and US–Israeli war in Iran, we see the persistence of a logic that casts technologically sophisticated violence as civilisationally superior, and racially dehumanized enemies as legitimate targets of overwhelming force. In Gaza, Ukraine, and Iran, this dynamic has reached a new level of abstraction, as AI is coupled with extreme racial devaluation of Palestinian, Ukrainian, and Iranian lives.

Ultimately, this article calls for a urgent and deeper critical reckoning with weapons as contributing to shape global political orders. Arguing that weapons serve imperial imaginaries and hierarchies may not, on its own, fully reveal the extent to which weapons naturalize global warfare, since it can leave open the temptation to treat the technoscience behind weapons as somewhat separate from processes of otherness. From this perspective, I would like to open the discussion by sketching two possible directions for further inquiry into weapons: their role in strategic impoverishment and their contribution to the reproduction of global inequalities.

First, the technoscientific-orientalist articulation as an isolation of war from strategy (the definition of the means and the ends of war) and the corollary enclosing of military action within the self-referential logic of weapons' violence. In this schema, power is misread as a guarantee of efficacy. Superiority in destructive capacity appears to justify either escalation (*striking harder* to compel compliance) or the routine use of force (*dominance through arms* as a viable option in foreign policy against the inferior Other). Both pathways are strategically hazardous because they substitute technological confidence and racialised imaginaries for political judgement, offering little prospect of achieving durable outcomes. This is starkly evident in Israel's war in Gaza, where the ongoing genocide is entrenching the conditions for future violence by intensifying civilian suffering, accelerating mass displacement, and deepening an already catastrophic humanitarian collapse. A similar dynamic is unfolding in the US–Israel war in Iran, where military-technological superiority is elevated to the level of technological deification. The result has been retaliatory escalation, regional destabilisation, a global energy shock that further imperils already vulnerable populations and a widening conflict spiral. What emerges from this technoscientific-orientalist history of the weapon is a dangerous fantasy in which international domination is imagined as either an endless ladder of escalation or an open horizon of violence. By probing this technoscientific-orientalist articulation further, we can better understand how modern weapons not only shape the conduct of war but also distort strategic thinking itself.

Second, weapons bring order not just because their superiority obliterates the culturally inferior, but because they support two co-constitutive fantasies of modernity: the technologically rational and civilizational control and destruction of spaces and beings. The technoscientific support of imperialism not only makes war possible, but it also makes war appear logical, necessary, and even civilized. From this perspective, this normalization of violence, carried out under the guise of technoscientific expertise, masks how deeply inequality and imperial domination are built upon the machinery of modern warfare. There remains a vast field of research to be explored on how the engineering of destruction through weapons contributes, almost paradoxically, to producing and enforcing "standards of civilization" (Gong 1984) even though this very engineering has historically been tied to gigantic levels of violence largely directed against civilians. To truly confront this, it is not enough to critically make sense of weapons and the (dominating) purpose for which they are used; we must also question the systems of knowledge and the civilizational fantasies that give those weapons their legitimacy.

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