THE HEXAGONAL POLITICS OF GAULLIST INFRASTRUCTURE

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Abstract

During Charles de Gaulle's presidency (1958–1969), France began to be transformed by an extensive programme of spatial planning and modernization (*aménagement du territoire*) which produced motorways, airports, rail networks, and other forms of infrastructure. As a political project, Gaullist *aménagement* aimed to give material form to France's post-imperial renewal by engineering a certain sense of French modernity into the physical fabric of the nation. Meanwhile Gaullism gravitated towards the figure of the hexagon as a means of expressing its promise of peace, prosperity, and security within a bounded space. This article examines the political stakes of Gaullist *aménagement*, its investment in infrastructure as a vector for civilizational advance, and its effects on everyday life and lived experience. Drawing on contemporary work by Paul Virilio, the article elucidates *aménagement*'s entanglement with questions of national security and its relationship with France's policy of nuclear deterrence as parallel and overlapping strategies for pursuing national renewal. It concludes by considering the on-going legacy of *aménagement*, and how the broader assumptions it articulates — about growth, progress, or development — along with the infrastructural forms they produce, are increasingly the focus of contemporary political conflict in France as the country faces the realities of climate crisis.

Résumé

Charles de Gaulle a initié un vaste programme d'aménagement du territoire pendant sa présidence qui a produit autoroutes, aéroports, réseaux ferroviaires rapides et

d’autres formes d'infrastructure au fil des années. En tant que projet politique, l’aménagement gaulliste cherchait à rendre tangible le renouveau post-impérial de la France en inscrivant dans le tissu physique de la nation une certaine idée de la modernité française. Parallèlement, le gaullisme s’est tourné vers la figure de l’hexagone pour exprimer sa promesse de paix, de prospérité et de sécurité dans un espace délimité. Cet article examine les enjeux politiques de l’aménagement gaulliste, son investissement dans l’infrastructure comme vecteur de progrès, et la façon dont il commence à transformer la perception et la vie quotidienne. S’appuyant sur les travaux contemporains de Paul Virilio, l’article élucide l’enchevêtrement de l'aménagement avec les questions de sécurité nationale, son rapport avec la politique française de dissuasion nucléaire, et la façon dont ils émergent comme des stratégies parallèles de poursuite du renouveau national. Il conclut en examinant l’héritage de l’aménagement gaulliste, et la façon dont les suppositions qu’il exprime — sur la croissance, le progrès ou le développement — ainsi que les formes d’infrastructure qu’il produit, se trouvent au centre des conflits politiques contemporains en France, alors que le pays est confronté aux réalités de la crise climatique.

In 1967, during that spring’s legislative election campaign, and looking to defend its majority in the French National Assembly, the Gaullist UNR party (Union pour la nouvelle République) deployed a hexagonal logo on its posters. The schematic white hexagon of metropolitan France was delineated by its three land borders in red and its three maritime borders in blue. Floating off-shore was a white dot denoting Corsica but there was no trace of France’s remaining overseas territories. Superimposed in blue on the hexagon was the phrase ‘Ve République’, with the roman numeral dominant as if to assert the centrality of Charles de Gaulle’s constitutional settlement

of 1958 in giving renewed structure and shape to the nation, not just figuratively but also literally speaking.

Next to the hexagon ran the UNR's campaign message: 'Vous voulez le progrès, l'indépendance, la paix. Vous choisirez la stabilité, l'efficacité'. With the logo focusing eyes, minds, and attention on the idea of the metropolitan territory as a neatly defined and self-contained space, the implications were clear. All of those things were predicated on France's newly-minted hexagonality, which could be secured and sustained only by the efficient exercise of Gaullist power. It was not simply, as the historian Nathaniel Smith observed at the time, that the hexagon 'symbolized the national strength, prosperity and unity promised by the UNR'.[1] Rather, French hexagonality was emerging as both the means of Gaullism and its end.

That Gaullism had gravitated towards the hexagon as a fitting motif for its political project was arguably no coincidence. Paul Virilio would suggest a few years later, drawing out the fundamental relationship between geometry and the state, that 'la géométrie est la base nécessaire à une expansion calculée du pouvoir de l'État dans l'espace et le temps'.[2] If geometry is the key to state power (most obviously through cadastral surveys and other means of mapping, measuring, controlling, and claiming territory) then it made sense for the governing party to signal its agenda for the country (progress, efficiency, security) by turning France into a geometric symbol before the voters' eyes.

As an emblem, the hexagon was leaving behind a tricky moment during the Algerian War when it had been used to suggest the diminishment and retreat of a

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[1] Nathaniel B. Smith, 'The Idea of the French Hexagon', *French Historical Studies*, 6.2 (1969), 139–55 (p. 150).

[2] Paul Virilio, *Essai sur l'insécurité du territoire* (Paris: Stock, 1976), pp. 174–75.

former imperial power 'folding back' into its metropolitan frontiers.[3] Instead, its geometric precision and regularity now helpfully signalled France's post-colonial trajectory as an advanced European civilization propelling itself into the future through the principles of rational efficiency and the application of technical expertise. At the same time, the hexagonal form could connote, in Douglas Smith's words, 'considerable structural strength, resistant to outside pressures' and as such, 'both the unity and independence of the nation'.[4] Already by 1967, moreover, it had become clear that the country's civilizational advance under Gaullism hinged especially on *aménagement du territoire* as the rational organization of the national territory through spatial planning and modernization. De Gaulle's hexagonal politics of modernity would find form and expression most visibly through the production and transformation of space.

In August 1961, legislation had come into force creating the District de Paris, a new administrative entity at regional level around the capital. It was headed up by the civil servant Paul Delouvrier, previously the governmental representative in Algeria between 1958 and 1960. Delouvrier's development plan for the Paris region, the *Schéma directeur d'aménagement et d'urbanisme de la région de Paris*, published in 1965, mapped out its modernization through the construction of motorways, rapid transit rail networks, an airport at Roissy, and a ring of new towns around the capital. In February 1963, the DATAR (Délégation à l'aménagement du territoire et à l'action régionale) had been established by presidential decree as a national coordinating body for territorial development, led by Olivier Guichard. The DATAR's remit included

[3] Smith, 'The Idea of the French Hexagon', p. 150.

[4] Douglas Smith, 'The Broken Hexagon: French Nuclear Culture between Empire and Cold War', *Modern and Contemporary France*, 18.2 (2010), 213–29 (p. 214).

the creation of new tourist, industrial, and transport infrastructure with the aim of stimulating and distributing economic growth across the country.

If *aménagement du territoire* emerged in many respects as a matter of infrastructure, it was because the physical transformation of space itself seemed to promise something approaching a literal acceleration into the future, and most notably so when it took the form of motorways and other forms of speed space; that is to say, space engineered to gain time by compressing territory through accelerated motion. Also lurking within the investment in infrastructure (an investment both economic and political) was an understanding that territorial and economic development were related to — indeed a form of — national security, something intimated in the UNR's rendering of the hexagon as a sharply delineated and bounded space.

In what follows, I set out to examine the political stakes of Gaullist *aménagement* as a project intent on engineering a certain conception of French modernity into the physical fabric of the nation, and thereby taking on material substance as infrastructure in particular. Doing so involves unpicking, with the aid of Paul Virilio's writing in the 1970s at a time when the ramifications of Gaullist modernization were becoming ever clearer, the relationship between spatial planning and national security. I explore how national renewal was pursued through the parallel and overlapping strategies of *aménagement du territoire* on the one hand, and the creation of a national 'sanctuary' through nuclear deterrence on the other. But also in play, as we see by way of conclusion, is the on-going legacy and longevity of that project, and the extent to which the broader assumptions it articulates — about growth, progress, or development — along with the infrastructural forms they produce, are increasingly the focus of contemporary political conflict in France as the country faces the realities of climate crisis.

The Way of the Future: Infrastructure, Speed, and Freedom

Two years into his stint as director of the DATAR, Olivier Guichard set out his reflections on the enterprise of spatial planning and modernization in *Aménager la France*. The book offered a systematic account of the domains across which French modernization and development were unfolding, from the agricultural and industrial sectors through education and research to transport, communication and tourism. In fact, the very span of its coverage signalled the extent to which *aménagement* would reach and transform all corners of French life and space.

If Guichard spells out that the aim of *aménagement* is societal advance through the strategic organization of space (he defines it as 'la volonté précise d'une collectivité qui pense son organisation générale en fonction de ses ressources territoriales'),[5] he also underlines how it is predicated on a distinctive relationship to time. More specifically, he suggests, in an unexpected moment of time-bending brio, 'l'aménagement ne vit pas dans l'époque présente: il doit toujours le devancer, projeter sur l'avenir'.[6] Spatial planning lives in the future, not the present. Being ahead of its time, its job is to return to the present with insights scouted from the future and use them to propel the country towards its destiny by translating them into policies, forms and structures.

Guichard's emphasis on the forward-flungness of *aménagement* betrays the influence of *la prospective*, or anticipatory planning. Pioneered in France by the philosopher Gaston Berger in the late 1950s, *la prospective* echoed the concept of futurology emerging out of American research institutes such as the RAND

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[5] Olivier Guichard, *Aménager la France* (Paris: Laffont-Gonthier, 1965), p. 14.

[6] Ibid., p. 26.

Corporation and the Ford Foundation around the same time. Berger's ideas would permeate French government thinking throughout the 1960s to a notable degree: amongst the staunchest advocates of *la prospective* was the economist Pierre Massé, who as head of the Commissariat général au Plan between 1959 and 1966, was nothing less than France's chief planner. Berger understood *la prospective* as a philosophy of agency and rational action in the world and, as such, a means of resisting the forces of entropy and decline. In practical terms, it was an invitation to the planners to work with socio-economic projections over the long rather than short term, have the nerve and audacity to map out a vision of the future based on those projections, and build the present towards it.[7]

Berger had died in a car crash on the motorway south of Paris in November 1960, a fate whose ironies were noted by historian Fernand Braudel, with whom Berger had collaborated on the creation of the Maison des sciences de l'homme in Paris during a spell at the Ministry of Education. 'La mort', wrote Braudel in an appreciation published in *Annales*, 'lui aura ainsi donné rendez-vous au long de l'autoroute du Sud, dans un paysage ultra-moderne, pareil à ceux dont il s'acharnait à découvrir le visage'.[8] Berger's untimely demise nevertheless confirmed that it was in

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[7] On Gaston Berger and the influence of *la prospective* on French planning in the 1960s, see Edward Welch, *Making Space in Post-War France: The Dreams, Realities and Aftermath of State Planning* (Oxford: Legenda, 2023), pp. 28–34. On the broader history and politics of post-war futurology, see Jenny Andersson, *The Future of the World: Futurology, Futurists, and the Struggle for the Post-Cold War Imagination* (Oxford: Oxford University Press, 2018).

[8] Fernand Braudel, 'Gaston Berger (1896–1960)', *Annales*, 16.1 (1961), 210–11 (p. 210).

the domain of speed, and infrastructures of speed, where some of the most obvious forms and modes of futurity were emerging. More than just a proxy for societal advance, the accelerated motion enabled by the motorway system and other forms of speed space was the means by which that advance would be achieved. (Of course, Berger's fate simultaneously underlined how technological progress exposed human fragility and held within itself unpredictable and often violent forces.)

A striking graphic in Guichard's chapter on transport and communications in *Aménager la France* staged the dramatic effects of speed on space by superimposing four outline maps of hexagonal France, each of which gets smaller with the advent of a new form of transport (the horse-drawn carriage, the steam and electric railway, the eagerly awaited and jet-powered *aérotrain*) [Figure 1: Olivier Guichard's shrinking hexagon]. As France shrinks in scale before us we see how technological advance in the domain of speed has the consequence of contracting space through time saved, a phenomenon that political geographer David Harvey would subsequently dub 'time-space compression'.[9] Guichard's graphic of the incredible shrinking nation presents the reader with something of a paradox: the key to national grandeur turns out to be the nation's diminution, at least in phenomenological terms. But with time-space compression, indicates Guichard, comes a virtuous circle of accelerating progress through quicker circulation, greater efficiency of movement and better economic productivity.

The effect of time-space compression, and with it the impression of a civilization fast-forwarding to the future, depends not just on innovations in specific forms of transport, but on the physical infrastructures that support and enable them, understood as 'built networks that facilitate the flow of goods, people or ideas and

[9] David Harvey, *The Condition of Postmodernity* (Oxford: Blackwell, 1989), p. 240.

allow for their exchange over space'.[10] The development of infrastructure in turn relies on the technical and physical capacities of the materials that constitute it, one of the most fundamental of which (certainly as far as French modernization and expansion were concerned) is concrete.

Post-war France was emerging, in Kenny Cupers' terms, as a country 'increasingly convinced by the possibilities of concrete'.[11] Those possibilities were embraced most immediately in the housing sector, where the urgent need to expand the national stock in response to the post-war *crise du logement* led to rapid advances in prefabrication as a means of industrial housing production. The first patent for prefabricated concrete panels of the sort that would accelerate construction of the *grands ensembles* and other forms of large-scale social housing was taken out by the engineer Raymond Camus in 1949. Contracts from the French government soon followed. In his cultural history of concrete, Adrian Forty observes that 'Camus, Balencey, Coignet and the other French systems gave France in the 1950s and 60s pre-eminence in European concrete fabrication'.[12]

A sense of concrete's growing societal significance and its role as a material with transformative potential is articulated in Éric Rohmer's 1969 television documentary, *Entretien sur le béton*, one in a series of educational films he made on space, planning, and architecture that began with *Métamorphoses du paysage* (1964).

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[10] Brian Larkin, 'The Politics and Poetics of Infrastructure', *Annual Review of Anthropology*, 42 (2013), 327–43 (p. 328).

[11] Kenny Cupers, *The Social Project: Housing Postwar France* (Minneapolis: University of Minnesota Press, 2014), p. 18.

[12] Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion Books, 2012), p. 117.

After an interview with architect Claude Parent on a construction site, where Parent explains the principles and uses of reinforced concrete, Rohmer films a discussion with Parent and Paul Virilio, his partner in architectural practice, on concrete and infrastructure. The two men are bullish about the epochal importance of both things, beginning with Parent's bold and elliptical claim that 'le béton, pour nous, c'est la liberté'. Meanwhile, Virilio has no doubt that infrastructural forms will emerge as the defining feature of the contemporary age: 'notre époque mettra en valeur l'infrastructure, c'est-à-dire le plancher, le support, le niveau'. Concrete is infrastructure's essential ingredient, Virilio goes on, 'parce qu'il est porteur et parce qu'il est franchissant'.

If concrete means freedom, it is because its material qualities as a substance engineer new possibilities for movement, flow, and circulation through bridging and connection, and therefore for human liberty. From that point of view, Parent and Virilio's analysis of the emancipatory potential of concrete and infrastructure coincided with the expressed intention of Delouvrier and the planners at the District de Paris, for whom the *Schéma directeur* was underpinned by an equation between liberty, mobility, and opportunity.[13] Furthermore, if the key to effective territorial organization was infrastructure, and the dynamic potential of infrastructure was best captured and expressed in concrete, then it was in concrete structures of different sorts, and especially those that embodied movement and flow, that *aménagement* would find its ideal forms and human freedom would flourish.

Marion Schmid wonders whether Parent and Virilio are guilty of a degree of *mauvaise foi* in their insistence on the aesthetic and structural superiority of concrete, which they position in contrast to the airy but rigid verticality of the glass and steel

[13] Welch, *Making Space in Post-war France*, pp. 41–42.

construction typifying modernist architecture.[14] I would disagree. Concrete's architectonic strength, and in particular the powers of bridging ('franchissement') that derive from its plasticity, made it the ideal material with which to express their notion of the 'fonction oblique' as a means of reinvigorating the practice of space through transversal movement ('la verticalité', argues Virilio, 'ne correspond pas du tout au dynamisme urbain').[15] At the same time, while Virilio's intuition about the epochal significance of infrastructure proves to be correct, it will occur to him not so long afterwards that its stakes are maybe not the ones he proposes here.

Sanctuary, Security, and the Stakes of Infrastructure

Spatial planning and modernization were not the only means by which the Gaullist regime would (re)assert France's place in the world. On 10 December 1960, a few weeks after Gaston Berger's premonitory accident on the motorway, a 'loi de programme relative à certains équipements militaires' was published in the *Journal officiel*. Amongst other things, the law put in place the budgetary means to develop the country's nuclear strike force.

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[14] Marion Schmid, 'Between Classicism and Modernity: Éric Rohmer on Urban Change', *French Studies*, 69.3 (2015), 345–62 (p. 352).

[15] On the 'fonction oblique', see 'Paul Virilio and the Oblique: Interview with Enrique Limon', in *Virilio Live: Selected Interviews*, ed. by John Armitage (London: Sage, 2001), pp. 51–57. For a contemporary critical response see Monique Seyler, 'La Fonction oblique', *Esprit*, 365 (November 1967), 786–89. Seyler is sympathetic to the 'élan de l'incliné' and the 'mobilité généralisée sur un sol non cloisonné' promised by the 'ville oblique' (p. 788).

The first atmospheric test of a French nuclear device had occurred in the Algerian desert that February. It followed a speech at the École militaire in Paris in November 1959 when De Gaulle underlined his commitment to securing 'ce qu'on est convenu d'appeler "une force de frappe" susceptible de se déployer à tout moment et n'importe où'.[16] Another (unspoken) function of a nuclear arsenal, as Douglas Smith observes, was 'to replace the empire as France's claim to world-power status'.[17] Alongside the military applications, meanwhile, a civilian nuclear programme, initiated with the creation of the Commissariat à l'énergie atomique in 1945, could give the country a degree of independent energy security as well as some compensation for the loss of easy access to Saharan oil and gas reserves after Algerian independence (provided it maintained privileged access to the uranium deposits in its former West African colonies).[18]

France's nuclear capability became operational in 1964 and was the cornerstone of its Cold War defence strategy. Its centrality was underlined in 1972 with the publication of a *Livre blanc sur la défense nationale*, the first such policy statement by a French government. The statement confirmed the persistence of the

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[16] Charles de Gaulle, 'Allocution prononcée à l'École militaire, le 3 novembre 1959', in *Discours et messages*, 5 vols (Paris: Plon, 1970), III, pp. 125–129 (p. 127).

[17] Smith, 'The Broken Hexagon', p. 215.

[18] Gabrielle Hecht, *Being Nuclear: Africans and the Global Uranium Trade* (Cambridge, MA: The MIT Press, 2012), pp. 107–12. On the political and symbolic stakes of France's nuclear programme, see also Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (Cambridge, MA: The MIT Press, 1998). Claude Parent would play a leading role in the design of France's nuclear power plants during the 1970s.

Gaullist doctrine of deterrence in the post-Gaullist era, not least by carrying the signature of Michel Debré, De Gaulle's first prime minister and at that point minister of defence in Georges Pompidou's government. It reasserted the principle of military and strategic independence (specifically in relation to the United States) that had motivated De Gaulle's insistence on developing French nuclear capability and his withdrawal of the country's forces from NATO's integrated military command.

Elaborating on the purpose of nuclear deterrence, the *Livre blanc* argued that the nuclear arsenal was a weapon of last resort in situations where the nation's 'vital interests' were threatened.[19] Notably, it defined those interests above all in territorial terms. National defence was a matter of protecting the security, integrity, and fabric of French territory, all of those facilities, structures and constituencies that between them ensured the conditions for French modernity: 'il faut protéger le fonctionnement de notre société industrialisée qui repose sur nombre d'installations spécialisées: sources d'énergie, infrastructure de transport, moyens de télécommunications, etc., et plus généralement sur la coopération de collectivités multiples et le respect des libertés individuelles'.[20] More than that, the doctrine of deterrence had produced its own new and distinctive type of space in the form of the 'sanctuaire national'. As the Gaullist deputy Raymond Bousquet had put it in the National Assembly in 1967, developing a nuclear strike force meant that 'nous érigeons notre sol national en "sanctuaire"'.[21] The presence of a nuclear deterrent transformed territory into

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[19] *Livre blanc sur la défense nationale*, 2 vols (Paris: Centre de documentation de l'armement, 1972), I, pp. 7–8.

[20] Ibid., p. 12.

[21] *Journal officiel*, Débats parlementaires, première séance du 24 octobre 1967, p. 4031.

sanctuary by rendering it assailable only at the terrible price of the enemy's own destruction.[22]

Writing a few years later in *Essai sur l'insécurité du territoire*, Paul Virilio summed up the confounding paradox of the doctrine of deterrence as one where 'l'arme nucléaire et l'abri ne font plus qu'un'.[23] He was also quick to underscore how Gaullism had forged a link between national security and hexagonality. The fundamental aim of the Gaullist political project, argued Virilio, had been 'l'instauration au sein de l'Europe de l'enceinte réduite et protectrice: l'hexagone'.[24] As territory turned into sanctuary, France's hexagonal contours grew stronger. Yet in *Aménager la France*, Olivier Guichard had already signalled that nuclear deterrence was not the only form hexagonality's protective embrace might take. His suggestive illustration of the incredible shrinking hexagon showed how time-space compression

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[22] The concept of nuclear sanctuary, and what the French began calling 'sanctuarisation' of the territory through nuclear deterrence, first emerged in the work of American theorists of nuclear strategy such as Herman Kahn and Thomas Schelling. The term was adopted in France by army general Lucien Poirier and others, surfacing with increasing frequency during the 1960s as it became a commonplace of deterrence theory. On the shifting notions of 'sanctuary' in US security policy see Michael A. Innes, *Streets without Joy: A Political History of Sanctuary and War, 1959–2009* (London: Hurst, 2021). For an (officially sanctioned) account of French nuclear deterrence policy, see Bruno Tertrais, *La France et la dissuasion nucléaire: concept, moyens, avenir* (Paris: La Documentation française, 2017).

[23] Virilio, *Essai sur l'insécurité*, p. 235.

[24] Ibid., p. 81.

was producing a more contained and containable territory, and that speed space as transport infrastructure was its means and manifestation.

Indeed in 1972, while Michel Debré was busy with the *Livre blanc*, Guichard was to be found at speed on the motorway in *Les Liaisons moins dangereuses*, a promotional film by his new government ministry about France's expanding network of *autoroutes*. After his time at the DATAR and a short spell as education minister, Guichard was now minister for *équipement* and *aménagement du territoire* in the Pompidou government. Notwithstanding his assumptions about the *aérotrain* in *Aménager la France* seven years earlier, it seemed for the moment at least, as Guichard cruised down the fast lane in a Citroën DS, that the strain of time-space compression was being taken by the motorway rather than the hover-train.[25]

The film's voiceover commentary underlines the importance of motorways in driving France's economic development (by revitalizing 'des régions en perte de vitesse'), enabling greater European integration, and improving 'la sécurité'. Most immediately, as the film title infers, the emphasis here is on 'sécurité' as road safety; but what we see signals that broader senses of the term might also be in play. Images of constant movement, shots of the increasingly impressive concrete structures that sustain it ('échangeur de Palaiseau, quatre niveaux, autre record d'Europe'), and a narrative of prosperity through accelerated circulation leave us in no doubt that new infrastructures of speed are fundamental not just for the safety of France's citizens but for its more general interests and security. 'Se doter d'autoroutes modernes', confirms the commentary, 'est devenu pour la France une nécessité vitale'.

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[25] On the saga and demise of Jean Bertin's jet-powered *aérotrain*, see Vincent Guigueno, 'Building a High-Speed Society: France and the *Aérotrain*, 1962–1974', *Technology and Culture*, 49.1 (2008), 21–40.

Getting France up to speed was essential for the country to stay one step ahead of the rest and maintain its *longueur d'avance* as a technically advanced nation. Virilio captured that urgency in his argument that '*la vitesse est l'espérance de l'Occident*'.[26] He was starting to grasp the extent to which command of speed was a defining military and economic preoccupation of the western world, and how in turn, technical superiority in the domain of speed hinged on territorial development. Or, as Virilio puts it while reflecting on the Vietnam War, 'ce qui remplace la guerre, c'est l'aménagement du territoire'.[27] If Vietnam had given the United States a fright it was because a technically more advanced army had been successfully challenged by a 'force de dissuasion populaire, pouvoir non plus idéologique mais physiologique des peuples'.[28] For Vietnam and the US, read also Indochina then Algeria and France. 'D'où la tentation, ou plutôt la nécessité', concludes Virilio, 'de faire de l'ensemble du champ de l'humanité le champ de la technicité'.[29] Motorways, or war by other means.

It was perhaps only now, in the 1970s, that the radical implications of De Gaulle's *ordonnance* of 7 January 1959 'portant organisation générale de la défense' were coming fully into view. Its significance, as Virilio observes, lay in dissolving the distinction between times of war and times of peace.[30] It did so by defining defence as a pre-emptive state of constant readiness against anything that might threaten the

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[26] Paul Virilio, *Vitesse et politique: essai de dromologie* (Paris: Éditions Galilée, 1977), p. 54, emphasis in the original.

[27] Virilio, *Essai sur l'insécurité*, p. 98.

[28] Ibid.

[29] Ibid., p. 99.

[30] Virilio, *Vitesse et politique*, p. 159.

country's territorial integrity, security, and population. As the first article of the ordinance has it, 'la défense a pour objet d'assurer en tout temps, en toutes circonstances et contre toutes les formes d'agression, la sécurité et l'intégrité du territoire, ainsi que la vie de la population'.[31] Moreover, though not unsurprisingly given such a totalizing definition, article fifteen spelt out that defence and national security were a matter for all government departments: 'chaque ministre est responsable de la préparation et de l'exécution des mesures de la défense incombant au département dont il a la charge'.[32]

That Gaullist sense of defence as a total project was still there thirteen years later in the opening pages of Debré's *Livre blanc*. All government policies inform and take their lead from defence policy, it suggests:

> Dès l'abord, il faut souligner que la défense nationale si elle se manifeste essentiellement par l'existence de forces armées, s'appuie sur bien d'autres réalités, démographiques, économiques, sociales et culturelles notamment. [...] Aussi n'est-il point étonnant que la politique qui inspire l'évolution de ces réalités ait des rapports étroits avec la politique de défense. Il en est ainsi des politiques de la natalité, de l'éducation, de l'emploi, de l'innovation, de l'investissement, de la monnaie.[33]

With security reliant on prosperity, prosperity a function of speed, speed achieved through infrastructure, and infrastructure key to territorial development, Guichard's

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[31] *Journal officiel*, 10 January 1959, p. 691.

[32] Ibid., p. 692.

[33] *Livre blanc*, p. 4.

ministry more than most was on the front lines of national defence; and one such front line was the motorway.

At the same time, it seemed more and more apparent to Virilio that the state was in the business of administering fear: 'la pacifique quotidienneté perd insensiblement de sa réalité, tout est dramatisé à outrance sous prétexte des dangers les plus divers: drogue, alcool, criminalité, pollution, subversion, on met l'accent sur le caractère redoutable de chaque action'.[34] The point is made in the title of *Essai sur l'insécurité du territoire*. Defence, national security, and the promise of nuclear sanctuary go hand in hand with cultivating a sense of insecurity amongst the population, one which can only be addressed through the production of increasingly regulated space and the increasing regulation of movement within it.

In *Vitesse et politique*, Virilio draws out the historic relationship between policing, roads and circulation to theorize infrastructure as an expression of state power and a means of societal control through regulated movement. 'Le pouvoir politique de l'État n'est donc que secondairement "le pouvoir organisé d'une classe pour l'oppression d'une autre", plus matériellement *il est polis, police c'est-à-dire voirie*'.[35] State power took embodied form in agents whose role was to monitor and maintain the condition of the road network (*agents voyers*) or oversee the social, economic and political life it sustained (*police*).[36] At stake in effect, he argues, is the

[34] Virilio, *Essai sur l'insécurité*, p. 224.

[35] Virilio, *Vitesse et politique*, p. 23, emphasis in the original.

[36] Glossing Virilio's analysis of its obsession with regulated movement, Gilles Deleuze and Félix Guattari observe that 'l'État ne cesse de décomposer, recomposer et transformer le mouvement, ou de régler la vitesse. L'État comme agent voyer,

embedding of a form of siege state (‘la vieille poliorcétique communale’) that equates ‘l’ordre social avec le contrôle de la circulation (des personnes, des marchandises) et la révolution, l’émeute avec l’embouteillage, le stationnement illicite, le carambolage, la collision’.[37] It is not hard to see siege logic surface too in an ordinance requiring a constant state of readiness to defend against any potential form of disruption, or an insistence on rapid, secure, and well-regulated circulation as the route to an orderly and prosperous society. After all, *Les Liaisons moins dangereuses* had opened with shots of long traffic jams and an assertion that France needed motorways because its existing road network ‘semblait voué à la paralysie’.[38]

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convertisseur ou échangeur routier’. *Capitalisme et schizophrénie 2: Mille plateaux* (Paris: Éditions de Minuit, 1980), p. 480.

[37] Virilio, *Vitesse et politique*, pp. 23–24.

[38] As if to prove Virilio’s case, a flurry of political anxiety broke out in the mid-1970s about subversion and the enemy within. During a debate on military spending and the nuclear deterrent in 1976, deputies on the right and left raised the threat of ‘subversion intérieure’ which ‘rendra illusoire la sanctuarisation, qu’elle soit atomique ou non’ (RPR deputy Maurice Plantier) and ‘casseraient le moral de la nation’ (social democrat Max Lejeune) (*Journal officiel*, Débats parlementaires, première séance du 25 mai 1976, pp. 3417 and 3421). Their worry found fictional form the following year precisely on the motorway: in Michel Lebrun’s thriller *Autoroute* (Paris: J.-C. Lattès, 1977), terrorists campaigning against *la société de consommation* blow up a service station restaurant and send it crashing down on to the carriageway. Meanwhile, other deputies were calling for vigilance over the dangers of subversion in the judiciary (*Journal officiel*, Débats parlementaires,

Here is where Virilio's intuition about the importance of infrastructure in *Entretien sur le béton* turns out to be right, but his hope for infrastructure as a vehicle for liberty and freedom remains unfulfilled. What emerges instead is the ever more rapid, even frantic circulation of the citizenry around the circumscribed space of the hexagon. By the mid-1970s, the motorway had taken shape as one of the sharpest expressions of speed space in the sense understood by Virilio, a regulated environment through which society submits to the demands of speed as a sublimated and actual form of war. Everyone, unbeknownst, had become '*les soldats inconnus de l'ordre des vitesses*',[39] serving the national economic interest in the name of productivity, prosperity, and civilizational advance. Starting to emerge as well was a sense of speed space's distinctive qualities and the nature of lived experience within it.

The Phenomenology of Gaullist Speed Space

Olivier Guichard remarks in *Aménager la France* that advances in modes of land transport typically happen when they become 'moins dépendants des impératifs naturels'.[40] The power of the steam engine could be fully exploited only via the interface of a rail system dislocating it from the earth. Hence, perhaps, the French government's early enthusiasm for Jean Bertin's *aérotrain*, which sat elevated above the land on a concrete monorail and was propelled along it by jet power on a *coussin d'air*. (Drawing on a *Paris Match* article from the time, Vincent Guigueno reports that

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première séance du 17 novembre 1975, p. 8476) and state television (*Journal officiel*, Débats parlementaires, première séance du 16 novembre 1977, p. 7492).

[39] Virilio, *Vitesse et politique*, p. 111, emphasis in the original.

[40] Guichard, *Aménager la France*, p. 126.

when shown a scale model of the *aérotrain*, Georges Pompidou liked how easily it moved with just a 'gentle shove'.[41])

Similarly, one of concrete's vital qualities for Parent and Virilio lies in how the movement it enables is expressed by its forms. 'Il est coulé comme la circulation coule', comments Virilio in *Entretien sur le béton*. Concrete enacts flow and 'franchissement' as the ideal of liberty through circulation, while its adaptability as a substance makes possible new structures and therefore new capacities of movement. They in turn can further transcend the limits, obstacles and resistances of Guichard's 'impératifs naturels' and as a result, usher in a whole set of perceptual, experiential, and societal shifts. Virilio returns to the transformative capacity of innovations in infrastructure in *Bunker archéologie* (1975). He notes how 'l'apparition d'un nouveau système infrastructure–véhicule révolutionne toujours la société en bouleversant à la fois le sens de la matière, celui des rapports sociaux, et donc celui de l'espace social tout entier'.[42] But as he also goes on to observe, 'le trajet de l'objet, comme du sujet, véhicule une valeur souvent inaperçue'.[43] Infrastructure's societal implications and its effects on lived experience often remain below the level of conscious awareness because of how they become incorporated into, and then begin to structure, the fabric and rhythms of everyday life.

Like those other forms of transport innovation, a key to the motorway's advance in the domain of speed lay in a dislocated relationship to its surroundings in order to overcome the constraints they might impose. While the traditional road system, remarks Marc Desportes, 'se situe dans une relation d'ouverture avec son

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[41] Guigueno, 'Building a High-Speed Society', p. 28.

[42] Paul Virilio, *Bunker archéologie* (Paris: Les Éditions du Demi-Cercle, 1991), p. 19.

[43] Ibid.

environnement, étant accessible en tout point de son parcours',[44] motorways sit at one remove from it, mobilizing a range of structures and technical solutions (flyovers, cuttings, interchanges, slip roads) to engineer unimpeded passage and flow. But equally significant is how their technical characteristics derive from a distinct administrative status and definition in law. Guichard points out that 'ce qui crée et garantit les conditions de la rapidité du trafic, ce sont les limitations juridiques à l'usage de la voie plus que les dispositions techniques que le développement du trafic rend nécessaires'.[45] His words here echo the legislation introduced in 1955 which established a specific legal regime for motorways, defining them as 'voies routières à destination spéciale, sans croisements, accessibles seulement en des points aménagés à cet effet et essentiellement réservés aux véhicules à propulsions mécaniques'.[46] Put another way, motorways are a material manifestation of the ways in which speed can be legislated for, produced, and regulated by the state. What also counts is how the legal and technical specifications not only translate into particular sorts of structure and form, but in doing so, generate experiential and phenomenological qualities distinct to the motorway environment.

A sense of those qualities emerges already in *Les Liaisons moins dangereuses*. Doing its work as a promotional film, it shows the smooth and rapid glide of Guichard's DS along the carriageway before cutting to a shot of Guichard at ease at the wheel, where he talks about the importance of keeping motorways free from the constraint of speed limits. Four years later, however, Jean-Patrick Manchette homed

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[44] Marc Desportes, *Paysages en mouvement: transports et perception de l'espace, XVIII^e–XX^e Siècle* (Paris: Gallimard, 2005), p. 301.

[45] Guichard, *Aménager la France*, p. 147.

[46] *Journal officiel*, 20 April 1955, p. 4023.

in on automotive speed space as a location where the psychical tensions of the age were revealing and playing themselves out. His thriller *Le Petit Bleu de la côte ouest* (1976) opens and closes with its main protagonist Georges Gerfaut circulating the (recently completed, in 1973) Boulevard périphérique at high speed in his Mercedes in the middle of the night, along with a few other cars doing the same. Like many of the drivers, notes the narrator, Gerfaut is drunk, but he has also taken barbiturates.

The combined effect is a state of 'tense euphoria' which threatens constantly to pivot between anger and melancholy, all while Gerfaut 'roule à 145 km/h'.[47] His recognition at some level that car, speed, and mood combined bring proximity to death is suggested by a plaque on the dashboard, which gives his name, address, and blood group. That Gerfaut is taking sedatives and drawn to high-speed laps of the ring road as a form of diversion from reality is connected not with the recent drama of murder, pursuit, and kidnapping the novel will go on to relate, the narrator suggests, but with 'la place de Georges dans les rapports de production'. After all, 'ce qui arrive à présent arrivait auparavant'.[48]

As he depicts Gerfaut locked on an endless orbit of Paris in a subdued yet frantic state, Manchette converges with Virilio in grasping the stakes of infrastructure. With his vital details glued to the dashboard, Gerfaut is like one of Virilio's unknown soldiers of speed, enmeshed in a system produced by and sustaining a politics of territorial and economic development predicated on the need for speed. But he is also subject to the psychical demands of that system and the politics behind it, which

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[47] Jean-Patrick Manchette, *Le Petit Bleu de la côte ouest*, in *Romans noirs* (Paris: Gallimard, 2005), pp. 707–94 (p. 707).

[48] Ibid., p. 708.

incubate moods and altered states demanding medication with barbiturates and other more informal remedies for anxiety or insecurity.

Indeed, as they constitute habitual existence, the odd experiential features of speed space (feelings of glide and velocity, rapid but fluid shifts in perspective) appear more like intended effects than accidental qualities. Infrastructure emerges as a form of Foucauldian bio-power in how it shapes human existence by inducing a sense of accelerated existence as the norm and linking mechanized movement with meaningful and productive activity.[49] The lived experience of speed space captured by Manchette derives from a politics of territorial development that folds it into a logic of national security, and makes it an essential part of that logic. But combining those two things — territorial development and national security — in infrastructural forms also makes infrastructure a high-stakes game, in political, societal, and security terms. Precisely how is coming into ever sharper focus as France begins to navigate an era of climate crisis and infrastructure features repeatedly as a point of contestation.

Coda: The Political Afterlives of Gaullist Infrastructure

In 2008, under the presidency of Nicolas Sarkozy, the French government published the country's third *Livre blanc* on defence and national security, and its first of the twenty-first century. Something important had changed since the appearance in 1994 of the previous iteration, which was preoccupied with the geopolitical consequences

[49] For Foucault on bio-power and bio-politics see *Histoire de la sexualité I. La volonté de savoir* (Paris: Gallimard, coll. "Tel", 1976), pp. 182–191. On *aménagement du territoire* as a form of bio-power see also Welch, *Making Space in Post-war France*, pp. 59–62.

of the end of the Cold War. If the threat of nuclear conflict had receded, the danger posed by global warming now took its place amongst the 'strategic uncertainties' France needed to confront.[50]

By illuminating coincidence, the year when the government formally acknowledged climate change as a threat to national security was also when climate activists first occupied an area of land at Notre-Dame-des-Landes near Nantes designated for development as a regional airport. Over the next ten years, until the government of Emmanuel Macron abandoned the plans for the site, the battle fought by the activists at Notre-Dame-des-Landes was fundamental in bringing into focus the political and environmental stakes of infrastructure in contemporary France; or more accurately, perhaps, the extent to which infrastructure's environmental stakes were now political.

What happened at Notre-Dame-des-Landes was significant firstly as an instance of how the politics of Gaullist infrastructure had outlasted Gaullism and continued to influence post-Gaullist France. The proposal for an airport to serve the west of France was a hangover from a development plan first drawn up in the mid-1960s. In 1974, using a planning mechanism introduced in 1962 to enable the state to secure land for future development, land at Notre-Dame-des-Landes was declared a *zone d'aménagement différé*, or ZAD. The project fell into abeyance over the next two decades, but gained renewed traction in the late 2000s when, following a period of public consultation, a *déclaration d'utilité publique* initiated the formal process of land expropriation, tendering, and construction.

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[50] *Défense et sécurité nationale: le livre blanc* (Paris: Odile Jacob/La Documentation française, 2008), pp. 25, 121–22.

It was also the point at which activists moved into the site, forming alliances with the farmers still working the land there, and embarking on a movement of resistance against the airport and what it stood for. In their hands, the *zone d'aménagement différé* (ZAD, in upper case) became a *zone à défendre* (zad, in lower case), a place to be defended not just from the environmental damage of construction, but from the dominant economic and territorial assumptions — about growth, development, progress, and the axiomatic relationship between them — that continue to govern political action, define the terms of political debate, and embed themselves in infrastructural forms.

In making infrastructure a battleground of the twenty-first century, the *zadistes* also brought into focus an irony and a contradiction. First the irony: those things instrumental in powering and sustaining a sense of post-war French modernity, the 'installations spécialisées' and other forms of infrastructure singled out for protection by the 1972 *Livre blanc*, were now emerging precisely as threats to the security they were supposed to ensure, through both the environmental damage they wrought and the logics they expressed. Then the contradiction: when environmental activism challenged airports and other infrastructure projects likely to exacerbate something the state itself had identified as a growing threat to national security, the state nevertheless leapt to their defence, typically in the end through violent means, as it attempted to face down climate protest as a new form of enemy within.

This is what made the action of the *zadistes* at Notre-Dame-des-Landes so powerful: it got straight to the heart of the matter as a territorial intervention in terms of disrupting the logics of infrastructure as progress through limitless economic

growth, and proposing an alternative mode of territorial occupation.[51] But it is also what has made subsequent attempts to initiate other *zones à défendre* and environmental actions (the *triangle de Gonesse* near Paris, agro-industrial *mégabassines* in the Deux-Sèvres and elsewhere) inevitably exposed to often brutal police responses as the state appears increasingly discontented with challenges to infrastructure and what it represents. With the French government digging in and announcing the creation of a 'cellule anti-ZAD' in 2023, the decision to abandon Notre-Dame-des-Landes to the *zadistes* in 2018 looked less like an admission of defeat than a tactical retreat.[52]

Yet at the same time, it is hard not to feel that the logics embodied in infrastructure must sooner or later run their course. The impetus ultimately may come

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[51] On the *zone à défendre* as both political gesture of occupation and theoretical intervention on territorialization, see Welch, *Making Space in Post-war France*, pp. 185–90 and, from the *zadistes*' own perspective, Mauvaise Troupe Collective, *The ZAD and NoTAV: Territorial Struggles and the Making of a New Political Intelligence*, ed. and trans. by Kristin Ross (London: Verso, 2018).

[52] Le Monde avec AFP, 'Gérald Darmanin annonce la création d'une "cellule anti-ZAD"', *Le Monde*, 2 April 2023, <https://www.lemonde.fr/societe/article/2023/04/02/gerald-darmanin-annonce-la-creation-d-une-cellule-anti-zad_6167915_3224.html> [accessed 16 August 2023]. It was a nice irony that Darmanin's press team got entangled in the terminological instability introduced by the *zadistes*. What they should have been announcing was a *cellule anti-zad*. What they seemed to be proposing instead, with their *cellule anti-ZAD*, was a crackdown on *zones d'aménagement différé*, thereby lending their hand to the *zadistes*' cause.

not just from environmental activists but from the climate itself. In the summer of 2022, as temperatures rose and drought persisted in France, hydroelectric schemes in the Alpes-Maritimes and nuclear power plants along the Rhône and Garonne rivers, elements of infrastructure symbolic of post-war modernization, were exposed as vulnerable to diminishing water levels. With such threats expected to become the norm as the twenty-first century goes on, and the sanctuary of the hexagon undermined more and more by its own infrastructural fabric, infrastructure will likely remain a front line of national security. But it will be in ways and for reasons that would have astonished the prospective planners of Gaullist times.