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RESEARCH ARTICLE

Machine conquest: Jules Verne's technocratic worldmaking

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Abstract

This article reads Jules Verne's *Extraordinary Voyages* series (1863–1905) through a worldmaking lens. It argues that, rather than simply reflecting 19th-century ideologies of progress, Verne was engaged in creative global ordering. The article argues that Verne constructed global order as *technocratic, anti-political*, and necessarily *violent*. This space was ambiguously but persistently appropriated by white, male engineers and scientists. This generates two important insights for International Relations (IR). First, Verne's global order was not about states, sovereignty, or political community: it was about an elite vanguard of technocratic adventurers roaming the globe. At a time when colonial incursions frequently emerged out of interventions by explorers and engineers and other 'people with projects', this understanding resonated deeply. It is also worth recovering as a current of technocratic thought not centred on bureaucracy and strong government but on private enterprise. Second, Verne's fiction constituted a powerful conception of global order, and contemporaries drew upon this as an inspiration for real-world interventions. At the French Société de Géographie, of which Verne was a long-time member, as well as among imperialists across Europe, the *Voyages* became a casual frame of reference in justification of colonial expansion. Better understanding this typically downplayed aspect of the modern international imagination not only promises to enrich IR's understanding of the role of speculative fiction in global ordering but also puts the current revival of techno-colonial projects – from Seasteading to the colonisation of Mars – into needed perspective.

Keywords: global order; imperialism; Jules Verne; technocracy; worldmaking

Introduction

In January 1929, the president of the eminent French Société de Géographie and renowned cave explorer Édouard-Alfred Martel hosted a session in honour of Jules Verne (1828–1905). The late writer had been a member of the Société for over three decades of his life. Twenty-four years after his passing, he still occupied a firm place in the institution's memory. In an elaborate speech to a room filled with the who's who of the French colonial elite – from the director of the Moroccan Colonial Railroads to the administrator of the Suez Canal Company, to the honorary governor-general of the colonies – Martel summarised Verne's legacy thus:

> All colonial explorers, officers, missionaries, agree that for the past sixty years, it is Jules Verne who has trained them. Trained them for what? Quite simply to double the colonial empire of France and to increase the number of its subjects to more than one hundred million

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> (*Applause*). This is why, in the name of colonisation, geography claims Jules Verne as one of its greatest and most fervent apostles.[1]

Verne is remembered today as a writer of adventure stories. His role as an 'apostle' of colonisation receives less attention. Literary scholars have noted the writer's membership in the Société and emphasised the inspiration he drew from obsessively collecting the latest facts and figures from its journals.[2] Rarely noted is the reverse inspiration Verne passed in turn to the explorers and colonisers he surrounded himself with. This is a missed opportunity, including for historians of international thought and International Relations (IR) scholars.

Martel's panegyric glossed over important nuances. Rather than unequivocally endorsing colonisation, Verne's fiction was ambivalent. As one contemporary journalist put it, Verne combined 'science and industrialism with all that is most romantic in life'.[3] Verne critics, from Roland Barthes to Michel Foucault, stress this ambiguity. They insist that Verne celebrated, yet also mocked and cautioned against, the scientist, the engineer, the coloniser.[4] The sense of a riveting *and* threatening empire of telegraph cables and railroads permeates the *Extraordinary Voyages* (1863–1905), the bestselling series of 54 stand-alone adventure novels to which the author had dedicated his lifetime as a writer.[5] Some of Verne's heroes celebrate the struggle of suppressed peoples against imperial domination, others advocate colonisation as necessary to deal with 'those African barbarians whom a civilizing war will necessarily one day reduce'.[6] The colonised are of 'pure manners' on some pages,[7] 'horrible beasts' on others.[8]

What, if any, view of global order did this imply? In search of an answer, this article presents a close contextual reading of Verne's fictional global order and its reception from the point of view of IR. The article approaches the *Voyages* through the lens of 'worldmaking', drawing on proliferating work at IR's intersection with global intellectual history and literary studies.[9] I argue that rather than simply reflecting 19th-century 'ideologies of progress', Verne was engaged in creative global ordering.[10] The *Voyages* captivated an audience that daily heard of 'the world' but hardly ever got to see it – much like the World's Fairs that proliferated at the time and which Verne had visited.[11] Both conveyed but also configured a sense of the global. The mass appeal of the *Voyages* meant that entire generations grew up imagining the world on Verne's terms; engineers and explorers explicitly drew upon his work as an inspiration for their real-world projects; and his universe became a casual

[1] Édouard-Alfred Martel, 'Séance solennelle du 11 janvier 1929. Célébration du centenai de Jules Verne', *La Géographie*, 51:3–4 (1929), pp. 186–213 (p. 190). Author's translation.

[2] Lionel Dupuy, 'Jules Verne et la géographie française de la deuxième moitié du XIXe siècle', *Annales de Géographie*, 3:679 (2011), pp. 225–45.

[3] Robert H. Sherard, 'Jules Verne at home: His own account of his life and work', *McClure's Magazine* (January 1894), available at: {http://jv.gilead.org.il/sherard.html}.

[4] Roland Barthes, *Mythologies* (Paris: Editions du Seuil, 1957); Michel Foucault, 'L'arrière-fable', *L'Arc*, 29:2 (1966), pp. 5–12; Pierre Macherey, *Pour une théorie de la production littéraire* (Paris: Maspero, 1966); Michel Serres, *Jouvences sur Jules Verne* (Paris: Minuit, 1974); Jean Chesneaux, *Jules Verne: une lecture politique* (Paris: Maspero, 1982); William Butcher, *Jules Verne's Journey to the Centre of Self* (London: Macmillan, 1990); Andrew Martin, *The Mask of the Prophet: The Extraordinary Fictions of Jules Verne* (Oxford: Clarendon Press, 1990).

[5] Additional volumes were published posthumously, but since these had been heavily edited and co-written by Jules Verne's son Michel Verne, this article does not consider the post-1905 *Voyages*.

[6] Jules Verne, *Le Pays des Fourrures* (Paris: Hetzel, 1873), p. 51.

[7] Jules Verne, *César Cascabel* (Paris: Hetzel, 1890), pp. 186–7.

[8] Jules Verne, *Cinq semaines en Ballon* (Paris: Hetzel, 1863), p. 124.

[9] See Duncan S. A. Bell, 'Making and taking worlds', in Samuel Moyn and Andrew Sartori (eds), *Global Intellectual History* (New York: Columbia University Press, 2013), pp. 254–79; Adom Getachew, *Worldmaking after Empire: The Rise and Fall of Self-Determination* (Princeton, NJ: Princeton University Press, 2019); Liane Hartnett, 'Love is worldmaking: Reading Rabindranath Tagore's *Gora* as international theory', *International Studies Quarterly*, 66:3 (2022), pp. 1–12.

[10] See Barry Buzan and George Lawson, *The Global Transformation: History, Modernity and the Making of International Relations* (Cambridge: Cambridge University Press, 2015).

[11] Verne was a visitor at the 1867 Exposition Universelle in Paris, where the display of a model of the French submarine *Plongeur* inspired him to write *Twenty Thousand Leagues under the Seas* (1869–70).

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reference in justification of colonial ventures. My reading appreciates the ambiguity that literary scholars have identified at the heart of his writing: we end up neither with a revisionist account of Jules Verne the radical progressive, nor with a one-dimensional Jules Verne the apologist of empire. Instead, I introduce Jules Verne the technocratic worldmaker.

Below, I first discuss the IR literature on speculative fiction and worldmaking, arguing that worldmaking is a form of global ordering. Second, I show that the *Voyages* are sources of insight for IR as under-explored parts of the late 19th-century political imagination. I interpret Verne's ambiguous but coherent conception of global order as *technocratic*, driven by individual heroic engineers; *anti-political*, as progress took place not because of but despite government; and necessarily *violent*. I conclude by connecting this interpretation to broader IR concerns. Verne's global order was not about states, sovereignty, or political community: it was about an elite vanguard of technocratic adventurers roaming the globe. At a time when colonial incursions frequently emerged out of interventions by explorers and engineers, this resonated deeply. It is worth recovering not least as a current of technocratic thought not centred on bureaucracy and strong government but on private enterprise.[12] Overall, better understanding this typically downplayed aspect of the modern international imagination not only enriches IR's understanding of the role of speculative fiction in global ordering but also puts the current revival of techno-colonial projects – from Seasteading to the colonisation of Mars – into needed perspective.[13]

Speculative fiction and worldmaking

Jules Verne was a writer of speculative fiction, not a theorist of international relations. To make the case for an IR reading of Verne's serialised novels, we thus first need to consider the broader merit of speculative fiction in this context. I briefly discuss the extant literature before arguing that worldmaking, which has received growing attention in recent years, helps capture the global ordering implications inherent in works of the political imagination. Political theorists and IR scholars have long insisted on the value of fiction as a genre of writing that is able to articulate what academic writing cannot. In the words of the late James C. Scott, novels 'have much political insight' to offer, and 'if you're just reading in political science and only talking with political scientists, it's like having a diet with only one food group'.[14] Or as Martha Nussbaum put it, novelists are able to perceive 'where the blunt terms of ordinary speech, or of abstract theoretical discourse, are blind'.[15] Judith Shklar likewise posited that it is by 'attending carefully to all imaginative and scholarly literature' that one can 'establish the historical identity of ideas'.[16] Speculative literature gives us access to historicity: the author's universe might grant us some access to what was imaginable, culturally and politically, in the context in which they wrote.

In IR in turn, approaches to fiction proliferate; according to one scholar, there is a 'literary movement at the forefront of contemporary IR'.[17] There is no consensus, however, as to the *point*

[12] Excellent recent work on bureaucratic technocracy includes Jens Steffek, *International Organization as Technocratic Utopia* (Oxford: Oxford University Press, 2021); and Marieke Louis and Lucile Maertens, *Why International Organizations Hate Politics: Depoliticizing the World* (London: Routledge, 2021).

[13] Alina Utrata, 'Engineering territory: Space and colonies in Silicon Valley', *American Political Science Review*, 118:3 (2023), pp. 1–13; Tristan Hughes, 'The political theory of techno-colonialism', *European Journal of Political Theory* (2024), available at: {https://doi.org/10.1177/14748851241249819}.

[14] As cited in Gerardo L. Munck and Richard Snyder (eds), *Passion, Craft, and Method in Comparative Politics* (Baltimore, MD: Johns Hopkins University Press, 2007), p. 370.

[15] Martha Nussbaum, *Love's Knowledge: Essays on Philosophy and Literature* (Oxford: Oxford University Press, 1990), p. 5.

[16] Judith N. Shklar, '*Nineteen Eighty-Four*: Should political theory care?', *Political Theory*, 13:1 (1985), pp. 5–18 (p. 17).

[17] Eileen M. Hunt, 'Mary Shelley's *The Last Man*: Existentialism and IR meet the post-apocalyptic pandemic novel', *Review of International Studies*, 49:5 (2022), pp. 1–23 (p. 1). See also Jutta Weldes, 'Globalisation is science fiction', *Millennium: Journal of International Studies*, 30:3 (2001), pp. 647–67; Seán Molloy, 'Escaping the politics of the irredeemable earth: Anarchy and transcendence in the novels of Thomas Pynchon', *Theory & Event*, 13:3 (2010), pp. 1–16; Isabella Hermann, 'Thought experiment as method: Science-fiction and International Relations in the Anthropocene', in David Chandler, Franziska Müller, and Delf Rothe (eds), *International Relations in the Anthropocene* (London: Palgrave Macmillan, 2021), pp. 425–40.

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of turning to novels as a source of insight. Sheeran argues that 'literature is a valuable medium to measure an understanding of the previous, prevailing and future social and political relations', including 'narratives and their influence on International Relations'.[18] According to Kirby, IR has fruitfully engaged with science fiction 'as a teaching aid', but also 'as a field for analysis in its own right'.[19] Fiction does more than mirror an already-familiar historical context: it '"naturalises" existing histories and power relations in a fantastical register'.[20] Weldes concurs that fiction can have *constitutive* effects.[21]

A growing number of IR scholars thus agrees *that* speculative fiction matters, though not necessarily how we should approach it methodologically. The notion of worldmaking offers a powerful answer to this question. Worldmaking foregrounds what Weldes refers to as the 'world-building' qualities of speculative fiction. Liane Hartnett argues that 'literature is a site of sentimental education long implicated in worldmaking projects of *both* domination *and* resistance'.[22] Coined by American philosopher Nelson Goodman, worldmaking refers to 'how humans symbolically construct worlds' and thus offers one way of conceptualising how 'social life is imagined and stabilized, maintained and reproduced'.[23] Taylor's social imaginaries[24] and Gregory's 'worlding'[25] similarly capture the constitutive effects of variable frames of the imagination by which we 'structure conditions of political possibility'[26] and generate a basic 'intelligibility of social reality'.[27]

In his 1978 *Ways of Worldmaking*, Goodman asked: 'In just what sense are there many worlds? What distinguishes genuine from spurious worlds? What are worlds made of? How are they made?'[28] Building on Ernst Cassirer, Goodman was interested in the multiplicity of worlds, and what these worlds consist of. By studying 'types and functions of symbols and symbol systems', Goodman suggested, we can examine the composite elements of multiple worlds.[29] Importantly, worlds are made of other worlds: 'Worldmaking as we know it always starts from worlds already on hand; the making is a remaking.' This is crucial because, while 'conception without perception is merely *empty*, perception without conception is *blind* (totally inoperative)'.[30] Worldmaking entails, first, *composition* and *decomposition*: we draw connections and organise things into groups and systems but also subdivide, classify, and distinguish. Second, *weighting*: each world places emphasis on some aspects and less so on others, separating the supposedly relevant from the supposedly irrelevant. Third, *ordering*: composite elements are related in order of derivation, periodicity, proximity, by time, by space, and so on. These specifications are '*built into a world*'.[31] Fourth, *deletion* and *supplementation*, or 'some extensive weeding out and filling – actual excision of some old and supply of some new material'.[32] Fifth and finally, *deformation*: the reshaping of particular aspects, which to some may appear as distortions, to others as corrections.[33] Applied to speculative fiction, these

[18] Paul Sheeran, *Literature and International Relations: Stories in the Art of Diplomacy* (London: Routledge, 2007), p. viii.

[19] Paul Kirby, 'Political speech in fantastical worlds', *International Studies Review*, 19:4 (2017), pp. 573–96 (p. 574).

[20] Kirby, 'Political speech in fantastical worlds', p. 583; see Jutta Weldes, 'Going cultural: *Star Trek*, state action, and popular culture', *Millennium: Journal of International Studies*, 28:1 (1999), pp. 117–34 (p. 127).

[21] Weldes, 'Going cultural', p. 127.

[22] Hartnett, 'Love is worldmaking', p. 2.

[23] Bell, 'Making and taking worlds', p. 258.

[24] Charles Taylor, *Modern Social Imaginaries* (Durham, NC: Duke University Press, 2004).

[25] Derek Gregory, *The Colonial Present* (Oxford: Wiley-Blackwell, 2004).

[26] Joanne Yao, 'The power of geographical imaginaries in the European international order: Colonialism, the 1884–85 Berlin Conference, and model international organizations', *International Organization*, 76:4 (2022), pp. 901–28 (p. 907).

[27] Alexander D. Barder, *Global Race Wars: International Politics and Racial Hierarchy* (Oxford: Oxford University Press, 2021), pp. 11–12.

[28] Nelson Goodman, *Ways of Worldmaking* (Indianapolis: Hackett, 1978), p. 1.

[29] Goodman, *Ways of Worldmaking*, p. 5.

[30] Goodman, *Ways of Worldmaking*, p. 6, emphasis original.

[31] Goodman, *Ways of Worldmaking*, p. 14, emphasis original.

[32] Goodman, *Ways of Worldmaking*, p. 14.

[33] Goodman, *Ways of Worldmaking*, pp. 7–16.

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five aspects help us specify how novels provide readers with a lens through which to look at the world, furnishing their perception with conception.

When we study worldmaking we study, as Bell puts it, 'enunciations of universality, on attempts to cognitively encompass a given world'.[34] These imaginative acts, accessible for and addressed at a particularly broad audience in the case of fiction, represent ways of understanding the world as well as, I argue, acts of global ordering. For present purposes, I understand global ordering as the material and ideational pursuit of establishing global order, broadly understood as structured relations between state, market, and civil society.[35] Now texts, in their capacity as *acts*, as Kuntz argues, 'operate as agents of realities, visibilities, entities, practice, and so forth, indeed entire worlds, which they construct and circumscribe'.[36] Writing of whichever kind then can be understood as 'not so much a method of transferring information as a material operation of creating order'.[37] In precisely this sense, literature is not just a reflection or 'a window' but a 'site' of worldmaking and global ordering.[38] This tracks Cheah's insistence upon 'world literature as a world-making activity' insofar as literature – not unlike 'theory' – is engaged in imagining and discovering the possible and the impossible, the desirable and the undesirable.[39] In so doing, it also 'demarcates ethical circles of concern and the hierarchies that pervade them'.[40] Getachew's reading of 20th-century anti-colonial claims to self-determination parallels this understanding. Since these claims, juxtaposed to global conceptions of empire, 'required a similarly global anticolonial counterpoint that would undo the hierarchies that facilitated domination', she argues that they constituted comprehensive *worldmaking* claims.[41] Worldmaking represented no less than 'a demand for the radical reconstitution of the international order'.[42] As Hartnett puts it, worldmaking entails 'disparate political attempts to imagine and enact worlds beyond those that exist'.[43] These do not spring from nowhere – worlds are made of other worlds.

Based on this, I conceptualise the worldmaking effect of speculative fiction as the comprehensive representation of the world based on choices of emphasis, agency, and actorhood in fictional writing. Goodman's five criteria help us dissect these and analyse them in a systematic fashion. The resulting representation of the world makes a particular kind of global order *imaginable* – fiction instils a particular image of what matters in global order and who drives change in it. Real-world practitioners – 'orderers', whether diplomats and statesmen or entrepreneurs and explorers – can then use this image as a cultural frame of reference to justify their actions or inspire their plans. Altogether, approaching worldmaking as global ordering embeds speculative fiction tightly within its historical context and so helps us resist reading fiction as ahistorical and detached.

In the IR context, on the one hand, this allows us to examine an important part of the political imagination. On the other hand, fiction can also be approached as political intervention in its own right. 'Artists try to depict people', the Egyptian novelist Waguih Ghali once wrote, 'and people depict the artists' conception of people'.[44] Jules Verne himself hinted at this much when Impey

[34] Bell, 'Making and taking worlds', p. 257.

[35] Andrew Hurrell, *On Global Order: Power, Values, and the Constitution of International Society* (Oxford: Oxford University Press, 2007), p. 6.

[36] Friederike Kuntz, 'On the government of liberty: Writing the liberal script into action', in Tanja Börzel, Johannes Gerschewski, and Michael Zürn (eds), *The Liberal Script at the Beginning of the 21st Century: Conceptions, Components, and Tensions* (Oxford: Oxford University Press, 2024), forthcoming.

[37] Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton, NJ: Princeton University Press, 1987), p. 245.

[38] Hartnett, 'Love is worldmaking', p. 2.

[39] Pheng Cheah, *What Is a World? On Postcolonial Literature as World Literature* (Durham, NC: Duke University Press, 2016), p. 2.

[40] Hartnett, 'Love is worldmaking', p. 2.

[41] Getachew, *Worldmaking after Empire*, p. 4.

[42] Getachew, *Worldmaking after Empire*, p. 5.

[43] Hartnett, 'Love is worldmaking', p. 1.

[44] Waguih Ghali, *Beer in the Snooker Club* (London: Serpent's Tail, 1963), p. 38.

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Barbicane, the protagonist of *From the Earth to the Moon* (1865), referred to the power of 'imaginary journeys' that had catalysed the adventures of explorers and scientists.[45] Even more, actual explorers during Verne's lifetime were inspired by the *Voyages*: Fridtjof Nansen named one of his ships after the fictional *Forward* from *The Adventures of Captain Hatteras*; Simon Lake travelled to the North Pole aboard the *Nautilus*, named after the submarine of *Twenty Thousand Leagues under the Seas* fame; and Frederick Cook has been said to have followed Verne's imaginary journey to the North Pole in real physical space.[46]

So far, I have argued that worldmaking in fiction merits being approached as a creative act of global ordering. In the next section, I investigate what 'worlds' Verne was immersed in to illuminate how his work related to the historical context in which he wrote. Subsequent sections then deploy Goodman's five criteria – composition, weighting, ordering, deletion, and deformation – to structure my reading of Verne's novels through a worldmaking lens.

Verne in context

Rosalind Williams aptly characterises Verne as 'a textual engineer', 'acutely aware of the constructed character of his works and of his own active role in building them from pieces of information produced by others'.[47] So what worlds was Verne's world made of? Political thought at the time of Verne's writing was intensely preoccupied with the experience of global integration. As historians of international thought have shown at length, coping with this experience could range from proletarian bonds of solidarity to racial-imperial visions of global order.[48] All the major 'isms' of the time affected the shape of these proposals.[49] They were distinct ideological responses to major material changes from rapid industrialisation to colonial expansion. What today we call science fiction was no accidental corollary of this experience. Jules Verne is a case in point; indeed, his literary output 'records and reflects on the ceaseless process of annexation, colonization, and insurrection which characterizes the nineteenth century'.[50] Yet the *Voyages* did more than reflect that experience – they were in significant ways constitutive of it: textually, Verne fictionalised the world in ambiguous but coherent ways. Contextually, the mass appeal of his work meant that entire generations grew up imagining the world on Verne's terms; engineers and explorers explicitly drew upon Verne's work as an inspiration for their real-world projects; and Verne's universe became a frame of reference in justification of colonial ventures in France and elsewhere.

Verne took special pride in being present-oriented and based in scientific fact, rather than facing a distant future. In a 1904 press interview, he stressed that 'I have always made a point in my romances of basing my so-called inventions upon a groundwork of actual fact, and of using in their construction methods and materials which are not entirely without the pale of contemporary engineering skill and knowledge'.[51] This grounding in ongoing scientific developments arguably made for part of the appeal and originality of Verne's many stories. At the same time – in line with Goodman – it reveals how Verne made his world of heaver-than-air flying machines, steam-powered railway journeys, and sophisticated submarines out of the material of other worlds made by the scientists, engineers, and explorers of his time. In a telling case in point of writing as 'a material operation of creating order' – of what Goodman refers to as *ordering* – Verne's writing

[45] Jules Verne, *De la Terre à la Lune, trajet direct en 97 heures 20 minutes* (Paris: Hetzel, 1865), chapter 2.

[46] Randall J. Osczevski, 'Frederick Cook and the forgotten pole', *Arctic*, 56:2 (2003), pp. 207–17 (p. 212).

[47] Rosalind Williams, *The Triumph of Human Empire: Verne, Morris, and Stevenson at the End of the World* (Chicago: University of Chicago Press, 2013), p. 87.

[48] Patricia Clavin and Glenda Sluga (eds), *Internationalisms: A Twentieth-Century History* (Cambridge: Cambridge University Press, 2016); Duncan S. A. Bell, *Dreamworlds of Race: Empire and the Utopian Destiny of Anglo-America* (Princeton, NJ: Princeton University Press, 2020).

[49] Buzan and Lawson, *The Global Transformation*; Jan Eijking, 'A "priesthood of knowledge": The international thought of Henri de Saint-Simon', *International Studies Quarterly*, 66:1 (2022), pp. 1–11.

[50] Martin, *The Mask of the Prophet*, p. 19.

[51] Gordon Jones, 'Jules Verne at home', *Temple Bar*, 129 (1904), pp. 664–71 (p. 670).

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method emulated the scientist.[52] He collected clippings and findings, scoured encyclopaedias and natural histories for morsels of fact and proper jargon, closely followed the latest scientific journals of whichever field his hero was meant to be versed in, and then condensed everything into meticulous descriptions filling the pages of his novels. He amassed charts, tables, graphs, manuals, notes from the various Geological, Geographical, Biological, Statistical, and other Associations of his day before he would dedicate himself to drafting meticulous descriptions of earth, mass, surface, depth, width, velocity, all conquered by his adventurous heroes. The explorer and the writer merged into one; the act of writing became identical with the act of exploration.

This was tied to a fascination with discovery and empty space. In an 1895 interview, Jules Verne explained that he 'had always been devoted to the study of geography, much as some people delight in history and historical research. I really think that my love for maps and the great explorers led to my composing the first of my long series of geographical stories.' From this point of view, it was no coincidence that his very first novel, the 1863 *Five Weeks in a Balloon*, was largely set in Africa: 'less was, and is, known about that continent than any other; and it struck me that the most ingenious way in which this portion of the world's surface could be explored would be from a balloon'.[53] A crucial part of this connection was his membership for over three decades of his life of the Société de Géographie, which still exists today and prides itself on being the world's oldest geographical society. As a member, Verne was in close and regular contact with the French imperial explorers and geographers who made up its primary base.

The Société was no mere scientific association, no more than 19th-century geography was a merely scientific pursuit.[54] Instead, it was a key institution of the French imperial project throughout the latter half of the 19th century, eventually earning it the addition of 'et d'études coloniales' to its name. The Société was closely aligned with and tied to the highest levels of the French government, particularly during the Second Empire under Napoleon III. An example of this close relationship is the 1864–73 presidency of the Marquis Prosper de Chasseloup-Laubat, Napoleon III's former minister of the navy. Chasseloup-Laubat was an important early advocate of French colonialism, said to have persuaded Napoleon III of the 1864 conquest of Cochinchina (part of modern-day Vietnam). In 1863, the year before taking up his position as president of the Société, he had declared that 'it is a real empire that we need to create for ourselves'.[55] Chasseloup-Laubat went on to use his position as a platform to promote the French colonial project.[56] Successors maintained this understanding, and during the 1870s and 1880s the Société played no small part in international affairs: in 1878, its president crowned Congo explorer Henry Morton Stanley with the Legion of Honour; 1879 saw the announcement on its premises of the French plan for a Panama canal; and in 1881, Suez Canal entrepreneur Ferdinand de Lesseps became its president. It was during this time too that the Société sponsored many an adventure of explorers – one is tempted to say Vernean heroes – such as Pierre Savorgnan de Brazza, after whom Brazzaville is named. Individual expeditions supported by the Société laid some of the groundwork for imperial claims later put to the table at the 1884–5 Berlin conference.

Verne was closely involved in the activities of the Société precisely during this high imperial phase.[57] In the 1870s, the Société directly referred to Verne's work and personally involved Verne in a campaign for round-the-world scientific exploration.[58] In 1875, Verne served as member of

[52] Latour and Woolgar, *Laboratory Life*, p. 245.

[53] Marie A. Belloc, 'Jules Verne at home', *Strand Magazine* (1895), available at: {http://jv.gilead.org.il/belloc/}.

[54] On geography, see, e.g., Zeynep Gülşah Çapan and Filipe dos Reis, 'Creating colonisable land: Cartography, "blank spaces", and imaginaries of empire in nineteenth-century Germany', *Review of International Studies*, 50:1 (2024), pp. 146–70.

[55] As cited in Sandrine Lemaire, Pascal Blanchard, and Nicolas Bancel, 'Milestones in colonial culture under the second empire (1851–1870)', in Pascal Blanchard, Sandrine Lemaire, Nicolas Bancel, and Dominic Thomas (eds), *Colonial Culture in France since the Revolution* (Bloomington: Indiana University Press, 2014), pp. 75–89 (p. 78).

[56] Alfred Fierro, *La Société de Géographie: 1821–1946* (Geneva: Droz, 1983), pp. 57–8.

[57] See Anonymous, *Jules Verne* (Amiens: Académie des sciences, lettres et arts du département de la Somme, 1908).

[58] As cited in Donald Vernon McKay, 'Colonialism in the French geographical movement 1871–1881', *Geographical Review*, 33:2 (1943), pp. 214–32 (p. 226).

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the organising committee of an International Congress of the Geographical Sciences held in Paris under the patronage of the Société.[59] A fellow member of this committee was Adolphe Puissant, editor of the Société-sponsored journal *L'Explorateur*, later subtitled 'Journal of the Conquests of Civilisation across All Parts of the Globe'. This journal published some of Verne's non-fiction writing but also connected Verne's fictional universe to real-world explorers. Three polar expeditions in 1871, the journal claimed, had followed the lead of none other than Verne's legendary Captain Hatteras.[60] Just as much as Verne devoured the publications of the Société, the Société celebrated the writer in turn, and the explorer's avenue to imperial expansion that it promoted was – as we shall see below – culturally imbued with the same conception of global order that underpinned Verne's fiction.

Paralleling how engineers at the time mobilised the idea of an 'empty frontier', Verne's novels simultaneously adopted a global gaze upon the planet and territorialised all space. According to Utrata, the spatial politics of today's techno-colonisers such as Jeff Bezos or Elon Musk revolves around the idea that 'the technological solution to the lack of empty space … is simply to engineer more territory – in cyberspace, outer space, and the sea'.[61] Likewise, projects such as Peter Thiel's 'Seasteading' construct 'the ocean as the final frontier – the last lawless zone that can tolerate the creation of a new political order'.[62] This puts the political consequences and relevance of how we construct global space into sharp relief. One of the historical seeds of this understanding – Jeff Bezos has cited Jules Verne as an inspiration[63] – can be found in the *Voyages*.

Verne's innovative publisher Pierre-Jules Hetzel had declared the author's task rather immodestly to be to 'summarise all the knowledge – geographical, geological, physical, astronomical – amassed by modern science, and to retrace, in the attractive and picturesque form which is his own, the history of the universe'.[64] Hetzel's enterprise was itself a product of the transformation of the publishing industry *qua* industry during this period: the business-savvy Hetzel was able to meticulously plan production from magazine series to special editions as individual volumes, to contracts with overseas publishing houses for parallel translations. This meant that British audiences were able to read Verne's work soon after their original French publication. On either side of the Channel, the writer's influence was exceptional – and wide-ranging, with the cheapest editions sold for a mere two to three shillings. Hetzel understood his market well: the novels' imaginary worlds neatly mapped onto the spirit of industrial capitalism and imperial expansion. And yet they did not simply reproduce that spirit. Rather like the World's Fairs, they coupled representation with experience: they made a world and, in the process, imposed their own conception of order upon it. I argue that we should approach the *Voyages* in much the same way – as, with Goodman, *perception with conception*.

In this section, I explored the historical context in which Verne wrote the *Voyages* in order to illuminate what 'worlds' he made his own world of. In the remainder of the article, deploying Goodman's five criteria of worldmaking, I examine three central themes that characterise global order in Verne's *Voyages*: technocracy, anti-politics, and violence.

Fully autonomous technocrats

The *Voyages* are centred on scientists and engineers as technocratic drivers of change in global order.[65] This elevation of one particular, male actor-type as vested with special agency and

[59] Société de Géographie, *Congrès International des Sciences géographiques tenu à Paris du 1er au 11 aout 1875: Compte-rendu des séances* (Paris: Martinet, 1875), p. LV.

[60] Anonymous, 'Le Pole Nord', *L'Explorateur: Journal Géographique et Commercial* (1 January 1875), pp. 7–10 (p. 8).

[61] Utrata, 'Engineering territory', p. 10.

[62] Hughes, 'The political theory of techno-colonialism', p. 12.

[63] Utrata, 'Engineering territory', p. 5.

[64] As cited in Martin, *The Mask of the Prophet*, p. 2.

[65] On the changing role of science and engineering in Jules Verne's novels, see Pierre Terrasse, 'Jules Verne et les grandes écoles scientifiques', *Bulletin de la Société Jules Verne*, 12:4 (1969), pp. 72–8.

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importance can be understood as what Goodman refers to as *weighting* or an emphasis inherent in worldmaking on some aspects over others. The *Voyages* are all about the engineer-explorer, man of science and reckless adventurer alike: Dr Samuel Fergusson travelling across sub-Saharan Africa in a hydrogen-filled balloon in *Five Weeks in a Balloon* (1863); Professor Otto Lidenbrock trying to reach the earth's core underneath a volcano in *A Journey to the Centre of the Earth* (1864); Captain Hatteras, who relentlessly pushes his expedition crew on the way to the North Pole in *The Adventures of Captain Hatteras* (1866); Captain Nemo traversing the oceans in his fully autonomous submarine in *Twenty Thousand Leagues under the Seas* (1869–70); or the pedantic Phileas Fogg's circumnavigation aboard trains, ships, and elephants in *Around the World in Eighty Days* (1872). Each of these protagonists were equal parts 'technically competent' and 'emotionally remote'.[66] Verne's adventurer was the ultimate 'sovereign individual'.[67]

This reflected the liberal political imagination of his time, intensely preoccupied as it was with the echoes of the French Revolution and the spectre of mass society, but also with visions of virile leadership. This was the time when the Victorians 'turned men of science and engineers into heroes', when Samuel Smiles suggested people follow their example in his 1859 guide *Self-Help*, and when the notion of the 'individual' gained currency in its modern usage.[68] Yet, as Morus relates, 'individual self-improvement was an entirely masculine affair'.[69] And so, the *Voyages* throughout juxtapose masculine heroes to female wilderness and nature forced into submission. The depiction of British India in *Around the World* combines these motifs with racial undertones when Phileas Fogg rescues a Mrs Aouda, 'an Indian of celebrated beauty, of the Parsee race', who 'did indeed belong to that race which occupies the highest level among the native races'. Mrs Aouda, who says next to nothing throughout the remainder of the novel, is rescued because she is a beautiful woman. Verne also assures his readers that she 'had received a thoroughly British education in that town, and from her manners and education, one would have thought her a European'.[70] Verne did consider science a male preserve. At an address to an Amiens girls' school, he went so far as to warn girls against pursuing scientific studies – 'even men have gotten lost in it at times'.[71] He had also co-authored a four-volume textbook assembling the stories of the 'great voyagers' from Ancient Greece to 1880 – all of them male, nearly all of them European.[72]

Isaiah Berlin noted in 1972 that one of Jules Verne's legacies was 'the construction of one single, technocratically organized, managerial, Saint-Simonian world'.[73] Were his heroes Saint-Simonian types?[74] Not entirely. As Chesneaux pointed out, Verne did write at a time when 'Saint-Simonianism and the industrial society of the Second Empire' converged.[75] Most of Verne's novels were published, if after the original movement's demise, at the peak of the 'practical Saint-Simonianism' that underpinned such notable global-political moments as the 1860 Cobden–Chevalier treaty (Michel Chevalier had been a leader of the Saint-Simonians) or the 1869 inauguration of the Suez Canal (many Saint-Simonians had done early surveying works for the canal, some had been directly involved in the company).[76] Verne was personally connected to Saint-Simonians such as the journalist Adolphe Georges Guéroult; the explorer Henri Duveyrier, who

[66] Williams, *The Triumph of Human Empire*, p. 61.

[67] Chris Bongie, 'Into Darkest Asia: Colonialism and the imperial fiction of Jules Verne's Michel Strogoff', *Clio*, 19:3 (1990), pp. 237–49 (p. 245).

[68] Iwan Rhys Morus, *How the Victorians Took Us to the Moon: The Story of the Nineteenth-Century Innovators Who Forged the Future* (London: Icon, 2023), p. 6.

[69] Morus, *How the Victorians Took Us to the Moon*, p. 13.

[70] Jules Verne, *Le Tour du monde en quatre-vingts jours* (Paris: Hetzel, 1872), pp. 63–81.

[71] As cited in Chesneaux, *Jules Verne*, p. 16.

[72] Jules Verne and Gabriel Marcel, *Découverte de la terre: Histoire générale des grands voyages et des grands voyageurs*, 3 vols. (Paris: Hetzel, 1870–80).

[73] Isaiah Berlin, 'The bent twig: A note on nationalism', *Foreign Affairs*, 51:1 (1972), pp. 11–30 (pp. 13, 15).

[74] On Saint-Simon's international thought, see Eijking, 'A "priesthood of knowledge"'.

[75] Chesnaux, *Jules Verne*, p. 71.

[76] Sébastien Charléty, *Histoire du Saint-Simonisme (1825–1864)* (Paris: Paul Hartmann, 1931), p. 273.

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appears in his novels; the composer Félicien David, who likewise features in the *Voyages*; and the writer and journalist Édouard Charton, editor of the journal *Le Tour du Monde*.[77] Verne frequented this milieu alongside his close friend the photographer Gaspard-Félix Tournachon, known as Nadar, whose ballooning adventures inspired *Five Weeks in a Balloon*. Nadar had also worked as secretary to Ferdinand de Lesseps, whose Suez Canal project had benefited greatly from prior surveying work carried out by Saint-Simonians.[78] Lesseps makes various appearances throughout Verne's novels, always praised as an exemplary engineering genius; and he had personally helped Verne obtain the prestigious Legion of Honour.[79] In 1862, Verne and Nadar founded a society for the promotion of work on heavier-than-air flying machines; and in 1883, Verne co-founded the cultural foundation Alliance française together with Lesseps and others, including the Orientalist Ernest Renan and vaccination pioneer Louis Pasteur.

Verne's representations of the world are reminiscent of Saint-Simonian proposals for covering the globe in railroads and telegraph cables. Literary scholars have described *Around the World in Eighty Days* as 'a hymn to communication whose primary inspiration is clearly Saint-Simonian'[80] and commented on a 'Saint-Simonian enthusiasm for science and technical progress' in the *Voyages*.[81] But ultimately, a deeper ideological commitment is absent. Closer to Victorian individualism and its obsession with the figure of the inventor, the Anglophile Verne stripped Saint-Simonian influences of any commitment to social reorganisation or political community. What was left was a much narrower focus on engineering genius – a core aspect of Verne's technocratic world, differentiating it from conceptions of technocracy centred on bureaucracy and government. For the Saint-Simonians, the technological unification of the world would have aimed at peace and spiritual community; engineers were to bring about something like technocratic welfare. For Verne, by contrast, they were anarchical figures who left broader aspirations for society behind. Captain Nemo, the ruthless hero of *Twenty Thousand Leagues under the Seas*, is a chief example: his grand rebellion consists not in spearheading collective action but in building an autarkical submarine as a means of permanent escape. Verne's was a vision of exit from politics. Beyond Saint-Simonian synergies, what stands out in his particular brand of technocratic thinking is a stark bifurcation between epistemically superior knowers and creators, and exotic, empty spaces of nature. Serres identifies a broad epistemic imperialism: 'It is no longer sailors, soldiers, farmers or missionaries who appropriate the land, it is scientists.' And indeed, throughout Verne's novels, we follow the journeys of 'astronomers in Cape Town, physicists in South America, surveyors, cartographers and geologists everywhere.'[82] Consider Cyrus Smith, one of the heroes in *The Mysterious Island* (1875), whom Verne described as 'a microcosm, a compound of every science, a possessor of all human knowledge'.[83] Indeed, most of Verne's protagonists are described as possessors of overwhelming amounts of knowledge, specialists in numerous disciplines and subjects at once, and genius inventors at the same time. This knowledge endows them with authority and prestige, but it is also more knowledge of the world which they seek in their conquest of it. All this of course resonated with the Société de Géographie and its role as an ostensibly scientific axis of the French colonial project. This was a matter, in Goodman's phrasing, of *deletion* and *supplementation* too: while in reality scientific missions such as Napoleon Bonaparte's 1798 expedition to Egypt were highly organised collective undertakings, in the *Voyages* such practical dependencies disappeared. Verne's heroes never followed in the entourage of military expeditions or diplomatic missions – they ventured out into the world entirely on their own terms.

[77] Chesneaux, *Jules Verne*.

[78] Jan Eijking, 'Historical claims to the international: The case of the Suez Canal experts', *International Studies Quarterly*, 67:3 (2023), p. sqad041.

[79] Marguerite Allotte de la Fuÿe, *Jules Verne: sa vie son oeuvre* (Paris: Hachette, 1966), p. 129.

[80] Pierre Macherey, 'The Philosophy of *Around the World in Eighty Days*', *Savoirs et Clinique*, 1:1 (2002), pp. 65–73 (pp. 66–7).

[81] Michel Serres, *Jouvences sur Jules Verne* (Paris: Minuit, 1974), p. 17.

[82] Serres, *Jouvences sur Jules Verne*, p. 12.

[83] Jules Verne, *L'Île mystérieuse* (Paris: Hetzel, 1875), p. 102.

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The role of epistemic superiority structures a persistent division throughout the *Voyages* between the white male scientist (in the singular) and ignorant natives (in the plural), reinforced by depictions of conquest as a technical imperative. With regards to the former, as one character explains to another aboard the balloon traversing the African continent in *Five Weeks in a Balloon* (1863): 'You might sit all day explaining the mechanism of a balloon to the *savants* of this country, and yet they would not comprehend you, but would persist in ascribing it to supernatural aid.'[84] With regards to the latter, the same novel's hero-scientist Dr Ferguson lays out the vast promise Africa bears to Europeans:

> Those climates now so fatal to strangers will be purified by cultivation and by drainage of the soil, and those scattered water supplies will be gathered into one common bed to form an artery of navigation. Then this country over which we are now passing, more fertile, richer, and fuller of vitality than the rest, will become some grand realm where more astonishing discoveries than steam and electricity will be brought to light.[85]

Technical possibility – purification, drainage, navigation – compels the scientist and the engineer to appropriate swathes of land for progressive, future-oriented usage. Here again, we might recognise Saint-Simonian influences, and perhaps his machine-centric world of engineer-adventurers does resemble Michel Chevalier's 'Mediterranean system' of canals and railroads.[86] But Verne reduced this to a world of machines and engineers, of science and discovery, devoid of political community. Verne's global order was technocracy without polis – not by denying the latter's existence, but by backgrounding it so much as to separate the heroism of the engineer from the resource extraction, labour, and not least imperial global order that enabled it (and which it, in turn, enables). At the same time, Verne was well aware of the limitations of a world thus reduced. At one point, his character Dick Kennedy in *Five Weeks in a Balloon* even warns us of 'a very dull period when industry will swallow up every thing for its own profit'. He goes on bleakly:

> By dint of inventing machinery, men will end in being eaten up by it! I have always fancied that the end of the earth will be when some enormous boiler, heated to three thousand millions of atmospheric pressure, shall explode and blow up our Globe![87]

Such warnings resurface occasionally. For example, Verne's eponymous engineer in *Robur the Conqueror* (1886) turns into a tyrannical villain in the novel's sequel *Master of the World* (1904). But even in those most pessimistic moments, there is no escape from it: the world is relentlessly being 'eaten up' by machinery, whether we like it or not. Verne's worldmaking narrates spectacular progress, in other words, that contains the seeds of its own unmaking. There is an argument to be made that the bleak side that comes out more strongly in Verne's later, post-1880 novels had been there from the start but was attenuated by push-back from Verne's editor and publisher Hetzel. For example, the very first of the *Voyages* (*The Adventures of Captain Hatteras*, 1864) originally was meant to tell the tale of a scientist who, after looking for the North Pole, finds it only to perish in it. Even the published version, in which the scientist does return but descends into insanity, retains a subtle critique of the limitations of science. More often than not, however, readers are brought back to comfort.[88] From *Around the World* to *Journey to the Centre of the Earth*, Verne's travels typically end with a return to bourgeois safety. Still, this is rarely if ever a return to society – instead, we return to the gentlemen's club, the corporate world, the scientific association: exclusive spaces of

[84] Verne, *Cinq semaines en Ballon*, chapter 30.

[85] Verne, *Cinq semaines en Ballon*, chapter 16.

[86] See Michael Drolet, 'Nature, science and the environment in nineteenth-century French political economy: The case of Michel Chevalier (1805–1879)', *Modern Intellectual History*, 15:3 (2018), pp. 711–45.

[87] Verne, *Cinq semaines en Ballon*, chapter 16.

[88] See William Butcher, *Jules Verne: The Definitive Biography* (New York: Thunder's Mouth Press, 2006), pp. 156–7.

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elite socialisation. Once the spoils are brought home, we are reassured, the cultivation of genius can resume as before.

In the *Voyages*, Verne thus persistently conveyed the sense that it is engineers and scientists to whom we owe progress in global order. The concomitant elevation of this actor-type as vested with special agency and importance can be understood, I argued above, as what Goodman refers to as *weighting* or particular choices of emphasis with worldmaking effects. Engineers and explorers invoked Verne, whether enthusiastically or in jest, themselves: an 1891 issue of the *Electrical Review* featured an excited summary of Verne's speculative *La journée d'un journaliste américain en 2890*;[89] an 1892 essay in *The Engineer* referred to Verne to discuss the construction of a multiple projectile, noting such a construction may be 'possibly reminding at first of Jules Verne's mechanical speculations';[90] and an 1895 issue of *The Electrical Engineer* cited a Swiss newspaper commenting upon a railway project as something 'out of one of Jules Verne's books'.[91] By the 1890s, Verne's world was a firm part of the popular imagination. In its capacity as a semi-Saint-Simonian, semi-vanguardist reduction of change in world politics to the individual actions of heroic engineers and explorers, this representation had broad appeal. It had constitutive effects too: Verne's heroes became model figures regularly invoked in justifications of colonial ventures, at a time when the French colonial project was in the making.

Progress against politics

So far I have highlighted the technocratic dimension of Verne's *Voyages*, central to which I suggested was a reduction of change in global order to the actions of brave explorers and genius inventors. What was the role of politics in a world thus conceived? Verne has been said to have 'constantly sought to shrink [the world], to populate it, to reduce it to a known and enclosed space'.[92] And yet from a worldmaking perspective, Verne's romantic narration of imperial conquest through the language of adventure and discovery is revealing of a more comprehensive engagement with global order. To speak with Goodman, here the *Voyages* involved *deformation*. Not least by extracting his heroes from any wider collective purpose, above all the colonial project that many actual expeditions and enterprises were in the service of, Verne denied the possibility of politics. Verne's worldmaking was also *ordering*: without ever omitting the backdrop of scientific associations, private benefactors, and even diplomatic relations and tensions that all surrounded the world of his heroes, he rearranged the order of their importance. His narration of conquest as ambivalent but romantic adventure, as I draw out in this section, reveals the dichotomies that underpinned his anti-politics: between the human and the natural, the civilised and the savage, the technical and the political. In the *Voyages*, conquest could so be portrayed as a service to humanity that merely extended the application of technical possibility beyond its European origins.

The conquest of supposedly empty global space by heroic scientists and engineers was a deeply anti-political narrative: exceptional men found their way in spite of society, not because of it. As Williams put it, Verne 'wanted to get away from organized humanity through creating a secondary world under his command'.[93] Of course, opposition to politics is political itself, for example when it obscures the privileged position of those able to claim independence from political decisions: it is no coincidence that Verne was writing as a white man from the imperial metropole, or that 'political exit' projects today are spearheaded by billionaires. But another layer is that politics reappears within the space of supposed exit itself: exit projects extract themselves from sovereign power relations foremost in order to reproduce those very power relations – only now the exiting engineer is in charge.[94]

[89] Anonymous, 'Jules Verne', *Electrical Review*, 19:8 (1891), p. 107.
[90] Samuel Tolver Preston, 'A multiple projectile', *The Engineer* (28 October 1892), p. 371.
[91] Anonymous, 'Notes', *The Electrical Engineer* (1 February 1895), p. 119.
[92] Barthes, *Mythologies*, pp. 65–6; for a similar interpretation cf. Chesneaux, *Jules Verne*, p. 62.
[93] Williams, *The Triumph of Human Empire*, p. 61.
[94] Utrata, 'Engineering territory', p. 9.

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The vertical and horizontal conquest of the earth – primarily in deserted, raw natural spaces, the inside of a volcano or the bottom of the sea, rather than in the midst of society – was a central feature from *Around the World in Eighty Days* to *Twenty Thousand Leagues under the Sea*. Yet Verne also imagined 'community – and individuals in it – [as] defined by a global transport system'.[95] This was not simply a universe where courageous men penetrated into hitherto-undiscovered lands; it was a universe fired up by the steam engine, cut up into railroad distances, and woven together by a web of telegraph cables. The emphasis was not on political community but on infrastructure. A passage at the beginning of *Around the World in Eighty Days* captures this perception:

> 'But after all, the world is big enough.' – 'It used to be,' Fogg said quietly. … 'What d'you mean, "used to be"? Has the Earth suddenly got smaller by some chance?' – 'Unquestionably it has,' responded Ralph. 'I share Mr Fogg's view. The Earth has shrunk because it can be covered ten times as quickly now as a hundred years ago.'[96]

Here, Verne was a narrator of global integration. His heroes were compelled by a quest to resist politics and oppose it: their triumphs relied on private sponsors, gentlemen's clubs, scientific associations, millionaires – not governments. They ventured afar in spite of government, not because of it. Global order likewise rarely ever featured states, empires, or political actors. Private actors were the chief benefactors, beneficiaries, and interlocutors. When the members of the Baltimore Gun Club in *From the Earth to the Moon* (1865) decided to build a massive gun to projectile-shoot humans to the Moon, the sum of money they needed to raise 'was far too great for any individual, or even any single State, to provide the requisite millions'. Half-mockingly, Verne described how the club's president Barbicane thus

> undertook, despite of the matter being a purely American affair, to render it one of universal interest, and to request the financial co-operation of all peoples. It was, he maintained, the right and duty of the whole earth to interfere in the affairs of its satellite. The subscription opened at Baltimore extended properly to the whole world – *Urbi et orbi*.[97]

Although he was joking about the attempt to conceal 'a purely American affair' as 'one of universal interest', Verne had elsewhere praised the Suez Canal, which had been financed following the exact same strategy, as 'the magnificent work of M. de Lesseps'.[98] In both cases, 'universal interest' was determined and defended by engineers and corporations, not nation-states. In part, this betrayed how much Verne and his readers took a world of empire for granted: after all, circumnavigation with the ease described in *Around the World in Eighty Days* was only possible because of empire. Verne depicted a journey that simultaneously relied on a velocity and connectivity only possible because of globe-spanning imperial transport and communication networks, *and* a journey where – in stark contrast with most actual circumnavigatory voyages – the travellers return home alive and well.[99] Verne's global order was not about imperial conquest, but about the scientist and the engineer appropriating an interconnected globe in full independence from politics. Global order materialised outside of society, in a natural realm waiting to be tamed: above the clouds, under the seas, into the depths of the earth – wherever the nation is not, the explorer must go.

At the same time, Verne was ambiguous as to whether such removal from society was desirable. There was a defeatist aspect to this exit from politics. As the character J. T. Maston in *From*

[95] Jonathan H. Grossman, 'The character of a global transport infrastructure: Jules Verne's *Around the World in Eighty Days*', *History and Technology*, 29:3 (2013), pp. 247–61 (p. 248).

[96] Verne, *Le Tour du monde en quatre-vingts jours*, p. 18.

[97] Verne, *De la Terre à la Lune*, chapter 12.

[98] Verne, *Le Tour du monde en quatre-vingts jours*, p. 28.

[99] Joyce E. Chaplin, *Round About the Earth: Circumnavigation from Magellan to Orbit* (New York City: Simon & Schuster, 2013), p. 420.

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the Earth to the Moon puts it: 'if I cannot get an opportunity to try my new mortars on a real field of battle, I shall … go and bury myself in the prairies of Arkansas!'[100] In addition to the defeatism his characters sometimes expressed, futility was a recurring part of their adventures. Perhaps most telling is the fate of the hero of *The Adventures of Captain Hatteras*, who after finding the North Pole returns home only to be driven into insanity – his adventure removed him from society, and he could not find a way back.[101] Relatedly, circulation, constant mobility, and self-referentiality loom large in the *Voyages*. Verne tells us that the protagonist of *Around the World*, Phileas Fogg, was not engaged in travelling but in 'describing a circumference': 'He constituted a heavy body moving in orbit around the terrestrial globe, following the rational laws of mechanics.'[102]

Likewise, in *Five Weeks in a Balloon*, as in many other *Voyages*, every time the protagonists encounter a foreign place, they make it intelligible by recounting the stories of European explorers in whose footsteps they were following: 'Then came the illustrious Mungo Park, the friend of Sir Walter Scott, and, like him, a Scotchman by birth. Sent out in 1795 by the African Society of London, he got as far as …', and so on.[103] A juxtaposition between the familiar and knowable, and the unfamiliar which for its unfamiliarity needs to be mastered, runs like a thread through the *Voyages*. Aside from the Self–Other contrast this evokes, it also contributes to Verne's anti-politics. The interlocutors of the contrast Verne drew, even if occasionally he played with its distinctions in a satirical and perhaps subversive fashion, were natives as a generic collective on the one hand, and sovereign-individual scientists, engineers, explorers, on the other. The encounter took place neither between peoples nor independently of governments. Verne's hyper-individual balloonists, geologists, and oceanographers embarked on journeys that were escape and conquest in one. In *Twenty Thousand Leagues under the Sea*, Captain Nemo conquered the oceans of the globe with his autonomous submarine vessel to break free from society's confines. In *Robur the Conqueror*, the eponymous hero's mission was 'the conquest of the air, to transform the civil manners and politics of the old world'.[104] In tune with 19th-century international thought, technocratic claims over global space entailed both possessing nature and redrawing the contours of politics. In that capacity, they were premised on a denial of political community.

In this section, building on the centrality of technocratic actors examined above, I argued that the *Voyages* chiefly narrated adventure as the machine-powered conquest of the globe with the effect that – through what Goodman calls *deformation* and *ordering* – politics not only recedes but gets antagonised. Contemporary international thinkers and practitioners mobilised this conception to lend credence and popular resonance to their claims, often to substantiate arguments for colonial conquest. An 1886 Tory imperialist treatise, for example, reframed a Verne story to this effect;[105] an 1899 address on the 'reorganization of the world' started by noting how 'commonplace' Verne's depiction of the world had become;[106] and a 1901 international law textbook referenced Verne in like fashion.[107] Verne had conjured up a vision of global order that was in one sense cobbled together from the raw material that surrounded the writer – yet these references show that, in another sense, the global ordering projects that followed during and after his lifetime were likewise cobbled together from the raw material that the *Voyages* provided in turn. Verne did not offer simple prescriptions for how to order the globe, however. As the next section shows in further detail, throughout his life's work he retained an ambiguity that requires us to resist a simple debunking of Verne's *Voyages* as mere imperial propaganda.

[100] Verne, *De la Terre à la Lune*, p. 14.

[101] Jules Verne, *Les Aventures du Capitaine Hatteras* (Paris: Hetzel, 1864).

[102] Verne, *Le Tour du monde en quatre-vingts jours*, p. 48.

[103] Verne, *Cinq semaines en Ballon*, p. 291.

[104] Jules Verne, *Robur-le-Conquérant* (Paris: Hetzel, 1886), p. 31.

[105] Howard Vincent, *Through the British Empire in Ten Minutes* (London: Johnston, 1886).

[106] Lyman Abbott, 'International brotherhood: Applied to the conduct of the United States in the Philippines', *The Outlook*, 62 (1899), pp. 865–70 (p. 865).

[107] Henri Dard, *La morale utilitaire dans le droit international: à propos des Boërs* (Arras: Sueur-Charruey, 1901), p. 22.

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Violence without suffering

The purpose of violence in Verne's fictional universe has been insufficiently analysed. A worldmaking lens puts its constitutive role into perspective. In extant analyses, violence either attests to imperial ideologies, or it simply adds dramatic effect.[108] In *Five Weeks in a Balloon*, for example, the very possibility of violence promises excitement ahead: 'Were their travelling apparatus to fail, what would become of them, among those ferocious savage tribes, in regions that had never been explored, and in the midst of boundless deserts?'[109] Yet on interpretations that foreground ideology or drama, violence is overdetermined by factors that presumably lie beyond Verne's own conception of global order.

In this section, I highlight violence as a third fundamental dimension of Verne's worldmaking, specifically in the sense of the worldmaking criterion Goodman referred to as *composition* and *decomposition*. Recall that composition refers to the drawing of connections as well as distinctions, all creating a sense of the infrastructure of a given world. Approaching the role of violence as both connector and separator clarifies why Verne, sometimes with tragic effect, treated violence with notable persistence as a 'necessary evil'. Violence *connects* Self and Other: more often than not, violence is all there is to the encounter between Verne's heroes and the inhabitants of the 'wilderness' they visit. Violence also serves to *disconnect* the meaningless brutality of savages from the purposive attacks upon them by the so-called civilised. To be sure, Verne did not simply cheer on the brutality of imperial conquest – he could be quite critical of it. Yet at the same time, Verne's heroes inflicted violence upon nature as well as upon human beings counted as part of 'wilderness'. Obfuscation was key: just as engineering genius never seemed to require significant labour, and just as technological globalisation hardly ever betrayed the imperial conquest it serviced, so the spectacle of violence upstaged accounts of human suffering. Racism was central to the latter. In *Around the World in Eighty Days*, Native Americans are crushed underneath a train carriage like 'worms';[110] and a character in *Five Weeks in a Balloon* bemoans the fate of European explorers in Africa who succumbed to illness and exhaustion as tragic 'victims to the cause of science'.[111]

Let me zoom in on *Robur the Conqueror*. This novel belongs to the author's later works, which are generally seen as more sombre and less optimistic about the potentials of technology than his earlier, more popular novels. Yet while some have argued that Verne's later novels represent 'a major discontinuity',[112] there are important linkages between, say, *Around the World in Eighty Days* and the story of Robur. Robur's name is derived from the botanical classification for the English oak: *robur* translates to 'strength', is the etymological root of the English term 'robust', and here presumably refers to the inventor's muscular appearance and strong will. He is a genius inventor who has built a heavier-than-air flying machine – the *Albatross* – with which he kidnaps two American engineers from the Weldon Institute in Philadelphia. In a set-up that is nearly identical with that of *Twenty Thousand Leagues u,nder the Sea*, the two engineers Uncle Prudent and Phil Evans, having been embroiled in an unending debate at the institute concerning lighter-than-air versus heavier-than-air crafts, and their Black valet Frycollin are taken hostage by Robur. On board the *Albatross*, a battery-powered airship propelled by dozens of vertical airscrews and made of reinforced paper, Robur's captives are taken on a tour around the world.

In its basic outlines, *Robur the Conqueror* is classic Verne, featuring typical elements from the ignorant servant sidekick, to the heroic engineer who is equal parts spellbinding and intimidating, to the colossal machine transporting the protagonists around the globe. But in a deviation from the subtlety of earlier novels, *Robur* is overtly political. Frycollin is a slapstick character, described throughout the novel in racist terms, characterised as animal-like, ignorant, easily frightened, and

[108] E.g. Martin, *The Mask of the Prophet*; Edmund J. Smyth, *Jules Verne: Narratives of Modernity* (Liverpool: Liverpool University Press, 2000).

[109] Verne, *Cinq semaines en Ballon*, chapter 11.

[110] Verne, *Le Tour du monde en quatre-vingts jours*, ch. 29.

[111] Verne, *Cinq semaines en Ballon*, ch. 30.

[112] Butcher, *Jules Verne*, p. 5.

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'incapable of defending himself'.[113] The illustrations on the pages of the original Hetzel edition as well as later Livres de Poche pocketbook editions are likewise classic examples of 19th-century racist caricature. But what is perhaps more striking about *Robur* is its embrace of colonial violence in the name of 'humanity'. Written at the height of the New Imperialism, and published just a year after the Berlin Conference that partitioned Africa among Europe's imperial powers, *Robur* combines Verne's machine conquest with a strong and explicit romanticisation of violent colonial intervention.

Robur conquers the air – 'I am master of this seventh part of the world, larger than Australia, Oceania, Asia, America and Europe, this aerial Icaria which thousands of Icarians shall one day populate!' – and inevitably casts an appropriative gaze down upon the earth. The reader follows him through the skies, that most truly *global* sphere, on a journey around a neatly divided world. When in Paris, the *Albatross* floodlights the French capital, literally bathing it in its awesome electric light as if to affirm that this is indeed the cradle of Enlightenment. When passing over Nebraska, by contrast, the passengers discern the drumming of a herd of bison passing over pasture, alongside 'a sinister barking which, this time, was not that of the coyotes; it was the cry of the Redskin'.[114] Algeria is a 'continuation of France across a sea that has earned the name of French lake'.[115] Over Timbuktu, Robur warns his passengers that stopping would be out of the question: 'it would be dangerous for foreigners, in the midst of Negroes, Berbers, Fulanis, and Arabs'.[116]

Things look even more different when the *Albatross* hovers over the Kingdom of Dahomey. Located in what is today southern Benin, Dahomey was a key regional power and had been known to many Europeans as a major supplier of enslaved people. An obsessive focus for Europeans keen to prove the veracity of the colonial narrative of brutal, 'uncivilised' African customs, Dahomey forms the backdrop for one of the novel's most astounding passages, in a chapter entitled 'A Good Deed'. Echoing colonial accounts circulating at the time, Verne describes Dahomey as being 'famous for the appalling cruelties that mark its annual festivals, for its human sacrifices, terrible hecatombs, intended to honour the sovereign who is leaving and the sovereign who replaces him'.[117]

Verne's protagonists fly over the country's capital just as one such ceremony is taking place. The noble engineer 'Robur, who knew the bloodthirsty customs of Dahomey, did not lose sight of the captives, men, women, children, reserved for this butchery'.[118] The *Albatross* slowly descends through a thick mist of clouds until 'suddenly, a gunshot went off from the Albatross. The [Dahomean] Minister of Justice fell face down.'[119] Things escalate quickly. Gunshots from repeating rifles – 'Ah! they want a taste of it!', one crew member shouts while pointing a massive cannon at the crowd[120] – hail down upon the citizens of Dahomey. We witnesses an indiscriminate aerial bombardment but are not supposed to be appalled: even 'Uncle Prudent and Phil Evans, whatever their feelings towards Robur, could only associate themselves with *such a work of humanity*'.[121] As the dust settles, 'the Albatross went up quietly … and soon lost sight of this wild coast'. We hear no more of Dahomey's fate.[122]

The choice of Dahomey as the scenery for Verne's 'humanitarian' military intervention from the skies is significant. The backdrop is not only the 1884–5 Berlin conference that partitioned African territory among the European imperial powers. Back in 1851, the French had signed a friendship treaty with the kingdom. The treaty had intensified French commercial and missionary

[113]Verne, *Robur-le-Conquérant*, p. 45.
[114]Verne, *Robur-le-Conquérant*, p. 90.
[115]Verne, *Robur-le-Conquérant*, p. 146.
[116]Verne, *Robur-le-Conquérant*, p. 150.
[117]Verne, *Robur-le-Conquérant*, p. 154.
[118]Verne, *Robur-le-Conquérant*, p. 157.
[119]Verne, *Robur-le-Conquérant*, p. 158.
[120]Verne, *Robur-le-Conquérant*, p. 160.
[121]Verne, *Robur-le-Conquérant*, p. 158, emphasis added.
[122]Verne, *Robur-le-Conquérant*, p. 160.

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involvement in the country. But in the wake of abolition, the British had begun to send out anti-slaving ships to the West African coast, continuing imperial control now under the banner not of the slave trade but of humanitarianism. A British vessel had attacked Dahomey's tributary Porto-Novo in 1861. As Dahomey fought to keep its regional tributaries under tight control, hostilities between the kingdom and the French grew. *Robur the Conqueror* was published as tensions between the two were building up. Eight years later, the Second Franco-Dahomean war absorbed Dahomey into French West Africa.

If speculative fiction generates insights when 'it "naturalises" existing histories and power relations in a fantastical register', then *Robur* is a case in point.[123] Jules Verne here may have departed from his less overtly political fiction, yet *Robur* may just as well be read as a culmination of Verne's efforts, and a perhaps more honest statement of the consequences of his techno-centric universe. Technology and science were unstoppable forces that ought to be applied wherever Europeans extended their reach. As Verne put it in an 1873 speech at the Société de Géographie, 'the Europeans, arriving in these unknown regions inhabited by natives who cared neither for the days nor the dates on which they ate their fellows … imposed their calendar, and all was said'.[124]

Worldmaking throws the constitutive effects of speculative fiction into relief. In this light, Verne's *Voyages* were part and parcel of the raw material of the 19th-century European global imagination. They prefigured a technocratic vision of global order – centred on entrepreneurs and explorers rather than diplomats and bureaucrats – which continues to play a central role in techno-colonial ventures to the present day. Verne harboured reservations about colonial violence, but *Robur* betrays the fact that he also believed in the possibility of an ostensibly humanitarian exception to that rule. In the universe of 'Verne's liberal brand of "imperialist exoticism"',[125] natives are ornamental agents who never speak for themselves. They are in need either of rescue or of bombardment – or, as Robur seems to think, both at once. In *La Jangada*, a novel published three years prior to *Robur*, Verne was defeatist about the implications of necessary violence: 'Such is the law of progress. The South American Indians will disappear. In the wake of the Anglo-Saxon race, Australians and Tasmanians have vanished. The Indians of North America are being wiped out by the advance of the conquerors of the Far West. One day, perhaps, the Arabs will be destroyed by French colonization.'[126] Once again, his was a deeply ambiguous sense-making of the imperial global order. Verne's œuvre provides us with a complex defence of imperialism in the guise not of national glory or power-political conquest but of nature conquered by machines, steered by reckless engineers and scientists.

Conclusion

This article read Jules Verne's *Extraordinary Voyages* through a worldmaking lens as creative acts of global ordering. My central argument was that interpreting Verne through such a lens is fruitful insofar as it allows us to go beyond reductive readings of speculative fiction as mere mirrors or reflections of their times. Based on a close reading of the *Voyages* and their historical reception, I argued that Verne fictionalised the world as a single space characterised by principles consistently elaborated throughout his novels. Based on archival research into Verne's reception, this article also foregrounded the rarely examined effect that Verne had on contemporary explorers, engineers, and imperial propagandists, not least via Verne's long-standing membership of the Société de Géographie. This connection went both ways: Verne devoured the charts and figures published by the Société, and the Société in turn ended up celebrating the writer as an 'apostle' of French colonial

[123] Kirby, 'Political speech in fantastical worlds', p. 583; see Weldes, 'Going cultural', p. 127.

[124] Jules Verne, 'Les méridiens et le calendrier', *Société de Géographie* (4 April 1873), available at: {https://julesverne.ca/jv.gilead.org.il/garmt/meridiens.html}.

[125] Bongie, 'Into Darkest Asia', p. 49.

[126] Jules Verne, *La Jangada: huit cents lieues sur l'Amazone* (Paris: Hetzel, 1881), pp. 41–2.

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expansion.[127] Explorers from Fridtjof Nansen to Frederick Cook were inspired by the *Voyages*. By the time of his death in 1905, imperial world orderers considered Verne's visions 'commonplace' and even included them in textbooks.[128]

Applying Goodman's five dimensions of worldmaking to this literary and intellectual-historical analysis allowed me systematically to draw out the constitutive effects of Verne's speculative fiction. Singling out *composition* and *decomposition* helped examine the role of violence as both connector – determining the imperial encounter – and separator, generating distinctions between bad, 'savage' kinds of violence and good, 'civilised' kinds of violence. The *weighting* inherent in worldmaking came to the fore as Verne's choice of engineers playing a disproportionately central role. By rearranging the order of importance between scientific associations, private benefactors, diplomats, and explorers, Verne engaged in *ordering* to make his world. The *Voyages* also involved *deletion* and *supplementation* insofar as they portrayed each journey as entirely on the adventurer's terms rather than as part of any military or diplomatic missions. And finally, the contribution of *deformation* to worldmaking came to the fore where the narrative of adventure denied and even antagonised politics, extracting heroes from any collective purpose or endeavour.

In sum, my analysis shows that Verne's world was a technocratic, anti-political, and violent place. Experienced from the vantage point of the machine, this was a realm of hyper-individuality and total autarky – but Verne's choice of protagonists and allocations of agency betrayed deeply imperial and racial underpinnings. Of course, this was all 'just fiction'. Yet as this article has shown, each novel toyed with desires that many of Verne's readers shared and in their own ways pursued – as geographers, diplomats, canal engineers, and officers of empire. For IR, if the 19th century as a formative period in the making of modern international society was marked by growing 'interaction capacities' and 'ideologies of progress',[129] then it was marked too by the ambiguous techno-world of Jules Verne. Today, as another generation of Verne readers shoots projectiles into outer space, we still face the implications of a global order premised on genius, anti-politics, and violence.

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[127] Martel, "Séance solennelle', p. 190.

[128] Abbott, 'International brotherhood', p. 865; Dard, *La morale utilitaire dans le droit international*, p. 22.

[129] Buzan and Lawson, *The Global Transformation*.

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