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INTERNATIONAL LEGAL THEORY

International law and time between three paradigms

Michal Saliternik[1] and Sivan Shlomo Agon[2]

[1]Law, Netanya Academic College, Israel and [2]Law, Bar-Ilan University, Israel
Corresponding author: Michal Saliternik; Email: saliter1010@gmail.com

Abstract

The relationship between time and international law is intricate and multifaceted, long evading methodical analysis. However, recent years have seen a surge in scholarly efforts to address this relationship. Taking a broad view of this burgeoning literature, this article recounts the temporal assumptions, narratives, and dynamics at play in the international legal sphere, while highlighting their logics and limitations. In doing so, it develops a critical typology of international law's temporalities, distinguishing between three overarching paradigms: modern, postmodern, and hypermodern. The modern temporal paradigm, commonly seen as dominating the discipline, views international law as progressing uniformly and linearly from a dark past toward a brighter present and future. In contrast, the postmodern paradigm challenges the modern narrative of universal progress over time, shifting the focus to the past and the ways in which international law allows past wrongs to reverberate into the present. While each of these paradigms serves important functions, the article argues that neither provides a sufficient framework for navigating international law in the current era of accelerated technological, social, and environmental change, where the future increasingly diverges from the known past and present. The article thus calls for greater incorporation into the discipline of a third, hypermodern temporal paradigm, which takes a sober look at the future and recalibrates international law's temporal modalities in response to rapidly evolving and increasingly complex global challenges.

Keywords: acceleration; future; international law; technology; time

1. Introduction

Questions of time loom large in legal systems, and international law is no exception. At the most basic level, time shapes and delineates substantive and procedural international legal rights and obligations. It dictates when a common state practice becomes binding customary law, delimits the period within which states can assert their rights or challenge legal decisions, and determines how far back the jurisdiction of an international court extends. Accordingly, factual and doctrinal problems relating to the determination and measurement of time or to the intertemporal application of international law have long been part of mainstream international legal analysis.[1] In

[1]See, e.g., A. Gattini and M. Dimetto (eds.). *Time and International Adjudication: The Temporal Factor in Proceedings before International Courts and Tribunals* (2025); C. Tomuschat, 'The Relevance of Time in International Law', (2021) XLI *Polish Yearbook of International Law*; N. Gallus, *The Temporal Jurisdiction of International Tribunals* (2017); R. Higgins, 'Time and the Law: International Perspectives on an Old Problem', (1997) 46 *International and Comparative Law Quarterly* 501; A. R. Ibrahim, 'The Doctrine of Laches in International Law', (1997) 83 *Virginia Law Review* 647; T. O. Elias, 'The Doctrine of Intertemporal Law', (1980) 74 *American Journal of International Law* 285; S. Rosenne, *The Time Factor in the Jurisdiction of the International Court of Justice* (1960); F. Deák, 'Computation of Time in International Law', (1926) 20 *American Journal of International Law* 502.

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addition, time regularly features in the study of international legal history, which seeks to enhance our understanding of the evolution of international legal norms, institutions, and ideas over the years while drawing attention to transformative moments and events that have shaped international law as we know it.[2]

Beyond such doctrinal and historical engagements, however, the relationship between time and international law has until recently received only little scholarly attention. For a long time, one could hardly find any theoretical or interdisciplinary investigations into the ways in which time and temporal perceptions influence international norms and institutions and manifest within them, nor could one find critical accounts of how international law, in turn, constructs and transforms prevailing notions and experiences of time. While scholars entrenched in domestic legal spheres have for more than three decades now dedicated considerable attention to the social, cultural, and political dimensions of time and their relevance to the law – drawing on a range of critical perspectives to assess the multilayered and co-productive relationship between time and law[3] – international law scholars have been slow to initiate similar critical examinations of the temporal dimensions of their discipline.

In recent years, however, a growing body of literature – including various articles[4] as well as several edited collections[5] – has been devoted to addressing the intricate relationship between time and law at the international level. Sharing the understanding that 'law and time thinking should not be regarded as the purview of lawyers at the domestic level alone' and that '[t]he international legal system too is a location ripe for temporal analysis and discussion',[6] these research efforts aim

[2]See, e.g., A. Brett et al. (eds.), *History, Politics, Law: Thinking Through the International* (2021); I. de la Rasilla, *International Law and History – Modern Interfaces* (2021); M. Craven et al. (eds.), *Time, History, and International Law* (2007).

[3]See, e.g., S. Ranchordás and Y. Roznai (eds.), *Time, Law, and Change: An Interdisciplinary Study* (2020); E. Grabham and S. M. Beynon-Jones (eds.), *Law and Time* (2019); E. Grabham, *Brewing Legal Times: Things, Form, and the Enactment of Law* (2016); R. Mawani, 'The Times of Law', (2015) 40 *Law and Social Inquiry* 253; R. Mawani, 'Law As Temporality: Colonial Politics and Indian Settlers', (2014) 4 *UC Irvine Law Review* 65; A. J. Wistrich, 'The Evolving Temporality of Lawmaking', (2012) 44 *Connecticut Law Review* 737; O. Lobel, 'The Law of Social Time', (2003) 76 *Temple Law Review* 357; T. Rakoff, *A Time for Every Purpose: Law and the Balance of Life* (2002); R. R. French, 'Time in the Law', (2001) 72 *University of Colorado Law Review* 663; J. Bjarup and M. Blegvad (eds.), *Time, Law, and Society: Proceedings of a Nordic Symposium Held May 1994 Sandbjerg Gods, Denmark* (1995); C. J. Greenhouse, 'Just in Time: Temporality and the Cultural Legitimation of Law', (1989) 98 *Yale Law Journal* 1631; D. M. Engel, 'Law, Time and Community', (1987) 21 *Law and Society Review* 605; C. F. Wilkinson, *American Indians, Time, and the Law: Native Societies in a Modern Constitutional Democracy* (1987).

[4]See, e.g., S. Shlomo-Agon and M. Saliternik, 'Overcoming Short-Termism in International Law and Governance', (forthcoming 2026) 16 *UC Irvine Law Review*; E. Cusato, 'Against Temporal Abstractions: The Battle for Colonial and Climate Reparations in International Law', (2025) 21 *International Journal of Law in Context* 281; R. Mignot-Mahdavi, 'Emancipatory Approaches to Time in International Law', (2025) 1 *Ars Interpretandi* 127; J. Dehm, 'Promise, Deferral, and Dissonance: Law, Time and Environments in the Anthropocene', (2025) *Time & Society*; K. McNeilly, 'How Time Matters in the UN Human Rights Council's Universal Periodic Review: Humans, Objects, and Time Creation', (2021) 34 *Leiden Journal of International Law* 607; N. Wheatley, 'Law and the Time of Angels: International Law's Method Wars and the Affective Lives of Disciplines', (2021) 60 *History and Theory* 311; A. Augusto Cançado Trindade, 'Time and Law Revisited: International Law and the Temporal Dimension', in A. Augusto Cançado Trindade (ed.), *International Law for Humankind: Towards a New Jus Gentium* (2020), 31; K. McNeilly, 'Are Rights Out of Time? International Human Rights Law, Temporality, and Radical Social Change', (2019) 28 *Social and Legal Studies* 817; D. Whitehall, 'A Time-Map for International Law', (2018) 7 *Cambridge International Law Journal* 4; G. Gordon, 'Imperial Standard Time', (2018) 29 *European Journal of International Law* 1197; J. Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', (2016) 4 *London Review of International Law* 167; F. Johns, 'The Temporal Rivalries of Human Rights', (2016) 23 *Indiana Journal of Global Legal Studies* 39; C. Djeffal, 'International Law and Time: A Reflection of the Temporal Attitudes of International Lawyers Through Three Paradigms', (2014) *Netherlands Yearbook of International Law* 93.

[5]K. Chan Yoon Onn and T. Kleinlein (eds.), 'Focus: Time and International Law', (2025) 67 *German Yearbook of International Law* 65; K. Polackova Van der Ploeg et al. (eds.), *International Law and Time: Narratives and Techniques* (2022); K. McNeilly and B. Warwick (eds.), *The Times and Temporalities of International Human Rights Law* (2022). For a review of the two books, see S. Shlomo Agon and M. Saliternik, 'Just About Time: International Law's Temporalities and Our Moment in History', (2024) 118 *American Journal of International Law* 751.

[6]See K. McNeilly and B. Warwick, 'Introduction', in McNeilly and Warwick (eds.), ibid., 1 at 10.

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to dissect how temporal constructs influence, and are shaped by, legal norms, practices, and institutions on the global stage. In so doing, they challenge international law's traditional perception of time as merely a basic dimension of the physical world, demonstrating instead how seemingly natural temporal standards and patterns are, in fact, infused with cultural values and political interests promoted by certain actors in the international legal arena.[7]

This emerging scholarship provides new and significant insights into the multifaceted and often overlooked role that time plays in international law. It thereby deepens our understanding of a range of international legal issues and phenomena – from the backlash against human rights,[8] to the distribution of climate change mitigation responsibilities,[9] to the choice of certain transitional justice schemes in peace agreements,[10] and the attribution of *jus cogens* status to some international norms but not others.[11] However, notwithstanding its valuable contributions, the growing literature on time and international law has so far been somewhat sporadic and narrowly focused, with each study typically concentrating on specific temporal aspects or examining particular interactions between time and international law, rather than providing a more systematic account of this complex relationship.[12]

Against this backdrop, this article aims to take a first step toward developing a broader methodical appraisal of the interplay between international law and time. Taking an extensive look at the accumulating international legal literature addressing the temporal conundrum – as well as other legal and non-legal analyses of temporal questions – the article offers a critical typology of the temporal patterns and perceptions that are shaping (or, arguably, should be shaping) international law and institutions in today's world. To this end, it distinguishes between three overarching temporal paradigms: modern, postmodern, and hypermodern.

The modern temporal paradigm portrays time as a natural, objective factor that denotes linear movement along a chronological continuum. According to this view, international norms and institutions develop – as they should – in an incremental fashion on the basis of accumulated knowledge and experience. The modern paradigm further asserts that, through this gradual evolution, international law fosters universal progress from a dark past that ought to be left behind toward a brighter present and future. The pattern of gradual normative evolution as well as its accompanying narrative of universal progress are pervasive in the international legal sphere and can be observed in various arrangements and regimes, including human rights, trade, climate change, and others. However, as critical scholars have argued, the modern paradigm's purported neutrality and universality often serve to mask the interests of powerful economic and political actors who resist change and seek to preserve the existing international order and its underlying hierarchies.

In light of such firm criticisms of the modern paradigm, commentators have called for the adoption of a more pluralistic and context-sensitive temporal approach to international law that acknowledges the diversity of temporal dynamics and perceptions within the international arena. Specifically, this alternative temporal paradigm – referred to in our typological analysis as 'postmodern' – argues that rather than focusing solely on unidirectional progress toward a better present and future while drawing a line on the past, international law must confront its troubled history of discrimination and abuse and take necessary steps to mitigate the past's negative effects on the present and future. As we show, although the postmodern temporal paradigm has not yet

[7]K. Polackova Van der Ploeg and L. Pasquet, 'The Multifaceted Notion of Time in International Law', in Polackova Van der Ploeg et al. (eds.), *supra* note 5, 1 at 21.

[8]See McNeilly, 'Are Rights Out of Time?', *supra* note 4.

[9]See Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', *supra* note 4.

[10]P. Kastner, 'Peace Agreements Between Rupture and Continuity: Mediating Time in International Law', in Polackova Van der Ploeg et al., *supra* note 5, 405.

[11]See M. H. Hansel, 'From Crisis to Quotidian: Countering the Temporal Myopia of Jus Cogens', in McNeilly and Warwick (eds.), *supra* note 5, 195.

[12]See McNeilly and Warwick, *supra* note 6, at 5, 8.

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gained widespread prominence outside academic circles, it is nevertheless reflected in certain international legal norms, practices, and processes.

The modern and postmodern paradigms each have their merits as conceptual frameworks for thinking about and engaging with time in the international legal context. Among other things, the modern paradigm can provide international legal actors with a collective sense of meaning and purpose as they govern the present and chart a regulatory path to the future, while the postmodern paradigm highlights the need to address underlying power asymmetries persisting from the past. Yet, regardless of the functions they may serve, the article contends that neither the modern nor the postmodern paradigm offers a sufficiently robust temporal framework for guiding international law and institutions in today's and tomorrow's world – a world defined by an extraordinary volume and accelerated pace of technological, social, and environmental change spanning diverse fields such as artificial intelligence, synthetic biology, demographic transformation, urbanization, and outer-space exploration.

In order to address these rapidly evolving global developments in a timely manner and to effectively reduce the risks and enhance the opportunities they present, we maintain, international law should adopt an anticipatory, forward-looking, and far-sighted temporal perspective. The modern and postmodern paradigms, however, seem ill-equipped for this task. While the modern paradigm is generally future-oriented, its reliance on linear, incremental, and reactive normative evolution shaped primarily in response to past events may cause international law to lag behind swiftly unfolding and increasingly complex global developments. Moreover, the modern paradigm's unqualified endorsement of the progress narrative may prevent international actors from fully acknowledging and adequately preparing for the immense risks embedded in the future. The postmodern paradigm, in turn, although non-linear and open to change, does not fare much better in navigating international law through the uncharted waters of the fast-paced future. This is due not only to its inclination to focus the disciplinary gaze on the past rather than the future, but also to its antagonism toward the excessive technological development that drives global acceleration.

Given the limitations of the modern and postmodern paradigms in addressing the intricate global challenges ahead, this article advances a third temporal paradigm – referred to as 'hypermodern' – which, though already emerging in certain corners of international law, is yet to be clearly articulated and more systematically integrated into the discipline. Drawing on the work of cultural theorists like Paul Virilio and Gilles Lipovetsky, the hypermodern paradigm as developed herein acknowledges both the opportunities and the risks embedded in a hyper-accelerated environment. It also recognizes that seizing these opportunities and mitigating associated risks require new modes of thinking, planning, and regulating in and through time. In particular, the hypermodern approach emphasizes the need for greater flexibility and dynamism in the creation and transformation of international norms and institutions, allowing their quick adaptation to the rapidly changing reality. At the same time, this approach urges the makers and operators of international law to proactively forecast, assess, shape, and prepare in advance for future events and developments, even if still distant and uncertain.

That said, our call to integrate the hypermodern temporal paradigm into mainstream international legal thought and practice does not imply the abolition of the modern and postmodern paradigms, which may still be well-suited for dealing with a range of international affairs. Instead, we propose a rebalancing among the three paradigms, one that acknowledges the necessity to expand and recalibrate the temporal horizons, patterns, and conceptions underpinning international law as this global governance system charts its path in an era of exponential change.

In analysing and problematizing the relationship between international law and time through the three paradigms, the article proceeds in six sections. Following this Introduction, Section 2 presents the modern temporal paradigm and demonstrates its prominence in the discipline. Section 3 discusses the postmodern paradigm and its critique of the modern paradigm. Section 4 examines the limitations of the modern and postmodern paradigms in addressing the challenges

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posed to international law and its institutions by accelerating global reality. In response to this critique, Section 5 sets out the hypermodern paradigm as a viable temporal approach for navigating the complexities of contemporary international law and institutions under conditions of acceleration. Section 6 concludes.

2. The modern paradigm: International law and the pursuit of universal progress

In Western modern thinking, time is generally conceived as an objective parameter that indicates movement between the past, present, and future.[13] Under this paradigm, time is viewed as a natural scientific fact, a basic feature of the physical world that is unitary, universal, and independent of human perception.[14] The primary function of time, in this view, is to serve as a neutral criteria that facilitates organization and coordination, enhancing the efficiency of social and economic interactions both within and beyond state borders.[15] A clear manifestation of this functional approach can be seen in the international standardization of time, which began in the nineteenth century with a view to 'bring the world under one ticking clock'.[16]

At the heart of the modern temporal paradigm is the assumption that time is linear, unfolding in a steady, predictable manner from the past through the present toward the future.[17] The idea of time moving incessantly forward in a rectilinear fashion was introduced into modern European thought by Christianity.[18] However, while Christian theology posits that earthly time began with creation and will end with Judgment Day, modern secular conceptions of time view it as proceeding infinitely without beginning or end.[19] Importantly, the Christian origins of linear temporality further suggest that, under this perception, the passage of time inherently carries the potential for social advancement.[20] Just as, in Christian theology, individuals are expected to improve their conduct in anticipation of Judgment Day, so too, within the modern temporal paradigm, societies are perceived as capable of deliberate progress toward securing a better future for their members. Modernity, in this sense, represents a 'shift from a "prophetic" engagement with the future' to a science-based 'rational prognosis' that allows humans to increasingly predict and control their fate while learning from past events and experiences.[21]

Notably, while the notion of linearity suggests that time flows incessantly between the past, present, and future, it does not conceive of these three temporal dimensions as continuous. Rather, they are seen as separate and distinguishable, with the passage of time and the changes it brings about disconnecting the past from the present and the future.[22] According to this view, 'modern time proceeds by continually producing a radical rift (or hiatus) between "the space of experience" (or the past) and "the horizon of expectation" (or the future)'.[23] Thus, while the past can influence the present and future and offer lessons for shaping them, it does not permeate them, nor dictate

[13]See Whitehall, *supra* note 4, at 5; see Mawani, 'Law as Temporality: Colonial Politics and Indian Settlers', *supra* note 3, at 70.

[14]C. McIntosh, 'Theory across Time: The Privileging of Time Less Theory in International Relations', (2015) *7 International Theory* 464; K. Hutchings, *Time and World Politics: Thinking the Present* (2008).

[15]E. Durkheim, *The Elementary Forms of the Religious Life* (trans. Joseph Ward Swain, 1915), 10, 17.

[16]P. L. Galison, 'The Refusal of Time', cited in Gordon, *supra* note 4, at 1207.

[17]See, e.g., Greenhouse, *supra* note 3, at 1631; see Polackova Van der Ploeg and Pasquel, *supra* note 7, at 19.

[18]H. Arendt, *The Life of the Mind II* (1971), 18.

[19]See Greenhouse, *supra* note 3, at 1634–5; see Wheatley, *supra* note 4, at 329.

[20]See Greenhouse, *supra* note 3, at 1635.

[21]D. Edelstein et al., 'Chronocenosis: An Introduction to Power and Time', in D. Edelstein et al. (eds.), *Power and Time: Temporalities in Conflict and the Making of History* (2020), 1 at 10. See also McNeilly, 'Are Rights Out of Time?', *supra* note 4, at 820.

[22]See Mawani, 'Law as Temporality: Colonial Politics and Indian Settlers', *supra* note 3, at 72–5.

[23]A. Assmann, 'Transformations of the Modern Time Regime', in C. Lorenz (ed.), *Breaking Up Time: Negotiating the Borders Between Present, Past and Future* (2013), 39 at 43 (drawing on R. Koselleck, 'Fortschritt', in O. Brunner et al. (eds.), *Geschichtliche Grundbegriffe* (1975), Vol. 2, 351.

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the way they unfold. The future, on its part, always contains a yet-to-be-realized opportunity to break the shackles of the past and the present in pursuance of individual and social betterment.

The modern temporal paradigm – along with its overarching narrative of linear progress toward a better future – is widely understood to have prevailed in social, economic, political, and legal thought and practice for a long time.[24] As Helge Jordheim and Einar Wigen note, '[t]he idea of a homogenous, linear, global movement towards a common, unspecified, ever-receding goal' has, since the late eighteenth century, served as the 'key concept for structuring the relationship between past, present, and future in Western culture'.[25] Increasingly, this conception of time has come to dominate not only the domestic sphere but also the international one, including the international legal domain.[26]

The prominence of the modern linear conception of time in the international legal sphere has been highlighted by many commentators.[27] Under this paradigm, international norms and institutions are understood to develop in a rectilinear, incremental manner, 'progressive[ly] unfolding through clearly separable past, present, and future'.[28] This gradual development of international law over time is reflected in the piecemeal creation and expansion of various international legal regimes[29] – from human rights law to criminal law, trade law, humanitarian law, and environmental law – with significant developments in each field catalysed by landmark historical crises and events that prompt international legal response.[30] These chronological incidents, in turn, are said to provide international law with a code or sequence by which to orient itself toward the future, generating a sense of disciplinary movement and improvement over time.[31] In this view, the formation and operation of international law is conceived as a cumulative process aimed at bettering the present and future by learning from past failures and experiences – a process of 'unstoppable' universal progress attained through 'linear regeneration'.[32]

The modern narrative of constant and universal improvement over time in and through international law is well reflected in what Thomas Skouteris has famously referred to as the 'discourse' or the 'vocabulary' of progress that dominates the discipline.[33] In line with this rhetoric of progress, international law is presented as continually advancing toward some exalted 'teleological destination . . . be it world peace, the triumph of human rights, economic prosperity, or the advent of the international rule of law itself'.[34] According to this account, the advances brought about by international law are unitary and universal, benefitting 'the entire community of states and their citizens'.[35] As Skouteris demonstrates, the vocabulary of universal progress from a dark past to a brighter present and future is echoed in many international treaties, declarations, and resolutions, whose moment of adoption is framed as an 'important episode[] in the long

[24]See Greenhouse, *supra* note 3, at 1637; see Koselleck, ibid.

[25]H. Jordheim and E. Wigen, 'Conceptual Synchronisation: From Progress to Crisis', (2018) 46 *Millennium* 421, 425.

[26]Ibid., at 423–4.

[27]See, e.g., ibid.; Johns, *supra* note 4, at 43; Cusato, *supra* note 4, at 284–5; Mignot-Madhavi, *supra* note 4; T. Soave, 'The Politics of Time in Domestic and International Lawmaking', in Polackova Van der Ploeg et al., *supra* note 5, 153 at 165–7; M. Staggs Kelsall, 'Disordering International Law', (2022) 33 *European Journal of International Law* 729, 739–745.

[28]See Polackova Van der Ploeg and Pasquet, *supra* note 7, at 19.

[29]R. Grace, 'Incrementalism in International Lawmaking: The Development of Normative Frameworks of Protection for Forcibly Displaced Persons', in Polackova Van der Ploeg et al. (eds.), *supra* note 5, 135.

[30]See H. Charlesworth, 'International Law: A Discipline of Crisis', (2002) 65 MLR 377; P. Sands, 'Crisis and Its Curators: A Preface', in M. M. Mbengue and J. d'Aspremont (eds.), *Crisis Narratives in International Law* (2021), vii at viii; see Hansel, *supra* note 11.

[31]F. Johns et al., 'Introduction', in F. Johns et al. (eds.), *Events: The Force of International Law* (2011), 1 at 3.

[32]B. K. Schramm, *Interstellar Justice Now: Back to the Future of International Law*, in Polackova Van der Ploeg et al. (eds.), *supra* note 5, 71 at 80–81. See also D. Thürer, *International Law as Progress and Prospect* (2009); J.E. Alvarez, 'Foreword: Progress in International Law?', in R. A. Miller and R. M. Bratspies (eds.), *Progress in International Law* (2008), 3.

[33]T. Skouteris, *The Notion of Progress in International Law: Discourse* (2010), 1.

[34]See Soave, *supra* note 27, at 153, 166.

[35]See Skouteris, *supra* note 33, at 137.

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evolutionary march' of international law 'towards a superior state of development'.[36] A notable example is the Charter of the United Nations, which begins by emphasizing the signatories' determination to 'save succeeding generations from the scourge of war, which ... has brought untold sorrow to mankind'.[37] A similar rhetoric of movement 'away from power, politics, injustice, war, [and] impunity ... towards ... predictability, justice, peace, [and] accountability' often accompanies the creation of new international institutions.[38] This is evident, for example, in the mainstream narration of the post-1990 proliferation of international courts and tribunals as 'a story of disciplinary progress' toward the achievement of substantive social goals, such as greater 'rule of law, more justice, and less war'.[39]

One domain where the pattern of linear, incremental evolution of international norms and institutions as well as the rhetoric of universal progress are particularly noticeable is international human rights law.[40] Commonly treated as the inception moment of this regime,[41] the adoption of the Universal Declaration of Human Rights in 1948 was loudly celebrated as marking a clear break from a history of 'disregard and contempt for human rights' to a new era of robust commitment to human rights protection.[42] Over the subsequent decades, the rights articulated in the non-binding Universal Declaration were gradually embedded in binding treaties, and various human rights committees, courts, and other bodies were established to monitor compliance with the applicable international rules and obligations. As Paul O'Connell notes, these developments are regularly described as a 'progressive movement through stages, from a neglectful past, through an improved present and on to a brighter human rights future'.[43] Anthony Langlois similarly observes that the history of human rights law is popularly told as a series of 'incremental, evolutionary, hard fought gains' achieved 'in linear time', with 'one incremental gain happening after another'.[44] All in all, as Kathryn McNeilly affirms, 'a definite linearity dominates how this area of law is understood and narrated'.[45]

Alongside international human rights law, another area where the notion of linear development leading to continuous global improvement is vividly apparent is climate change. At the heart of the international climate change regime lies the 1992 United Nations Framework Convention on Climate Change, which established the core goal of the regime: to mitigate climate change and its adverse effects by stabilizing greenhouse gas concentrations in the atmosphere.[46] This broad goal has subsequently been translated into more concrete, state-specific emission targets, first in the 1997 Kyoto Protocol and then in the 2015 Paris Agreement that replaced it.[47] To facilitate the operation and ensure the continuous development of the climate regime, these instruments also authorized the Conferences of the Parties (COP) – a body composed of State Parties' representatives that meets on an annual basis – to monitor compliance and adopt decisions necessary for the effective implementation of treaty obligations.[48] Arguably, this incremental, step-by-step

[36]Ibid., at 2, 6.

[37]1945 Charter of the United Nations, Preamble.

[38]See Skouteris, *supra* note 33, at 6.

[39]Ibid., at 137.

[40]See, e.g., McNeilly, 'Are Rights Out of Time?', *supra* note 4, at 820; T. Altwicker and O. Diggelmann, 'How is Progress Constructed in International Legal Scholarship?', (2014) 25 *European Journal of International Law* 425, 434.

[41]For alternative historical accounts see, e.g., S. Moyn, *The Last Utopia: Human Rights in History* (2010); C. McCrudden, 'Human Rights Histories', (2015) 35 *Oxford Journal of Legal Studies* 179.

[42]1948 Universal Declaration of Human Rights, Preamble.

[43]P. O'Connell, 'Human Rights Futures', in McNeilly and Warwick (eds.), *supra* note 5, 211 at 211.

[44]A. Langlois, 'Queer Temporalities and Human Rights', in McNeilly and Warwick (eds.), *supra* note 5, 159 at 164.

[45]See McNeilly, 'Are Rights Out of Time?', *supra* note 4, at 820.

[46]1992 United Nations Framework Convention on Climate Change, Art. 2 (UNFCCC).

[47]1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Art. 3, Annex B (Kyoto Protocol); 2015 Paris Agreement to the United Nations Framework Convention on Climate Change (Paris Agreement).

[48]See UNFCCC, *supra* note 46, Arts. 4, 7; see Kyoto Protocol, *supra* note 47, Arts. 3, 5, 7, 9; see Paris Agreement, *supra* note 47, Arts. 6, 14, 16.

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evolution of the climate regime has allowed states to gradually build consensus over highly contested issues concerning climate change mitigation.

Notably, throughout its various stages of development, the climate regime has been accompanied by a strong rhetoric of universal progress over time. The Framework Convention, the Kyoto Protocol, and the Paris Agreement were all hailed as landmark historical achievements that would improve the lives of future generations worldwide.[49] In the same vein, COP annual meetings were repeatedly presented as significant steps forward, even when their outcomes were much less satisfactory than expected. To give a recent example, while many commentators expressed disappointment with the deal reached at the COP29 meeting regarding the financing of developing countries,[50] the UN Climate Change Executive Secretary nevertheless described it as an 'insurance policy for humanity' that would help all countries 'to share in the vast benefits of the clean energy boom'.[51] Similarly, despite vocal criticisms from scientists and activists, the agreements reached in preceding COP meetings on such issues as carbon trading and transition to renewable energy were each defined by the Executive Secretary as a 'historic outcome'[52] or an 'excellent achievement'[53] that marked the beginning of a new climate era.[54]

The foregoing discussion suggests that the modern temporal paradigm, with its emphasis on linear progress from the past, through the present, to the future, serves a distinctive function in the international legal domain. It provides international law with 'a clear teleological horizon … [and] a sequential trajectory' by which to guide its development,[55] imbuing the discipline with a sense of direction, meaning, and purpose. In this regard, the modern paradigm is ultimately premised on – and simultaneously constructive of – a fundamental assumption of agency, according to which states, international organizations, experts, judges, and other international legal actors can, through their free choices and actions, exert considerable control over present and future global developments and steer them in desirable directions. This assumption of agency, in turn, can motivate international actors to create and implement legal commitments intended to promote the 'common values, goals, and interests' of the 'international community'.[56] Put differently, by portraying a 'remarkably optimistic'[57] picture of collective advancement toward an improved future enabled by the informed choices of purposeful international agents, the modern paradigm arguably provides a significant driving force for states and other actors to develop and comply with international law. Yet, as discussed in the next section, despite its potential contribution to international cooperation, the modern paradigm's endorsement of a one-size-fits-all linear temporal pattern coupled with a meta-narrative of unitary progress has been criticized as overly simplistic, biased, and even intentionally misleading.

[49]See, e.g., UNFCCC, *supra* note 46, Art. 3(1); UN Climate Change Secretariat, 'Historic Paris Agreement on Climate Change', Press Release, 12 December 2015; S.M. Gardiner, 'The Global Warming Tragedy and the Dangerous Illusion of the Kyoto Protocol', (2004) 18 *Ethics & International Affairs* 23, 23–4.

[50]See, e.g., J.-A. Jue Xuan Wang, 'COP29 Climate Finance Deal: Why Poor Countries Are So Angry', *The Conversation*, 25 November 2024.

[51]UN Climate Change Executive Secretary, COP29 Closing Speech, 24 November 2024, Baku.

[52]UN Climate Change Executive Secretary, COP27 Closing Speech, 20 Nov. 2022, Sharm el-Sheikh

[53]UN Climate Press Release, COP26 Reaches Consensus on Key Actions to Address Climate Change, 13 November 2021.

[54]UN Climate Change Executive Secretary, COP28 Closing Speech, 13 December 2023, Dubai. Compare: D. Carrington, 'Failure of COP28 on Fossil Fuel Phase Out is "Devastating", Say Scientists', *Guardian*, 14 December 2023. For the use of progress rhetoric in previous COP meetings, see C. Skidmore and W. Farrell, 'Lessons from the Past – Towards a Better Future: A Brief History of the United Nations Climate Change Conferences: COPs 1–27', Harvard Kennedy School M-RCBG Associate Working Paper Series No. 219, October 2023.

[55]See Polackova Van der Ploeg and Pasquet, *supra* note 7, at 19.

[56]See Altwicker and Diggelmann, *supra* note 40, at 434.

[57]Ibid., at 425.

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3. The postmodern paradigm: A return to the past?

The modern temporal paradigm has drawn sharp criticism challenging its foundational assumptions – particularly its unequivocal depiction of time as linear, monolithic, universal, and neutral. In place of this model, critics have advanced non-linear, non-essentialist understandings of time, which we refer to here as constituting a 'postmodern' temporal paradigm, insofar as they resonate with key strands of postmodern thought – such as the rejection of the meta-narrative of continuous teleological progress,[58] the embrace of heterogeneity and complexity,[59] and the emphasis on the cultural, economic, and political contingency of seemingly neutral phenomena.[60] Echoing this formulation, Russell West-Pavlov defines 'postmodern time' as 'a temporal logic in which the suppressed aporias of absolute or universal time begin to re-emerge'.[61] In line with this logic, Gilles Deleuze, for example, advances the idea of non-chronological, multidimensional, subjective time, which does not merely contain or measure successive events but also shapes them and infuses them with multiple and shifting meanings.[62] Drawing heavily on Henri Bergson's conception of time as the non-measurable duration of lived experience and as a creative force,[63] Deleuze underscores the role of time in the construction – and dismantling – of identities, narratives, and ideologies, as well as the influence of these configurations on temporal imaginaries.[64]

In recent years, such postmodern temporal thinking has gained traction in the fields of international law and international relations. Scholars have argued that time is not 'a stand-alone object detached from social relations',[65] but rather constituted by, and constitutive of, shifting circumstances, interests, beliefs, and norms.[66] Thus, 'time of political affairs is often at odds with ... time of exception or emergency, with religious time ... and with the various temporalities of displaced, oppressed, or marginalized groups'.[67] That is to say, experiences and perceptions of time can vary across nations, societies, and communities, and also within them, depending on the context and situation.[68]

According to the postmodern critique, the modern paradigm and its unitary meta-narrative of linear universal progress overlook the plurality and diversity of times, which are particularly prominent in the international arena.[69] Among other things, the modern paradigm dismisses

[58]See, e.g., J. F. Lyotard, *The Post-Modern Condition: A Report on Knowledge* (trans. G. Bennington and B. Massumi, 1984 [1979]); J. Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning and the New International* (trans. P. Kamuf, 1994).

[59]See, e.g., G. Deleuze, *Difference and Repetition* (trans. Paul Patton, 1995); G. Deleuze and F. Guatarri, *A Thousand Plateaus: Capitalism and Schizophrenia* (trans. Brian Massumi, 1987); J. Derrida, *Of Grammatology* (trans. G. Chakravorty Spivak, 1976 [1967]).

[60]See, e.g., M. Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason* (1961): D.Harvey, *The Condition of Postmodernity: An Inquiry into the Origins of Cultural Change* (1990); J. Butler, *Gender Trouble: Feminism and the Subversion of Identity* (1990); J. Butler et al., *Contingency, Hegemony, Universality: Contemporary Dialogues on the Left* (2000).

[61]R. West-Pavlov, *Temporalities* (2013), 140.

[62]See Deleuze, *supra* note 59; G. Deleuze, *The Logic of Sense* (trans. M. Lester and C. Stivale, 1990 [1969]). *See also* A. Al-Saji, 'The Memory of Another Past: Bergson, Deleuze and a New Theory of Time', (2004) 37 *Continental Philosophy Review* 203.

[63]H. Bergson, *Creative Evolution* (trans. A. Mitcheli, 1922 [1907]); H. Bergson, *An Introduction to Metaphysics* (trans. T.E. Hulme, 1912 [1903]).

[64]Alongside Bergson, Deleuze's multidimensional conception of time draws on various philosophers whose work he often reinterprets or complicates, including M. Heidegger, F. Nietzsche, I. Kant, and others. For a recent account of these influences, see D. W. Smith and R. W. Luzecky (eds.), *Deleuze and Time* (2023).

[65]A. R. Hom, 'Timing is Everything: Toward a Better Understanding of Time and International Politics', (2018) 62 *International Studies Quarterly* 69.

[66]K. Lalor, 'Gender, Temporality, and International Human Rights Law: From Hidden Histories to Feminist Futures', in McNeilly and Warwick (eds.), *supra* note 5, 103 at 105.

[67]See Edelstein, Geroulanos and Wheatley, *supra* note 21, at 7.

[68]See, e.g., Greenhouse, *supra* note 3, at 1633; J. Dehm, 'The Temporalities of Environmental Human Rights', in McNeilly and Warwick (eds.), *supra* note 5, 33 at 65.

[69]See Jordheim and Wigen, *supra* note 25, at 426; see Hom, *supra* note 65, at 70.

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non-linear perceptions of cyclical time, relativistic time, contingent time, and 'thick time', as well as the possibility of suspending time altogether or refusing to situate certain phenomena in time.[70] This it does, according to the postmodern claim, because the possibility of multiple, seemingly disjointed temporalities threatens the pursuit of efficient, unceasing economic growth, which lies at the heart of the Western international liberal order.[71] The postmodern approach further contends that the modern narrative of linear progress seeks to synchronize the inherently diverse temporal concepts, patterns, and rhythms of the world and align them with a 'European-emergent, but supposedly universally valid'[72] and allegedly superior 'global time of commerce, technology and media'.[73] In this sense, the growing use of the rhetoric of universal progress in international political and legal discourse since the mid-twentieth century can be seen as complementing the mid-nineteenth-century project of global standardization of time. While the latter imposed a direct, formal type of temporal synchronization driven by imperial powers and their international trade interests,[74] the former represents a more sophisticated form of temporal domination by Western economic forces who benefit from the illusion of equal progress for all.[75]

Importantly, by emphasizing the plurality of temporal patterns and perceptions and questioning the uniform vision of time as 'an arrow that runs irreversibly' from the dark past to a brighter future,[76] the postmodern paradigm further challenges the 'emphatically modern mode of breaking up time ... and cutting off the past'.[77] As Alia Al-Saji points out, this 'rectilinear schema of time', in which the present is understood to succeed or replace the past, is viewed by writers associated with postmodern thinking as overly simplistic.[78] Rather than presuming strict separation between past and present, the postmodern approach asserts that these temporal dimensions overlap and intertwine in multiple ways. This view is illustrated by Deleuze, who, following Bergson, argues that '[t]he past and the present do not denote two successive moments, but two elements which coexist'.[79] In this context, Al-Saji explains that in the 'Bergsonian–Deleuzian theory, the threads that weave time are no longer mere horizontal lines of succession. Rather, they involve vertical transmissions within a duration that passes only because it also coexists with itself'.[80] This account offers a deep, multilayered ('vertical'), rather than flat ('horizontal'), conception of time – one in which the past, 'not only the immediate past ... but the whole past at different levels and rhythms'[81] – haunts the present and continues to live within it, rather than simply remaining behind.

Endorsing the call to acknowledge the continued presence of the past within the present, critical international legal scholars have shown how the modern tendency to break from the past may be particularly detrimental to those who continue to bear the impacts of past injustices facilitated by legal acts and omissions – such as those associated with colonial domination, gender discrimination, or environmental degradation.[82] In this context, it has been argued that in its

[70]For discussions of these and other non-linear perceptions of time see, e.g., Hom, *supra* note 65, at 70; see Greenhouse, *supra* note 3, at 1636; see Arendt, *supra* note 18, at 16; see Altwicker and Diggelmann, *supra* note 40, at 430; see Whitehall, *supra* note 4; R. Loewen Walker, *Queer and Deleuzian Temporalities: Toward a Living Present* (2022).

[71]See Mawani, 'Law as Temporality: Colonial Politics and Indian Settlers', *supra* note 3, at 74; see O'Connell, *supra* note 43, at 220–26.

[72]See Jordheim and Wigen, *supra* note 25, at 430.

[73]Ibid., at 428.

[74]See Gordon, *supra* note 4; A. Barrows, *The Cosmic Time of Empire: Modern Britain and World Literature* (2011), 14.

[75]See Dehm, 'Promise, Deferral, and Dissonance: Law, Time and Environments in the Anthropocene', *supra* note 4.

[76]See Assmann, *supra* note 23, at 42.

[77]Ibid., at 44.

[78]See Al-Saji, *supra* note 62, at 203–4.

[79]G. Deleuze, *Bergsonism* (trans. Hugh Tomlinson and Barbara Habberjam, 1988 [1966]), 54.

[80]See Al-Saji, *supra* note 62, at 205.

[81]Ibid., at 218.

[82]See Kastner, *supra* note 10, at 405, 418–19; see Lalor, *supra* note 66, at 104, 114–15; see Dehm, *supra* note 68, at 44–5, 65.

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failure to adequately address many of these past misdeeds, international law effectively allows them to continue shaping the present and future conditions and opportunities of affected populations. As Anne Orford notes – echoing the Bergsonian–Deleuzian idea of multilayered, vertical relations between past and present – international law is 'not governed solely by a chronological sense of time in which events and texts are confined to their proper place in a historical and linear progression from then to now', but is 'inherently genealogical, depending as it does upon the transmission of concepts, languages, and norms across time'.[83] This means that, unless appropriate corrective action is taken, international legal norms, practices, and institutions that, at the time of their emergence, helped normalize discrimination and exclusion, are likely to perpetuate such biases over time.[84]

Against this backdrop, the postmodern approach foregrounds a call to treat the past not only as a background experience that offers lessons for designing and evaluating present and future advancements in international law – as it is viewed in the modern paradigm – but also as a direct source of present and future international legal rights and obligations.[85] At its core, this call to assign greater weight to the past within international law may be seen as a plea to expand the concept of agency in the discipline. As noted above, under the modern temporal paradigm, international legal actors are viewed as purposeful agents capable of positively affecting the world's future trajectory. Yet, under the same paradigm, the assumption that international actors have considerable choice and control over their potential actions is not always coupled with an attribution of responsibility for those actions once they are completed. Put differently, while the modern approach distinguishes itself from pre-modern approaches by rejecting determinism – and therefore cannot deny, as a factual matter, that past wrongdoings were for the most part freely and willfully conducted – it nevertheless asserts, as a normative matter, that such agency should not necessarily lead to the establishment of moral or legal responsibility. Instead, it contends that the passage of time can render the past irrelevant for determining rights and duties in the present and future. Preoccupation with the past, in this view, is often seen as unnecessary and counterproductive, and as distracting international law from the task of 'liberat[ing] human beings from their chains'[86] and allowing them to create a better present and future.[87] By contrast, the postmodern approach insists that fully confronting the past is indispensable for ensuring that not only better-off countries and populations, but also developing countries, indigenous peoples, women, and others still haunted by past grievances would be able to engage with international law and enjoy its benefits as free and equal agents.

It is noteworthy that while the modern, linear temporal paradigm remains dominant in international law, postmodern calls to recognize the heterogeneity of time – and, in particular, to take more seriously the past and its lingering effects in the present – have not been the exclusive purview of critical scholars. Indeed, manifestations of postmodern temporal thinking, though still

[83]See A. Orford, 'On International Legal Method', (2013) 1 *London Review of International Law* 166, at 175. See also M. Koskenniemi, 'Vitoria and Us: Thoughts on Critical Histories of International Law', (2014) 22 *Rechtsgeschichte* 119.

[84]The continuing effects of past wrongdoings on contemporary international legal structures have been discussed by many TWAIL scholars. See, e.g., J.T. Gathii, 'Neoliberalism, Colonialism and International Governance: Decentering the International Law of Governmental Legitimacy', (1999–2000) 98 *Michigan Law Review* 1996, 2017–24; A. Anhgie, '"The Heart of My Home": Colonialism, Environmental Damage, and the Nauru Case', (1993) 34 *Harvard International Law Journal* 405; A. Anghie, 'Time Present and Time Past: Globalization, International Financial Institutions, and the Third World', (2000) 32 *NYU Journal of International Law and Politics* 243.

[85]A. Orford, 'The Past as Law or History? The Relevance of Imperialism for Modern International Law', in M. Toufayan et al. (eds.), *Droit International et Nouvelles Approches Sur Le Tiers-Monde: Entre Repetition et Renouveau* [International Law and New Approaches to the Third World: Between Repetition and Renewal] (2013), 97.

[86]See Harvey, *supra* note 60, at 13.

[87]In this spirit, Brad Roth has argued that despite the illegitimacy of past imperial conquests, international law should limit the responsibility of former empires for such conquests in order to protect peace and security in the present. See B. Roth, *Governmental Illegitimacy in International Law* (1999), 203–4; B. Roth, 'Governmental Illegitimacy and Neocolonialism: Response to Review by James Thuo Gathii', (2000) 98 *Michigan Law Review* 2056, at 2065.

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limited and far from mainstream, can already be discerned in the discipline. One illustrative (albeit controversial) example can be found in the UN climate change regime. As noted above, this regime often uses the modern rhetoric of linear progress, even with relation to treaties and decisions that many consider as disappointing and submissive to powerful economic interests.[88] It could therefore be expected that the postmodern approach would criticize this regime and its misleading use of the progress rhetoric. Yet, in some respects, the climate regime seems to endorse the logic of the postmodern approach. Most notably, the principle of 'common but differentiated responsibilities' endorsed in the climate treaties largely resonates with the postmodern call to acknowledge the diverse rhythms of economic and technological development among countries, while delineating their respective legal obligations in light of their past behaviors.[89] Rather than drawing a clear line between the past, present, and future, this principle recognizes that 'a certain level of warming and certain impacts are already "locked in"' due to past harmful actions for which some states bear greater responsibility than others.[90]

Alongside international treaties, postmodern temporal thinking can also be observed in certain sites of international adjudication. A compelling example may be found in the case law developed by the late Judge Antônio Augusto Cançado Trindade. In a series of separate and dissenting opinions, first at the Inter-American Court of Human Rights (IACtHR) and then at the International Court of Justice (ICJ), Judge Cançado Trindade developed a non-chronological, flexible, pluralistic conception of time, which underscored time's socially constructed and culture-dependent nature.[91] Above all, this approach seems to have been used by Judge Cançado Trindade to prioritize the protection of vulnerable individuals and communities over the promotion of state interests and doctrinal stability.[92] In the ICJ Temple of Preah Vihear case, for example, Judge Cançado Trindade invoked postmodern temporal logic to affirm the timeliness of Cambodia's request for interpretation – and for enforcement through provisional measures – of a half-century-old judgment that ordered Thailand to withdraw its armed forces from the Cambodian Preah Vihear Temple.[93] Elaborating on the timelessness of religious monuments and emphasizing the indeterminacy and subjectivity of time measurements, Judge Cançado Trindade asserted that the lapse of 50 years since the original judgment, although unusual, should not prevent the court from indicating provisional measures necessary to protect the Temple and nearby communities.[94] To further support his conclusion that legal obligations related to the Temple and its environment did not fade with time, Judge Cançado Trindade suggested that the passage of time serves to connect, rather than separate, past, present, and future events, thereby relating and extending the legal obligations that arose from these events.[95]

A similar notion of temporal continuity – especially between the dead, the living, and those who are yet to be born – was also invoked by Judge Cançado Trindade in his earlier jurisprudence at the IACtHR, particularly when seeking to strengthen human rights protection in countries emerging from military dictatorships. Among other things, Judge Cançado Trindade used this temporal analysis to explain the ongoing duty of states to return the mortal remains of victims of

[88]See notes 49–54 and accompanying text, *supra*.

[89]See UNFCCC, *supra* note 46, Arts. 3, 4; see Kyoto Protocol, *supra* note 47, Art. 10; see Paris Agreement, *supra* note 47, Art. 2. For analysis see, e.g., D. Bodansky et al., *International Climate Change Law* (2017), 121–3, 165–70, 219–26.

[90]See Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', *supra* note 4, at 169.

[91]For an overview of Judge Cançado Trindade's theory of the temporal dimension of international law, see Cançado Trindade, *supra* note 4.

[92]Judge Cançado Trindade's human-oriented approach to international law also drew upon his non-conventional spatial theory. For elaboration, see M. Saliternik, 'Expanding the Boundaries of Boundary Dispute Settlement: International Law and Critical Geography at the Crossroads', (2017) 50 *Vanderbilt Journal of Transnational Law* 113, 131–5.

[93]*Request for Interpretation of the Judgment of 15 June 1962 in the Case Concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand)*, Provisional Measures, Order of 18 July 2011, [2011] ICJ Rep. 537, at 566, (Judge Cançado Trindade, Separate Opinion).

[94]Ibid., at 567–8, 572–80.

[95]Ibid., at 576–7.

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torture.[96] He also applied it to extend the jurisdiction of the Court to acts of forced disappearance that occurred before the Court's jurisdiction was formally established, emphasizing the enduring nature of such acts.[97] This emphasis on the connection between the past, present, and future strongly echoes the postmodern idea that the past fundamentally affects – and to some extent continues to exist in – the present and future,[98] and that it is 'never entirely correct to refer to anything as ending'.[99]

It is remarkable that a similarly flexible approach to the question of *ratione temporis* jurisdiction – though not accompanied by elaborate temporal theorization – was also adopted by other judges at both the IACtHR and the European Court of Human Rights (ECtHR). Most notably, these courts have held that in certain circumstances they would have jurisdiction over violations of procedural human rights obligations, such as the duty to investigate unlawful killing, even if the killing itself occurred before the respondent state ratified the relevant human rights convention.[100] In *Šilih* v. *Slovenia*, the ECtHR established that this kind of extended temporal jurisdiction could be justified by 'the need to ensure that the guarantees and the underlying values of the Convention are protected in a real and effective manner'.[101] According to Eric Wyler and Arianna Whelan, the *Šilih* precedent – which was reiterated and further developed in subsequent cases[102] – represents a remarkable willingness of the ECtHR to adopt a non-linear, diachronic temporal interpretation that 'sacrifices legal certainty and non-retroactivity at the altar of concrete justice'.[103]

The examples above show that postmodern temporal notions have gained some traction in key sites of international law, such as climate treaties and the case law of the ICJ and human rights courts. As we have seen, these notions have also been endorsed by a growing body of scholarship dedicated to the critical examination of international law's temporalities. Together, these practical and theoretical interventions have revealed fundamental flaws in the dominant modern paradigm, while carving a space for disrupting the disciplinary tendency to 'flatten heterochrony'[104] and resisting the power structures served by this temporal synchronization. However, while the postmodern paradigm is valuable for promoting a more diverse conception of time – one that accommodates the temporal experiences of less powerful actors in the international arena – this paradigm also has its limitations and blind spots. Most critically, its focus on reviving the past in response to its dismissal by the modern paradigm appears to have led the postmodern paradigm to forgo a serious critical examination of international law's relationship with the future. In the next section we take up this challenge, offering such an examination and proposing a new temporal paradigm that appears more appropriate for navigating international law's future path.

4. Moving beyond the modern and postmodern paradigms

As we have seen, the temporalities of international law are currently shaped by two distinct paradigms: the dominant modern paradigm, which emphasizes a unidirectional movement

[96] *Bámaca Velásquez v. Guatemala*, Reparations and Costs, Judgment of 22 February 2002, [2002] IACtHR (Judge Cançado Trindade, Separate Opinion).

[97] *Blake v. Guatemala*, Merits, Judgment of 24 January 1998, [1998] IACtHR, (Judge Cançado Trindade, Separate Opinion).

[98] See Wheatley, *supra* note 4, at 326–7.

[99] A. Kwaymullina, 'Aboriginal Nations, the Australian Nation State and Indigenous International Legal Traditions', in I. Watson (ed.), *Indigenous Peoples as Subjects of International Law* (2017), 5 at 7.

[100] See, e.g., *Serrano-Cruz Sisters v. El Salvador*, Preliminary Objections, Judgment of 3 November 2004, [2004] IACtHR, Para. 84; *Moiwana Village v. Suriname*, Judgment of 15 June 2005, [2005] IACtHR, Para. 43; *Šilih v. Slovenia*, Judgment of 9 April 2009, [2009] ECtHR, at Paras. 161–7; *Association '21 December 1989' and Others v. Romania*, Judgment of 24 May 2011, [2011] ECtHR.

[101] See *Šilih v. Slovenia*, ibid., Para. 163.

[102] For a list of relevant cases, see *Janowiec and Others v. Russia*, Judgment of 21 October 2013, [2013] ECtHR, Paras. 136–9.

[103] E. Wyler and A. Whelan, 'Lawyers as Creators of Law's Temporal Reality: A Pragmatic Approach to International Law', in Polackova Van der Ploeg et al., *supra* note 5, 27 at 49.

[104] See Dehm, *supra* note 68, at 65.

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toward a better future, and the postmodern paradigm, which challenges the modern narrative of universal progress and advocates a return to the past in order to better address historical injustices. These two paradigms seem to steer international law in opposing directions, with the first 'privileging … the future'[105] and underscoring the role of international norms and institutions in facilitating progress and promoting humanity's shared interests, and the second seeking to shift the discipline's focus to its troubled and conflicted past and its ongoing effects in the present. However, although these two paradigms may appear to cover together the full temporal terrain in relation to which international law may operate, a closer examination reveals that they both induce a form of 'temporal myopia', limiting the discipline's 'ability to achieve a clear perception of the future'.[106]

Thus, even though the modern paradigm is apparently forward-looking and future-oriented, it presents a rather narrow vision of the future and of the place of law within it – a future that is essentially positive and develops in a linear, controllable, and predictable manner from a familiar past. Yet this vision fails to adequately capture the 'real' future for which international law must prepare in a world that becomes ever more accelerated: a future that radically diverges from the past and confronts humanity with unprecedented challenges and risks. The postmodern paradigm, on the other hand, although more accommodative of real-world complexities, also faces notable limitations when it comes to guiding international law through the accelerated future that lies ahead. Before elaborating on this mismatch, it may be useful to take a closer look at the challenge of acceleration.

As commentators have observed, we live in an exceptional era in human history, characterized by an accelerated pace and extraordinary volume of change.[107] With each passing decade, the speed and scope of technological innovation increase exponentially, fundamentally transforming such fields as communications, trade, health, labour, outer-space exploration, and the conduct of hostilities.[108] Climate change, deforestation, loss of biodiversity, and other types of environmental degradation are also unfolding in an unprecedented rate and scale.[109] And the same is true for global population growth and urbanization.[110] At the same time, various social, cultural, political, and economic developments, such as privatization of governmental services or global power shifts, are quickening and becoming more complex.[111] Together, these interrelated processes create a 'maelstrom of change', which, in different ways and to varying degrees, affects lives in every corner of the world.[112]

To be sure, acceleration is not a new phenomenon and has been considered a defining feature of Western modernity at least since the Industrial Revolution.[113] However, the pace, scale, intensity, and effects of current technological, environmental, and social changes – and of those

[105]A. Huyssen, 'Present Pasts: Media, Politics, Amnesia', (2000) 12 *Public Culture* 21.

[106]J. Bindé, 'Toward an Ethics of the Future', (2000) 12 *Public Culture* 51, 52.

[107]See, e.g., W. MacAskill, *What We Owe the Future* (2022), 26–8, 41. On social acceleration, see generally H. Rosa, *Social Acceleration: A New Theory of Modernity* (2013).

[108]See MacAskill, ibid., at 26–8; M. Rees, 'Navigating the Next Century's Challenges', in N. Cargill and T. M. John (eds.), *The Long View: Essays on Policy, Philanthropy, and the Long-term Future* (2021), 29 at 30, 41; UN, Our Common Agenda: Report of the Secretary-General 44 (2021); F. Retief et al., 'Global Megatrends and Their Implications for Environmental Assessment Practice', (2016) 61 *Environmental Impact Assessment Review* 52, 54.

[109]See, e.g., B. S. Halpern et al., 'Recent Pace of Change in Human Impact on the World's Ocean', (2019) 9 *Nature Scientific Reports* 11609; J. E. M. Watson et al., 'The Exceptional Value of Intact Forest Ecosystems', (2018) 2 *Nature Ecology and Evolution* 599; J. E. M. Watson et al., 'Catastrophic Declines in Wilderness Areas Undermine Global Environment Targets', (2016) 26 *Current Biology* 2929.

[110]UN Department of Economic and Social Affairs, World Population Prospects 2024, available at population.un.org/wpp/.

[111]See Rees, *supra* note 108, at 30–1; see MacAskill, *supra* note 107, at 27.

[112]See Harvey, *supra* note 60, at 11.

[113]H. Rosa, 'De-Synchronization, Dynamic Stabilization, Dispositional Squeeze: The Problem of Temporal Mismatch', in J. Wajcman and N. Dodd (eds.), *The Sociology of Speed: Digital, Organizational, and Social Temporalities* (2016), 25 at 31–2; R. Colvile, *The Great Acceleration: How the World is Getting Faster, Faster* (2016), 15–20.

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likely to occur in the future – are historically unparalleled, leading some commentators to describe the current era as one of 'great-acceleration' or 'hyper-acceleration'.[114] A defining feature of this hyper-acceleration is that the timespan between major transformations in each domain has become significantly shorter, with advancements or deteriorations that once took decades now occurring in just a few years or even less.[115] Think about the example of computing: more than a century passed between the design of the first steam-driven calculating machine in 1821 and the construction of a room-size computer in the mid-twentieth century. Several more decades passed before early home computers entered the market. Today, however, ever smaller and more powerful computers are released at much higher frequencies, and this pace is likely to further accelerate as quantum computing technologies mature.

Moreover, alongside the rising speed of many innovations and changes, their reach and influence are nowadays amplified by global interconnectedness,[116] with developments in one location or domain regularly sparking further changes in others (e.g., deforestation in the Amazon affects weather patterns and food security in East Africa, while advances in artificial intelligence enhance both the potential and risks of synthetic biology).[117] Finally, and perhaps most crucially, some contemporary or upcoming advancements and changes are highly impactful and have the potential to positively or negatively shape the whole course of the future.[118] Artificial intelligence, for instance, can create enormous value for humanity by helping us predict and cope with a range of economic, social, and security problems. But it also raises serious risks, including the displacement of large segments of the workforce and the facilitation of mass surveillance. Similarly, synthetic biology holds promise for curing difficult diseases and ensuring food and energy security for the rapidly growing world population. Yet it could also pose an existential threat if, for example, a genetically engineered pathogen was to cause a disastrous global pandemic.

Given the inherently transboundary nature of many rapidly emerging developments and the high stakes involved, international law should play a key role in mitigating the risks and seizing the opportunities they present. The problem, however, is that the temporal paradigms currently at play in the discipline do not offer sufficient conceptual and methodological frameworks for regulating the complex global challenges on the horizon. This mismatch arises primarily from the gradual, step-by-step evolutionary and operative mode of many international norms and institutions, which is naturalized and reinforced by the dominant modern temporal paradigm. In an ever-accelerating world, this incrementalism leads international law to lag behind 'real-life' developments, leaving it out of sync with the pace of global changes.[119] Whereas in the not-so-distant past, the gradual development of international law may have aligned with the accelerated yet manageable pace of modern life, in the current age of great acceleration, this mode of linear, piecemeal legal progression can no longer keep up with the extreme velocity of technological, social, and environmental change.

Consider the case of international space law. Beginning with the adoption of the general Outer Space Treaty in 1967 and continuing in the following decade with a series of narrower treaties addressing specific aspects of space activity,[120] this regime emerged hand in hand with the

[114]See, e.g., S. J. Williams, 'The Earth System, the Great Acceleration and the Anthropocene', in S. J. Williams and R. Taylor (eds.), *Sustainability and the New Economics: Synthesising Ecological Economics and Modern Monetary Theory* (2021), 15; see Colvile, *supra* note 113; H. Rosa, 'Social Acceleration: Ethical and Political Consequences of a Desynchronized High-Speed Society', (2003) 10 *Constellations* 3, 5.

[115]See UN Office for Disaster Risk Reduction, M. Stauffer et al., *Existential Risk and Rapid Technological Change: Advancing Risk-informed Development* (2023), 14–15.

[116]J. B. Wiener, 'Risk Regulation and Future Learning', (2017) 8 *European Journal of Risk Regulation* 4, 7.

[117]See, e.g., Stauffer et al., *supra* note 115, at 20–1, 23.

[118]Ibid.; see MacAskill, *supra* note 107, at 41.

[119]See Grace, *supra* note 29, at 136.

[120]1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of

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advancement of human space exploration. In some respects, international law even outpaced actual space activity, such as when the 1967 treaty prohibited the installation of nuclear weapons in space, a scenario that existed only as a theoretical possibility at the time.[121] Today, however, as space activities rapidly intensify and expand, concerns arise that while governments and private entities are 'approach[ing] the technological tipping point to enable space mining and space tourism',[122] international law will fail to keep pace with technological developments, resulting in the creation of 'a new Wild West in outer space'.[123]

Clearly, the temporal gap between the accelerating global reality and the incremental evolution of international law is closely tied to the cumbersome nature and typical slowness of international lawmaking, most notably apparent in the creation and amendment of binding treaties and customary norms.[124] But there are also other, less visible aspects of international lawmaking that contribute to this desynchronization. One such feature is the reactive nature of international law alluded to above,[125] whereby international norms and institutions are regularly devised in response to past crises and events – whether wars, systemic abuses, natural disasters, or technological advancements.[126] Resonating with the logic of the modern temporal paradigm, this reactive, problem-solving approach facilitates continual progress and improvement over time in international law. Yet its grounding in the near past and present exacerbates the discipline's tendency to lag behind the rapidly evolving social and physical reality it seeks to regulate. More concretely, the reactive approach produces legal arrangements that are shaped by yesterday's circumstances, based on the assumption that past problems and needs are good indicators of future ones.[127] But in an era of extreme acceleration, where the future is increasingly less like the past and the 'relevance of accumulated wisdom and experience is called into doubt',[128] this assumption often proves misguided, and over-reliance on past knowledge risks undermining international law's effectiveness and resilience.[129]

Alongside its propensity for incremental and reactive normative development, the suitability of the modern temporal paradigm for shaping international regulatory endeavors in today's and tomorrow's world is further called into question by its unreserved adherence to the narrative of constant progress over time. This strong 'confidence in technology and modernization', which goes 'hand in hand with a quasi-metaphysical glorification' of the present and future as inherently superior to the past,[130] may lead the developers and implementers of international law to underestimate the potential risks embedded in scientific and technological advancements like artificial intelligence, synthetic biology, or outer-space exploration. As a result, they may fail to take appropriate measures to mitigate these risks and be caught off-guard when they materialize.

Given the misfit between, on the one hand, the core features and assumptions of the modern temporal paradigm (linearity, incrementalism, reactiveness, and unwavering adherence to the narrative of progress), and, on the other hand, the regulatory demands of a rapidly accelerating

Objects Launched into Outer Space; 1972 Convention on International Liability for Damage Caused by Space Objects; 1975 Convention on Registration of Objects Launched into Outer Space; 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.

[121]See Outer Space Treaty, ibid., Art. IV.

[122]R. Mitchell, 'Into the Final Frontier: The Expanse of Space Commercialization', (2018) 83 *Missouri Law Review* 429, 430.

[123]Ibid., at 448.

[124]See K. Polackova Van der Ploeg, 'International Law through Time: On Change and Facticity of International Law', in Polackova Van der Ploeg et al., *supra* note 5, 313 at 327–8.

[125]See notes 30–2 and accompanying text, *supra*.

[126]M. Saliternik and S. Shlomo-Agon, 'Proactive International Law', (2024) 75 *UC Law Journal* 661.

[127]Ibid.

[128]J. Ellis, 'Change and Adaptation in International Environmental Law: The Challenge of Resilience', in Polackova Van der Ploeg et al., *supra* note 5, 357 at 361.

[129]Ibid., at 357.

[130]A. Huyssen, 'The Search for Tradition: Avant-Garde and Postmodernism in the 1970s', (1981) 22 *New German Critique* 23, 36.

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global reality, it is time for international law to shift more decisively toward alternative temporal frameworks. In particular, it should embrace temporal notions and patterns that are more flexible, adaptive, and capable of dealing with the complex challenges looming in the future. Might the postmodern temporal paradigm offer such an alternative? Can it equip international law and institutions with adequate tools for navigating the unfamiliar dynamics of an increasingly volatile world?

As discussed above, the postmodern paradigm puts forward a non-linear, fluid conception of time that emphasizes the plurality and contingency of temporal experiences and perceptions. Favouring contextualism over naturalism and essentialism, this paradigm is not bound to any particular temporal narrative (such as unidirectional progress), pattern (such as incremental development), or epistemological method (such as planning the future based on past knowledge). Instead, it is open to 'breaks, jolts, and ruptures that … shatter any orderly "progression" of time',[131] and acknowledges that the future is turbulent and not fully predictable. In the words of David Harvey, 'postmodernism swims, even wallows, in the fragmentary and the chaotic currents of change'.[132] In that respect, the postmodern paradigm seems well-positioned to inform international regulatory choices in an increasingly complicated and fast-paced world.

However, despite its openness to change and its embrace of diversity, complexity, and indeterminacy, in some important respects the postmodern temporal paradigm is not ideally suited to navigate international law and institutions through the uncharted waters of the future. As noted, the postmodern approach seeks to shift the disciplinary focus from the future to the past, in order to better address past injustices and their ongoing effects. It rejects the transformative view that 'it is both possible and necessary to break with tradition and institute absolutely new ways of living and thinking',[133] emphasizing instead the various ways in which the past continues to shape contemporary social and legal structures. This past-oriented mindset, while valuable for promoting a more equitable future that avoids reproducing historical wrongs, in itself offers little guidance for enhancing international law's capacity to anticipate and respond to novel global challenges of unprecedented scale and complexity.

Indeed, even when works aligned with the postmodern approach are explicitly future-oriented – arguing that acknowledging the persistent influence of the past is essential, above all, to achieving a more just and sustainable future – they often stop short of engaging with the future as such: assessing how it may evolve or what legal or institutional measures might be needed to shape it. A case in point is Julia Dehm's analysis of how different ways of narrating the temporalities of the climate crisis can open up or foreclose present possibilities for mitigating future harm.[134] While her appeal for a realistic approach – one that acknowledges irreversible damage without abandoning the struggle for change – is clearly future-oriented, her narrative-focused account refrains from addressing crucial operative questions such as how to enable swift and effective intervention in the face of accelerating degradation. A similar tendency is evident in Kathryn McNeilly's call for an 'untimely' conception of human rights, which envisions the future as 'unknown and out of control' and 'not necessarily follow[ing] progressively from the past or present'.[135] Like Dehm, McNeilly eschews prescriptive guidance in favour of a focus on historical narrative, legal discourse, and democratic debate.[136] Moreover, her critique of the modern illusion of predictability and control borders on portraying the future as entirely ungovernable, potentially discouraging valuable forms of anticipatory action.[137] This is by no means to deny the value of

[131]See Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', *supra* note 4, at 172.

[132]See Harvey, *supra* note 60, at 44.

[133]J.-F. Lyotard, 'Note on the Meaning of "Post-"', in J.-F. Lyotard (ed.), *The Postmodern Explained: Correspondence 1982–1985* (1993), 75 at 76.

[134]See Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', *supra* note 4.

[135]See McNeilly, 'Are Rights Out of Time?', *supra* note 4, at 818.

[136]Ibid.

[137]Ibid.

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either contribution. But to the extent that these works are representative of postmodern thinking about the future, they underscore the need to complement this paradigm with one more attuned to the challenges of legal and institutional design posed by a complex and accelerating global reality.

Yet another aspect of postmodern thinking that may hinder its capacity to guide international law through the risks and opportunities presented by an accelerated future is its general antagonism, perhaps even 'deep aversion', toward 'any project that [seeks] universal human emancipation through mobilization of the powers of technology, science, and reason'.[138] While in 'modernist discourse' these powers are often celebrated as objective sources of knowledge, authority, and progress, critical postmodern writing tends to see them as suppressing less powerful voices and narratives, reinforcing 'hierarchies of class and meritocratic practices', and 'reify[ing] science over the humanities, men over women, and facts over values'.[139]

These concerns about technological progress have recently surfaced in international law scholarship associated with the postmodern temporal approach. Julia Dehm, for instance, warns that reliance on yet unproven future carbon removal technologies allows powerful economic actors to defer climate mitigation action through international law – a delay that may yield catastrophic consequences, particularly for climate-vulnerable populations.[140] Technological advancement, on this view, not only historically benefited developed countries while inflicting climate harms on developing countries, but also risks creating an illusion of future mitigation opportunities at the latter's expense. Ingo Venzke similarly critiques the 'complacent faith' in technological progress that enables industrialized countries to delay phasing out fossil fuels, arguing that this stance 'expresses a situated privilege' insensitive to developing countries' experiences and concerns.[141] Adopting a broader historical perspective, Geoff Gordon suggests that international law's promotion of globally standardized time and of transnational communication technologies enabled by such standardization – though presented as a 'natural and neutral token of progress' and accompanied by 'powerful pretentions to universalism' – has in fact served imperial and corporate interests, often at the expense of colonized people.[142] A critical assessment of state and market-led attempts to universalize and compress time while relying on real-time data processing technologies is also provided by Fleur Johns.[143] Johns posits that despite growing pressures, international human rights law may still be capable of offering an alternative temporal experience that is more pluralistic and anachronistic, thereby helping 'the proud, angry poor' to 'reactivat[e] . . . as political questions' the technology-driven temporalities of nation-states and global markets.[144]

As these examples demonstrate, postmodern engagements with time in international legal scholarship carry forward postmodernism's general skepticism toward technology, suggesting that the modern ideal of linear technological progress serves to align international legal arrangements with powerful economic interests. This skepticism arguably presents an inverted mirror image of the modern paradigm's over-confidence in science and technology: whereas the modern paradigm tends to downplay the possible limitations, dangers, and biases of technological development, the postmodern paradigm risks dismissing technological possibilities before they materialize. Neither framework, therefore, seems suitable for preparing international law to adequately address the complexities of accelerating global changes driven by technological advancement.

[138]See Harvey, *supra* note 60, at 41.

[139]D. S. L. Jarvis, 'Postmodernism: A Critical Typology', (1998) 26 *Politics and Society* 95, 117.

[140]See Dehm, 'Promise, Deferral, and Dissonance: Law, Time and Environments in the Anthropocene', *supra* note 4.

[141]I. Venzke, 'Tragedy and Farce in Climate Commentary', (2023) 3 *European Review of Books*, available at europeanreviewofbooks.com/tragedy-farce-in-climate-commentary/.

[142]See Gordon, *supra* note 4, at 1202, 1214.

[143]See Johns, *supra* note 4, 45–50.

[144]Ibid., at 59–60.

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5. The hypermodern paradigm: Back to the future

The foregoing discussion suggests that the extreme velocity and complexity of unfolding global challenges require international law and its institutions to look for a different temporal framework, neither modern nor postmodern, that is future-oriented and forward-looking, yet flexible and non-linear, and which steers a middle ground between the modernist over-confidence in universal progress and the postmodernist skepticism toward it. We believe that hypermodernism – an evolving concept emerging from turn-of-the-twenty-first-century socio-cultural scholarship – can point the way in the right direction.[145] At the heart of hypermodernism lies the proposition that frantic acceleration driven by technological advances is the defining characteristic of our era. Therefore, to better understand and address contemporary social, cultural, economic, and geopolitical processes and challenges, we must focus on the notion of speed.

Among the first to engage with speed as a crucial lens for analyzing social and political phenomena was Paul Virilio, who introduced 'dromology' – the study of speed or race (*dromos*) – as a major field of philosophical inquiry.[146] 'If time is money ... then speed is power',[147] Virilio observes, arguing that the power of speed is becoming increasingly dangerous.[148] Throughout history, Virilio explains, technological advances such as the invention of electricity or the airplane have created significant value for humanity but have also led to various accidents.[149] Until the not-so-distant past, however, such accidents were mostly local and limited in their impact, making them manageable. By contrast, in the current age of extreme acceleration – defined by Virilio as a move from 'relative speed' to 'absolute speed' – the risk associated with technological progress has shifted from localized accidents to a potentially 'integral' or 'generalized' catastrophe of a fundamentally different order, such as a global nuclear war that could affect the entire world population.[150] To illustrate this dual nature of constant expedition, Virilio uses the example of massive particle accelerators like the Large Hadron Collider, which can help solve complex scientific problems, but at the same time (re)present, both concretely and metaphorically, potentially unknown and uncontrollable dangers or 'black holes'.[151]

Virilio's concern that rapid technological development, while offering many benefits, may also pose serious and even existential risks to humanity, has been echoed by other writers, framing the ambivalent nature of acceleration as a central theme in hypermodern theory. As Sebastian Charles has put it: 'Hypermodernity is the reign neither of absolute happiness, nor of total nihilism ... it is neither the accomplishment of the Enlightenment project, nor the confirmation of Nietzsche's dark predictions'.[152] Put differently, the hypermodern approach rejects the utopian narrative of inevitable progress, but it does not deny that progress exists and that it has both positive and negative aspects.[153]

The most detailed account so far of the hypermodern condition has been offered by Gilles Lipovetsky. According to Lipovetsky, the turn of the twenty-first century marks the beginning of

[145]The concept of hypermodernism has been developed in the works of Gilles Lipovetsky, Paul Virilio, & John Armitage, among others. See, e.g., G. Lipovetsky, *Hypermodern Times* (with S. Charles, trans. Andrew Brown, 2005); J. Armitage, *Paul Virilio: From Modernism to Hypermodernism and Beyond* (2000); P. Virilio, *Speed and Politics: An Essay on Dromology* (trans. M. Polizzotti, 1986 [1977]).

[146]J. D. Ebert, 'Dromology', in J. Armitage (ed.), *The Virilio Dictionary* (2013), 69.

[147]J. Armitage, 'From Modernism to Hypermodernism and Beyond: An Interview with Paul Virilio', (1999) 16 *Theory, Culture, and Society* 25, 35.

[148]P. Virilio, *The University of Disaster* (2009); P. Virilio, *The Original Accident* (2007); P. Virilio, *The Information Bomb* (2000); P. Virilio, *Open Sky* (trans. J. Rose, 1997); P. Virilio, 'The Museum of Accidents', (1989) 2 *Public* 81.

[149]See Armitage, *supra* note 147, at 40.

[150]Ibid., at 26, 36–7, 39–41. See also C. Oliveira, 'The Silence of the Lambs: Paul Virilio in Conversation' (trans. Patrice Riemens), (1996) *CTheory*.

[151]P. Virilio, *The Great Accelerator* (trans. J. Rose, 2012).

[152]See Lipovetsky (with Charles), *supra* note 145, at 25.

[153]S. Charles, 'For a Humanism Amid Hypermodernity: From a Society of Knowledge to a Critical Knowledge of Society', (2009) 19 *Axiomathes* 389.

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an era characterized by hyper-connectivity, hyper-capitalism, and hyper-change, and by the logic of the excess and the extreme.[154] In this hypermodern era, 'the speed of operations and exchanges is accelerating' in every domain of life,[155] while a culture of hedonism and over-consumption exists in tandem with ambitious scientific attempts to 'explore the infinitely great and the infinitely small, to reshape life, to manufacture mutants, to offer a semblance of immortality, to resurrect vanished species, [and] to programme the genetic future'.[156] These interrelated trends, Lipovetsky argues, are 'heavy with threats as well as promises',[157] encapsulating 'a paradoxical combination of frivolity and anxiety, euphoria and vulnerability, playfulness and dread':[158] They can enhance individual freedom and welfare and safeguard the future of humanity and the planet, but they also involve risks of social disintegration, mass surveillance, and catastrophic accidents.[159]

Importantly, the recognition of the 'Janus face of progress',[160] combined with the realization that acceleration is not entirely reversible, has led Virilio, Lipovetsky, and other theorists of hypermodernity to call for 'responsible action', which includes the development of 'ethical regulation and codes of practice' in various spheres of life.[161] These writers emphasize that, although the future is not entirely open and is to some degree already determined by past actions, it is certainly not fully fixed or closed.[162] The urgent task, therefore, is 'to build it, together, in the present';[163] that is, 'to foresee, to forestall, to plan, to prevent',[164] while relying on constantly developing forecasting models and risk assessment methods.[165] Such future-oriented thought and action, in turn, involves some recalibration of the temporal organization of key social, economic, and legal institutions.[166]

In the context of international law, we argue, the call for temporal recalibration put forward by the hypermodern approach should be translated into greater diversity and flexibility in the discipline's temporal assumptions and patterns. Such variation can foster development and experimentation with non-conventional temporal methods and approaches that may be more suitable for addressing global challenges in a hyper-accelerating world. Within this framework, the incremental and reactive evolutionary mode prevalent in international law, whereby norms and institutions develop gradually in light of past events, should be complemented and balanced more vigorously with non-linear and proactive models of normative transformation.

Under the hypermodern paradigm, then, international law and institutions should strive to prepare in advance for possible future technological, social, and environmental trends, seeking to actively influence the way they unfold and steer them in positive directions.[167] Given the ever-growing complexity of global developments, such forward-looking regulation can no longer rely predominantly on past knowledge and experience. Instead, it should draw considerably from enhanced forecasting and modelling capacities.[168] At the same time, the 'adaptive

[154]See Lipovetsky (with Charles), *supra* note 145, at 30–4.

[155]Ibid., at 35.

[156]Ibid., at 36–7, 43.

[157]Ibid., at 31.

[158]Ibid., at 40.

[159]Ibid., at 42, See also G. Lipovetsky, *La Société de Deception* (2006), 106–8; G. Lipovetsky, *Le Bonheur paradoxal* (2013), 13.

[160]S. Matthewman, 'Book Review: The Great Accelerator by Paul Virilio', (2013) *Interstitial*, at 3.

[161]See Lipovetsky (with Charles), *supra* note 145, at 21.

[162]Cf. Dehm, 'International Law, Temporalities and Narratives of the Climate Crisis', *supra* note 4, at 168.

[163]See Lipovetsky (with Charles), *supra* note 145, at 27.

[164]Ibid., at 47.

[165]Ibid., at 43–4; P. Virilio, *Politics of the very Worst: An Interview with Philippe Petit* (1999), 93; M. L. Frick, 'Excess of Anxiety: Hypermodernity and the Ambivalence of Freedom', in P. Mbongo (ed.), *L'Excès: L'hypermodernité, Entre Droit et Politique* (2012), 37 at 51.

[166]See Lipovetsky (with Charles), *supra* note 145, at 35.

[167]See Saliternik and Shlomo-Agon, *supra* note 126.

[168]A. Lopez-Claros et al., *Global Governance and the Emergence of Global Institutions for the 21st Century* (2020), 294.

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capacity'[169] of international law should be improved to facilitate quick normative and institutional adjustments in light of updated forecasts or new facts on the ground. This can be done, among other strategies, by adopting simplified treaty amendment procedures, delegating legislative authority to subsidiary bodies, or relying on informal lawmaking mechanisms.[170] As Edith Brown Weiss observes, if international law is to retain its effectiveness and legitimacy in a rapidly changing, multifaceted 'kaleidoscopic world', it must remain alert, responsive, and open to new normative and institutional configurations.[171]

Yet, rendering international law more dynamic and proactive and better capable of addressing upcoming global challenges further entails the extension of international law's time horizons far into the future. In an ever-accelerating world, effective preparation for future technological, social, environmental, and other developments requires regulatory interventions well in advance, when it is still possible to influence future global trajectories. The relevant timeframes for such long-term planning and action may vary across different domains. While in some areas they may extend a few decades into the future, in others (e.g., climate change or nuclear waste management), regulatory measures should be designed to exert influence centuries, millennia, or even tens of thousands of years ahead.[172] In either case, the objective is to systematically 'embed long-term thinking into our [global governance] systems, to improve global risk anticipation and foresight, and to take the interests of future generations seriously'.[173] In designing such long-term-oriented interventions, however, international law- and policy-makers should also take into account and attempt to mitigate possible risks, such as unjust sacrifice of present generations' interests.[174]

Although not widespread, hypermodern temporal elements such as adaptability, proactiveness, and long-term thinking are not entirely alien to international law and its institutions. To give but one example, the UN climate regime, which was mentioned earlier as blending both modern and postmodern temporal aspects, also displays some seeds of hypermodern logic. The declared goal of this regime is to address the long-term threat of global warming 'for the benefit of present and future generations of humankind'.[175] Within this framework, State Parties undertake 'to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change'.[176] To fulfill this commitment, the parties have established a designated body tasked with providing timely scientific and technological input to the COP.[177] The COP, in turn, has been delegated expansive decision-making powers that enable it to adapt various elements of the climate regime to new scientific knowledge as well as to developments on the ground.[178]

[169]R. S. J. Tol, 'Adaptation and Mitigation: Trade-offs in Substance and Methods', (2005) 8 *Environmental Science and Policy* 572, 574.

[170]See, e.g., T. Meyer, 'Alternatives to Treaty-Making: Informal Agreements', in D. Hollis (ed.), *The Oxford Guide to Treaties* (2020), 59 at 70–73; C. A. Bradley and J. G. Kelley, 'The Concept of International Delegation', (2008) 71 *Law and Contemporary Problems* 1, 27; J. Pauwelyn et al., 'When Structures Become Shackles: Stagnation and Dynamics in International Lawmaking', (2014) 25 *European Journal of International Law* 733, 742–3, 749.

[171]E. Brown Weiss, *Establishing Norms in a Kaleidoscopic World* (2022); E. Brown Weiss, 'Intergenerational Equity in a Kaleidoscopic World', (2019) 49 *Environmental Policy and Law* 3.

[172]H. Vogt and A. Pukarinen, 'The European Union as a Long-term Political Actor: An Overview', (2022) 4 *Political Research Exchange* 1, 5; H. Shue, 'Changing Images of Climate Change: Human Rights and Future Generations', (2014) 5 *Journal of Human Rights and the Environment* 50, 54.

[173]UN Secretary-General's Remarks to the UN General Assembly, 10 March 2022, available at press.un.org/en/2022/sgsm21173.doc.htm.

[174]See, e.g., S. Humphreys, 'Against Future Generations', (2022) 33 *European Journal of International Law* 1061; M. Wewerinke-Singh et al., 'In Defence of Future Generations: A Reply to Stephen Humphreys', (2023) 34 *European Journal of International Law* 651.

[175]See UNFCCC, *supra* note 46, Art. 3(1).

[176]Ibid., Preamble, Art. 4(1)(g).

[177]Ibid., Art. 9. See also Kyoto Protocol, *supra* note 47, Art. 15; Paris Agreement, *supra* note 47, Art. 18.

[178]See UNFCCC, *supra* note 46, Arts. 4, 7; see Kyoto Protocol, *supra* note 47, Arts. 3, 5, 7, 9; see Paris Agreement, *supra* note 47, Arts. 4, 6, 14, 16. See also Bodansky et al., *supra* note 89, at 90.

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However, notwithstanding these hypermodern glimpses, the UN climate regime is far from being sufficiently long-termist, proactive, and adaptive. As many have observed, despite its elevated rhetoric and good intentions, the climate regime has ultimately done too little, too late to mitigate the enormous threat of global warming.[179] So far, this regime has failed to ensure adequate levels of emission reduction and temperature rise mitigation,[180] with scientists warning that even the most ambitious goals set by the state parties (1.5 Celsius degrees of warming and net-zero emissions) are too vague and may cause 'distraction and delay just at the point when climate action is most urgent'.[181]

The constraints hindering effective forward-looking legal action on climate change are manifold, and some of them likely also play a role in addressing other rapidly unfolding global challenges, such as artificial intelligence, synthetic biology, or outer space commercialization. In addition to the challenge of overcoming knowledge gaps presented by 'a dromological culture [that] eludes – or speed pasts – any attempt at systematic analysis',[182] the main barrier to pursuing a hypermodern temporal approach in international law appears to be the lack of motivation among pertinent actors. As many have observed, governments and other international actors have few political incentives to invest resources or make concessions in the present for the benefit of people who will live in the future.[183] Instead, they usually prioritize legal interventions that yield near-term benefits, which can immediately enhance their popularity – a consideration of particular importance for governmental decision-makers concerned with re-election, even when operating at the international level.[184]

Moreover, alongside such rational considerations, those creating and operating international norms and institutions may also be inclined toward reactiveness and short-termism, even when proactiveness and long-term thinking are more appropriate, due to various cognitive biases that distort their judgment. One such bias is over-optimism, which may cause international decision-makers to overestimate the likelihood that things will go well and underestimate the chances that things will go wrong, thereby hindering efforts to effectively reduce future risks and enhance future opportunities.[185] Another common cognitive bias that may lead international legal actors to respond to immediate problems while downplaying more distant – albeit no less serious – future problems is the availability bias. This bias pushes decision-makers to focus on issues and scenarios that have already materialized and captured public attention, while paying less heed to potential upcoming developments that are not readily available in their minds and sight.[186]

However, despite such epistemological, political, behavioral, and other challenges, we argue that hypermodern temporal elements like dynamism, adaptability, proactiveness, and far-sightedness must be more vigorously integrated into mainstream international legal thought and

[179]See, e.g., S. M. Gardiner, 'On the Scope of Institutions for Future Generations: Defending an Expansive Global Constitutional Convention that Protects Against Squandering Generations', (2022) 36 *Ethics and International Affairs* 156, 164; S. Caney, 'Political Institutions for the Future: A Five-fold Package', in I. González-Ricoy and A. Gosseries (eds.), *Institutions for Future Generations* (2016), 135, at 139.

[180]D. Bodansky, 'The UN Climate Change Regime Thirty Years on: A Retrospective and Assessment', (2023) 53 *Environmental Policy and Law* 19, 32; see Gardiner, *supra* note 179, at 164.

[181]F. Pearce, 'Mind the Gaps: How the UN Climate Plan Fails to Follow the Science', *Yale Environment 360*, 9 January 2024, available at e360.yale.edu/features/un-climate-science-1.5-net-zero.

[182]M. Kelly, 'Technological Drive, the Self and the Ethical', (2002) 5 *MANUSYA: Journal of Humanities* 29, 35.

[183]UN, *Our Common Agenda: Report of the Secretary-General* (2021), 38.

[184]R. Falkner, 'The Paris Agreement and the New Logic of International Climate Politics', (2016) 92 *International Affairs* 1107, 1109.

[185]A. Tversky and D. Kahneman, 'Judgment under Uncertainty: Heuristics and Biases', (1974) 185 *Science* 1124, 1129; N. D. Weinstein, 'Unrealistic Optimism about Future Life Events', (1980) 39 *Journal of Personality and Social Psychology* 806.

[186]A. Tversky and D. Kahneman, 'Availability: A Heuristic for Judging Frequency and Probability', (1973) 4 *Cognitive Psychology* 207; see Tversky and Kahneman, *supra* note 185, at 1127–8; J. S. Carroll, 'The Effect of Imagining an Event on Expectations for the Event: An Interpretation in Terms of the Availability Heuristic', (1978) 14 *Journal of Experimental Social Psychology* 88.

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practice. This requires those operating in the international legal sphere to regularly assess future developments of unprecedented speed and scope, and initiate early interventions to minimize potential harms and maximize benefits. Obviously, such a shift in the temporal orientation of international law requires significant conceptual, doctrinal, and institutional reforms. However, demanding as this endeavour may be, it is necessary for ensuring that international law and institutions remain fit for purpose in a hyper-accelerating and increasingly complex world.

Finally, it is noteworthy that while recalibrating international law's temporalities toward greater proactiveness and long-termism is essential for enabling the international community as a whole to better handle the hyper-accelerated future, it is especially important for the less well-off members of this community, who usually bear the heaviest costs during a global crisis. Given that 'the powerful are fast [and] the powerless are slow',[187] weaker states and societies are often unable to unilaterally devise effective last-minute responses to large-scale predicaments, whereas well-resourced societies enjoy greater maneuvering space. This disparity was vividly illustrated during the COVID-19 outbreak. While all countries suffered immense harm from the failure of international law and institutions to prepare in advance for the pandemic, developing countries and disadvantaged populations were hit hardest.[188] Not only were they sidelined in the global scramble for medical supplies and vaccines,[189] but they also lacked the resources needed to navigate their national health and economic systems through the crisis.[190] Similarly, in the context of climate change, the most vulnerable countries are often those with the fewest resources to adapt, including large parts of Africa, South America, and the Pacific islands, where heatwaves and sea-level rise may render life uninhabitable.[191] And the same is true for other emerging global problems like population growth, food scarcity, and technologically-induced job loss – in all these domains, the countries and populations most dependent on timely global risk mitigation measures are those with the slowest reaction times and fewest resources for adaptation.

6. Conclusion

This article has offered a critical typology of the temporal conceptions and dynamics at play in the international legal field, categorizing them into three overarching paradigms. It began with the modern temporal paradigm, which envisions international law as developing in a linear fashion from the past through the present to the future, bringing about constant universal progress over time. Noting that the modern paradigm is dominant in international legal thought and practice, the article then moved to discuss the postmodern temporal paradigm, which presents a less naturalized and unitary – and more contingent and pluralistic – perception of time. The postmodern approach asserts that by imposing a grand narrative of unidirectional movement from a dark past that ought to be left behind toward an unequivocally bright future, the modern paradigm condemns those most affected by international law's past failures and injustices to remain haunted by them, without having the opportunity to equally enjoy progress and emancipation. The postmodern paradigm thus calls for greater accountability for past wrongs along with a genuine commitment to dismantling the norms and structures that perpetuate these injustices into the present and future.

[187]J. Wajcman and N. Dodd, 'Introduction: The Powerful Are Fast, the Powerless are Slow', in Wajcman and Dodd, *supra* note 113, 1.

[188]OECD, *OECD Supports Developing Countries in the Time of COVID-19* (19 May 2021).

[189]J. Bradly, 'In Scramble for Coronavirus Supplies, Rich Countries Push Poor Aside', *The New York Times*, 9 April 2020; L. Gruszczynski and C.-H. Wu, 'Between the High Ideals and Reality: Managing COVID-19 Vaccine Nationalism', (2021) 12 *European Journal of Risk Regulation* 711, 712; J.D.N. Lagman, 'Vaccine Nationalism: A Predicament in Ending the COVID-19 Pandemic', (2021) 43 *Journal of Public Health* 375.

[190]U.S. Global Leadership Coalition, 'COVID-19 Brief: Impact on the Economies of Low-Income Countries', August 2021.

[191]S. Humphreys, 'Climate Justice: The Claim of the Past', (2014) 5 *Journal of Human Rights and the Environment* 134, at 135–6.

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However, as this article has argued, while the postmodern paradigm rightly advocates for more meaningful engagement with the past within international law and institutions, it leaves unresolved the issue of international law's overly simplistic and somewhat anachronistic engagement with the future. Against this backdrop, the article has promoted a third, hypermodern approach, which provides a sober assessment of the increasingly accelerated, complex, and interdependent future that lies ahead. Recognizing that impending technological, environmental, and socio-economic developments may have far-reaching implications, and that timely regulatory interventions can help steer these implications in a positive direction, the hypermodern temporal approach emphasizes the need to enhance international law's adaptive capacity, proactiveness, and long-termism. Although this shift in the discipline can be demanding and entails various conceptual, doctrinal, and institutional changes, we believe that it is indispensable for ensuring that international law remains fit for purpose and for securing a better future for humanity and the planet.

The Pandemic Agreement adopted by the World Health Organization (WHO) in May 2025 offers a timely illustration of both the urgency and the difficulty of pursuing a hypermodern temporal approach in international regulation. As noted above, the COVID-19 crisis exposed the immense costs of inadequate normative and institutional preparedness for unfamiliar, rapidly spreading pandemics, as well as the unequal distribution of those costs. This experience spurred WHO member states to negotiate a pandemic agreement aimed at facilitating continuous knowledge exchange, coordinated preemptive measures, and fast real-time responses, all while advancing a 'One Health' approach that recognizes the interconnectedness of human health with technological, environmental, economic, and other global developments.[192] However, although the Pandemic Agreement achieved some progress in these respects, arguably reflecting the hypermodern emphasis on foresight, agility, and multi-layered cooperation, political struggles between developed and developing states, coupled with a tendency to replicate familiar lawmaking methods and patterns, ultimately hindered the adoption of more proactive and innovative arrangements, particularly in relation to technology transfer and equitable access to vaccines and treatments.[193]

Before concluding, it is worth re-emphasizing that our call for greater integration of hypermodern temporal patterns into international law does not entail abandoning the modern or postmodern paradigms. Rather than endorsing a single temporal orientation to the exclusion of others, we advocate recalibrating the respective roles and relative weight of the three paradigms within the discipline. Depending on the specific context and the regulatory challenge at hand, international law should be able to embrace both linearity and non-linearity, tradition and innovation, reactiveness and proactiveness, short-termism and long-termism. Thus, the linear logic of the modern paradigm may be well suited to areas that require gradual consensus building, such as the expansion of human rights protections. The modern paradigm along with its reactive inclination also holds normative appeal when past experience can offer valuable regulatory guidance, as is the case with key (though not all) aspects of international humanitarian law, where long-standing wartime practices can inform efforts to reduce future harm. The postmodern paradigm, for its part, can help confront the legacies of war crimes and other historical injustices by emphasizing their lingering effects. Yet, in an increasing number of international domains – particularly those marked by rapid change and growing complexity, such as space exploration or cyberattacks – the hypermodern call for innovative thinking as well as its emphasis on anticipatory and adaptive regulation become essential. Ultimately, many of today's and tomorrow's pressing

[192]WHO Pandemic Agreement, WHA78.1 (20 May 2025), available at apps.who.int/gb/ebwha/pdf_files/WHA78/A78_R1-en.pdf.

[193]See, e.g., A. Berman and I. Dewi Kantiana, 'The Pandemic Agreement: A Milestone in Global Health, But Will It Work?', *European Journal of International Law: Talk!*, 12 June 2025; C. Wenham and M. Eccleston-Turner, 'Will the Pandemic Treaty Make It over the Line', (2024) 384 *British Medical Journal* q395.

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global challenges demand a combination of temporal approaches, as evidenced by the climate change regime discussed throughout this article. By embracing this plural and dynamic temporal sensibility, international law can become more responsive to the demands of a rapidly changing future without losing sight of past legacies and their enduring influence.

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