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After global governance

Technological innovation and the new politics of sovereignty in internet governance

Jürgen Neyer

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Abstract Technology is of crucial importance for understanding the recent crisis of global governance and concomitant practices of re-territorializing sovereignty. It is far more than an instrument for putting ideas and interests into practice; it is embedded in relationships of power, gives expression to normative decisions and shapes the conditions under which politics is conducted. Technology empowers some actors and disempowers others. It makes new forms of political action possible and others more costly. This crucial role of technology has been emphasized in many dispersed parts of the IR discourse since long. What has often been overlooked, however, is that technological innovation can have a disruptive effect on international institutions. This paper traces this disruptive effect in the administration of the internet by underlining the close nexus between technology, sovereignty and global governance. It finally discusses promising avenues for future research.

Keywords Global Governance · Sovereignty · Technology · Internet

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Nach dem globalen Regieren

Technologische Innovationen und die neue Souveränitätspolitik in der Verwaltung des Internet

Zusammenfassung Technologie ist von entscheidender Bedeutung für das Verständnis der aktuellen Krise globalen Regierens und der damit einhergehenden Praxis einer Reterritorialisierung von Souveränität. Technologie ist weit mehr als ein Instrument zur Umsetzung von Ideen und Interessen; sie ist eingebettet in Machtverhältnisse, verleiht normativen Entscheidungen Ausdruck und prägt die Bedingungen, unter denen Politik gemacht wird. Technologie ermächtigt einige Akteure und entmacht andere. Sie macht neue Formen des politischen Handelns möglich und andere aufwändiger. Diese entscheidende Rolle der Technologie wird seit langem in vielen verstreuten Bereichen der Internationalen Beziehungen betont. Häufig wird jedoch übersehen, dass technologische Innovation eine disruptive Wirkung auf die internationale Politik haben kann. Dieser Beitrag zeichnet diesen disruptiven Effekt in der Verwaltung des Internets nach, indem er den engen Nexus zwischen Technologie, Souveränität und Global Governance hervorhebt. Abschließend werden vielversprechende Wege für zukünftige Forschung diskutiert.

1 After global governance

Sovereignty is a concept that lies at the heart of organizing politics in the global political system. It gives expression to prevalent shifts in the global distribution of power and the changing connotations of legitimate political authority (Held 2002, p. 2). Sovereignty is thus more than merely expressing an idea of legitimate governance (Jackson 2008a; Kingsbury 1998). It is better understood as an essentially contested concept which reflects the ups and downs of international cooperation and the changing readiness of states to pool and delegate competences to international institutions (Sarooshi 2004). The academic discourse on sovereignty was dominated by the notion of “global governance” (Rosenau and Czempiel 1992; Zürn 2018) for most of the last two decades. Statist conceptions of sovereignty were often denounced as outdated and no longer able to provide the grammar for describing the Western world. Anne-Marie Slaughter (2005) wrote about a “new world order” populated by international organizations, domestic agencies, and trans-governmental sites of cooperation in which the notion of international anarchy had lost all explanatory power for outcomes. Chayes and Chayes (1995) described a “new sovereignty” that no longer consisted in the right to autonomously regulate domestic matters but to participate in global problem-solving. The “power of international deliberation” was identified (Johnstone 2011), and leading scholars argued that the emergence of the world state is “inevitable” (Wendt 2003). In short, the world looked like becoming a flattening place in which the law, inclusive deliberation and cooperation would flourish, anarchy lose its threatening meaning and global legitimacy become an integral component of international politics. The concept of sovereignty, as Herzog (2020) argues, should rest in peace.

It is nevertheless quite obvious today that sovereignty is anything but an irrelevant concept. The global political landscape is characterized by a return of territoriality and national sovereignty. The US and China are engaged in an intense trade and investment war and mutually blame each other for damaging national sovereignty. The World Trade Organization (WTO) is handicapped by sabotage of its conflict settlement mechanism, the UK has left the EU, the US, China and the European Union (EU) sue each other for allegedly unfair trade practices, and the World Health Organization (WHO) is subject to allegations of being an agent of Chinese interests.

The new emphasis on national sovereignty and the crisis of global governance come as no surprise to all those who always knew that international institutions carry only a “false promise” (Mearsheimer 1995 [1994]). Realism was never shy to assert that the institutionalists’ claim of an international structure of governance driven by a combination of functional logic and shared ideas would burst as soon as the global political situation becomes more conflictual. The crisis of global governance is also of little surprise to all those who followed the reasoning of “a clash of civilizations”. Huntington (1996) argued prominently that the different cultures of the world can hardly live side by side in harmony. Incompatible normative and cultural heritages would always drive them against and into conflict with each other. Many of those students of international politics, however, who did believe in the power of international institutions and ideas, have significant problems to understand what has happened. Why does the world no longer perform according to the values of multilateral cooperation and liberal values? What has happened to the ideas of “new sovereignty”, “the real world order” and “global governance”? What has reintroduced conflict and dissonance on such a broad scale and send global politics back into a territory deemed to be the realm of historians rather than political scientists?

This article argues that any effort at understanding the shift in the political climate must take technology and its impact on the institutional order of global politics into account. It argues against much of the literature that technological innovation has not only a benign influence on international relations but that it has contributed in the last thirty years to a political climate of insecurity and motivated a stronger emphasis on territorial conceptions of sovereignty in the EU, Russia, China, and many other states (cf. Möllers 2021; Schünemann in this volume). The article analyses the new politics of sovereignty after global governance in three steps. The following section (Sect. 2) introduces the notion of sovereignty, theorizes the effects of constitutive technological change on its practices and infers a set of suggestions. Section three (Sect. 3) collects empirical evidence for substantiating the soundness of the suggestions. It uses the case of internet governance for highlighting how system-level technological change affects the international distribution of power and leads to new conflicts over the global political order. In its final section (Sect. 4), the paper summarizes the findings, underlines the close nexus between technology, sovereignty and global governance, and discusses promising avenues for future research.

2 Theorizing technology, sovereignty and global governance

2.1 Sovereignty and the promise of global governance

Most discussions of the concept of sovereignty start with Jean Bodin. In the context of the religious wars of the 16th century, Bodin (2013 [1576]) interpreted the notion of sovereignty as a concept intended to justify absolutism, i.e. to provide reasons for an unlimited extension of royal powers.¹ When the crown abandoned its originally tolerant course, an ideological instrument was needed to legitimize the emergence of a state powerful enough to enforce a uniform religious order on a divided society that was clearly separated from other societies. It was to apply to all matters important for establishing and maintaining domestic order. This power, “la puissance absolue et perpetuelle” was what Bodin called “sovereignty”. No other authorities, either internally or externally, should limit its powers. Sovereignty and state absolutism entered a close relationship. The concept of sovereignty was thus outright normative and affirmative at the same time. It was to establish authority over a plurality of competing powers and to justify the empowerment of a state with the rights to do whatever it takes in order to suppress dissidence and opposition.

State-centered notions of sovereignty have since long been criticized for their lack of normative relevance and empirical precision (Agnew 2005). Leading IR contributions such as “Power and Interdependence” (Keohane and Nye 1977), “Theory of International Politics” (Waltz 1979), “Social Theory of International Politics” (Wendt 1999) or “Tragedy of Great Powers” (Mearsheimer 2001) either disregarded the concept or dismissed it altogether as misleading. Sovereignty as an analytical term is too important to be easily rejected, however. It is a concept that lays for good reasons at the heart of organizing politics in the global political system (Lake 2003). It might well be for this reason that a number of scholars have tried rescuing the concept in the 1990s by adapting it to the changing empirical conditions of the 21st century. Studying sovereignty, as we are reminded, is not about normative theorizing only but about dealing with the “shifts in the regime of sovereignty” in order to understand the “reconfiguration of the proper form and limits of political power and the changing connotation of legitimate political authority” (Held 2002, p. 2).

International relations theory has gone to great lengths in the 1990s for living up to the insight. On the one side of the theoretical debate, Stephen Krasner distinguished among a set of different interpretations of the concept of sovereignty and argued that state actors had always used the term rhetorically only, without feeling compelled to adapt their course of action to its implications (Krasner 1999, p. 24). Sovereignty was thus little more than “organized hypocrisy”. On the other side of the debate, however, a whole chorus of interventions announced the dawn of a new age of global governance. Zürn (2000) described “governance beyond the nation state”, Abbott et al. (2000) theorized the “legalization of international politics” and Reinicke (1998) elaborated on “global public policy”. Governance without government seemed to be a realistic option for formerly anarchical structures. A growing

¹ For elaborate discussions of Bodin’s concept of sovereignty cf. Andrew (2011), Grimm (2015).

body of literature went even one step further and discussed the “power of international deliberation” (Johnstone 1998), the compliance pull exerted by legitimate international governance arrangements (Franck 1990) or even the “inevitability” of a world state (Wendt 2003). Not only political science but also legal analysis developed new concepts. Chayes and Chayes (1995) described the emergence of a “new sovereignty”. According to the Chayeses, sovereignty consists not only in the freedom of states to act independently, but “in membership in reasonably good standing in the regimes that make up the substance of international life” (Chayes and Chayes 1995, p. 26). In order to be accepted as a competent partner in dealing with global affairs, states must submit to the pressures that international regulations impose. It is only by participation in international legal regimes that states have access to international coordination and cooperation and thus the means to actively participate in cross-border problem-solving. “Participation in this network is voluntary in principle but difficult in practice to escape because of the high costs escaping would entail” (Osiander 2003, p. 283). Not participating in international regimes and not complying with international legal obligations is therefore not a realistic option. The legal practice of international law mirrored this process of contextualizing territorial ideas of sovereignty. The post-war emphasis on the “sovereign equality of nation-states”, on the “duty to cooperation” and on international peace as the central norm was in the early 2000s complemented by new principles. The “responsibility to protect”, adopted at the UN World Summit in 2005, the Tunis-Agenda of the same year underlining financial responsibility of the richer states for a global information society, and the NetMundial declaration of 2014, demanding an inclusive and multistakeholder Internet governance framework, seemed to introduce a new transnational normative world in which global responsibility, not state sovereignty and territoriality, figured prominently (Roeben 2012). Anarchy and disorder seemed to have become a phenomenon of the past.

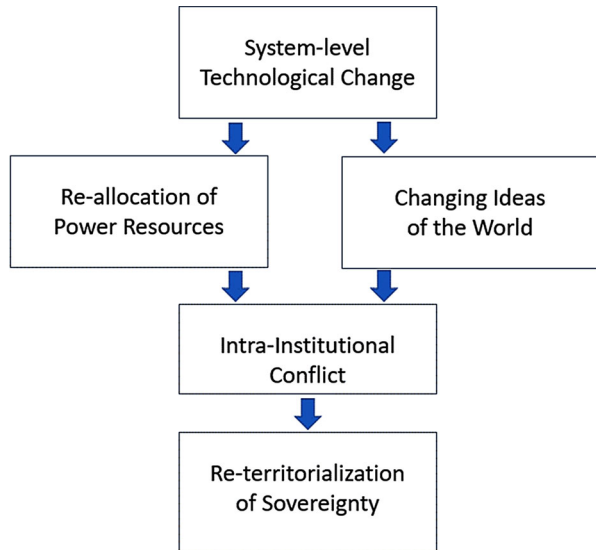
2.2 Digital technology and practices of sovereignty

The optimism of the 1990s and the 2000s ignored the shaky pillars on which global governance rests. Most of the literature of the time understood technology and technological innovation as a force for good only. Realism emphasized the benign role of nuclear weapons in stabilizing deterrence during the cold war (Rauchhaus 2009; Powell 1989; Waltz 1990) whilst liberals focused on gradual innovations in traffic, transport and telecommunications for transnational integration and globalization (Keohane and Nye 1977) as well as international peace (Oneal et al. 1996). Rosenau (1995, pp. 13–15) argued prominently that information technologies undermine hierarchical political structures through the growth of governance networks. Relevant information is becoming more widely dispersed and held by both public and private actors with the effect of more inclusive and cooperative forms of governance becoming imperative (Keohane 2002, pp. 10, 51–59, 245–259; Benkler 2006, pp. 466–467). The greater transparency coming with modern information and communication technologies would also mitigate the uncertainty of international politics and thus limit the effects of the security dilemma. Nye was one of the few authors connecting technological innovation to shifts in power. He argued quite

affirmatively, however, that the new information and communication technologies would devalue hard power and increase the importance of soft power by underlining cultural attractiveness, openness, empathy and human rights (Nye 1990).

It is hard to dispute that those arguments have their merits. It is also true, however, that technological innovation can lead to major disruptions of a given institutional order if it reallocates power resources, distorts a pre-existing balance of power and leads states to reconsider their interest in cooperation. Such innovations can be called system-level technological innovations. They do not stop at making existing practices more efficient or introducing new ways of producing but change the underlying rules of the international game. The introduction of firearms in the 16th century in Europe, of the steam engine in the 18th century, and of nuclear weapons in the 20th century are examples of system-level technological innovations (Chin 2019). They reallocated power resources among states and contributed to the rise of Europe and, later, the US, to global hegemony. The development of digital technologies from the mid-20th century onwards and the rapid increase of network effects since the breakthrough of the commercial internet in the late 1990s is functionally similar in its effects. Digitization has not only disrupted domestic industries by incentivizing companies to relocate less efficient modes of production to less developed states but also has had systemic effects on the hierarchy among states (Autio et al. 2021). Developing countries with access to advanced state-of-the-art digital technology could emulate developed economies and “leapfrog” stages of industrial development by directly entering the information economy (Miller 2001; Fong 2009). Dynamic economies like China have followed this path successfully, left the ranks of developing economies and are competing today for global leadership (Lee 2018). The digital transformation has also had a significant effect on the ideas that we have about the world. Big data and machine learning allow speculating about a world in which human agency shares control with artificial intelligence and in which unskilled labor must compete with social bots (Pew Research Center 2018). Cyber weapons and drones are revolutionizing security policy, are sometime hard to attribute and may tilt the balance between attack and defense in favor of the former (Schulze 2020). The digital transformation thus introduces a new era of military insecurity and growing mistrust. None of this has left international institutions unaffected. Big powers compete for influence in international institutions and sometimes withdraw their support if they lose control. Non-governmental actors and big business challenge state control over the setting of technical standards. It would surely be daring to argue that the crisis of global governance is due to technological change only. The Sino-US confrontation is a fact that exists quite independent of technological change (Allison 2020). It would be no less daring, however, to completely disregard technological changes. Technological change is a major force reallocating power resources, altering our ideas of the world, introducing intra-institutional conflicts, and fostering new practices of sovereignty (cf. Fig. 1).

Fig. 1 Technological Change and Practices of Sovereignty



2.2.1 Technological change and re-allocations of power

System-level technological change has an important effect on the international distribution of power.² Technology helps to use power resources more efficiently and to better realize given goals. Smarter software, for example, can allow for closer surveillance of foreign practices and more efficient use of defense systems. Technological innovation is a highly asymmetrical process, however. New ideas are invented and introduced by some whilst others only adopt them at a later point in time. New technologies may in the long run disseminate globally and benefit everyone; in the short-run, however, they benefit only those who adapt early (cf. Frey 2019) while late-adapters suffer from comparative disadvantages. Early adopters thus enjoy comparative advantages in using their resources in relation to others. Those who lack the access to innovative technologies use their resources less efficiently and thus have a limited capacity to overcome resistance by others. Innovation in technology is thus having a direct effect on power, is asymmetrically allocated across states and implies changes in the hierarchy among states.

Technological innovation can also have an effect on the likeliness of cooperation. Technology allows for new solutions to old problems and sometimes makes resources redundant which were crucial only yesterday. The affordable availability of home-grown drone technology, for example, has lessened the dependence of the Turkish military on US supplies and opened new options for an independent foreign policy. The large-scale introduction of fracking technology in the US has reduced the dependence of the US on oil imports from the Middle East and might lead to

² Power is defined here broadly as “the production, in and through social relations, of effects that shape the capacities of actors to determine their circumstances and fate” (Barnett and Duvall 2005, p. 42).

a limited interest in supporting oil-rich states like Saudi Arabia. Both cases show how new technologies may reduce incentives to find common political ground and open new avenues for independent policy choices. They can improve the best alternative to a negotiated agreement for one of the parties and limit incentives for cooperation (Moravcsik 1993). Early adopters will therefore sometimes feel empowered and encouraged to bargain harder, make less compromises or even try to go alone. In extreme cases, innovative technologies lead to hegemonic control. A case in point is the early availability of nuclear weapons at the end of the Second World War and its effect of making the US (and soon after the Soviet Union) the unchallenged hegemonic powers in their respective military alliance system. Some observers fear today that the dynamic development of artificial intelligence in China might lead to a comparable Chinese economic and security dominance in the near future (O'Meara 2019).

2.2.2 *Technological change and ideas of the world*

Technology is an important factor for determining how actors perceive their environment, which ideas of the world they accept, and which institutions they deem appropriate for putting those ideas into practice. Technology is all around us and shapes how we experience nature, how we communicate and interact. Technology is not just about material facts, however, but subject to social constructions and interpretations that give meaning to it (Latour and Woolgar 1979).³ Technology is thus very much what we make of it and how we interpret it. The making of meaning in international politics is closely connected to so-called “epistemic communities” (Haas 1992). The term refers to networks of knowledge-based experts who cooperate with decision-makers to define problems, identify policy solutions and assess policy outcomes. Epistemic communities are of crucial importance for mainstreaming ideas and for transforming partial opinions into hegemonic knowledge. “Ideas do not float freely” as Thomas Risse (1994) has argued prominently. New ideas need agents and institutions for becoming politically relevant.

Epistemic communities are not independent from technological innovation nor are they normatively neutral. They emerge if and where specific expertise is accumulated and they reflect the specific world views of their members. Most experts in internet regulating bodies like the Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Engineering Task Force (IETF) or the Internet Governance Forum (IGF) are delegated from highly developed states with sophisticated private and public centers of technological expertise. Epistemic communities and their problem-solving philosophies thus reflect asymmetries of power, and embody particular normative decisions about the definition of a problem and its solutions. They are hardly ever organizing universal knowledge but are established on specific criteria for the selection of experts and the attribution of expertise (Chisholm 1995).

³ Social media, for example, can be both a tool for collapsing distance and for allowing personal communication; and it can be a device for manipulating political discourses, controlling citizens and manipulating behavior.

The intrinsic subjectivity of ideas, and their exclusive character, is an important reason why specific problem-solving philosophies are often contested by those actors who were excluded in the early stages of the development of an epistemic community. Especially if technologies are successful, i.e. if they spread out to further areas of application and gain relevance for international competitiveness and security, it is most likely that new actors and interests enter the field and work hard to have their concerns taken into account. Increasing salience invites contestations of dominant problem-solving philosophies, classifications of solutions, and concomitant reassessments of applicable criteria for expert selection. Successful technologies can thus easily lead to more intense contestation of the ideas promoted by existing epistemic communities and challenges to existing institutional provisions for their regulation. Innovation in technology and contestation of international regulatory institutions are thus likely twins in international politics.

2.2.3 Power, ideas and institutional change

Changing allocations of power resources and normative dissent about regulatory philosophies are critical factors for the efficacy of international institutions. The specific principles, norms, rules, and decision-making procedures of international institutions are the product of international negotiations and reflect the distribution of power and the prevalent problem-solving philosophies of important actors at the time of their establishment (cf. Keohane 1989). They are often not only reflecting functional imperatives but are deliberately chosen from a set of options according to their fit with the allocation of power among states and dominant regulatory philosophies (Haggard and Simmons 1987, pp. 496–498). The negotiations leading to the establishment of the WTO, for example, dealt extensively with questions relating to the independence of its dispute-settlement mechanism, the strength of its monitoring bodies and the openness to private actors (Jackson 2008b). The setting-up of ICANN as a multistakeholder institution covered by US legal provisions and dominated by US private interests in 1998 did likewise reflect the dominant role of the US in the early years of the development of the internet (Hill 2014; Carr 2015). Different responses to the challenge of regulating interdependence reflect different points of cooperation and overlap to different degrees with individual state interests (Thompson and Verdier 2014). International institutions are thus not politically neutral instruments but reflect the asymmetrical distribution of power resources among the contracting parties at the time of their establishment, and their prevalent ideas of how common problems ought to be solved.

Being the product of a given distribution of power and prevalent ideas, international institutions are fragile entities that are highly sensitive to changes in power and ideas (Young 1982). As opposed to most democracies, international institutions cannot rely on a democratically constituted “diffuse support” (cf. Easton 1975), i.e. a readiness on the part of their principals to cooperate in rule-making and compliance independent of an overlap between policy output and state interests (Tallberg and Zürn 2019). International institutions also lack the power of coercion, which states can mobilize in order to bridge gaps between governmental performance and public expectations. International institutions will thus quickly run into problems

with guaranteeing their contracting parties' adherence if their procedural set-up and substantial approach to coping with interdependence no longer matches with the preferences of its most important principals.⁴ The closer the overlap between the preferences of most important actors and institutional provisions, the higher the probability that an institution will be capable of making important actors adhere to the discipline imposed by its regulations. A major challenge of international institutions in a dynamic political environment thus is to adapt their procedural and substantial provisions to a changing distribution of power resources. Most international institutions are set up by unanimous decision of their contracting parties and need unanimity for change. If such unanimity cannot be realized, international institutions are likely to suffer from reduced legitimacy and face intensifying intra-institutional conflicts.

2.2.4 *Technology and new practices of sovereignty*

Rising intra-institutional conflicts are important sources of the recent crisis of multilateralism. The effects of this crisis can be observed in a large number of multilateral institutions. The recent obstruction of the World Trade Organization, the World Health Organization and the International Telecommunications Union by the US is a case in point. Western powers are no longer dominating these three organizations but have to accommodate with a technologically-empowered China which is aggressively demanding its share in governing global trade, health policy and telecommunications including internet governance. The effects of these challenges can be observed quite clearly in the recent emphasis on national sovereignty and the crisis of multilateralism. The “weaponization of interdependence” (Farrell and Newman 2020) has become a new reality and is inviting mistrust and unilateralism. Sovereignty is no longer something that states are ready to pool in international institutions but has become again a subject of intense negotiations among states and between governmental and non-governmental actors. They all compete for influence and continuously contest the boundaries between domestic and international, public and private, and democratic and authoritarian regulatory ideas. System-level technological change has transformed global interdependence into a more conflictual structure. Topics of formerly low political salience such as communication and the media have transformed into areas of high politics.⁵ The consequence of this process is that a territorial conception of sovereignty has gained new political prominence. The emerging new world order is a political order in which well-established international institutions are losing legitimacy and in which state adherence is diminishing. It is a world *after global governance* which is often closer to conflict and territorial sovereignty than to accumulating trust and a further pooling of sovereignty.

⁴ There is a long debate in the scientific literature on the conditions of compliance with international norms (Simmons 1998). Recent developments during the Trump administration give good reason to question the optimism of managerial school (Chayes and Chayes 1995; Franck 1990; and Koh 1997) that the legitimacy of an institution and a general feeling of obligation can compensate for a gap between governmental preferences, institutional set-up and output.

⁵ For insightful accounts of the political debate on the administration of the Internet cf. Broeders (2017), Budnitsky and Lianrui (2018), Chenou (2014), Radu (2019).

3 How system-level technological innovation conflicts with global governance

Whilst these processes are taking place in many policy areas, they are especially pronounced in the global regulation of the internet. China is nowadays employing the term “cyber sovereignty” (cf. Hong and Goodnight 2020; and Zeng et al. 2017) for its digital technology policy, Russia is trying to shield its domestic public space from international interaction by using a “sovereign Internet law” (Nocetti 2015; Epifanova 2020), and even the European Union is working on establishing “digital sovereignty” (Hobbs 2020; Christakis 2020). Although the concepts carry very different content in terms of the relationship between state and citizen, and the implications for democracy, they all share an idea of sovereignty that is closely tied to an increasing emphasis on governmental control over the content and processes of digital communication, and a general hesitancy to allow for uncontrolled interdependence.⁶ Digital sovereignty has become a buzzword in much of the political debate and is inspiring a growing number of academic analyses reaffirming territorial conceptions of content control (cf. Lambach 2020, pp. 486–487; Glen 2014; Pohle and Thiel 2020; Goldsmith and Wu 2006). An important reason why the internet has become a central site for giving expression to the new practices of territorial sovereignty is that it is a prime example of a system-level technology. It allows for completely new categories of products and forms of production that hardly anybody could have imagined in the heydays of global governance. The system-level character of this technology is also expressed in the fact that it is of strategic importance for many other policy areas. The internet is basically everywhere. National security today depends largely on the integrity of critical infrastructures in traffic, energy and health, and is impossible to safeguard without proper public and private online safety measures. An open and trustworthy internet is also of crucial importance for democracy as domestic opposition groups can link to international advocacy coalitions and organize powerful new forms of domestic discussion and protest. Regulating the internet is thus more than organizing an issue area; it is about controlling the infrastructure of modern politics. EU regulations like the General Data Protection Regulation (GDPR), the EU’s anti-competition law and the proposed Digital Market Act and the Digital Service Act are far more than only instruments for regulating the domestic European market. They are the political instruments with which the struggle for European economic and political digital sovereignty is being conducted. Likewise, discussions on technical standards like the Transmission Control Protocol/Internet Protocol (TCP/IP) are not about efficiency and functionality only but will define whether citizens’ autonomy will be safeguarded online and which society will see its idea of privacy being written into the technical infrastructure of global communication.

⁶ A typical example is Floridi (2020, p. 370) defining digital sovereignty as “control of data, software (e.g. AI), standards and protocols (e.g. 5G, domain names), processes (e.g. cloud computing), hardware (e.g. mobile phones), services (e.g. social media, e-commerce), and infrastructures (e.g. cables, satellites, smart cities)”. Similar interpretations can be found in Gueham (2017).

3.1 Power shifts: from stewardship to dominance

Digital technologies and the internet have had a major effect on the international balance of power. Whilst the literature of the 1970s and early 1980s was populated by a large number of contributions announcing the decline of US hegemony, none of this can be found today. Seven out of the biggest ten corporations in terms of market capitalization are located today in the US. Of the 30 most valuable corporations, 19 are hosted by the US.⁷ Apple, Amazon, Google, Microsoft and Facebook are the unrivaled champions of global capitalism and dominate much of technological innovation. The hard- and software capabilities of the US military are matched by no rival including China. Its surveillance capacities most likely outstrip those of any other nation in the world.

The dominance of the US is the product of massive technological innovations that have taken place in the US since the 1960s and that are still propelled by major US universities, research institutes and the mega-corporations. Amazon and Alphabet headed in 2018 the list of the largest research funding companies with 22.6 bn US\$ and 16.2 bn. US\$.⁸ The total R&D spending of the US amounted in 2019 to nearly 613 bn US\$, followed by China with 515 bn US\$ and Japan with 172 bn US\$.⁹ The rise of the US to global technological leadership was accompanied from very early on by efforts to establish industry-wide technological standards. Most of the major technological standards and most of the governance mechanisms that rule the internet until today had been developed in the 1970s to 1990s by US scientists sponsored by the US government. American “stewardship” was producing de facto a collective good open for consumption by the rest of the world (McCarthy 2015). The establishment of the global domain name system, the administration of the root file at an American university, and the TCP/IP standard were developed in cooperation among American researchers, universities, and companies, and financed by the US Defense Advanced Research Projects Agency (DARPA).¹⁰ The server which hosted the root zone file, necessary for resolving—on the highest level—queries regarding internet “names and numbers”, and necessary for finding domains online, is owned and managed by VeriSign Inc. from the United States. The establishment of ICANN in 1998 was also a US government initiative, transferring the administration of the registries of Internet Protocol (IP) identifiers to a private company being supervised until 2016 by the US government.

The benevolent US hegemony did not last forever, however. US technological and institutional hegemony translated in the 2000s into a market-based development of the World Wide Web (originally invented at the European Organization for Nuclear Research in Europe) that was soon dominated by the rising new US mega-corpora-

⁷ <https://companiesmarketcap.com>, last accessed 5/30/2021.

⁸ <https://www.statista.com/statistics/265645/ranking-of-the-20-companies-with-the-highest-spending-on-research-and-development/> last accessed 4/14/2021.

⁹ OECD Data: Gross Domestic Spending on R&D, <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htmr>, last accessed 6/14/2021.

¹⁰ Of the 13 top-level root name servers in place in 2015, 10 were governed by US institutions and only three by its European and Japanese allies cf. Shen (2016, p. 85).

tions of the internet. The retreat of the US from a benevolent administration of the internet became most obvious with the revelations of the former Central Intelligence Agency (CIA) employee and subcontractor Edward Snowden in 2013. He disclosed that the National Security Agency (NSA) had been running for many years extended global surveillance programs against Western and non-Western states. The US government was (and probably still is) using its cyber capabilities not only for retrieving information but also to “control or change the adversary’s information, information systems, and networks in a manner that supports the commander’s objectives” and to “build and maintain viable cyber options and plan to use those options to control conflict escalation and to shape the conflict environment at all states.”¹¹ The US technological advantage had become so massive in the early 2000s that the US lacked sufficient consideration for the concerns of its allies and other nation-state. It had become a hegemonic power that felt confident to regulate the internet and to dominate the global online order. The international reaction to the new US approach of exploiting and even weaponizing asymmetrical interdependence came promptly. All major powers, including China, Russia and the EU have become highly aware of their vulnerabilities and started in the 2000s to either embark on, or strengthen, strategies of national sovereignty (Goldsmith and Wu 2006; Deibert and Crete-Nishihata 2012).

3.2 Ideational change: from liberal norms to an uncommon internet

Liberal norms are the second important pillar of global governance that has been eroded by the impact of system-level technological innovation. Back in the 1990s, China and Russia were on a path towards close participation in the WTO and other international organizations. Liberal values were hardly disputed and both China and Russia did expect the benefits of interdependence to be more valuable than its challenges. Much has changed with the growing awareness that the technological innovations and the dominance of the US in digital technologies had changed the character of interdependence substantially. The idea of an open internet in which information flows freely and where market processes evolve dynamically is no longer perceived as a promise of ever better and more efficient products only. It has increasingly turned into a synonym for the global market dominance of large US mega-corporations, of massive tax evasion by platform corporations and of intensifying surveillance and control by private and public US institutions (Zuboff 2019).

Not only authoritarian, but also democratic, governments had to realize that unfettered online liberalism implied the export of the US model of free speech, including very limited constraints for hate speech and extensive user responsibility for online privacy. Not surprisingly, the liberal idea of an internet as unregulated as possible, lost much support in the last decades. The Chinese government reacted in the late 1990s with establishing the so-called Great Firewall and other instruments for establishing national control over the content of the internet. The Great Firewall enables the Chinese government to inspect any data being received or sent, and to block

¹¹ Citations refer to official documents authored by the Joint Chiefs of State and the US Department of Defense cited by Shen (2016, p. 90).

destination IP addresses and domain names. What has emerged is a digital world unto itself, with its content closely monitored and managed by the Communist party. The legitimizing ideology behind these state measures flies under the name *cyber sovereignty*. According to this model, every country is asked to control its own domestic internet, to abstain from interferences with other countries and to safeguard its own internet infrastructure and information system. Beijing is on high alert with regard to US instruments such as the Planning tool for Resource Integration, Synchronization, and Management (PRISM) and emphasizes that every single state should have the power to make cyber related policy independently (Arsène 2016); that there should be roughly equalized rights to participate in the decision making process of the rules, norms, or code of conduct that governs global cyberspace; and that the respect for national sovereignty should be one of the most important guiding principles to deal with cyber related issues internationally (Shen 2016, p. 90). Many Chinese scholars agree that “ensuring cyber security mainly by finding a proper way to protect its sovereignty in cyberspace should become the number one priority of the national security to do list” (Shen 2016, p. 91).

A similar approach can be observed in Russia. Russia has adopted under the so-called “*Sovereign Internet Law*” in 2019 a series of amendments to the existing federal laws which aim at preventing all external actors to interfere with domestic policies and political discourses (Epifanova 2020). The “*online Iron Curtain*”, as it has been called, is defended by the Russian government as a security measure to protect Russia in the event of an emergency or foreign threat like a cyberattack. It will allow Moscow to tighten control over the country’s internet by routing web traffic through state-controlled infrastructure and creating a national system of domain names. That system would allow Russia to operate its own internal networks that could run independently from the rest of the World Wide Web.

The European Union seems at first glance to be a hard case for comparison. It is governed by its democratic member states and can hardly be described as an authoritarian polity. Its policies are not totally different, however, when interpreted as domestic measures aimed at fostering a digital space governed by domestic political preferences, not by US ideas and interests (Hobbs 2020). The EU does not aim at suppressing opposition and controlling dissidence; what it does, however, is to follow the Chinese and the Russian example in using the terminology of digital sovereignty for justifying legislation that aims at establishing guard rails against unwanted content, its storage and retrieval. The EU has adopted in the last years a whole bundle of legislation for shaping the market and incentivizing corporate behavior. Today, the EU has probably the most protective legal and regulatory framework on internet issues anywhere in the world. Its E-Commerce Directive states that providers must act “expeditiously to remove or to disable access” to information if they have “actual knowledge” of its illegality.¹² The Copyright in the Single Market Directive adopted in April 2019 protects the interests of authors and artists from being exploited by obliging the big social media platforms to pay fair fees; it also provides for special

¹² Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (‘Directive on electronic commerce’).

exemptions from ambitious copyright concerns for public-interests such as online education and the preservation and dissemination of the cultural heritage;¹³ finally, it updates the liability shield for sharing platforms such as YouTube vis-à-vis the E-Commerce Directive, providing for obligations to undertake best efforts to keep illegal content unavailable before it is even uploaded—stoking fears of upload filters. The EU's General Data Protection Regulation (GDPR) furthermore prevents all users dealing with private data to use US software like Zoom or MS Teams if it cannot be guaranteed that data will not be stored and reused in the US (Kuner 2015).

3.3 Institutional change: the crisis of multistakeholderism

The twin pillars of US technological leadership and of the liberal idea of a mutually beneficial global internet translated in the 1990s into the practice of multistakeholder governance.¹⁴ It was established on the assumption that governance should be conducted not only by governments but by a combination of transnational regulators, private parties and non-governmental organizations “interacting both with each other domestically and also with their foreign and supranational counterparts” (Slaughter 2005, p. 5). It implemented an idea of governance in which expertise, and not interests, should govern and where all parties should have a fair opportunity to voice their concerns. ICANN is one of the most well-known multistakeholder institution in the administration of the internet. It is a private nonprofit organization that deals, among others, with the internet's global Domain Name System (DNS), the introduction of new generic Top-Level Domains (TLDs), and the operation of root name servers. Its stakeholders include representatives from governments, from civil society organizations as well as private interests, all working through consensus-based processes.

The Internet Engineering Task Force (IETF) is another important example for multistakeholderism. It is the premier internet standards body, bringing together a network of individuals, representatives of private business, civil society and governmental agencies who are willing to voluntarily cooperate in the development of the internet architecture and its operation. The IETF is not authorized by any governmental or intergovernmental body but allows everybody who is willing and competent to contribute technical expertise to participate in the deliberations. It has been the birthplace of countless technologies and technical standards without which neither the internet nor the World Wide Web or many of its applications would run.

Both institutions are prominent sources of de facto binding rules that are not formally authorized by any political body. Multistakeholderism has often been identified with a type of rule which grows bottom-up from societal deliberations. In

¹³ For a critical assessment cf. Dusollier (2020).

¹⁴ For an extensive discussion of the term multistakeholderism and empirical applications to ICANN, the IETF and the ITU cf. Raymond and Denardis (2015). They define it as “two or more classes of actors engaged in a common governance enterprise concerning issues they regard as public in nature, and characterized by polyarchic authority relations constituted by procedural rules” (Raymond and Denardis 2015, p. 573).

practice, however, the notion of multistakeholder governance is often hardly more than a camouflage for powerful private interests. Although it is true that ICANN is legally open to everybody who wants to contribute to its deliberation, practice shows that not all parties subject to the deliberations in ICANN have the same power to influence the proceedings (Carr 2015, p. 645). Persuasive power closely correlates with expertise, and expertise is hard to collect without significant economic resources. Civil society groups are often represented in name only but lack the power to make their arguments heard. Powerful players like the US mega-corporations or US governmental experts are privileged and often find it easy to dominate the deliberations.¹⁵

Multistakeholderism is nevertheless the institutional form of first choice for the US and many of its liberal allies. It combines private resources and expertise with governmental authority into a new form of de facto public-private partnership. Although the public and the private branch of governance in multistakeholder institutions are legally independent from each other, US governmental agencies have far-reaching rights to access stored data in cases of threats to national security. The system de facto allows US governmental agencies to collect enormous amounts of data by cooperating with private corporations and thus to establish a new structure of authority based on a nontransparent compound of private and public power (Eriksson and Giacomello 2006, p. 232; De Nardis 2014, p. 38). The mobilization of the private sector to drive internet growth is thus often seen as a proxy for US national interest (Carr 2015) and is meeting with growing concern by other states (Hill 2014; Chenou 2014).

This bias in influence was crucial for motivating a number of other nations to oppose multistakeholder governance from early on (cf. Flonk et al. 2020). The dominance of the liberal market-based model of the internet and the strong role of the US government was from very early on suspected to work in favor of US interests and to weaken the sovereignty of less technologically advanced nations.¹⁶ The resulting clash between the US and its Western allies on the hand and most less developed states including China and Russia on the other hand constitutes since then an “overarching conflict between two fundamentally different views with different social purposes, institutional structures and specific norms” (Flonk et al. 2020, p. 379). It was crucial for the emergence of the new narrative of the internet as a threat to domestic stability. Organized Chinese opposition started already in 1994, when China was officially connected to the internet with a first set of web pages. The leading role of US scientists and corporations was criticized as a manifestation of US hegemony. Not surprisingly, Chinese opposition was quickly joined by a num-

¹⁵ “Of the three ‘stakeholders’ defined in the literature, civil society remains relatively disempowered although it plays an important legitimizing role for the other stakeholders, the private sector is dominated by US multinationals which serve in many ways to aggregate US power, and governments show no significant signs of relinquishing their conventional hold on sovereign power” (Carr 2015, p. 645; cf. Hofmann 2016).

¹⁶ Rather cautious is Kleinwächter (2003, p. 23), referring to a “conceptual and philosophic conflict between different stakeholders about the question how the global information society, which is based on the Internet as its main infrastructure should be governed”. More open is the critique by Shen (2016, p. 85): “the United States shows how hegemony can extend sovereignty of a single country in global cyberspace in the name of weakening and eliminating sovereignty”.

ber of less developed states when lobbying for a shift of authority from ICANN to the intergovernmental International Telecommunications Union (ITU). The ITU was expected to play an important role in promoting technology transfer and the dissemination of technical assistance to developing countries (Negro 2020, p. 121). It was also expected to provide an arena where political concerns could be played out more thoroughly and where ideas of national sovereignty would find a more welcoming resonance.

At the World Summit on the Information Society (WSIS) in Geneva in 2005, China undertook the next oppositional move when supporting the Tunis Agenda for Information Society in its ambition to grant all governments an equal role and responsibility in managing DNS roots. China was also crucial in orchestrating the, finally unsuccessful, ‘UN takeover’ of the internet at the 2012 World Conference on International Telecommunications (WCIT). At the meeting, changes to the ITU treaty were discussed which would have changed the ITU from a primarily telecom-oriented agency to one that specifically deals with the internet. It would also have added provisions aiming at internationalizing control of the DNS (domain name system), adding cybersecurity directives to the International Telecommunication Regulations (ITRs), and condone internet filtering. Not surprisingly, the proposals met with strong opposition by the US, the EU and other Western countries. The opposition of most liberal states did not end the efforts of China, Russia and a set of other less developed states to change the existing regime but motivated them to move it one step further. In 2015, they used the Shanghai Cooperation Organization (SCO) for recommending a code of conduct on information security to the UN General Assembly, underlining the rights and responsibilities of states in the information space, and enhancing intergovernmental cooperation by addressing common threats and challenges (including unlimited free speech if threatening public order). Without explicitly mentioning the US, it emphasized that “all states must play the same role in, and carry equal responsibility for, international governance of the internet, its security, continuity and stability of operation”.¹⁷ Although multistakeholderism was also not explicitly mentioned, the wording made it obvious that it was states, not non-state actors, which were to be equipped with the ultimate authority and that the safeguarding of national sovereignty was the final aim.

3.4 Territorializing sovereignty

The dominance of the US and the market driven norms embedded in the multistakeholder form of internet governance have contributed to fostering fragmentation and intensifying policy contestation in internet governance (Mueller 2017). Two sharply antagonistic perspectives with very different ideas of proper practices of sovereignty have developed and become increasingly entrenched. They compete for influence in international standard setting and challenge each other’s normative and institutional order. Although it is true that ICANN and the IETF are still the major sites for administering the internet, and that multistakeholderism is still the dominant mode of

¹⁷ <https://www.cfr.org/blog/will-china-and-russias-updated-code-conduct-get-more-traction-post-snowden-era>, last accessed 10/11/2020.

governance, it would be naïve to overlook the cracks in the system and to neglect the possibility that the integrity of the internet might suffer from the ongoing political clash (Voelsen 2019). It is telling that the Chinese telecom giant Huawei presented in 2019 a proposal for a new technical standard to the ITU (Sherman 2020). Although the proposal seems to be of a very technical nature, it has significant political relevance. The “New IP”, as it is called, is intended to replace the open, interoperable and multi-stakeholder-driven TCP/IP standard protocols that are currently in use around the world with a new structure that fragments the global internet into a number of smaller and somewhat technically distinct networks. It would give central internet service providers the power to monitor and control all communications, and even to gate individual access.¹⁸ If introduced, the new standard would imply the scenario of a splintering global internet in which state operators might have to choose between a Western liberal internet or an authoritarian Chinese one.

4 Back to the future?

There can be little doubt that technological progress in general has propelled human society towards higher living standards and that it is an important backbone of modern civilization. It is also true that the crisis of international cooperation must not be attributed to technological innovation only. Its reasons are broader and most likely do also encompass, inter alia, the rise of populism, the growing awareness of the negative side-effects of intensifying international competition and the rivalry between China and the US. These facts must not mislead us to assume, however, that technology is a force for good only. The technological innovations of the last thirty years have reallocated power resources, changed prevalent ideas about multilateralism, interdependence and international cooperation, and introduced a major contestation of governance arrangements in the administration of the internet. Overcoming the resulting conflicts will be the more difficult as they are embedded in a worsening international climate of mistrust, power rivalry and a return to nationalistic interpretations of sovereignty. A world “after global governance” is in the making.

Future research on the linkage between technology and practices of sovereignty should expand and systematize the insight that technological innovation can have negative effects on the stability of the international system. Where, when and how does technological change disrupt or hinder governance arrangements? How has international politics in the past dealt with major technological innovation and how has it affected institutional and normative orders? Can we draw parallels between earlier breakthroughs in technological innovation and their effects on the disruptions in the international order? How have those disruptions played out in the longer run and what can we learn from those experiences for today? Detailed historical case studies would help to shed more light on these questions and to systematize the evidence presented in this article.

¹⁸ “China and Huawei propose reinvention of the internet”, *Financial Times*, March 27 2020, <https://www.ft.com/content/c78be2cf-a1a1-40b1-8ab7-904d7095e0f2> last accessed 6/14/2021.

We might also want to reflect about ways and means for preventing backward-looking policies trying to establish territorial conceptions of digital sovereignty. Traditional concepts of autonomy-maximizing sovereignty are effectively undermining the very existence of the global public good of an unlimited and open internet. A global public good needs global regulation and appropriate international institutional arenas. If sovereignty is to remain more than a notion for justifying policies of protectionism and autonomy, it must be embedded in a cooperative process of multilevel negotiations, bringing all relevant stakeholders together. If the governments of the world reject this insight, we will most likely witness further cracks in the global communication system and have sovereignty (once again) become a signifier for political and economic nationalism.

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Literature

Cited Literature

- Abbott, K., Robert Keohane, Andrew Moravcsik, Anne-Marie Slaughter, and Duncan Snidal. 2000. The concept of legalization. *International Organization* 54(3):401–419.
- Agnew, John. 2005. Sovereignty regimes: territoriality and state authority in contemporary world politics. *Annals of the Association of American Geographers* 95(2):437–461.
- Allison, Graham. 2020. The new spheres of influence sharing the globe with other great powers. *Foreign Affairs* 99(2):30–40.
- Andrew, Edward. 2011. Jean Bodin on sovereignty. *Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts* 2(2):75–84.
- Arsène, Séverine. 2016. Global Internet governance in Chinese academic literature: rebalancing a hegemonic world order? *China Perspectives* 2(25):25–35.
- Autio, E., R. Mudambi, and Y. Yoo. 2021. Digitalization and globalization in a turbulent world: centrifugal and centripetal forces. *Global Strategy Journal* 11:3–16.
- Barnett, Michael, and Raymond Duvall. 2005. Power in international politics. *International Organization* 59(1):39–75.
- Benkler, Yochai. 2006. *The wealth of networks. How social production transforms markets and freedom*. New Haven: Yale University Press.
- Bodin, Jean. 2013. *Les Six Livres de la République. Bibliothèque d'histoire de la Renaissance*. Paris: Classiques Garnier.
- Broeders, Dennis. 2017. Aligning the International Protection of 'the Public Core of the Internet' with State Sovereignty and National Security. *Journal of Cyber Policy* 2(3):366–376.
- Budnitsky, Stanislav, and Jia Lianrui. 2018. Branding Internet sovereignty: digital media and the Chinese–Russian cyberalliance. *European Journal of Cultural Studies* 21(5):594–613.

- Carr, Madeline. 2015. Power plays in global internet governance. *Millennium: Journal of International Studies* 43(2):640–659.
- Chayes, Antonia, and Abraham Chayes. 1995. *The new sovereignty: compliance with international regulatory agreements*. Cambridge: Harvard University Press.
- Chenou, Jean-Marie. 2014. From cyber-libertarianism to neoliberalism: internet exceptionalism, multi-stakeholderism, and the institutionalisation of Internet governance in the 1990s. *Globalizations* 11(2):205–223.
- Chin, Warren. 2019. Technology, war and the state: past, present and future. *International Affairs* 95(4):765–783. <https://doi.org/10.1093/ia/iiz106>.
- Chisholm, Donald. 1995. Problem solving and institutional design. *Journal of Public Administration* 5(4):451–491.
- Christakis, Theodore. 2020. “European digital sovereignty”: successfully navigating between the “Brussels effect” and Europe’s quest for strategic autonomy. SSRN Scholarly Paper ID 3748098. Rochester: Multidisciplinary Institute on Artificial Intelligence/Grenoble Alpes Data Institute. <https://doi.org/10.2139/ssrn.374809>.
- Deibert, Ronald J., and Masashi Crete-Nishihata. 2012. Global governance and the spread of cyberspace controls. *Global Governance: A Review of Multilateralism and International Organizations* 18(3):339–361.
- Dusollier, Séverine. 2020. The 2019 directive on copyright in the digital single market: some progress, a few bad choices, and an overall failed ambition. *Common Market Law Review* 57(4):979–1030.
- Easton, David. 1975. A re-assessment of the concept of political support. *British Journal of Political Science* 5(4):435–457.
- Epifanova, Alena. 2020. *Deciphering Russia’s sovereign Internet law. Tightening control and accelerating the splinternet*. DGAP Analysis Working Paper No. 2.
- Eriksson, Johan, and Giampiero Giacomello. 2006. The information revolution, security, and international relations: (IR)relevant theory? *International Political Science Review* 27(3):221–244.
- Farrell, Henry, and Abraham L. Newman. 2020. Weaponized interdependence: how global economic networks shape state coercion. *International Security* 44(1):42–79.
- Flonk, Danielle, Markus Jachtenfuchs, and Anke S. Obendiek. 2020. Authority conflicts in Internet governance: liberals vs. sovereigntists? *Global Constitutionalism* 9(2):364–386.
- Floridi, Luciano. 2020. The fight for digital sovereignty: what it is, and why it matters, especially for the EU. *Philosophy and Technology* 33(3):369–378.
- Fong, Michelle W.L. 2009. Technology leapfrogging for developing countries. In *Encyclopedia of information science and technology*, 3707–3713.
- Franck, Thomas M. 1990. *The power of legitimacy among nations*. New York, Oxford: Oxford University Press.
- Frey, Carl Bendict. 2019. *The technology trap: capital, labor, and power in the age of automation*. : Princeton University Press.
- Glen, Carol. 2014. Internet governance: territorializing cyberspace? *Politics and Policy* 42(5):635–657.
- Goldsmith Jack, L., and Tim Wu. 2006. *Who controls the Internet? Illusions of a borderless world*. Oxford: Oxford University Press.
- Grimm, Dieter. 2015. *Sovereignty. The origin and future of a political and legal concept*. New York: Columbia University Press.
- Gueham, Farid. 2017. *Digital sovereignty. Steps towards a new system of Internet governance*. Paris: Fondation Pour l’Innovation Politique.
- Haas Peter, M. 1992. Introduction: epistemic communities and international policy coordination. *International Organization* 46(1):1–35.
- Haggard, Stephan, and Beth A. Simmons. 1987. Theories of international regimes. *International Organization* 41(3):491–517.
- Held, David. 2002. Law of states, law of peoples: three models of sovereignty. *Legal Theory* 8(1):1–44.
- Herzog, Don. 2020. *Sovereignty. RIP*. : Yale University Press.
- Hill, Richard. 2014. Internet governance: the last gasp of colonialism, or imperialism by other means? In *The evolution of global Internet governance*, ed. Roxanna Radu, Jean-Marie Chenou, 79–94. Berlin: Springer.
- Hobbs, Carla (ed.). 2020. *Europe’s digital sovereignty. From rulemaker to superpower in the age of US-China rivalry*. : European Council on Foreign Relations.
- Hofmann, Jeanette. 2016. Multi-stakeholderism in Internet governance: putting a fiction into practice. *Journal of Cyber Policy* 1(1):29–49.

- Hong, Yu, and Thomas Goodnight. 2020. How to think about cyber sovereignty: the case of China. *Chinese Journal of Communication* 13(1):8–26.
- Huntington, Samuel P. 1996. *The clash of civilizations and the remaking of world order*. New York: Simon & Schuster.
- Jackson, Robert. 2008a. *Sovereignty: evolution of an idea*. John Wiley, Polity Press.
- Jackson, John H. 2008b. *The case of the world trade organization*. *International Affairs* 84(3):437–454
- John, Oneal R., Oneal H. Frances, Zeev Maoz, and Bruce Russett. 1996. The liberal peace: interdependence, democracy, and international conflict, 1950–85. *Journal of Peace Research* 33(1):11–28.
- Johnstone, Ian. 2011. *The power of deliberation: international law, politics and organizations*. Oxford: Oxford University Press.
- Keohane, Robert O. 1989. *International institutions and state power. Essays in international relations theory*. : Boulder Westview Press.
- Keohane, Robert O. 2002. *Power and governance in a partially globalized world*. : Routledge.
- Keohane, Robert, and Joseph S. Nye. 1977. *Power and interdependence. World politics in transition*. Boston: Little, Brown and Company.
- Kingsbury, Benedict. 1998. Sovereignty and Inequality. *European Journal of International Law* 9(4): 599–625.
- Kleinwächter, Wolfgang. 2003. Global governance in the information age. *Development* 46(1):17–25.
- Koh, Harold H. 1997. Why do nations obey international law? *Yale Law Journal* 106:2599–2659.
- Krasner, Stephen. 1999. *Sovereignty: organized hypocrisy*. Princeton: Princeton University Press.
- Kuner, Christopher. 2015. Extraterritoriality and regulation of international data transfers in EU data protection law. *International Data Privacy Law* 5(4):235–245.
- Lake, David A. 2003. The new sovereignty in international relations. *International Studies Review* 5(3):303–323.
- Lambach, Daniel. 2020. The territorialization of cyberspace. *International Studies Review* 22(3):482–506.
- Latour, Bruno, and Steve Woolgar. 1979. *Laboratory life. The social construction of scientific facts*. Beverly Hills: Sage Publications.
- Lee, K.F. 2018. *AI superpowers: China, Silicon Valley, and the new world order*. Boston: Houghton Mifflin.
- McCarthy, Daniel R. 2015. *Power, information technology, and international relations theory: the power and politics of US foreign policy and the Internet*. Basingstoke: Palgrave Macmillan.
- Mearsheimer, John J. 1995. The false promise of international institutions. *International Security* 19(3):5–49.
- Mearsheimer, John J. 2001. *The tragedy of great power politics*. Ithaca, New York: Cornell.
- Miller, Robert R. 2001. *Leapfrogging? India's information technology industry and the internet*. Washington, D.C.: World Bank Publications.
- Möllers, Norma. 2021. Making digital territory: cybersecurity, techno-nationalism, and the moral boundaries of the state. *Science, Technology, & Human Values* 46(1):112–138.
- Moravcsik, Andrew. 1993. Preferences and power in the European community: a liberal Intergovernmentalist approach. *Journal of Common Market Studies* 31(4):473–524.
- Mueller, Milton L. 2017. *Will the Internet fragment? Sovereignty, globalization and cyberspace*. Cambridge: Polity.
- De Nardis, Laura. 2014. *The global war for Internet governance*. New Haven: Yale University Press.
- Negro, Gianluigi. 2020. A history of Chinese global Internet governance and its relations with ITU and ICANN. *Chinese Journal of Communications* 13(1):104–121.
- Nocetti, Julien. 2015. Contest and conquest: Russia and global internet governance. *International Affairs* 91(1):111–130.
- Nye, Joseph S. 1990. Soft power. *Foreign Policy* 80:153–171.
- O'Meara, Sarah. 2019. Will China lead the world in AI by 2030? *Nature* 572:427–428.
- Osiander, Andreas. 2003. Sovereignty, international relations, and the Westphalian myth. *International Organization* 55(2):251–287.
- Pew Research Center. 2018. *Artificial intelligence and the future of humans*
- Pohle, Julia, and Thorsten Thiel. 2020. Digital sovereignty. *Internet Policy Review* 9:4. <https://doi.org/10.14763/2020.4.1532>.
- Powell, Robert. 1989. Crisis stability in the nuclear age. *The American Political Science Review* 83:61–76.
- Radu, Roxanna. 2019. *Negotiating internet governance*. Oxford: Oxford University Press.
- Rauchhaus, Robert. 2009. Evaluating the nuclear peace hypothesis: a quantitative approach. *The Journal of Conflict Resolution* 53(2):258–277.
- Raymond, Mark, and Laura Denardis. 2015. Multistakeholderism: anatomy of an inchoate global institution. *International Theory* 7(3):572–616.

- Reinicke, Wolfgang. 1998. *Global public policy. Governing without government?* Washington, D.C.: Brookings Institution Press.
- Risse-Kappen, Thomas. 1994. Ideas do not float freely: transnational coalitions, domestic structures, and the end of the cold war. *International Organization* 48(2):185–214.
- Roeben, Volker. 2012. Responsibility in international law. *Max-Planck-Yearbook of United Nations Law* 16:99–158.
- Rosenau, James N. 1995. Governance in the twenty-first century. *Global Governance* 1(1):13–43.
- Rosenau, James N., and Ernst-Otto Czempiel (eds.). 1992. *Governance without government: order and change in world politics.* : Cambridge University Press.
- Sarooshi, Dan. 2004. The essentially contested nature of the concept of sovereignty: implications for the exercise by international organizations of delegated powers of government. *Michigan Journal of International Law* 25(4):1107–1139.
- Schulze, Matthias. 2020. Cyber in war: assessing the strategic, tactical, and operational utility of military Cyber operations. In *12th international conference on Cyber conflict*, ed. T. Jančárková, L. Lindström, M. Signoretti, I. Tolga, and G. Visky. Tallinn: NATO CCDCOE Publications.
- Shen, Yi. 2016. Cyber sovereignty and the governance of global cyberspace. *Chinese Political Science Review* 1(1):81–93.
- Sherman, Justin. 2020. Huawei's global advancement of alternative internet protocols. *China Brief* 20(21):8–14.
- Simmons, Beth. 1998. Compliance with international agreements. *Annual Review of Political Science* 1:75–93.
- Slaughter, Anne-Marie. 2005. *A new world order.* Princeton: Princeton University Press.
- Tallberg, Jonas, and Michael Zürn. 2019. The legitimacy and legitimation of international organizations: introduction and framework. *The Review of International Organizations* 14:581–606.
- Thompson, Alexander, and Daniel Verdier. 2014. Multilateralism, bilateralism, and regime design. *International Studies Quarterly* 58:15–28.
- Voelsen, Daniel. 2019. Cracks in the Internet's foundation. The future of the Internet's infrastructure and global Internet governance. *SWP Research Paper* 14. <https://doi.org/10.18449/2019RP14>
- Waltz, Kenneth N. 1979. *Theory of international politics.* Reading: Addison-Wesley Publishing Co.
- Waltz, Kenneth N. 1990. Nuclear myths and political realities. *American Political Science Review* 84:731–745.
- Wendt, Alexander. 1999. *Social theory of international politics.* Cambridge: Cambridge University Press.
- Wendt, Alexander. 2003. Why a world state is inevitable. *European Journal of International Relations* 9(4):491–542.
- Young, Oran R. 1982. Regime dynamics: the rise and fall of international regimes. *International Organization* 36(2):277–297.
- Zeng, Jinghan, Tim Stevens, and Chen Yaru. 2017. China's solution to global cyber governance: unpacking the domestic discourse of 'Internet sovereignty'. *Politics & Policy* 45(3):432–464.
- Zuboff, Shoshana. 2019. *The age of surveillance capitalism. The fight for a human future at the new frontier of power.* New York: Public Affairs.
- Zürn, Michael. 2000. Democratic governance beyond the nation-state: the EU and other international institutions. *European Journal of International Relations* 6(2):183–221.
- Zürn, Michael. 2018. *A theory of global governance: authority, legitimacy, and contestation.* Oxford: Oxford University Press.
- Johnstone, Ian. 2011. *The Power of Deliberation: International Law, Politics and Organizations.* Oxford: Oxford University Press.

Further Reading

- Couture, Stéphane, and Sophie Toupin. 2019. What does the notion of 'sovereignty' mean when referring to the digital? *New Media & Society* 21(10):2305–2322.
- Ebert, Hannes, and Tim Maurer. 2013. Contested cyberspace and rising powers. *Third World Quarterly* 34(6):1054–1074.
- Eich, Stefan. 2019. Old utopias, new tax havens. The politics of Bitcoin in historical perspective. In *Regulating Blockchain: techno-social and legal challenges*, ed. Philipp Hacker, Ioannis Lianos, Georgios Dimitropoulos, and Stefan Eich. Oxford: Oxford University Press.
- Thiel, Thorsten 2021: Das Problem mit der digitalen Souveränität. *Frankfurter Allgemeine Zeitung* 26 Jan 2021