In June of 2013, Edward Snowden ignited a global debate about the nature of government surveillance in the electronic sphere. The government documents leaked by the former National Security Agency (NSA) contractor revealed mass electronic surveillance by the United States and a number of partner governments such as the United Kingdom. These leaks raised serious legal, political, and ethical questions about the nature of individual privacy in the face of secret government surveillance programs. The dominant narrative of the Snowden affair, as it unfolded in the media, was one of expanding government power impinging on individual rights in the electronic sphere. There was also a counter narrative involved in this incident that exhibits a complementary ebbing of the state’s power to control information.

Perhaps the best illustration of this counter narrative is the farcical vignette that takes place in the basement of The Guardian’s building in London. In July of 2013, “a senior editor and a Guardian computer expert used angle grinders and other tools to pulverize the hard drives and memory chips on which the encrypted” leaks from Snowden were stored. These two men were overseen by note-taking government officials who had ordered the destruction of the equipment. This scene functions as a tableau that illustrates the core issue that Snowden exposed: the increasing dissonance Cyberspace causes in the application of state power. In The Guardian’s basement, the state appears in physical form and asserts a right to control information based on physical realities. It uses legal and physical coercion to destroy a machine that contains information.

In the pre-digital era, the same tableau might have been one of police destroying a printing press; the destruction of a printing press being an efficient means of containing information and destroying a message. In the digital age, the UK government remained insistent on this same method of control. It physically destroyed the machinery of the newspaper, despite the fact “that other copies of the files existed outside the country and that The Guardian was neither the sole recipient nor steward of the files leaked by Snowden.” The effectiveness of the state’s power to coerce is limited within a specific space and time, because the object of its control existed outside the space of the state. More specifically, not only was this information outside of the space of the UK, it existed outside the space of any state. The leaks themselves existed in a global space. In the past, the rationale for destroying the printing press was linked to its locality and its central position in the distribution network for its messages. Now, the message is no longer linked to the locality of the machine, and in McLuhan’s word “the medium” has been transfused with “the message.” As a result, the state’s ability to control information is bounded, and The Guardian “preferred to destroy [its] copy rather than hand it back to them or allow the courts to freeze [its] reporting.” While the individuals using the angle grinders are helpless in the face of the state, the state is helpless in the face of technology: reporting on the leaks continued. Interestingly, the very leaks being destroyed exposed how states are attempting to shift this proposition and reassert power to control information.

New spaces create unique governance issues. This theme can be traced through the historical development of the international system of governance, which is tied to the conceptualization and division of space. From empires to Westphalian states to the modern state, the way in which global space is conceptualized, divided, and compartmentalized is a critical component in understanding the distribution of governance across the globe. This
research takes up this thread and argues that Cyberspace creates an alternative geography that is facilitating a respatialization of the world. This respatialization, from an international space to a global space, is directly tied to the networkization of real space that creates new abutments and intersections with Cyberspace.

Specifically, the argument herein is that Cyberspace recodes international borders in such a way that international governance has been unable to effectively regulate Cyberspace. The traditional understanding of international space is centered on the state-centric system that developed post-Westphalia, and it entrenches itself in the post-1945 settlement. International space is thus defined by the sovereign equality of nations states that are defined by specific territorial borders. The international geography in this spatial order is an articulation of national spaces and an expression of sovereignty. This geographical shift in borders is not a matter of shifts in physical terrain. Instead, this study understands territory as "a political and legal concept, and not merely a geographical term." Changes in geography require that both the practice and theory of international law and international relations be reevaluated in light of the opening up of a global digital information space that exists external to international space.

As is evident in the episode in the London basement from above, this project does not claim that the state is devoid of power, and certainly not that the state is breathing its last gasps. The state still maintains the primary authority and legitimacy to compel the individuals located within its borders to comply with regulatory mechanisms, and this power is reified through the system of international governance. Instead, the claim here is that the geography of Cyberspace dramatically changes state power in ways that both strengthen and weaken the state. In a global geography the state becomes only one subject among many in global space. While this bifurcation of the international from the global may seem like an exercise in semantics, it represents deeper questions about the notion of governance system at a world-scale. The international system is premised on the state as a primary actor, but the idea of globality acknowledges other actors and thus other participants in the construction of governance mechanisms. Globality in this sense is a spatial geography that encompasses the state system, but is not defined in terms of the borders of that system. It is a geography that serves as an alternative to geography defined by the borders of states and the political-legal content of those borders.

Technology and the Global

It is no coincidence that "ages" of human time are often named after the dominant technology: stone age, iron age, bronze age, machine age, atomic age, space age. These references to technology carry the implication that the named technology was instrumental in shifting social relations and power structures in human society within the span of a temporal bracket. The contemporary Information Age is no different. The Information Age moniker suggests that world power structures are being shaped by Information Communication Technologies (ICT). As such, it is a natural place for inquiry into how governance systems that operate globally are being reshaped by digitized information.

This brings us to the central problem taken up by this research. International law has historically been capable of governing technologies that have transnational effects. The primary example being the law of the sea, which since the historic debate between mare librum and mare clausum in the 1600s, has been able to adapt to changes in technology that have increased the state’s ability to extend claims over the sea abutting their borders. This trend can be traced throughout the history of international law: the telegraph emerged in the 1830s and in 1865 the International Telegraph Union was formed to govern transnational telegraphy and it absorbed telephone and broadcast technologies in due course; Little Boy was dropped on Hiroshima in 1945 and the Partial Test Ban Treaty entered into force in 1963 followed by the Non-proliferation Treaty (NPT) in 1970; and Sputnik was launched in 1957 and the Outer Space Treaty entered into force in 1967.

The first Internet connection was established in 1968, and the network quickly grew after that with a successful public demonstration in 1972. Today, it goes without saying that Cyberspace has become ubiquitous in everyday life and that it facilitates new types of transnational exchanges. Unlike past transnational technologies, though, international law has been slow to react to Cyberspace. To date only one multilateral treaty dealing directly with Cyberspace has been negotiated. The Budapest Convention on Cybercrime was promulgated though the Council of Europe and has few state parties from outside of Europe. Additionally, the Treaty’s requirements are limited to
Cyberspace and the Problem of New Spaces
Written by P.J. Blount

creating regulatory harmony on Cybercrime, and it vests this power into the states themselves in the form of obligations for state parties to adopt legislation. Indeed, much of the problem behind negotiating a treaty is that states are skeptical about trade-offs, meaning that topics such as cyberwar, cyber intelligence gathering, content restrictions, privacy and other human rights, and national security are likely to be excluded from any international agreement on Cyberspace.\(^1\)

International law scholars have struggled with this exact issue, and the scholarship is marked by attempts to identify international norms that govern Cyberspace. Power and Tobin argue for “soft law” principles to govern the Internet in the face of the dearth of international law, and the soft law sources they identify are often external to international governance meaning that they have to argue for a new understanding of international legal processes.\(^1\) Similarly, Zalnieriute argues for the existence of a customary international norm on data privacy, but she has to advocate for a “modernist” understanding of customary international law, a formulation likely to be found unacceptable by a majority of states.\(^1\) A final example is Kulesza’s volume titled *International Internet Law*, which argues that some international mechanisms can be extended into Cyberspace, but spends substantial time discussing other systems of regulation including an entire chapter on domestic law.\(^1\)

The question of why international governance has been unable to extend its reach effectively to Cyberspace as a technology, despite its ability to regulate other transnational technologies, is the primary jumping off point for this research. This broad question has several specific questions that must be answered in order to draw conclusions. The first of these questions is fundamental in international law: where is Cyberspace? In the territorial oriented body of international governance, the location of actions and actors is a threshold question for determining applicable law. Next, we must ask whether the location that is identified for Cyberspace fits into any of the categories understood by international law. If so, then baseline international norms can be established for Cyberspace. If it does not, then we must ask how this new category of Cyberspace interacts with international space. Such interactions will reveal the specific sites at which international governance runs out and is unable to extend its reach.

Similar questions have been addressed in the literature on globalization, which at its core is about the changing of the spatial terms of the world.\(^1\) This research, though closely connected, does not intend to situate itself within this body of scholarship. Globalization is often conceived of as a “respatialization” that “has geographical scope, volume, and density of transactions.”\(^1\) Some theorists view globalization as a process, while others consider the term to indicate a theory, and still others use it to indicate a specific temporal era.\(^2\) Others reject it as a “fad.”\(^3\) The literature on the whole, though, places into question the “constellation” of international space.\(^4\) Reference to ICT is almost obligatory in these works as it is associated with shortening space and time and facilitating global flows, but globalization theory has “economic roots.”\(^5\) In this context, technology is not ignored, but it often is given a supporting role in the shaping of world-scale governance,\(^6\) thereby pushing technology to the edges of the inquiry.\(^7\) For instance, Jayakar analyzes globalization in terms of commercial interests in ICT standard setting bodies, but never addresses how the technology itself is shaping the space in which those decisions unfold.\(^8\) Thus, despite globalization literature’s preoccupation with flows and interconnections of all types, there is little scholarship that tries to understand how technology itself serves as an endogenous factor that shapes the space in which flows and interconnections unfold.\(^9\) The scholarship most often presents technology as an external factor best understood in terms of disciplinary accepted points of inquiry such as conflict or the global political economy. While globalization implies “expanding integration, and integration on a planetary scale,” global space itself has been ill-defined.\(^10\) Indeed, one of the deep problems with the definition of global space is that it is often presented as a counterfactual to international space, and not as an independent spatial structure existing autonomously from international space.\(^11\)

To some extent this makes sense. International governance scholarship has often addressed technology as an externality because it was controlled by the state and therefore a function of blood and treasure. The state was the arbiter of technology both through law and policy, and as a result, systems of governance that were established to stabilize states were well suited to establishing frameworks for governing those technologies at the world scale. This is why the International Telegraph Union was established in 1865 and continues to govern international telecommunications as the International Telecommunication Union (ITU).\(^12\) When the state is addressed as the sole arbiter of power, it means that *international* understandings are applied, which place the state at the center of the
Cyberspace and the Problem of New Spaces
Written by P.J. Blount

inquiry. Such a perspective is functional when the state controls technologies of power. For instance, during the Cold War nuclear weapons were controlled by states, and nuclear politics and power unfolded within the context of the state. Cyberspace is different. The state does not control this technology absolutely, despite the fact that state power often unfolds within the space of Cyberspace. This indicates that Cyberspace has a different scope and meaning than previous technologies that function at a global scale, such as nuclear and space technologies. This leaves theory somewhat in the lurch, as a transnational phenomenon seemingly without international control maintains and propagates itself throughout society worldwide.

Instead of a state-oriented perspective, this research investigates Cyberspace as an “endogenous and political factor deeply embedded in the global system.”[32] Where earlier technologies existed as the subject of state power, state power is often addressed here as a subject of Cyberspace. This distinction is important, because it indicates that Cyberspace shapes the space in which governance at all scales unfolds. That is not to say that the state does not shape the space in which Cyberspace unfolds, quite the contrary, states still hold significant power over parts of Cyberspace and social life in general.[31] This is the problem with addressing global space as a counterfactual to the international: it presupposes a zero-sum relationship best understood in terms of either/or. Cyberspace, instead, presents a global space best understood as a co-factual to the national and international. It is a new space that is emerging in addition to international space, and its emergence is central to contemporary structuring of world-scale governance. It is not necessarily a space that is always in a contestation with the national as states maintain interests in Cyberspace and often pursue their interests through Cyberspace. The dynamic interaction at the border of the state and Cyberspace is the focal point of this research, because it is in this dynamic that the reprogramming of international space into global space can be observed.

This research asserts that the key to understanding the unfolding of law and politics at the world scale is through an understanding of how Cyberspace shapes social experience of world space through a key value of interoperability. Interoperability is the core organizing logic for Cyberspace and it has strong sway over the social construction of Cyberspace as a global space. This value puts a primary focus on facilitating cross-platform, cross-network communications. This study’s focus is on the technological landscape of communication flows and how the medium structures and facilitates transnational and global information exchange. This cyber-landscape – addressed below in terms of spatial, legal, and political geography – creates a global space that pushes against international borders challenging the concept of the international. This research asserts that Cyberspace imposes an alternate geography that results in redistribution of governance capabilities from international space to global space. It will trace this redistribution through the examination of interactions often used as focal points in international studies as a way to illustrate how key assumptions based on the territory of the state are being challenged within a new geography.

Layers of Geography

The core goal of this research is to articulate a coherent understanding of whether, how, and why Cyberspace changes international governance space. To do this, it must evaluate the three sub questions identified in the preceding section, namely: where is Cyberspace, does it fit into an existing international spatial category, and finally, how does Cyberspace interact with the international system. In order to accomplish this, this research adopts a two-step analytic methodology. In Part I, it articulates a geography of Cyberspace, and in Part II, it layers cyber-geography onto international geography in order observe how the two spaces interact.

The first task will be to articulate a holistic geography of Cyberspace in both practical and theoretical terms. Using geography as a heuristic for understanding Cyberspace necessitates an interdisciplinary approach, since scholarship on Cyberspace is dispersed across a number of disciplines. A primary focus will be on works that directly address legal and political theory, but themes from sociology, history, and computer science will be evident in the description of the complex interconnections between technical and social processes. This interdisciplinary approach will be used to conceptualize a geography of Cyberspace by describing its borders and boundaries through its spatial, legal, and political characteristics.

This alternate geography will then be used to facilitate observation of points at which Cyberspace interacts with international geography. These two geographies will be layered in order to observe points of interaction and analyze
the content of those interactions in terms of spheres of governance. This analysis will be executed using terms of international governance, which is understood to contain both international law and international relations. Despite the disciplinary divide between international law and politics, they are clearly entangled. Thus, they are presented here as integrated parts of the international governance system. For ease of application the international will be understood to consist of the system in which the traditional state is the primary subject and object of governance.

It will be argued that cybergeography changes the nature of international geography by giving new meaning to state borders. This argument will employ prominently the work of Carl Schmitt and Saskia Sassen. These two, very different, theorists both work with ideas on how governance systems are deployed across space. In his Nomos of the Earth, Schmitt argues that international law springs directly from shifting notions of how political legitimacy is tied to geography. Similarly, in Territory, Authority, Rights, Sassen argues that world-scale governance systems are the result of different assemblages of territory, authority, and rights. The posited cybergeography of the first section of this book is argued to cause shifts in our understanding of geography and as a result challenge the assemblage of territory, authority, and rights currently deployed by the international system.

This argument will be supported by thematically grouped case studies that exhibit interactions of Cyberspace with international space, or, in other words, where Cyberspace borders international space. To accomplish this conceptual layering of geographies, a hermeneutic approach that seeks to construct meaning through analysis of media narratives and primary legal and political documents will be used. The methodology will be somewhat similar to Reisman’s international incident approach. This approach argues that the epistemic unit in international law is the international incident, which is marked by a conflict among states that leads to clarifications in the content and meaning of international law through the negotiated resolution of incidents. Similarly, the case studies will investigate transnational incidents that would traditionally fall within the realm of international governance and examine how Cyberspace changes the content and meaning of those incidents. The cases chosen are grouped thematically, and these themes have been selected for their salience in revealing the shifting nature of the international. Specifically, the themes are built around the territorial, legal, and political geography of international space in order to match the geography adopted in the first part of the research. This will allow the identification and analysis of encounters where cyber and international geographies come into proximity. As a result these themes reach directly to critical issues addressed by the international system: the nature and limitation of interstate conflict; the state’s central position in the making of international governance; and the nature and limits of individual human rights. The selected cases or incidents themselves are archetypical of types often examined in international studies, but the specific incidents should not be taken as archetypical of the interactions they represent. Instead, they are intended to show trends, as more research would be required to chart these trends across a diverse range of interactions.

The examples used in this research were chosen to reveal a common narrative of governance redistribution. While individual cases may have alternative readings in light of traditional international relations or international law theory, it is submitted that if these theories are maintained across the narrative as a whole, then they become dissonant. Nor is this research an attempt to disprove more traditional theories. Instead, the goal is to illustrate the multidimensional nature of global space and show the limits of such theories in light of the complex nature of networked world of Cyberspace. Just as this research argues that Cyberspace is separate from international space, so too do traditional theories run separately from the alternative geography presented herein.

This study will limit its scope to understanding how spatial redistribution occurs and how this changes power structures at the world-scale. It will not seek to normalize or naturalize these processes. Though the conclusion will argue that cyber-technologies can act as a facilitator of developing governance at the global level, it does not embrace technological determinism. Indeed, it is well documented that technology is dual use and can be turned from liberation to oppression with ease. Technology itself has no ethical content until it is transfused with the politics of human interaction. It is this political content that will be investigated in this research and not necessarily the virtue or vice of that content.

**Definitional Issues**
In order to avoid confusion, the usage of a number of terms should be clarified at the outset. First, Cyberspace should be defined. Unfortunately, this is trickier than it seems. Indeed, Chapters 2–4 attempt to give a long-form definition of Cyberspace. Herein, Cyberspace is understood to be a combination of communications technology, specifically the Internet, and the social sphere that has developed within the communicative space created by these technologies.

Additionally, there are a number of spatial terms that are adopted in this research and the author has attempted to be consistent in their usage throughout. ‘Space’ is used to designate an area or region in both a physical sense (i.e. the space of a room) and a metaphorical sense (i.e. a safe space for discussion). Implicit in the idea of space is that it has contours, boundaries, and borders that demarcate the extent and nature of that space. This means that the term ‘space’ is often used with qualifiers that designate the limits of a space: physical space, digital space, legal space, political space. Of note are two spaces that are central to the analysis: ‘international space’ and ‘global space.’ ‘International space’ designates a space that is demarcated by borders that construct sovereign territorial states and thus is constituted by the national borders deployed by international governance mechanisms. It should be noted that in this conception, though highly entangled ‘national space’ constitutes a separate category from ‘international space.’ ‘International space’ is a construct of international governance, and the condition of ‘international governance’ and ‘international space’ is often referred to in short hand as ‘the international.’ ‘Global space,’ on the other hand, designates a space of world-scale that is not marked by national borders. This type of space exists independent of the state system. It should be noted that while, for the purposes of simplifying this analysis, these two spaces are juxtaposed, they are not always easily severable. Central to this argument is that these spaces overlap and intersect, and that global space, and specifically Cyberspace, is often marked by the borders of international space and vice versa. It is this interaction that is at issue, and juxtaposition serves as a useful tool for examining the interaction between the two spaces.

The idea that spaces have boundaries that demarcate them means that spaces, both physical and metaphorical, can be said to have ‘geography.’ ‘Geography’ is used herein as heuristic to describe the particular structure of a space. In real space, this means a description of the physical attributes of that space. In metaphorical spaces, this means a description of the various limitations that mark the contours of that space. For instance, below ‘legal geography’ is deployed as a way of understanding jurisdiction, which demarcates the limits of the law’s application. The term ‘alternative geography’ is used to designate the new understanding of geography that Cyberspace creates by juxtaposing it to the accepted geography of the international.

In addition to the spatial terminology, there are a variety of governance terms in use that should be clarified. The core concern of this research is that of governance at the world-scale – and ‘governance’ is used to designate the network of mechanisms that distribute rights, obligations, and limitations within a society, whether legal, political, economic, or of another nature. In this research, ‘law’ is most often used to designate formal legal systems exercised by organized government; however, law is occasionally used to designate less formal systems that have high regulatory ability, such as in the ‘code is law’ principle found in Chapter 3. ‘Regulation’ on the other hand is used in a very broad sense to designate a variety of mechanisms that serve to exert control over actors in a given system. Regulatory processes, in this sense, do not need to flow from formal processes of law, and may come from informal or non-binding processes external to government action. ‘Politics’ is part of ‘governance,’ since politics helps to define the content of law and regulation giving further contours to the space that regulatory mechanisms inhabit.

A Reprogrammed World

The world is being reprogrammed. This statement might seem like a quippy metaphor, but this research argues that it means something much more concrete. The central claim of this book is that digital technologies are rewiring the way that society understands and thinks about global order as Cyberspace changes the content of international borders. Specifically, this work claims that the techno-social assemblage of Cyberspace is creating new connections across the world, and that these connections are difficult to characterize as purely ‘transnational’ in scope. This research investigates how these changes are literally affecting geography as understood in the modern international governance system. Cyberspace is argued to present an alternative geography that comes into proximity with international borders. These proximities present instances where we can observe a shift in the landscape in which
global affairs unfold.

The idea of a reprogrammed world, then, is one that does double duty. First, it performs a metaphorical function and maps the language of computer science and technology onto the system of global order. Throughout this work, the reader will find the use of these metaphors as a way to explain how digital technologies affect governance. Second, it describes a real and actual process that requires evaluation of the design of the international governance system. While international governance has never been a static process, the reprogramming being described herein is extraordinarily different from previous shifts in international governance. It is not the result of a war or of a contingent of sovereigns negotiating rules; it is a technologically driven process that redistributes power within that system and challenges the core concept of territorial sovereignty.

Understanding the importance of this is as easy as turning on the news, or more accurately connecting to the news. We live in a world of “fake news”, data breaches, election hacking, and cyberwarfare. We live in a world in which 280 characters can change everything. Our analog past has been replaced with digital realities. The world itself is being reprogrammed and understanding that phenomenon is critical to understanding the future of global society.

Notes


[3] Id.

[4] Id.


Cyberspace and the Problem of New Spaces
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