ICANN and Non-Territorial Sovereignty: Government Without the Nation State

(DRAFT 2.0)

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I. Introduction

In 1998 the US government privatized the Internet, transferring authority over core technical resources to a private, non-profit corporation, the Internet Corporation for Assigned Names and Numbers (ICANN). The original commitment of the US and the original bylaws of ICANN defined it as a global coordination institution that would exercise authority independently of national governments. That plan was never fully implemented: ICANN never achieved full autonomy, and it remains to this day under the authority of the US government. Nonetheless, its original institutional design merits close examination for what was *almost* achieved. In what follows I examine the original design of ICANN as a radical experiment in autonomous public authority at the global level. I argue that ICANN was an experiment in non-territorial, non-state sovereignty.

The never-fully-implemented ICANN design of 1998 (what I will call simply "ICANN") embodied novel characteristics relating to one of the main issues of globalization: sovereignty. Although its decisions would affect users around the globe – arguably constituting global public policy (Klein, 2002) – the ICANN directors making those decisions were accountable only to various private constituencies of Internet experts and users. ICANN's legitimacy was not derived from formal political institutions but directly from the consent of the governed, as expressed through global elections and other mechanisms of representation. Although not a nation state, ICANN possessed characteristics of a sovereign. This is of theoretical interest, because even a small step in such a significant direction offers insights into political development at the global level.

In what follows I present a conceptual framework for understanding not only ICANN but global governance institutions generally. I consider what makes some actions "public" and what mechanisms are employed in to establish legitimacy, both for nation states and for non-state governance institutions. I then apply this conceptual framework to ICANN, noting that in its 1998 design it not only exercised public functions but also embodied mechanisms of legitimacy.

II. Understanding Political Authority and Governance

The analysis here is predominantly concerned with definitions and classifications. Since my investigation concerns the legal/political status of ICANN, as opposed to, say, its origins or functioning, I begin by constructing a conceptual framework defining various political attributes and then locate ICANN in that framework.

The question I seek to answer is, "What *was* ICANN?" By this I mean, what was its legal status, what rights could it make claim to, and what actions could it legitimately perform? The answer I provide is, "ICANN was a *sovereign*." Although a non-state entity, ICANN could lay claim to certain rights and enjoyed a rare kind of autonomous legitimacy.

The literature on governance and sovereignty can be usefully organized according to two categories: functionalist vs. legalist and state vs. non-state institutions. These two dimensions define the conceptual framework used here.

The basic insight of the functionalist literature is that governance institutions perform – and ought to perform – certain functions. Usually, these functions ensure stability and achieve coordination. In the domestic arena a national governments should create a stable environment for the economy (Robertson, 1989). At the global level, governance institutions should coordinate transnational systems in trade, finance, environment, communications, and so on. Where such functions are not achieved, there may be civil disorder, economic underperformance, failure to realize opportunities, environmental degradation, and so on.

The legalist literature focuses on right. It examines whether governance institutions have the right to perform the functions they do. Important issues here are the rights of sovereigns, the legitimacy of governance institutions, and the ways in which authority is constructed and exercised. These are essential political attributes with which institutions (most notably political institutions) are endowed or ought to be endowed. This literature addresses definitions (e.g. what is legitimacy?) and evaluations (e.g. does institution X possess legitimacy?)

The second organizing distinction is between state and non-state institutions. In both functionalist and legalist studies the state figures prominently. It is the predominant – really the sole – focus of the sovereignty literature, and it is the starting point of most discussions of supranational governance. This is not surprising, since the nation state is the basic building block of international relations.

Writers on non-state institutions examine treaty organizations like the WTO, UN agencies like WIPO, transnational NGOs like Greenpeace, and multinational corporations. They also study less tangible institutions like intersubjective consensuses (Rosenau, 1998) and the principles, norms, rules, and procedures of international regimes

(Krasner, 1983). Much of the recent scholarship on globalization points to these institutions as key elements in the new dynamic of global politics. Functionalist literature examines how they realize governance, and a small but growing legalist literature examines their right to perform governance functions.

This categorization of the literature can be represented in the following table:

	Function	**Legal Status**
Nation State	1. Public Functions: • **Enforce contracts** • **Domestic order** • **National defense**	2. Recognized Rights / Sovereignty: • **Domestic** • **International Legal** • **Westphalian**
Non-state Institutions	3. Global Governance: • **Coordination** • **Standards** • **Property rights?** • **Competition policy?**	4. Legitimacy Crisis • **Delegated authority** • **Private Authority** • ***Non-territorial sovereignty***

The focus of this study, ICANN, is a non-state institution that possesses important characteristics of sovereignty. Such issues are located in the fourth cell in the matrix above, which focuses on legalist issues for non-state institutions. The argument draws on the literature in the other cells, which I now review.

Functionalist views of the state (Cell 1, above) inform broad areas of political science. The state must perform certain functions in order that society not degenerate into disorder and violence. Indeed, the need for an entity to perform such functions is what justifies the existence of the state at all. I refer to such state functions as *public functions*. Locke (1986) argues that the state must protect property, enforce contracts, and perform a host of other public functions to raise society out of the chaos of the state of nature. Marx (2002) sees the state as a coordinating committee for the business community, solving the collective problems of a capitalist economy. Weber (2004) notes that the power of the state includes the exercise of violence; public functions involving the use of violence include such essential tasks as national defense and domestic policing. In general, we can think of public policy, whether domestic or international, as the performance of public functions. In the international arena, a state must be able to survive in the community of nations, defending its borders and participating effectively in international affairs. States that are unable to perform public functions can be considered to have "failed". They may

fail to realize their economic potential, suffer exploitation by their neighbors, or collapse into domestic anarchy and violence (Zartman, 1995).

The performance of public functions depends not only on capabilities but also on legal status. Non-state entities ought not to perform such functions. Weber's famous dictum that the state possesses a monopoly on the legitimate use of violence illustrates well the core legalist idea: the state is endowed with special rights that allow it, and only it, to perform certain functions. Raising the Weberian dictum to a more abstract level, we can say that the state has a monopoly on the performance of public functions generally. These include exercising police powers, enforcing contracts, correcting for market failures, and performing a host of tasks generally called public policy. A state may delegate the performance of a function, but the right to do it still derives from the state.

An encompassing conception of state right is expressed by the term "sovereignty." In *Sovereignty: Organized Hypocrisy,* Krasner (1999) provides a useful typology of state rights and explains the substantive content of each one. He also identifies the basis of each right: recognition. Each kind of sovereignty is grounded in *recognized right* (Krasner, 1999:10). That is, each type of sovereignty consists of a substantive right created through the recognition of that right by another party. Depending on the right, the party giving recognition may be the citizenry or may be another state. I examine the idea of recognized right with respect to three of Krasner's definitions of sovereignty:

- Domestic sovereignty
- International legal sovereignty
- Westphalian sovereignty

The substantive right inherent in domestic sovereignty is the right to govern -- the right to perform the public functions discussed above. A state rightfully performs public functions because the citizens recognize its right to do so. Domestic sovereignty is legitimated by the recognition of the citizens – by the consent of the people being governed. Absent such recognition, the ruler of a country would lose its legitimacy. A ruler might continue to perform public functions, but that would now be wrong, for it would have lost the basis of its domestic sovereignty.

The substantive right inherent in international legal sovereignty is the right to be recognized as a peer in the community of states. This type of sovereignty allows a state to participate in the UN, exchange ambassadors, sign treaties, qualify for certain kinds of external assistance, and generally be a member of the global community of states. International legal sovereignty is legitimated by recognition by other states. A process of peer evaluation and peer recognition grounds the right. Absent such recognition, the ruler of a country would be seen as an illegitimate usurper or a rogue. Should some states recognize a ruler but others not, it might have diplomatic relations with some but not others.

Finally, the substantive right inherent in Westphalian sovereignty is the right to be the sole political authority within a territory. It is the right to have one's territorial boundaries respected and to suffer no intervention from other states. Westphalian

sovereignty is legitimated by recognition by other states. It is made real by states' practices: a history of non-intervention and of positive acts of non-intervention provides substance for this right. Absent Westphalian sovereignty, other states might refuse to respect a demarcated territory, as when a national government sends armed forces into the territory of a secessionist province.

With recognition playing such an important role in state right, a variety of mechanisms exist to formalize it. Elections are one such mechanism of recognition: elections provide citizens a means to recognize (or deny) a ruler's right to govern. Following a successful election a ruler has the right to perform public functions. It has domestic sovereignty. Westphalian and international legal sovereigny are established by mechanisms of inter-state recognition. The clearest expression of inter-state recognition is the exchange of ambassadors. Through such an act states recognize each other as formal peers in the community of nations. Inversely, the withdrawal of ambassadors often precedes the violation of territorial boundaries, a violation of Westphalian sovereignty.

When an entity performs public functions, whether it has the right to do it depends on whether the appropriate third party recognizes that right. For example, should an entity inflict violence on the people of a territory, a first question arises as to whether those people recognize that entity's right to do so (e.g. did they elect the ruler?). If so, then the use of violence *may* be appropriate. Absent such recognition, the exercise of violence is an illegitimate performance of a public function by a non-sovereign entity. Likewise, should an entity assert the right to be the sole ruler of a territory, the question arises as to whether other states recognize that entity's right to do so.

This line of reasoning will be important in understanding ICANN. The logic of public functions and recognized rights it makes it possible to attribute sovereignty to an entity, independent of whether that entity controls territory. To the extent that an entity performs public functions and has formal mechanisms of recognition, it may be said to enjoy sovereignty (to some degree.) As examined in the next section, ICANN did perform such functions, and it did embody such mechanisms.

Moving to Cell 3 in the table above, I now consider functionalist perspectives on non-state institutions. In this category we find much of the literature on global governance. Works here start with the recognition that there exist transnational systems in such areas as trade, finance, communications, shipping, and environment. Effective system operation requires the performance of various functions, such as setting technical standards, allocating common resources, sharing costs, etc. The name given for the performance of such functions is "governance," and it generally refers to the coordination of groups in the performance of systemic activities. Thus Keohane and Nye define governance as processes that *guide* and *constrain* the activities of a group (2000:12). Rosenau defines it in terms of the ability to frame goals and achieve them and to perform purposive behavior generally (1992:3).

Institutions created to perform such functions for transnational systems are called "global governance institutions". Most such systems have a governance institution, and, indeed,

most seem to need one in order to work properly. Thus the World Trade Organization governs the transnational system of trade, the International Monetary Fund governs the transnational system of finance, the International Telecommunications Union governs the transnational system of telecommunications, and so on. Not only may such institutions be necessary, they may even be a desirable way of creating global order; writing in mid-century David Mitrany (1943) advocated functionalist institutions as a means to constructing a workable international order.

Some authors have explained ICANN in functionalist terms. In *Ruling the Root* Mueller (2002) explains ICANN as an attempt to solve the problem of allocating value in Internet identifiers. Klein (2002, 2003) examines the mechanisms by which ICANN realizes functions of governance.   However, these studies do not primarily examine ICANN's *right* to govern, the topic addressed here.

Cell 4 contains legalist studies of non-state institutions' right to govern. Unlike studies of nation states, where questions of right are immediately salient, studies of non-state institutions often examine whether legitimacy is an issue at all. Do global governance institutions perform public functions? If so, then the question of legitimacy arises. If not, then those institutions can be evaluated exclusively in terms of administrative efficiency and effectiveness. Such questions have policy implications as well. In Seattle in 1999 citizens forcefully raised questions of right. Marching in the streets, they manifested their non-recognition of the WTO's right to govern world trade, asserting that the WTO was illegitimately performing public functions.

The literature here draws mixed conclusions. Some notes that global governance is primarily administrative in nature and, as such, can avoid politics (e.g. Mitrany (1943)). Others note that good administration is itself a source of legitimacy, with the outputs justifying the means, or that there are few attractive alternatives to the closed, "club model" of governance (Keohane & Nye,2000:34). Especially after 1999, however, questions of right are being raised more forcefully. Stiglitz (2002) questions the qualifications of the International Monetary Fund and other non-state institutions to perform economic governance. Such literature manifests a legitimacy crisis of global governance institutions.

A recent literature examines the legitimacy of private, non-state authority (Cutler et al.,eds.,1999; Teubner, ed.,1997). Writers here examine the practices of non-state institutions that construct "autonomous" or "global deterritorialized" legal orders (Robe, 1997:53,49). Much of their focus is on the governance activities of multinational corporations and the accompanying problems of legitimacy. These authors acknowledge that legitimacy derives from public institutions: "only the public sphere is empowered and entitled to prescribe behavior for others, for only public authorities are accountable through political institutions" (Cutler et al.,1999:18).   Yet they note the existence of prescriptive systems grounded in alternative sources of right. In the simplest case, private entities may derive authority from an explicit grant of power by a nation state. Or private law (most notably international commercial contracts using private dispute arbitration) may ultimately rely on public authority for enforcement. In this way, private

authority is safely subordinated to public authority (at least in theory – contract enforcement may be impractical.) However, the authors also identify sources of legitimacy that do not depend on the state. Private entities may derive rights from their special expertise or from established historical practice. Here legitimacy is independent of public institutions, but its sources are non-political.

At least one author, however, argues that private entities may enjoy legitimacy that is political in nature but not derivative of state institutions. Robe (1999:58) makes such a claim with respect to multinational corporations. He grounds corporate governance in property rights, which he claims are prior to a formal constitutional order. Property rights bestow sovereign authority on owners to enjoy and dispose of things in an absolute manner. More importantly, they are a right over the behavior of other people in connection with things, and as such can legitimate some control of people by private parties. Specifically, he sees the internal employment rules of multinational corporations as an autonomous legal order grounded in political rights of property. In this view corporations' right to perform public functions is independent of the state.

The concept of a legitimate autonomous legal order does not negate violate norms of legitimacy. Rather it suggests that legitimacy can be realized in entities other than territorially defined nation states. Stated differently, sovereignty may be separable from territory. It may be possible to realize "non-territorial sovereignty" (or "non-state sovereignty".) This amounts to the claim that a non-state entity can legitimately perform public functions. This is not private authority but public authority realized in a non-traditional institutional form.

Most of the literature on global governance fails to even consider the possibility of non-territorial sovereignty. Krasner explicitly restricts sovereignty to territorially-defined nation states. Rosenau is more implicit: he distinguishes between "governance" (which is purely function) and "government" (which is function endowed with right). While he does not say that governments can only be nation states, he does not consider any other kind of institution.

As designed in 1998 ICANN embodied such non-territorial sovereignty. It both exercised public functions and incorporated mechanisms of recognition of the rights of sovereignty. It is to ICANN that we now turn.

III. ICANN

Like other governance institutions, ICANN performs a variety of coordination and allocation functions for a transnational system (here, the Internet). In an earlier article (Klein, 2002) I analyzed those functions. I argued that ICANN dispels the myth of the ungovernable Internet: it leverages a single control point to realize capabilities of governance and to promulgate global public policy.

Here I focus on ICANN's legalist characteristics. In its original design – which was never realized – it included mechanisms to provide it with legitimacy. These mechanisms were political in nature, yet they were independent of state institutions. Although described as private, ICANN was in fact public, but it was a public entity independent of governments. It itself constituted a kind of government – a non-territorial sovereign. It had the functionality of a governance institution and much of the legal status of a government, but it had no formal or derivative connection to a nation state.

Those comments refer to ICANN as it was intended to be. The fact is that in the six years of its life, ICANN's authority has ultimately derived from the United States government. Although the US was supposed to relinquish control over ICANN, that commitment was never honored, and to this date ICANN can make no change to the Internet's "root" without US approval.

In this section, however, I will largely ignore the fact of US authority in ICANN. I will focus on ICANN as it was supposed to be: an autonomous, non-state governance institution deriving its authority from Internet experts and users. That model was partially implemented: its most important element – elections of directors by Internet users from around the world – was implemented in 2000 (but only that one time and only for a subset of directors). Even if never fully implemented, ICANN's original institutional design was so innovative and so radical that it merits careful analysis. In what follows, I will use the term "ICANN" to refer to that design of 1998 rather than to today's reality. (Later, I will return to the reality of ICANN's subordination to the US.)

In this section I make two claims. First, ICANN performs public functions. Second, ICANN has a recognized right to perform those functions.

ICANN performs a number of public functions, as discussed above. At the risk of sounding cute, I will apply the "cyber-" prefix to Weber's notion of state violence: ICANN has the power of cyber-violence. Like a gangster or a government agent, ICANN can cause people to disappear. ICANN's control over the Internet's root renders every user indirectly dependent on it for access to the Internet. ICANN has the power to eliminate users – and it has exercised this power. Thousands of domain names have been deleted from the Internet name space, causing the associated computers (and users) to lose access. This is the exercise of a public power.

Other public powers exercised by ICANN are more regulatory in nature. In a role similar to a utility regulator, ICANN sets the base price for Internet access. Internet users, like users of water, airports, or toll bridges, must pay the regulated price for domain name registration (via intermediaries). ICANN also makes competition policy. It decides who will operate domain name registries, decisions that can be worth millions or even billions of dollars. Some firms have gone bankrupt because ICANN did not grant them access to the name space (e.g. "iNAMES" of Atlanta), while the firm that ICANN authorized to operate the .COM registry achieved a market value of over $20b. ICANN can also affect national security. In many countries the Internet is by now a critical infrastructure, yet its stable operation depends on ICANN. At one point the operator of the .DE domain

accused ICANN of destabilizing the Internet in Germany by not updating the .DE entry in the root. Finally, ICANN can define property rights (trademarks) at the global level. It has filled a legal lacuna with rights of its own making, as defined in its Uniform Dispute Resolution Policy (Mueller, 19XX).

What gives ICANN the right to perform such public function? I discuss here three sources of legitimacy in its 1998 design that rendered its power over others legitimate.

First, ICANN's governing board of directors represented various affected constituencies, such as registry operators, commercial registrars, and domain name constituents. One constituency was particularly important: the Internet-using public. Since ICANN's powers of governance applied to all users, legitimacy required that all users give their consent. Public powers required public consent. And indeed, they could and did give their consent. Half the board of directors was composed of user representatives. Anyone with an Internet address could register and vote for ICANN's directors in the elections of 2000. Through this ICANN realized *domestic sovereignty*. It had a recognized right to perform public functions, for the "citizens of cyberspace" could give their consent to their sovereign and hold it accountable for bad decisions.

Second, ICANN's right to perform public functions was recognized by other sovereigns. The mechanism for this recognition was the Governmental Advisory Council (GAC). GAC's members included official representatives from most national governments of the world. GAC did not give governments a position from which to veto or shape ICANN's actions, but they could make recommendations. (No public officials were allowed on ICANN's board.) Participation in GAC constituted a form of official recognition. With this recognition by other sovereigns, ICANN's right to perform public functions was strengthened. Through GAC ICANN achieved *international legal sovereignty*, i.e. some degree of recognition as a peer sovereign. It gained the recognized right to act as a sovereign.

Finally, other sovereigns also recognized ICANN's right to non-intervention.   The clearest example of this came from the United States. In year XXX the US Congress considered legislation requiring the creation of new domain names intended to provide safe zones for children-oriented content (a .KIDS domain). However, when officials complained that this policy area infringed on ICANN's sphere of authority, the US backed off. It respected ICANN's right to non-intervention. The US recognized ICANN's right to non-intervention, not in territorial terms (for ICANN had no physical territory) but in policy terms. Nonetheless this constituted a form of *Westphalian sovereignty*. Armed with such a recognized right to non-intervention by nation states, the legitimacy of ICANN's exercise of public functions was strengthened.

Thus ICANN fulfilled many of the conditions of sovereignty. It enjoyed recognition by Internet users from around the world, the "citizens" of its domain. And it enjoyed recognition by sovereign nations, both by their participation in the GAC and by their non-intervention in ICANN's areas of activity.

IV. Implication for Global Governance

One can speak of two ICANNs: the one that was to be (the 1998 design) and the one that actually exists. Each holds lessons for today's debates over globalization and sovereignty. I begin with the ICANN of 1998.

Will there ever be a global government? This question has featured prominently in debates over governance (Held, Dahl, etc.). Evidence (or the lack thereof!) has been on the side of the skeptics: for all one might speculate about global government, absent some evidence that it exists or is developing, there is little reason to believe the predictions of the more cosmopolitan social scientists – at least until now. ICANN provides some hard evidence that global government is possible. This faltering experiment in non-territorial sovereignty could be a model for future institutions.

Moreover, ICANN gives some sense what the politics of global sovereignty might look like. In a word, it looks scary. ICANN's policy processes were extraordinarily Machiavellian, arguably much more so than processes in established political institutions. Breaking commitments, refusing to play by the rules, pretending to act in good will and then violating that faith – all such behaviors proved effective in ICANN's policy processes. Without being naïve about politics in any other political institution, one can still fear that new forms of sovereignty will give rise to more brutal power politics than elsewhere. In ICANN power triumphed, arguably more than in other institutional settings.

The real ICANN of today also holds lessons for global governance. In reality, ICANN's ultimate authority for the exercise of public functions lies with its big brother, the US. Compared to institutions like the WTO or the IMF, ICANN may be judged considerably less legitimate. If this is a model for the future, it is a troubling one: in ICANN the US asserts its sole authority over the people of the entire world. Not surprisingly, other sovereign governments have begun efforts to come out from under US authority. At the World Summit on the Information Society (WSIS), the UN initiated a study group to consider alternative institutional arrangements for Internet governance.

In closing, ICANN is a new institution on the global stage. It is a non-state institution, yet it is endowed with the rights of a sovereign state. For better or worse, it may offer some glimpse of the future of global governance.

References

Cutler, Claire, Haufler, Virginia, Porter, Tony, eds. (1999). "Introduction". In *Private Authority and International Affairs*. Albany: State University of New York Press.

Katzenstein, Peter (1985). *Small States In World Markets: Industrial Policy In Europe*. Ithaca, NY: Cornell University Press, 1985.

Keohane, Robert, and Nye, Joseph. (2000). "Introduction". In Nye, Joseph, and Donahue, John, *Governance in a Globalizing World*. Washington: Brookings.

Klein, Hans. (2003). "Technology, Contracts, and the Internet: Private Governance for Global Communications," in Braman, Sandra, ed., *The Emergent Global Information Policy Regime*. New York: Palgrave.

Klein, Hans. (2002) "ICANN and Internet Governance: Leveraging Technical Coordination to Make Global Public Policy", *The Information Society*, Vol. 18, No. 3, 193-207.

Klein, Hans. (2001a). "Global Democracy and the ICANN Elections" in *info*, Vol. 3, No.2, August.

Klein, Hans. (2001b). "The Feasibility of Global Democracy: Understanding ICANN's At-large Elections," in *info*, Vol. 3, No.2, August.

Krasner, Stephen. 1983. "Structural Causes and Regime Consequences: Regimes as Intervening Variables". In Krasner, Stephen, *International Regimes*. Ithaca, NY: Cornell University Press.

Locke, John. (1986). *The Second Treatise On Civil Government*. Amherst, New York: Prometheus Books.

Marx, Karl. (2002) *Communist Manifesto*. New York: Penguin Books. Originally published in 1888.

Mitrany, David. (1975). *The Functional Theory of Politics*. New York: St. Martin's Press.

Mueller, Milton. (2002). *Ruling the Root*. Cambridge, MA: MIT Press.

Mueller, Milton. (XXXX). Paper on ICANN UDRP. *The Information Society*.

Nye, Joseph, and Donahue, John, eds. (2000). *Governance in a Globalizing World*. Washington: Brookings.

Robe, Jean-Philippe. (1997). "Multinational Enterprises: The Constitution of a Pluralistic Legal Order". In Teubner (1997).

Rosenau, James. (1992). "Governance, Order, and Change in World Politics" in Rosenau, James and Czempiel, Ernst-Otto, eds.. *Governance Without Government: Order and Change in World Politics*. New York: Cambridge University Press.

Robertson, Ian. (1989). *Society: A Brief Introduction*. New York: Worth Publishing Co.

Stiglitz, Joseph. (2002). *Globalization and Its Discontent.* New York: W. W. Norton.

Teubner, Gunther, ed. (1997). *Global Law Without a State*. Dartmouth Publishing: Brookfield, USA.

Weber, Max. (2004). "Politics as a Vocation" in *The Essential Weber: A Reader.* New York: Routledge.

Zartman, I. William, ed. (1995), *Collapsed States. The Disintegration and Restoration of Legitimate Authority*. Boulder: Lynne Rienner.