

**Oren Perez**

Bar-Ilan University, Israel

oren.perez@biu.ac.il

ORCID: 0000-0003-4061-697X

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## Transnational Network Authority and the Question of Grounding

### I. Introduction

The structure of the global governance system has undergone significant changes in the past few years. From a system governed by multilateral treaties and their associated organizations (intergovernmental organizations (IGOs)), it has metamorphosed into a hybrid field in which a plethora of public, private, and semi-public institutions interact in various ways. In this new universe, private transnational regulatory regimes (PTRs) have assumed a key role.<sup>1</sup> The new PTRs operate in diverse areas, ranging from product standards and environmental protection to financial reporting, human and labor rights, and the ranking of academic institutions.<sup>2</sup> Most of these PTRs include both a normative facet – a set of prescriptive behavioral guidelines usually focusing on firms – and an institutional framework with a compliance functionality. I use the term “PTR” to refer to the institutional complex that includes the relevant legal texts, the body (or bodies) responsible for developing and administering the norms, and the individual agents closely associated with these bodies.

The emergence of PTRs as important actors in the global governance domain reflects the weakness of the international treaty system.<sup>3</sup> Two features of the treaty system have contributed to this weakness: its dependence on the consensual action of

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<sup>1</sup> C. Streck, “Filling in for Governments? The Role of the Private Actors in the International Climate Regime”, (2020) 17 *Journal for European Environmental & Planning Law* 5; T. Hale, “Transnational Actors and Transnational Governance in Global Environmental Politics” (2020) 23 *Annual Review of Political Science* 203.

<sup>2</sup> See, e.g., T. Bartley, “Institutional Emergence in an Era of Globalization: The Rise of Transnational Private Regulation of Labor and Environmental Conditions” (2007) 113 *Am. J. of Sociology* 297. Examples of standards in the areas noted above include: Global Organic Textile Standard; Fairtrade International; Responsible Care and ISO 14001; The International Financial Reporting Standards Foundation and Shanghai Academic Ranking of World Universities.

<sup>3</sup> T. Hale, D. Held and K. Young, *Gridlock: Why Global Cooperation Is Failing When We Need It Most* (2013); L.O. Gostin, S. Moon, and B.M. Meier, “Reimagining Global Health Governance in the Age of COVID-19” (2020) 110 *American Journal of Public Health* 1615.

governments and its rigid bureaucratic structure. Together, the two features have undermined the capacity of the treaty system to respond effectively to global risks such as climate change or the corona pandemic.<sup>4</sup>

The increasing prominence of PTRs in the governance of global affairs presents a complex challenge to legal and political theory. In the present article, I respond to this challenge by developing a network-driven model of transnational legal authority, which challenges contemporary thinking about global authority. I argue that transnational legal authority is an emergent, network-based phenomenon. The framework I propose brings together ideas from network science, legal theory, and social sciences. I explore the structural and dynamic conditions that can lead to the emergence of transnational network authority. I link this argument to the concept of multilayered networks and develop an analytical framework that explains how multilayered networks are realized in the transnational context. Building on the concept of multilayered networks, I show how transnational legal authority can emerge from synergistic interactions between individual PTRs. I develop in this context the idea of network grounding, which challenges the orthodox, hierarchical view of legal authority. This discussion also contributes to the philosophical debate regarding the nature of grounding, by exploring the idea of mutual or relational grounding and by demonstrating how it is realized in a real-world domain.<sup>5</sup>

The idea that the authority of transnational regimes has a relational feature has attracted the attention of several authors over the past few years. Examples include: Nicole Roughan and Andrew Halpin work on pluralist jurisprudence,<sup>6</sup> Keith Culver and Michael Giudice work on the borders of legality,<sup>7</sup> Stepan Wood's work on *transnational business governance interactions*,<sup>8</sup> Nico Krisch's work on entangled legalities<sup>9</sup> and Dana Burchardt's work on legal space and the topology of multiple legalities.<sup>10</sup> Although the work of these authors has improved our understanding of the interactive dynamic of the transnational legal system, they have stopped short of developing a complete theoretical framework of the constitutive role that networks play in the foundation of

<sup>4</sup> See further on that point, J. Pauwelyn, R.A. Wessel, J. Wouters, "When Structures Become Shackles: Stagnation and Dynamics in International Lawmaking" (2014) 25 *European Journal of International Law* 733 and I. Stoddard et al., "Three decades of climate mitigation: why haven't we bent the global emissions curve?"; 46 *Annual Review of Environment and Resources* (2021): 653–689.

<sup>5</sup> For the philosophical debate see: J. Giannotti, "Fundamental Yet Grounded", 87 *Theoria* (2021) 578 and R. Bliss, "Grounding and reflexivity" [in:] R. Bliss and G. Priest (eds), *Reality and its structure: Essays in fundamentality* (2018): 70–90.

<sup>6</sup> N. Roughan and A. Halpin, "The Promises and Pursuits of Pluralist Jurisprudence" [in:] N. Roughan and A. Halpin (eds), *In Pursuit of Pluralist Jurisprudence* (2017) 326.

<sup>7</sup> K.C. Culver and M. Giudice, *Legality's Borders: An Essay in General Jurisprudence* (2010).

<sup>8</sup> S. Wood et al., "The Interactive Dynamics of Transnational Business Governance: A Challenge for Transnational Legal Theory" (2015) 6 *Transnational Legal Theory* 333.

<sup>9</sup> N. Krisch, "Entangled legalities in the postnational space" (2022) *International Journal of Constitutional Law*.

<sup>10</sup> D. Burchardt, "The concept of legal space: A topological approach to addressing multiple legalities" (2022) *Global Constitutionalism*: 1–30.

transnational authority, and of the institutional pathways through which this role is activated. In this article I seek to fill this lacuna.<sup>11</sup>

The social network approach, which plays a key role in my argument, is driven by the idea that the patterning of social ties in which actors are embedded has important consequences for the dynamics of social systems.<sup>12</sup> Social network analysis (SNA) captures this pattern by representing the social system as an abstract structure of nodes and edges, which can depict different kinds of entities and interactions. The entities studied by network science include cells, individuals, organizations, or texts; the interactions include information flow, trade, friendship, citations, and more. Scientists in a range of fields have developed an extensive set of tools for analyzing the structure and dynamics of networks.<sup>13</sup>

The article below proceeds as follows. In section II, I discuss the fundamentals of global network authority; next, in section III, I discuss the jurisprudential dilemmas underlying this model, focusing on the idea of network grounding. Section IV is a conclusion.

## II. Fundamentals of Global Networked Authority

### A. Introduction

The model of transnational networked authority is based on the idea that the authority of PTRs is fundamentally relational. According to this account, the authority of PTRs emerges from cyclical interactions between transnational regimes, which are embedded in a multilayered institutional network. This idea distinguishes the network model from other theoretical approaches that regard the authority of PTRs as based on either *formal delegation* or on completely endogenous processes of self-grounding.<sup>14</sup>

In a multilayered network, actors (nodes) are connected through multiple types of socially relevant ties.<sup>15</sup> According to this model, transnational legal authority evolves only when the multilayered network satisfies certain conditions related to the net-

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<sup>11</sup> The article draws on a companion paper, O. Perez, "Transnational networked authority" 35, *Leiden Journal of International Law* 35.2 (2022): 265–293, which provides a more extensive discussion of the network aspects of my argument.

<sup>12</sup> See, L. Freeman, *The Development of Social Network Analysis: A Study in the Sociology of Science* (2004), at 2.

<sup>13</sup> For an introduction to the field of social network analysis, see S. Borgatti, M. Everett and J. Johnson, *Analyzing Social Networks* (2018).

<sup>14</sup> G. Teubner, *Constitutional Fragments: Societal Constitutionalism and Globalization* (2012) at 55; Abbott, et al., "Competence versus Control: the Governor's Dilemma" (2019) 14, *Regulation & Governance* 619. In a recent article, Julia Black has described the mechanics of this process in detail, arguing that transnational regimes establish and stabilize their authority by maintaining interpretive control over the normative texts they produce. J. Black, "'Says Who?' Liquid Authority and Interpretive Control in Transnational Regulatory Regimes" (2017) 9 *International Theory* 286, at 289.

<sup>15</sup> M. Dickison, M. Magnani, and L. Rossi, *Multilayer Social Networks* (2016), 21.

work's topology (density and cross-layer coherence) and dynamics (intensity of the social interactions within and across layers), which jointly create a synergistic effect.<sup>16</sup> Key factors in the emergence of networked authority are the normative and compliance synergies that emerge through the densification of links across the different layers.

Subject to satisfaction of the above conditions, the PTR network can facilitate the emergence of a self-organized legal system with the following features:

- (a) Each member (regime) of the PTR network constitutes an independent legal system that exerts authority through its associated normative texts and overarching organizational body. Each regime thus forms an independent locus of legal power.
- (b) The PTR network has the features of a self-organized system: its overall pattern and dynamics are self-generated and not externally controlled.<sup>17</sup>
- (c) The PTR network provides the conditions of reflexivity required for the emergence of a constitutionalized system.
- (d) The realization of (a) to (c) does not depend on the network becoming an independent legal actor, although this is a possible consequence.

I argue that transnational legal authority should be viewed as an emergent, network-based phenomenon.<sup>18</sup> Drawing on Wilensky and Rand, I define emergence as "the arising of novel and coherent structures, patterns, and properties through the interactions of multiple distributed elements."<sup>19</sup> A distinctive feature of emergent structures is that their properties cannot be deduced from the properties of the elements alone, but arise also from interactions between the elements.<sup>20</sup> Another important feature of emergent phenomena is the existence of synergy,<sup>21</sup> which refers to the "combined or cooperative effects produced by the relationships between various forces, particles, elements, parts or individuals in a given context – effects that are not otherwise attainable."<sup>22</sup> We can distinguish between synergies of scale, which arise "from adding (or multiplying) more of the same thing"<sup>23</sup> and tend to exhibit

<sup>16</sup> As I discuss below this process may be gradual, leading to the establishment of fuzzy or graded authority.

<sup>17</sup> M. Prokopenko, "Design Versus Self-Organization" [in:] M. Prokopenko (ed.), *Advances in Applied Self-Organizing Systems* (2013) 3, at 3–4.

<sup>18</sup> I do not claim that my argument is exhaustive; there can be mechanisms other than networks that can facilitate the emergence of private transnational legal authority. Further, the emergence process is not deterministic; the topological and dynamic thresholds that I describe below provide only sufficient, but not necessary conditions for the emergence of PTR authority. L. Gabora and D. Aerts, "Evolution as Context-Driven Actualisation of Potential: Toward an Interdisciplinary Theory of Change of State", (2005) 30 *Interdisciplinary Science Reviews* 69.

<sup>19</sup> W. Rand and U. Wilensky, *An introduction to agent-based modeling: Modeling natural, social, and engineered complex systems with netlogo* (2015), 6.

<sup>20</sup> *Ibid.* See further: J. Goldstein, "Emergence as a Construct: History and Issues" (1999) 1 *Emergence* 49 and P. Corning, "The re-emergence of 'emergence': A venerable concept in search of a theory", (2002) 7 *Complexity* 18.

<sup>21</sup> P. Corning, "The Re-Emergence of Emergence, and the Causal Role of Synergy in Emergent Evolution" (2012) 185 *Synthese* (2012) 295, at 305.

<sup>22</sup> *Ibid.*, at 303.

<sup>23</sup> P. Corning, *Nature's Magic: Synergy in Evolution and the Fate of Humankind* (2003), 17.

threshold effects,<sup>24</sup> and synergies that arise out of functional complementarity and represent a situation in which entities with different properties interact in a way that generates novel beneficial effects.<sup>25</sup>

## B. The Multilayered Structure of PTR Networks

In this section, I elucidate my argument regarding the multilayered structure of PTR networks and their emergent socio-legal features. As I argued above, in a multilayered network, a common set of actors is connected through multiple types of socially relevant ties. Each of these interaction types can be represented as a different layer of the multilayered network. In analyzing the links between the PTRs, I distinguish between two dimensions: (a) the social type of the interaction, and (b) the topological configuration through which the link between the regimes is realized (in particular, whether the link represents a direct or induced connection). Below I elaborate the structure of the layers that play a key role in the evolution of PTR networks, distinguishing between the type of the interaction and its topological manifestation (see Annex A for a more detailed discussion).

### 1. Institutional Connections

PTRs can be connected either directly, through various organizational interactions, or indirectly, through joint affiliation with third parties (e.g., joint firms):

- a) Direct links: four types of direct institutional connections can be distinguished: governance, partnership, compliance cooperation, and membership.
  - 1) Governance refers to the participation of PTR organizations in the governance of other organizations.
  - 2) Partnership refers to various forms of collaboration between PTRs.
  - 3) Compliance cooperation refers to a situation in which some PTR organizations provide traceability or compliance services to other organizations.
  - 4) Membership refers to the membership of PTR organizations<sup>26</sup> in other PTRs.
- b) Affiliation structures: PTRs can be indirectly linked through their *joint affiliation* with various third parties, such as firms (that are certified by different PTRs), umbrella organizations, such as ISEAL,<sup>27</sup> or compliance assurance bodies.<sup>28</sup> The affiliation structure linking PTRs and corporate members can be captured in a bi-partite ne-

<sup>24</sup> These “occur when a critical point is reached that precipitates an abrupt change of state.” *Ibid.*, at 19.

<sup>25</sup> P. Corning, *Holistic Darwinism: Synergy, Cybernetics, and the Bioeconomics of Evolution* (2010), 64.

<sup>26</sup> Many CSR schemes distinguish between membership and certification. Membership reflects participation in the governance of the code as an organization; certification is provided to organizations that meet the requirements of the standard promulgated by the relevant CSR scheme. In some cases, the two categories overlap.

<sup>27</sup> ISEAL is the global membership association for credible sustainability standards; see, <https://www.isealalliance.org/> (accessed: 2022.09.01).

<sup>28</sup> E.g., FLOCERT or Accreditation Services International GmbH (ASI); <https://www.flocert.net/solutions/standard-assurance/fairtrade-certification/> or <http://www.accreditation-services.com/> (accessed: 2022.09.01).

network, where the first set includes a list of distinct PTRs and the second set includes a list of firms. Such affiliation structures may arise because of overlaps in the regulatory remits of different regimes. In the case of umbrella organizations, such as ISEAL, PTRs are indirectly connected through their co-membership (e.g., ISEAL members include organizations such as Fairtrade International, Forest Stewardship Council, and the Gold Standard).<sup>29</sup>

## **2. Citation Links between the Legal Standards Associated with Distinct PTRs and between Other Legal Instruments**

This layer focuses on the legal texts that undergird a network and the way in which they either cross-reference each other or refer to (or are cited by) external legal texts (which can be international treaties, national legislation, corporate codes, and supply-chain contracts). I refer to these texts as “standards” or “codes.”

## **3. Relations between Individual Agents**

PTR organizations can also be linked through direct interactions between individuals working in the organizations that administer the standards. In addition, PTR organizations can become affiliated through their association with the same individual agents (e.g., directors, advisors). In the corporate world this affiliation structure has been studied in the context of “interlocking directorates.”<sup>30</sup>

## **4. Shared Conceptual Architecture**

This layer emerges through the common references to general legal concepts in PTR standards. Formally, such structures are realized in a bi-partite network, where the first set includes a list of the distinct PTR standards, and the second includes a list of concepts (e.g., sustainability, gender equality, circular economy).

To illustrate how the above framework is manifested in a concrete network, I selected 9 CSR schemes, which are part of the sample analyzed in detail in section B below: the Carbon Disclosure Project (CDP), the Global Reporting Initiative (GRI), the UN Global Compact (UNGC), the International Council on Mining and Metals (ICMM), Equator Principles (EP), the Aquaculture Stewardship Council (ASC), the Marine Stewardship Council (MSC), the Council for Responsible Jewelry Practices (RJC), and the global membership association for credible sustainability standards (ISEAL).<sup>31</sup> I analyzed the connections between these schemes across three layers (Figure 1), which represent different types of links among the actors: a layer that describes cross-citations between the standards associated with the schemes; a layer that describes direct organizational ties; and a layer that describes indirect links between the schemes based on their joint association with certified firms.<sup>32</sup>

<sup>29</sup> ISEAL members are sustainability standards and accreditation bodies, see <https://www.isealliance.org/iseal-community-members>. (accessed: 2022.09.01).

<sup>30</sup> See, e.g., A. Baccini and L. Marroni, “Regulation of Interlocking Directorates in the Financial Sector: a Comparative Case Study” (2016) 41 *European J. of Law and Economics*, 431.

<sup>31</sup> For the complete list of the CSR schemes in our sample, see Appendixes A and B.

<sup>32</sup> In multilayered networks, links can be formed both within nodes in the same layer (*intra*layer

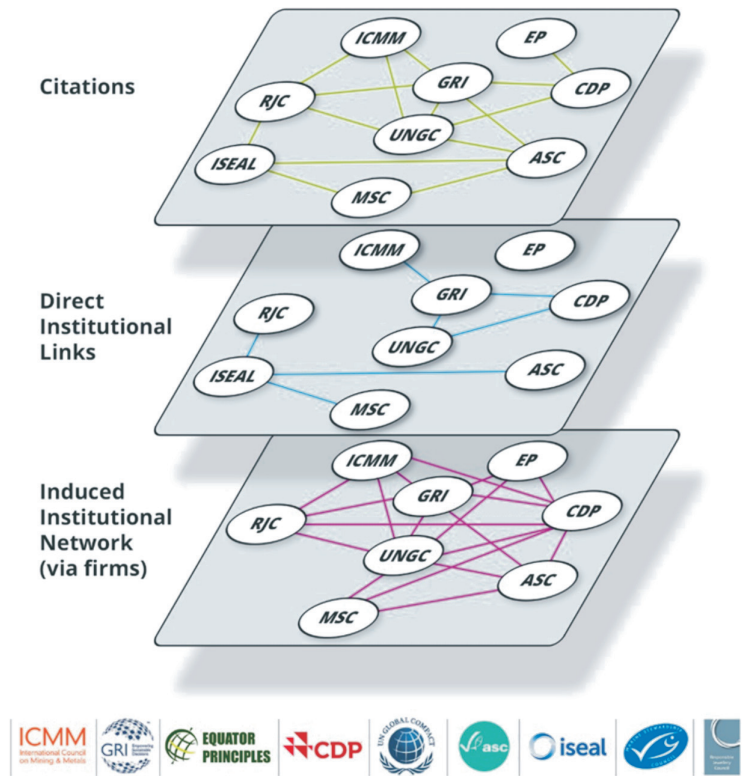


Figure 1: A Snapshot of the CSR System as a Multilayered Network

This multi-layer representation can enrich our understanding of the topology and dynamics of a PTR system in various ways. First, by exposing the extent to which every edge appears in every layer (link overlap), it provides a way to measure the topological coherence of the system. Second, multilayer analysis can shed light on the informational dynamic of the network by exposing the multiple paths through which information can flow in the PTR system. In the example in Figure 1, the multilayer perspective demonstrates how information can reach organizations that appear isolated in one layer (e.g., Equator Principles on the Direct Institutional Links layer), but that are connected to the rest of the network through other layers (the layer of the Induced Institutional Network).<sup>33</sup> Finally, the multilayer perspective enables a better understanding of the positional structure of the network by providing a broader view of the centrality

*edges*) and between nodes in different layers (*interlayer edges*). For example, the connections between standards and their associated PTRs can also be conceptualized as interlinks connecting different layers. The figure below does not capture interlayer linkages.

<sup>33</sup> It is important to consider in this context the ontological differences between the layers. Thus, for example, the citation layer, which consists of legal texts, cannot support the flow of information.

of PTRs across layers. In the example above, GRI, UNGC, and CDP emerge as the most central organizations, when we consider the three layers as a whole.

### III. Network Grounding and Relational Authority

#### A. The Architecture of Network Grounding

The model of transnational networked authority challenges the conventional, pyramidal understanding of the law by developing a relational concept of authority. According to this account, the authority of PTRs is the emergent product of cyclical interactions between distinct regimes. In the transnational context, there is no ultimate “rule of recognition” that can ascertain which normative text is legal and which is not. Any “marking” of a text as “law” is the outcome of a three-fold, network-embedded process of self-reference, cross-reference, and external reference.

Self-reference or self-authorization is achieved by marking the normative text with terms that have a clear legal connotation, such as “standard” or “code,” and by the publication of formal interpretations and guidelines (second-order observation of the legal text).<sup>34</sup> Cross-reference is the process by which a PTR standard cites another standard. Such citation, understood as a form of legal speech act, serves several goals. First, it is used to support the normative standing, or the validity, of the citing document.<sup>35</sup> Second, by citing another standard (as a mean of supporting its own validity) the citing standard recognizes (implicitly) the legal validity of the cited text.<sup>36</sup> The citation operates as a declarative speech act that does not merely acknowledge (or indicate) that the cited normative text has a particular feature (validity), but also constitutes it as such.<sup>37</sup> Finally, citation as recognition also includes an implicit act of self-recognition, because validating another normative text makes sense only if the citing text also recognizes itself as valid.

Second, by singling-out certain texts (nodes) as relevant to the citing text (and excluding others), citation determines the boundaries of the network. This boundaries-generating function becomes apparent only at the macro level, where nodes that are

<sup>34</sup> See, Black, note 14 above. Another condition for considering a certain text as legal is that it be structured using the deontic discourse of duties and obligations. E.g., Principle 1 of the Global Compact states that “Businesses should support and respect the protection of internationally proclaimed human rights”.

<sup>35</sup> See O. Perez and O. Stegmann, “Transnational networked constitutionalism” (2018) 45 *Journal of Law and Society* S135, at S152–S153, for a more detailed taxonomy of citation types.

<sup>36</sup> P. Ricoeur, *The Course of Recognition* (2005), 8. My interpretation of “recognition” differs from the standard account; see: Iser, Mattias, “Recognition”, *The Stanford Encyclopedia of Philosophy* (Summer 2019 Edition), Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/sum2019/entries/recognition/> (accessed: 2022.09.01).

<sup>37</sup> For the distinction between representative and declaratory speech acts, see, J. Searle, *Making the Social World: the Structure of Human Civilization* (2010), 114 and J. Searle, “A Classification of Illocutionary Acts” (1976) 5 *Language in Society* 1, at 10, 13.



linked more densely among themselves than with nodes outside the group emerge as a distinct community.<sup>38</sup>

The constitutive aspect of the citation can be realized only if it is embedded in a sufficiently dense structure of cross-citations, reflecting the emergent nature of network authority. The constitutive force of the act of recognition that underlies the cross-citation between two PTRs is therefore contingent upon the overall topology of the network.

The constitutionalization of PTR standards as valid sources of law is also influenced by two forms of external referencing. The first is the citing of international public law instruments (e.g., international treaties) by PTR standards. The second is the citing of PTR standards by national legislation, corporate codes of conduct, or corporate supply-chain contracts. External referencing contributes to the validity of PTRs in several ways. First, citing global treaties enables PTR standards to rely on the validity of recognized sources of legal authority. The direction of this referencing is the inverse of the conventional delegation model: the authority is not bestowed upon the agent lacking it through explicit delegation, but rather is extracted unilaterally through the referential act. Second, the citation of PTR standards in national legislation, corporate codes of conduct, and corporate supply-chains contributes to their validity by identifying them as credible sources of normative content. Finally, external referencing also functions as a boundary-setting mechanism, by implicitly linking together standards that cite and are cited by the same legal instruments.

## B. Network Grounding and the Paradox of Circular Hierarchy

The relational account of transnational authority challenges two tenets of traditional jurisprudence: hierarchy and well-foundedness.<sup>39</sup> According to the hierarchy thesis, the validity of legal norms can be derived only from higher-ranked (valid) legal norms. According to the well-foundedness thesis, legal validity must be grounded in some ultimate source; the relation of dependence between legal norms must terminate, according to this thesis, in something fundamental.<sup>40</sup> The model of network authority departs from the conventional conception of legal authority by claiming that validity and authority can emerge from a non-hierarchical (horizontal) network of cross-references, even when none of the network nodes can be described as foundational (that is, none of the nodes have possessed the property of validity before linking with the other nodes).<sup>41</sup>

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<sup>38</sup> See, P. Bedi, and C. Sharma, "Community Detection in Social Networks" (2016) 6 *WIREs Data Mining and Knowledge Discovery* 115; Perez *et al.*, "The Network of Law Reviews: Citation Cartels, Scientific Communities, and Journal Rankings", (2019) 82 *The Modern Law Review* 240. This aggregative clustering process is realized both through direct citations between PTRs standards and through citation of international treaties.

<sup>39</sup> See, F. Schauer, *The Force of Law* (2015), 78–79.

<sup>40</sup> These commitments are also shared by metaphysical foundationalists; see: R. Bliss, "Viciousness and Circles of Ground", (2014) 45 *Metaphilosophy* 245, at 245.

<sup>41</sup> Neither can PTRs bodies extract authority from global public law instruments: a delegate cannot extract legal powers from the delegator (the authority holder) without his/her consent.

A word about my understanding of validity is in order here. Validity provides legal norms with their binding force and distinguishes them from non-legal norms.<sup>42</sup> The bindingness of legal norms is reflected in their capacity to change the legal entitlements and statuses attributed to a subject.<sup>43</sup> Another feature of binding norms is their capacity to create content-independent reasons for action.<sup>44</sup> PTR norms realize these dual aspects of bindingness, both in the internal dynamic of the PTR network, and in their interaction with external public norms.

The concept of grounding is given different meanings in the model of network authority and in the framework of traditional jurisprudence. In the traditional jurisprudential framework, grounding is understood as a noncausal, linear dependence between legal facts and their determinants. This relation of dependence satisfies several logical properties:<sup>45</sup> irreflexivity –  $x$  cannot be a ground of itself; asymmetry – if  $x$  is a ground of  $y$ ,  $y$  cannot be a ground of  $x$ ; transitivity – if  $x$  is a ground of  $y$ , and  $y$  is a ground of  $z$ , then  $x$  is a ground of  $z$ ; and well-foundedness, which implies that every non-fundamental entity in the system under consideration is fully grounded by some fundamental (and ungrounded) entity or entities that fully account for its being.<sup>46</sup> The concept of well-foundedness is based on the intuition that the “derivative must have its source in, or acquire its being from, the non-derivative.”<sup>47</sup>

The cyclical and emergent features of network authority give rise to a different understanding of grounding.<sup>48</sup> Network grounding (grounding<sup>N</sup>) is reflexive both because, as indicated above, the act of external recognition depends on self-recognition and because code  $x$  may appear in its own grounding ancestry, owing to the potentially cyclic structure of network grounding. Grounding<sup>N</sup> is also weakly symmetric, that is, code  $x$  may be a ground<sup>N</sup> of code  $y$  and  $y$  a ground<sup>N</sup> of  $x$ . Thus, both  $x$  and  $y$  may appear

<sup>42</sup> *Ibid.*, at 78.

<sup>43</sup> J. Hage, “What is Legal Validity? Lessons from Soft Law” [in:] Westerman *et al.* (eds), *Legal Validity and Soft Law* (2018) 19, at 22 and D.W. Bromley, “Property relations and economic development: the other land reform”, (1989) 17 *World Development* 867, at 871.

<sup>44</sup> Joseph Raz has argued that legal authority is manifested through the power to impose duties which are meant to operate preemptively, thus displacing alternative reasons for action that subjects might have. J. Raz, “The Problem of Authority: Revisiting the Service Conception”, (2006) 90 *Minnesota Law Review* (2006) 1003; Black, note 14 above, at 293 and M. Carpentier, “Sources and Validity” in Westerman *et al.* (eds), *Legal Validity and Soft Law* (2018) 75, at 81–82.

<sup>45</sup> Supporters of monist foundationalism in metaphysics adopt a similar framework, see N. Thompson, “Metaphysical Interdependence” [in:] M. Jago (ed.) *Reality making* (2016): 38–56, 41, and Bliss, note 40 above, at 247. See also: S. Chilovi and G. Pavlakos, “Law-determination as Grounding: A Common Grounding Framework for Jurisprudence” (2019) 25 *Legal Theory* 1, at 7.

<sup>46</sup> This definition of well-foundedness combines elements from T.S. Dixon, “What is the well-foundedness of Grounding?” (2016) 125 *Mind*, 439, at 446 and T.E. Tahko, “Fundamentality”, *The Stanford Encyclopedia of Philosophy* (Fall 2018 Edition), Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/fall2018/entries/fundamentality/> (accessed: 2022.09.01).

<sup>47</sup> Dixon, *ibid.*, at 447.

<sup>48</sup> The idea of network grounding is closely related to the idea of “metaphysical interdependence”; see Thompson, note 45 above.

in the grounding ancestry of each other.<sup>49</sup> Grounding<sup>N</sup> is also transitive, that is, from the fact that code  $x$  recognizes  $y$ , and  $y$  recognizes  $z$ , we can deduce that  $x$  is a ground<sup>N</sup> of  $z$ .<sup>50</sup> Grounding<sup>N</sup> does not satisfy, however, the well-foundedness criterion, that is, the dependence chains that are established through cross-references between the PTRs do not terminate in a node that is presumed to be fundamental in any way.<sup>51</sup> Furthermore, any code in the network can participate in multiple grounding chains. Finally, grounding<sup>N</sup> is also contingent in the sense that its constitutive potential is realized only if it is embedded in a sufficiently dense structure of cross-citations, reflecting the emergent nature of network authority.

The validity and authority of each PTR regime emerges, then, from its embeddedness in a network of grounding relations, which forms a web of mutual support.<sup>52</sup> It is important to emphasize that the idea of network grounding (grounding<sup>N</sup>) is stricter than the idea of mutual grounding,<sup>53</sup> which postulates that for some fundamental entities,  $x$  and  $y$ , it is possible that  $x$  grounds  $y$  and  $y$  grounds  $x$ . Network grounding is an emergent phenomenon, whose realization depends on the satisfaction of certain conditions regarding the topology of the network that brings together the “grounded” entities. It is therefore a “threshold concept”.<sup>54</sup>

The idea of network grounding faces however, a potential objection, which I will call “the bootstrapping or inheritance critique”. The critique is based on the view that relations of ground transmit a property. According to this view, network grounding needs to explain how authority (or validity) can emerge out of the interaction between network nodes, which did not possess this property beforehand.<sup>55</sup>

It is important to note that traditional jurisprudence faces a similar challenge. The idea that the validity of lower-level norms can be derived only from higher-level norms

<sup>49</sup> Grounding<sup>N</sup> is only weakly symmetric, because it assumes that mutual dependence only holds between some of the codes. In contrast, full symmetry requires that for all  $x$  and all  $y$ , if  $x$  grounds  $y$ , then  $y$  grounds  $x$ . See, Thompson, *ibid.*, at 41–42.

<sup>50</sup> In more formal terms,  $\phi$  is transitive if  $(\forall x)(\forall y)(\forall z)[(\phi xy \wedge \phi yz) \rightarrow \phi xz]$ .

<sup>51</sup> The idea of network grounding differs from the account offered recently by Karen Bennett which assumes that all building relations also satisfy a fundamentality relation (that is, if  $x$  grounds  $y$ ,  $x$  is also more fundamental than  $y$ ). I reject the claim that grounding and fundamentality necessarily come together. See, K. Bennett, *Making Things Up* (2017), 119 (fn. 19).

<sup>52</sup> The theory of network grounding has much in common with that of Epistemic Coherentism, see: N. Thompson, “Metaphysical interdependence, epistemic coherentism, and holistic explanation” (2018) [in:] *Reality and its Structure: Essays in Fundamentality*, R. Bliss and G. Priest (eds) 107–125.

<sup>53</sup> For the idea of mutual grounding see, J. Giannotti, “Fundamental Yet Grounded”, *87 Theoria* (2021) 578.

<sup>54</sup> P.M. Groffman, J.S. Baron, T. Blett, *et al.*, *Ecological Thresholds: The Key to Successful Environmental Management or an Important Concept with No Practical Application?* *9 Ecosystems* (2006) 1–13.

<sup>55</sup> R. Bliss, “Grounding and Reflexivity” [in:] R. Bliss and G. Priest (eds), *Reality and its structure: Essays in fundamentality* (2018): 72, 81; S. Dixon, “Infinite Descent”, M. Raven (ed.) *The Routledge Handbook of Metaphysical Grounding* (2020): 244–258, at 251.

leaves us with the puzzle of how to explain the validity of the ultimate norm of the land (usually, the constitution).<sup>56</sup> Frederick Schauer has neatly articulated this puzzle:<sup>57</sup>

We know that laws are made valid by other laws, and those other laws by still other laws, and so on, until we run out of laws. But what determines the validity of the highest law? What keeps the entire structure from collapsing? On what does the validity of an entire legal system rest?

There are differences, though, in the way in which the bootstrapping paradox is realized in the national and transnational contexts. In the national context the paradox is realized by the need to assume the self-grounding of the *Grundnorm* or the constitution.<sup>58</sup> In the transnational realm, the paradox is realized by the circular, network structure of the grounding relations.<sup>59</sup> The transnational and national levels also differ in the mechanisms that they employ to make the bootstrapping paradox tolerable, that is, in their strategies of de-paradoxification. At the national level, the paradox of the foundation of law has been suppressed through an appeal to a mythical constitutional moment.<sup>60</sup> At the transnational level, what makes the paradox tolerable is the affinity between the topological realization of network grounding and the substantive doctrines of international law, in particular, the idea that states have an obligation to cooperate in addressing issues of international concern.<sup>61</sup> The affinity between the structural and substantive dimensions provides the idea of interdependent grounding with a sense of appropriateness, which can deflect potential critique.

<sup>56</sup> Legal theorists have developed various responses to this conundrum, ranging from H.L.A. Hart's rule of recognition, whose validity rests on the brute fact of social acceptance, to Hans Kelsen's interpretation of the *Grundnorm* as a "transcendental-logical presupposition." Schauer, *supra* note 39, at 79; H. Kelsen, *Pure Theory of Law* (1967) at 201, 204. For a discussion of the paradoxes involved in such higher-order reflexivity see: O. Perez, "Courage, regulatory responsibility, and the challenge of higher-order reflexivity", 8 *Regulation & Governance* (2014) 203–221.

<sup>57</sup> Schauer, note 39 above, p. 78. See also, J. Gardner, "Law as a leap of faith: essays on law in general" Oxford University Press, 2012, at p. 107.

<sup>58</sup> D. Kovacs, "What is wrong with self-grounding?", 83 *Erkenntnis*, (2018) 1157–1180; K. Albrecht, "Conditions, Fictions and the Basic Norm", 66 *The American Journal of Jurisprudence* (2021) 279–290.

<sup>59</sup> See: Thompson, note 52 above, at 110.

<sup>60</sup> See, e.g., T. E. Pettys, "The Myth of the Written Constitution", (2009) 84 *Notre Dame L. Rev.* 991; A. Marciano, "Introduction: Constitutional Myths" [in:] *idem* (ed.), *Constitutional Mythologies: New Perspectives on Controlling the State* (2011) 1 and I. Ward, "Mythologies of English Constitutionalism" (2004) 15 *King's Law Journal* 132.

<sup>61</sup> B. Mayer, "Climate Change Mitigation as an Obligation Under Human Rights Treaties?" 115 *American Journal of International Law* (2021) 409–451, at 431; J.H. Knox (Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment), Report, UN Doc. A/HRC/31/52 (Feb. 1, 2016), par. 36–39.

## IV. Conclusions

In this article, I developed a relational model of transnational legal authority, which is based on a network analysis of the interactions between private transnational regulatory regimes. By offering a further layer of governance functionality that complements the international treaty system, PTR networks can contribute to the resilience of the global governance system by increasing its diversity and by providing redundancy.<sup>62</sup> The idea of network grounding also contributes to the philosophical debate regarding the nature of metaphysical grounding, by illustrating how mutual grounding can be manifested in a real social setting.<sup>63</sup>

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<sup>62</sup> Diversity provides governance systems with multiple, alternative courses of action; when a system experiences disruption along one pathway, an alternative pathway can be used to achieve the same goal. Redundancy provides the system with “insurance” by allowing some system elements to compensate for the loss or failure of others. Diversity and redundancy become important for the functionality of the system in times of crisis. Barasa *et al.*, “What is Resilience and How Can it be Nurtured? A Systematic Review of Empirical Literature on Organizational Resilience”, (2018) 7 *International Journal of Health Policy and Management* 491.

<sup>63</sup> For introduction to this debate see, T. Oberle, “Metaphysical Foundationalism: Consensus and Controversy”, 59 *American Philosophical Quarterly* (2022): 97–110.

## Annex A

Table 1 elaborates the general framework suggested above through a two-dimensional matrix, where each cell represents a different layer in a multilayered PTR network. To emphasize the embeddedness of PTR networks in the global governance system, the table also includes external links, connecting PTRs with entities beyond the PTR network. The way in which PTRs are represented across layers may differ according to the nature of the socio-legal interaction captured by a particular layer. I distinguish between “elementary nodes,” which represent the core regime, and “layer-specific nodes,” which represent the manifestation of the elementary node in a particular layer (e.g., standards associated with a particular regime, its employees, or an associated organizational body).

Table 1: The Multilayered Structure of a PTR Network

<b>Interaction Type</b> ----- <b>Topological Configuration</b>	<b>Institutional Connections</b>	<b>Cross-citations</b>	<b>Relations between Individual Agents</b>	<b>Shared Concepts</b>
<b>Direct Links</b>	Direct institutional links between the organizations that administer the standards	Cross-referencing between PTR standards	Direct links between individuals who work at distinct PTR organizations	–
<b>Indirect Links (Affiliation Structures)</b>	Affiliation structures that indirectly link PTRs through joint membership of firms or through joint association of PTRs with umbrella organizations (e.g., ISEAL) or with other third parties (e.g., compliance auditors, NGOs)	Affiliation structures produced through joint citation of public international law treaties in PTR standards or through joint citation of PTR standards in corporate codes	Affiliation structures that indirectly link PTRs through joint affiliation of distinct PTR organizations with common individual agents (e.g., directors, advisors)	Affiliation structures that indirectly link PTRs through mutual reference to general concepts (e.g., sustainability)

<b>External Links</b>	Ties between PTR organizations and GPLIs or national bodies; interaction with external stakeholders (industry associations, NGOs, civic groups, research institutions)	Citation links between PTR standards and external legal instruments (international treaties, national legislation, corporate codes of conduct, supply chain contracts, corporate sustainability reports)	–	–
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A multilayered PTR network can be formally defined by the triple  $M = (Y, G, F)$ :

$Y$  indicates the set of layers:

$$(1.1) \quad Y = \{\alpha \mid \alpha \in \{1, 2, \dots, n\}\}$$

$G$  indicates the ordered list of networks and the topological structure of each layer ( $\alpha = 1, 2 \dots n$ ), where:

$$(1.2) \quad G_\alpha = (V_\alpha, E_\alpha)$$

$G_\alpha$  is the network in layer  $\alpha$  (e.g., the layer of institutional ties). The set of nodes (e.g., PTR organizations) of layer  $\alpha$  is indicated by  $V_\alpha$  and the set of edges connecting nodes within layer  $\alpha$  is indicated by  $E_\alpha$ . Finally,  $F$  is the list of bipartite networks that captures the interactions across pairs of different layers and has elements  $F_{\alpha\beta}$  given by:

$$(1.3) \quad F_{\alpha\beta} = (V_\alpha, V_\beta, E_{\alpha,\beta})$$

### Literature

Abbott K.W. *et al.*, "Competence versus Control: the Governor's Dilemma", *Regulation & Governance* 2019, vol. 14, issue 4.

Albrecht K.Y., "Conditions, Fictions and the Basic Norm", *The American Journal of Jurisprudence* 2021, vol. 66, issue 2.

Baccini A., Marroni L., "Regulation of Interlocking Directorates in the Financial Sector: a Comparative Case Study", *European Journal of Law and Economics* 2016, vol. 41.

Barasa E. *et al.*, "What is Resilience and How Can it be Nurtured? A Systematic Review of Empirical Literature on Organizational Resilience", *International Journal of Health Policy and Management* 2018, vol. 7.

Bartley T., "Institutional Emergence in an Era of Globalization: The Rise of Transnational Private Regulation of Labor and Environmental Conditions", *American Journal of Sociology* 2007, vol. 113, no. 2.

- Bedi P., Sharma C., "Community Detection in Social Networks", *WIRES Data Mining and Knowledge Discovery*, 2016, vol. 6, issue 3.
- Bennett K., *Making Things Up*, Oxford University Press 2017.
- Black J., "Says Who? Liquid Authority and Interpretive Control in Transnational Regulatory Regimes", *International Theory* 2017, vol. 9, issue 2.
- Bliss R., "Viciousness and Circles of Ground", *Metaphilosophy* 2014, vol. 45.
- Bliss R., "Grounding and reflexivity" [in:] *Reality and its structure: Essays in fundamentality*, R. Bliss, G. Priest (eds), Oxford University Press 2018.
- Borgatti S., Everett M., Johnson J., *Analyzing Social Networks*, Sage Publications 2018.
- Bromley D.W., "Property relations and economic development: the other land reform", *World Development* 1989, vol. 17.
- Burchardt D., "The concept of legal space: A topological approach to addressing multiple legalities", *Global Constitutionalism* 2022 (First view).
- Carpentier M., "Sources and Validity" [in:] *Legal Validity and Soft Law*, P. Westerman et al. (eds), Springer 2018.
- Chilovi S., Pavlakos G., "Law-determination as Grounding: A Common Grounding Framework for Jurisprudence", *Legal Theory* 2019, vol. 25.
- Corning P., "The re-emergence of 'emergence': A venerable concept in search of a theory", *Complexity* 2002, vol. 7.
- Corning P., *Nature's Magic: Synergy in Evolution and the Fate of Humankind*, Cambridge University Press 2003.
- Corning P., *Holistic Darwinism: Synergy, Cybernetics, and the Bioeconomics of Evolution*, The University of Chicago Press 2010.
- Corning P., "The Re-Emergence of Emergence, and the Causal Role of Synergy in Emergent Evolution", *Synthese* 2012, vol. 185.
- Culver K.C., Giudice M., *Legality's Borders: An Essay in General Jurisprudence*, Oxford University Press 2010.
- Dickison M., Magnani M., Rossi L., *Multilayer Social Networks*, Cambridge University Press 2016.
- Dixon T.S., "What is the well-foundedness of Grounding?", *Mind* 2016, vol. 125.
- Dixon S., "Infinite Descent" [in:] *The Routledge Handbook of Metaphysical Grounding*, M. Raven (ed.), Routledge 2020.
- Freeman L., *The Development of Social Network Analysis: A Study in the Sociology of Science*, Empirical Press 2004.
- Gabora L., Aerts D., "Evolution as Context-Driven Actualisation of Potential: Toward an Interdisciplinary Theory of Change of State", *Interdisciplinary Science Reviews* 2005, vol. 30.
- Gardner J., *Law as a leap of faith: essays on law in general*, Oxford University Press 2012.
- Giannotti J., "Fundamental Yet Grounded", *Theoria* 2021, vol. 87.
- Goldstein J., "Emergence as a Construct: History and Issues", *Emergence* 1999, vol. 1.
- Gostin L.O., Moon S., Meier B.M., "Reimagining Global Health Governance in the Age of COVID-19", *American Journal of Public Health* 2020, vol. 110, issue 11.
- Groffman P.M., Baron J.S., Blett T. et al., "Ecological Thresholds: The Key to Successful Environmental Management or an Important Concept with No Practical Application?", *Ecosystems* 2006, vol. 9.
- Hage J., "What is Legal Validity? Lessons from Soft Law" [in:] *Legal Validity and Soft Law*, P. Westerman et al. (eds), Springer 2018.



- Hale T., "Transnational Actors and Transnational Governance in Global Environmental Politics", *Annual Review of Political Science* 2020, vol. 23.
- Hale T., Held D., Young K., *Gridlock: Why Global Cooperation Is Failing When We Need It Most*, Wiley 2013.
- Kelsen H., *Pure Theory of Law*, University of California Press 1967.
- Kovacs D., "What is wrong with self-grounding?", *Erkenntnis* 2018, vol. 83.
- Krisch N., "Entangled legalities in the postnational space", *International Journal of Constitutional Law* 2022, vol. 20.
- Marciano A., "Introduction: Constitutional Myths" [in:] *Constitutional Mythologies: New Perspectives on Controlling the State*, *idem* (ed.), Springer 2011.
- Mayer B., "Climate Change Mitigation as an Obligation Under Human Rights Treaties?", *American Journal of International Law* 2021, vol. 115.
- Oberle T., "Metaphysical Foundationalism: Consensus and Controversy", *American Philosophical Quarterly* 2022, vol. 59.
- Pauwelyn J., Wessel R.A., Wouters J., "When Structures Become Shackles: Stagnation and Dynamics in International Lawmaking", *European Journal of International Law* 2014, vol. 25, issue 3.
- Perez O., "Courage, regulatory responsibility, and the challenge of higher-order reflexivity", *Regulation & Governance* 2014, vol. 8.
- Perez O., Stegmann O., "Transnational networked constitutionalism", *Journal of Law and Society* 2018, vol. 45.
- Perez O. et al., "The Network of Law Reviews: Citation Cartels, Scientific Communities, and Journal Rankings", *The Modern Law Review* 2019, vol. 82.
- Perez O., "Transnational networked authority", *Leiden Journal of International Law* 2022, vol. 35, issue 2.
- Prokopenko M., "Design Versus Self-Organization" [in:] *Advances in Applied Self-Organizing Systems*, *idem* (ed.) Springer 2013.
- Rand W., Wilensky U., "An introduction to agent-based modeling: Modeling natural, social, and engineered complex systems with netlogo", *The Massachusetts Institute of Technology Press* 2015.
- Raz J., "The Problem of Authority: Revisiting the Service Conception", *Minnesota Law Review* 2006, vol. 90.
- Ricoeur P., *The Course of Recognition*, Harvard University Press 2005.
- Roughan N. Halpin A., "The Promises and Pursuits of Pluralist Jurisprudence" [in:] *In Pursuit of Pluralist Jurisprudence*, *idem* (eds), Cambridge University Press 2017.
- Schauer F., *The Force of Law*, Harvard University Press 2015.
- Searle J., "A Classification of Illocutionary Acts", *Language in Society* 1976, vol. 5, no. 1.
- Searle J., *Making the Social World: the Structure of Human Civilization*, Oxford University Press 2010.
- Stoddard I. et al., "Three decades of climate mitigation: why haven't we bent the global emissions curve?", *Annual Review of Environment and Resources* 2021, vol. 46.
- Strech C., "Filling in for Governments? The Role of the Private Actors in the International Climate Regime", *Journal for European Environmental & Planning Law* 2020, vol. 17.
- Tahko T.E., "Fundamentality" [in:] *The Stanford Encyclopedia of Philosophy*, E.N. Zalta (ed.), Fall 2018 Edition.
- Teubner G., *Constitutional Fragments: Societal Constitutionalism and Globalization*, Oxford University Press 2012.

Thompson N., "Metaphysical Interdependence" [in:] *Reality making*, M. Jago (ed.), Oxford University Press 2016.

Thompson N., "Metaphysical interdependence, epistemic coherentism, and holistic explanation", [in:] *Reality and its Structure: Essays in Fundamentality*, R. Bliss, G. Priest (eds), Oxford University Press 2018.

Ward I., "Mythologies of English Constitutionalism", *King's Law Journal* 2004, vol. 15.

Wood S. et al., "The Interactive Dynamics of Transnational Business Governance: A Challenge for Transnational Legal Theory", *Transnational Legal Theory* 2015, vol. 6.

## Summary

*Oren Perez*

### Transnational Network Authority and the Question of Grounding

The structure of the global governance system has undergone significant changes in the past few years. From a system governed primarily by intergovernmental institutions and multilateral treaties, it has metamorphosed into a hybrid field in which a plethora of public, private, and semi-public institutions interact in various ways. In this article, I focus on the increasingly important role of private transnational regulatory regimes (PTRs). I argue that the authority of PTRs emerges from (and is grounded by) their embeddedness in a dense web of ties with other PTRs. The model of network authority challenges the orthodox, hierarchical view of legal authority and contributes to the more general philosophical debate regarding the concept of grounding.

**Keywords:** network analysis; relational authority; network grounding; global governance.

## Streszczenie

*Oren Perez*

### Transnarodowa, usieciowiona władza i kwestia jej podstawności

Struktura globalnego systemu władzy uległa w ostatnich latach znaczącym zmianom. System, w którym kluczową rolę odgrywały dotąd instytucje międzyrządowe i traktaty wielostronne przekształcił się w obszar hybrydowy, na którym wiele instytucji publicznych, prywatnych i pół-publicznych wzajemnie na siebie oddziałuje na różne sposoby. W artykule skupiono się na coraz ważniejszej roli prywatnych transnarodowych reżimów regulacyjnych (PTR). Autorytet PTR wynika z ich osadzenia w gęstej sieci powiązań z innymi PTR. Model władzy usieciowionej podważa ortodoksyjny, hierarchiczny pogląd na władzę legalną i wnosi wkład do bardziej ogólnej debaty filozoficznej dotyczącej podstaw (źródeł, podstawności) władzy.

**Słowa kluczowe:** analiza sieciowa; autorytet relacyjny; usieciowienie; podstawność władzy; globalne zarządzanie.