TEORIE VĚDY / THEORY OF SCIENCE / XLIV / 2022 / 2
https://doi.org/10.46938/tv.2022.549

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BUREAUCRATIC AND MARKET SOURCES OF EPISTEMIC AUTHORITY

Abstract: *In International Relations (IR) scholarship, the epistemic communities' framework has gained relevance for explaining the roles of experts in the context of transnational global governance. However, IR scholars have criticized the framework for descriptive reasoning. This paper aims to strengthen its explanatory power by following rules of a systematic literature review and by using Desmond's conception of professionalism to further develop Cross's model of epistemic community. Desmond introduced his concept of professionalism as a response to bureaucratic and market trends in scientific research and Cross developed her concept of professionalism as a comprehensive reconceptualization of Haas's original model of an epistemic community. The results confirm compatibility between the two concepts. Following the structure of Cross's model of professionalism, individual autonomy operationalizes selection and training, collective autonomy covers the face-to-face meetings, and the service provision operationalizes the common culture.*

Keywords: *epistemic communities; professionalism; new public management; professional autonomy; service ideal*

Byrokratické a tržní zdroje epistemické autority

Abstrakt: *V oblasti mezinárodních vztahů je pro vysvětlení rolí expertů v kontextu transnacionálního globálního vládnutí relevantní rámec epistemických komunit, přestože jej někteří výzkumníci mezinárodních vztahů kritizují jako popisný. Cílem tohoto článku je posílit jeho explanatorní funkci. Za tímto účelem tento text realizuje systematizovaný přehled literatury, aby sloučil dvě koncepce profesionalizace. První konceptualizaci profesionalizace rozvinula Crossová jako rozsáhlou aktualizaci původního Haasova modelu, Desmond představil druhou konceptualizaci profesionalizace jako reakci na byrokratické a tržní trendy ve vědeckém výzkumu. Výsledky rozboru potvrdily kompatibilitu obou koncepcí. V návaznosti na strukturu modelu profesionalizace Crossové, individuální autonomie operacionalizuje výběr nových členů a jejich další průpravu. Kolektivní autonomie rozpracovává setkání tváří v tvář. Poskytování služby pak operacionalizuje kritérium společné kultury.*

Klíčová slova: *epistemické komunity; profesionalizace; nový veřejný managment; profesní autonomie; ideál služby*

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The study was supported by The Czech Science Foundation, project GA ČR 19-20678S "The first post-war generation of Czech astronomers, astrophysicists and mathematicians: Interdisciplinary research of the history of science networks."

1. Introduction

Uncertainty during the COVID-19 pandemic has highlighted the subjectivity of research and accelerated a serious debate over the relevance of knowledge. Significant questions have arisen over the credibility of causal theories, hypotheses, the adequate data-collection procedure, data compatibility, confirmation bias, and interpretation of results.[1] At the national level, mistrust of the best scientific approaches to fighting COVID-19 was evident not only among the public but also in the scientific community. The Stanford Medical Center's and Hoover Institution's conflict over anti-COVID-19 strategies served as strong evidence of this debate.[2]

The dispute arose between an emeritus chief of neuroradiology at Stanford Medical Center and Scott Atlas, a senior fellow in health care policy at the Hoover Institution, who was appointed as a special advisor to President Donald Trump to combat the COVID-19 pandemic.[3] Atlas proposed that herd immunity would be best achieved by easing the anti-COVID restrictions, whereas the Stanford physicians and researchers with expertise in epidemiology and health policy disagreed with his belief.[4] The group accused Atlas of misinterpreting the science. Moreover, the faculty senate members discussed Atlas's compliance with the Stanford Code of Conduct and the American Medical Association's Code of Ethics. The conflict prompted concerns about how academic freedom within university principles should be applied.

A divided reaction in the scientific community also existed at the international level.[5] In July 2020, a group of scientists published an open letter questioning the WHO's COVID-19 infection prevention and restriction guidance.[6] Except in healthcare settings, the scientists doubted the evidence supporting airborne virus transmission. These developments at the national and international levels renewed scholars' interest about the role of knowledge in the policy process.[7] In International Relations (IR) scholarship, the meso-level framework of epistemic communities, considering concepts from historical philosophy and sociology of science, has aimed at explaining the role of experts in the decision-making process for conditions of transnational global governance.[8] Previous investigation into epistemic communities revealed both the benefits and disadvantages of technocratic experts formulating public policy, but the COVID-19 pandemic solidified the relevance in maintaining a degree of propositional and legislative say in determining governmental policy.[9] However, backlash from the members within governmental office and non-state actors brought into question public trust in scientific knowledge and its intersection with public policy.[10]

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[1] Matt Ridley, "What the Pandemic Has Taught Us About Science: The Scientific Method Remains the Best Way to Solve Many Problems, but Bias, Overconfidence and Politics Can Sometimes Lead Scientists Astray," *Wall Street Journal*, October 10, 2020, Eastern edition; William E. Colglazier, "Science, Uncertainty and Pandemic Response," *Wall Street Journal*, October 17, 2020, Eastern edition.

[2] Stanford News, "Academic Freedom Questions Arise on Campus over COVID-19 Strategy Conflicts," *Stanford News*, accessed June 28, 2022.

[3] Colleen Flaherty, "Not Shrugging Off Criticism," *Inside Higher Ed*, accessed June 28, 2022.

[4] University Stanford, "Stanford Medicine: Open Letter," accessed June 28, 2022.

[5] Tana Johnson, "Ordinary Patterns in an Extraordinary Crisis: How International Relations Makes Sense of the COVID-19 Pandemic," *International Organization* 74, no. S1 (2020): 9.

[6] Lidia Morawska and Donald K. Milton, "It Is Time to Address Airborne Transmission of Coronavirus Disease 2019 (COVID-19)," *Clinical Infectious Diseases* 71, no. 9 (2020): 2311.

Since Peter M. Haas and Emmanuel Adler defined interactions between experts and decision-makers in international politics as the research agenda for the epistemic community framework in 1992, we still know very little about what kinds of individuals and groups constitute epistemic communities.[11] Epistemic communities resemble other meso-level frameworks in IR, such as policy networks and issue networks.[12] Later studies applied the concept for empirical cases and tested its broader utility.[13] Unfortunately, there is a lack of theoretical studies providing a cross-disciplinary dialogue for reconceptualizing the concept. Addressing the challenge, this paper pushes the boundaries of Cross's epistemic community concept,[14] based on professionalism derived from social constructivism in IR[15] and the sociology of professions[16] by enhancing it through Desmond's elements of professional activity.[17] Whereas Cross emphasized the internal cohesion of an epistemic community and perceived it as a functional social mechanism coordinating the activities of individual members, Desmond clarified the role of an individual professional in science.[18] He introduced a dominant perspective in OECD countries that treats science as a knowledge-based occupation. He highlighted the role of the individual professional and his or her discretion in explaining scientific misconduct. Following Desmond's study dealing with the problem of demarcating science from nonscience,[19] this paper assumes that the increased implementation of external control through the New Public Management (NPM) reforms helps one to recognize a professionalized epistemic community with greater ability to spread its beliefs among the other actors in international politics more clearly.

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[7] Claire A. Dunlop, "Epistemic Communities," in *Routledge Handbook of Public Policy*, eds. Eduardo Araral et al. (London: Routledge 2013), 230; Claudio M. Radaelli, "The Role of Knowledge in the Policy Process," *Journal of European Public Policy* 2, no. 2 (1995): 164.

[8] Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization* 46, no. 1 (1992): 3; Emanuel Adler and Peter M. Haas, "Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Program," *International Organization* 46, no. 1 (1992): 375.

[9] Dave Toke, "Epistemic Communities and Environmental Groups," *Politics* 19, no. 2 (1999): 98–99; Johnson, "Ordinary," 11.

[10] Cornelia Betsch, "How Behavioural Science Data Helps Mitigate the COVID-19 Crisis," *Nature Human Behaviour* 4, no. 5 (2020): 438; Barry Eichengreen, Cevat Giray Aksoy, and Orkun Saka, "Revenge of the Experts: Will COVID-19 Renew or Diminish Public Trust in Science?," *Journal of Public Economics* 193 (2021): 9–10; S. E. Kreps and D. L. Kriner, "Model Uncertainty, Political Contestation, and Public Trust in Science: Evidence from the COVID-19 Pandemic," *Science Advances* 6, no. 43 (2020): 8.

[11] Haas, "Introduction," 3; Adler and Haas, "Conclusion," 375; Mai'a K. Davis Cross, "The Limits of Epistemic Communities: EU Security Agencies," *Politics and Governance* 3, no. 1 (2015): 91; Olga Löblová, "When Epistemic Communities Fail: Exploring the Mechanism of Policy Influence," *Policy Studies Journal* 46, no. 1 (2018): 161; Peter M. Haas, "Reflections on Contested Knowledge and Those Who Study It," in *Contesting Global Environmental Knowledge, Norms, and Governance*, ed. M. J. Peterson (London: Routledge, 2019), 170–71.

[12] David Marsh and R. A. W. Rhodes, *Policy Networks in British Government* (Oxford: Clarendon Press, 2011); Hugh Heclo, "Issue Networks and the Executive Establishment," in

To fulfill this aim, this paper proceeds in four steps. First, the broader context of how transnational global governance shaped the research agenda of epistemic communities in IR, serving as the point of departure. The sec-

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The New American Political System, ed. Anthony King (Washington, DC: American Enterprise Institute, 1978), 88–124.

[13] Lars Carlsson, "Policy Science at an Impasse: A Matter of Conceptual Stretching?," *Politics & Policy* 45, no. 2 (2017): 159; Carsten Daugbjerg, *Policy Networks Under Pressure: Pollution Control, Policy Reform and the Power of Farmers* (New York: Routledge, 2018), 2.

[14] Mai'a K. Davis Cross, "Rethinking Epistemic Communities Twenty Years Later," *Review of International Studies* 39, no. 1 (2013): 137–60.

[15] Friedrich Kratochwil and John Gerard Ruggie, "International Organization: A State of the Art on an Art of the State," *International Organization* 40, no. 4 (1986): 753–75; Alexander E. Wendt, "The Agent-Structure Problem in International Relations Theory," *International Organization* 41, no. 3 (1987): 335–70.

[16] Andrew Abbott, *The System of Professions: An Essay on the Division of Expert Labor* (Chicago: University of Chicago Press, 1988).

[17] Christopher Hood, "A Public Management for All Seasons?," *Public Administration* 69, no. 1 (1991): 3–19.

[18] Hugh Desmond, "Professionalism in Science: Competence, Autonomy, and Service," *Science and Engineering Ethics* 26, no. 3 (2020): 1289–90.

[19] Karl R. Popper, *The Logic of Scientific Discovery* (New York: Basic Books, 1959); Imre Lakatos, *The Methodology of Scientific Research Programmes: Philosophical Papers* (Cambridge: Cambridge University Press, 1978).

ond step is to review the emergence and development of the original concept of epistemic communities introduced by Haas. The third step contextualizes Cross's and Desmond's conceptualizations of professionalism and specifies the parameters of the systematic literature method. And finally, the fourth step presents the results. The presentational logic corresponds to Desmond's model of professionalism based on NPM ideas.

2. Broader Context

In IR, the epistemic community concept has gained popularity in the context of globalization, where complex transnational relations and processes are present. The analytical work on transnational relations started during the late 1960s and early 1970s.[20] In 1971, the journal *International Organization* highlighted the topic with a special issue edited by Keohane and Nye on "Transnational Relations and World Politics". The authors defined the concept as "interactions across state boundaries that are not controlled by the central foreign policy organs of governments."[21] These and other scholars started to challenge the state-centric view of world politics.[22]

Furthermore, three other developments of the late 1980s and early 1990s led to a proliferation of studies on the cross-border activities of non-state actors in US and European research institutions. First, demand for understanding social-reality international politics laid the foundations for what would later be called constructivism or sociological institutionalism in IR.[23]

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[20] Paul Dicken, *Global Shift: The Internationalization of Economic Activity* (London: Paul Chapman, 1992); Richard N. Cooper, *The Economics of Interdependence: Economic Policy in the Atlantic Community* (New York: McGraw-Hill, 1968); Karl Kaiser, "Transnationale Politik," in *Die Anachronistische Souveränität*, ed. Ernst-Otto Czempiel (Köln: Wiesbaden VS Verlag für Sozialwissenschaften, 1969), 80–109; Raymond Vernon, *Sovereignty at Bay: The Multinational Spread of US Enterprises* (London: Basic Books, 1971).

[21] Robert Owen Keohane and Joseph S. Nye, *Transnational Relations and World Politics* (Cambridge: Harvard University Press, 1971), 331.

[22] Peter D. Bell, "The Ford Foundation as a Transnational Actor," *International Organization* 25, no. 3 (1971): 465–78; Peter B. Evans, "National Autonomy and Economic Development: Critical Perspectives on Multinational Corporations in Poor Countries," *International Organization* 25, no. 3 (1971): 675–92; Donald P. Warwick, "Transnational Participation and International Peace," *International Organization* 25, no. 3 (1971): 655–74.

[23] Kratochwil and Ruggie, "International," 753–75; Wendt, "Agent," 335–70; Nicholas Greenwood Onuf, *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia: University of South Carolina Press, 1989); Friedrich V. Kratochwil, *Rules, Norms, and Decisions: On the Conditions of Practical and Legal Reasoning in International Relations and Domestic Affairs* (Cambridge: Cambridge University Press, 1989).

Emphasis on the social and ideational rather than merely the material structure of international politics characterized the authors who followed the theoretical approach. They depicted reality as a set of subjective knowledge and material objects.[24] Reality became meaningful for human action only through the structure of shared understandings.[25] This way of institutionalizing facts highlighted the role of knowledge in shaping social reality.[26]

The end of the Cold War was the second development that impacted IR theorizing. It led to the decline of research interest in structuralist theories such as realism, neo-realism, and state-centered institutionalism, and renewed an appreciation of domestic politics.[27] On the other hand, the end of the Cold War also underlined transnational relations.[28] In addition, the post-Cold War period underlined the normative challenges of neo-realism and state-centered institutionalism in theorizing value conflict and cultural diversity.[29] Scholarship emphasized globalization processes related to the expansion of innovations in communication technologies.[30] The spread of new technologies fostered debate on the retreat of the state,[31] highlighted the emergence of non-state authority in the economy,[32] and enabled evaluation of the actorness of non-state entities in world affairs.[33] This intellectual shift created research space for analyzing global governance,[34] which had become more complex.[35] Therefore, the research considered non-state actors's roles in rulemaking, regulating social issues, and providing collective goods in cooperative arrangements with nation-states.[36]

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[24] Emanuel Adler, "Cognitive Evolution: A Dynamic Approach for the Study of International Relations and Their Progress," in *Progress in Postwar International Relations*, eds. Emanuel Adler and Beverly Crawford (New York: Columbia University Press, 1991), 43–88.

[25] John R. Searle, *The Construction of Social Reality* (New York: Free Press, 1995).

[26] Gerard Delanty, *Social Science: Beyond Constructivism and Realism* (Minneapolis: University of Minnesota Press, 1997), 53.

[27] Harald Müller and Thomas Risse-Kappen, "From the Outside In and from the Inside Out: International Relations, Domestic Politics, and Foreign Policy," in *The Limits of State Autonomy: Societal Groups and Foreign Policy Formulation*, eds. Valerie M. Hudson and David Skidmore (Boulder: Westview Press, 1993), 25–48; Thomas Risse-Kappen, "Democratic Peace – Warlike Democracies? A Social Constructivist Interpretation of the Liberal Argument," *European Journal of International Relations* 1, no. 4 (1995): 491–517.

[28] Oran R. Young, *International Cooperation: Building Regimes for Natural Resources and the Environment* (Ithaca: Cornell University Press, 1989), 87–96; Lisa L. Martin, *Coercive Cooperation: Explaining Multilateral Economic Sanctions* (Princeton: Princeton University Press, 1992).

[29] Samuel P. Huntington, "The Clash of Civilizations?," *Foreign Affairs* 72 (1993): 22–50; Ted Robert Gurr, *Minorities at Risk: A Global View of Ethnopolitical Conflicts* (Washington, DC: United States Institute of Peace Press, 1993).

[30] James N. Rosenau, *Turbulence in World Politics: A Theory of Change and Continuity* (Princeton: Princeton University Press, 1990), 11.

[31] Susan Strange, *The Retreat of the State: The Diffusion of Power in the World Economy* (Cambridge: Cambridge University Press, 1996).

[32] James N. Rosenau and Ernst Otto Czempiel, *Governance without Government: Order and Change in World Politics* (Cambridge: Cambridge University Press, 1992).

The diverse forms of non-state actors's participation in international politics and research concentration on the social and ideational rather than the material structure of international politics facilitated the study of the conditions under which transnational networks shaped international affairs. Authors defined a transnational network as a non-formal internal structure that allows exchange relations with one another without any formal authority to set hierarchy or settle disputes.[37] Its importance in international politics stemmed primarily from moral authority and the claim to authoritative knowledge, which it used for the emergence, creation, diffusion, and internalization of norms.[38]

Therefore, it was thought that researchers should study epistemic communities in the broader context of transnational global governance, which underlines many non-state actors' and communities' relevance. These non-state actors and communities interact with the nation-state to shape transnational global governance.[39] They participate in constructing the rules and norms within the international system and strengthening transnational global relations. Transnational global networks encompass a variety of actors, including advocacy networks sharing specific values and principled beliefs,[40] transnational coalitions coordinating sets of strategies to influence social change publicly,[41] transnational social movements engaging in joint collective action,[42] communities of practice that share patterns of action,[43] professional communities conferring competence and status for members,[44] multinational corporations,[45] and individuals.[46] The actor networks are diverse and may not always be composed of epistemic communities exclusively.[47] They may be competitors of epistemic communities and operate individually in international politics.

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[33] Charles Lipson, "Bankers's Dilemmas: Private Cooperation in Rescheduling Sovereign Debts," *World Politics* 38, no. 1 (1985): 200–225; Ronald B. Mitchell, "Regime Design Matters: Intentional Oil Pollution and Treaty Compliance," *International Organization* 48, no. 3 (1994): 425–58.

[34] James N. Rosenau, "Governance in the Twenty-First Century," *Global Governance* 1, no. 1 (1995): 13–43.

[35] David Held, *Democracy and the Global Order: From the Modern State to Cosmopolitan Governance* (Stanford: Stanford University Press, 1995).

[36] Claire A. Cutler, Virginia Haufler, and Tony Porter, *Private Authority and International Affairs* (Albany: State University of New York Press, 1999); Renate Mayntz, "Common Goods and Governance," in *Common Goods: Reinventing European and International Governance*, ed. Adrienne Windhoff-Héritier (Lanham: Rowman & Littlefield, 2002), 15–27; Tanja A. Börzel and Thomas Risse, "Public-Private Partnerships: Effective and Legitimate Tools of International Governance," in *Complex Sovereignty: Reconstructing Political Authority in the Twenty First Century*, eds. Edgar Grande and Louis W. Pauly (Toronto: University of Toronto Press, 2005), 195–216.

[37] Joel M. Podolny and Karen L. Page, "Network Forms of Organization," *Annual Review of Sociology* 24, no. 1 (1998): 59.

[38] Margaret E. Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (London: Cornell University Press, 1998), 206–7; Haas, "Introduction," 1–35; Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization* 52, no. 4 (1998): 887–917; Michael N. Barnett and Martha Finnemore, *Rules for the World: International Organizations in Global Politics* (London: Cornell University Press, 2004).

3. Development of the Concept

The epistemic community framework is rooted in historical philosophy of science. Fleck's ideas on the thought collective and thought style labeled a community of persons.[48] The community maintained intellectual interactions and adopted a particular style of group thinking. Foucault's interpretation of the ancient Greek philosophical term of "epistêmê"[49] also inspired the research of epistemic communities in IR. Foucault used the notion of episteme to describe a historically and culturally determined set of articulations.[50] He considered the definition of the parameters of relations between discursive practices that form knowledge as the major function of the articulations. In sociology, Holzner and Marx coined the term "epistemic community"[51] to describe knowledge-oriented work communities, where cultural standards and social arrangements were diffused in the process of knowledge production and application. Thomas Kuhn also dealt with how social ties within scientific communities created a shared paradigm.[52] He defined a paradigm as an illustration of the models of research questions and processes for solving them.[53]

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[39] Cross, "Rethinking," 139.

[40] Keck and Sikkink, *Activists*.

[41] Sanjeev Khagram, James V. Riker, and Sikkink Kathryn, "From Santiago to Seattle: Transnational Advocacy Groups Restructuring World Politics," in *Restructuring World Politics: Transnational Social Movements, Networks, and Norms*, eds. Sanjeev Khagram, James V. Riker, and Sikkink Kathryn (Minneapolis: University of Minnesota Press, 2002), 7.

[42] Donatella Della Porta and Mario Diani, *Social Movements: An Introduction* (Chichester: Wiley-Blackwell, 2020), 15–17.

[43] Emanuel Adler and Vincent Pouliot, "International Practices," *International Theory* 3, no. 1 (2011): 6–7.

[44] Peter Katzenstein and Rudra Sil, *Beyond Paradigms: Analytic Eclecticism in the Study of World Politics* (Hampshire: Palgrave Macmillan, 2010).

[45] Robert Gilpin, *U.S. Power and the Multinational Corporation: The Political Economy of Foreign Direct Investment* (New York: Basic Books, 1975); Robert O. Keohane, *After Hegemony: Cooperation and Discord in The World Political Economy* (Princeton: Princeton University Press, 2005).

[46] Marilyn B. Brewer and Sherry K. Schneider, "Social Identity and Social Dilemmas: A Double-Edged Sword," in *Social Identity Theory: Constructive and Critical Advances*, eds. Michael Hogg and Dominic Abrams (London: Harvester Wheatsheaf, 1990), 169–84; David A. Lake and Donald Rothchild "Containing Fear: The Origins and Management of Ethnic Conflict," *International Security* 21, no. 2 (1996): 41–75.

[47] Cross, "Rethinking," 137–60.

John G. Ruggie used episteme as the structural expression of mutual understandings.[54] He merged Foucault's meaning of episteme and Kuhn's notion of the scientific community. He also clarified the meaning of the episteme in the context of collective response. Ruggie's research was also influenced by Eugene Skolnikoff's norm-creation function of international organizations and Ernst B. Haas's discussion of international regimes for the management of technological interdependence.[55] The following referenced works resulted in the specification of conditions for the international institutionalization of epistemic communities, including bureaucratic positions, technocratic training, and shared scientific paradigms among members of a community.[56]

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[48] Ludwik Fleck, *Genesis and Development of a Scientific Fact* (Chicago: University of Chicago Press, 1979), 39, 41.

[49] Aristoteles and Terence Irwin, *Nicomachean Ethics* (Indianapolis: Hackett Publishing, 2000), 86.

[50] Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language* (London: Routledge, 2002), 191.

[51] Burkart Holzner and John H. Marx, *Knowledge Application: The Knowledge System in Society* (Boston: Allyn and Bacon, 1979), 107–8.

[52] Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970), 182.

[53] Kuhn's paradigms and Foucault's epistemes are frequent cross-disciplinary concepts for analyzing dynamics of knowledge differing in scope. Whereas paradigm has a link to a particular scientific tradition, episteme includes beliefs and reflections that might not be treated as scientific facts. See Paulo Pirozelli, "The Grounds of Knowledge: A Comparison between Kuhn's Paradigms and Foucault's Epistemes," *Kriterion: Revista de Filosofia* 62, no. 148 (2021): 283–84. Haas included sharing of beliefs, values and methodology among members of a community from the Kuhn's definition of paradigm and referring a prevalent way for explaining social reality from Foucault's episteme (Haas, "Introduction," 3, 26–27).

[54] John Gerard Ruggie, "International Responses to Technology: Concepts and Trends," *International Organization* 29, no. 3 (1975): 568–69.

At the turn of the 1980s and 1990s, Peter M. Haas published several works emphasizing the role of epistemic communities in the creation of international environmental protection regimes, including his book *Saving the Mediterranean: The Politics of International Cooperation,* followed by a paper devoted to chlorofluorocarbon emissions and the depletion of the ozone layer.[57] These studies highlighted making political decisions under conditions of uncertainty. Haas's research also underlined the need for advice from a knowledge-based transnational network sharing common views about cause-and-effect relationships and consensual knowledge. These conclusions opened new avenues of epistemic community research in the 1992 *International Organization* special issue dedicated to knowledge, power, and international policy coordination. In the 1992 *International Organization* "Introduction", the most cited piece in the history of the journal, Haas operationalized the concept in more detail than previous scholars.[58] He defined a shared set of normative and principled beliefs, casual beliefs, notions of validity, and common policy enterprise as the criteria for recognizing an epistemic community. Uncertainty and complexity in international policy coordination stimulated demand for advice from epistemic communities.[59] The advice helped to frame issues for collective policy negotiations.

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[55] Eugene B. Skolnikoff, *The International Imperatives of Technology: Technological Development and the International Political System* (Berkeley: Institute of International Studies, University of California, 1972), 12–13; Ernst B. Haas, "Is There a Hole in the Whole? Knowledge, Technology, Interdependence, and the Construction of International Regimes," *International Organization* 29, no. 3 (1975): 839.

[56] Ruggie, "International Responses," 570.

[57] Peter M. Haas, "Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control," *International Organization* 43, no. 3 (1989): 349–50; Peter M. Haas, "Obtaining International Environmental Protection through Epistemic Consensus," *Millennium – Journal of International Studies* 19, no. 3 (1990): 150–65; Peter M. Haas, *Saving the Mediterranean: The Politics of International Environmental Cooperation* (New York: Columbia University Press, 1990), 55–56; Peter M. Haas, "Policy Responses to Stratospheric Ozone Depletion," *Global Environmental Change* 1, no. 3 (1991): 226.

[58] Haas, "Introduction," 3.

[59] Ibid., 5.

While the authoritative claim to policy-relevant knowledge based on recognized expertise distinguished epistemic communities from other actors involved in policy negotiations, Haas, in contrast, highlighted the fact that policy choices resulted from the interactions of epistemic communities with other actors.[60] The other actors may include interest groups promoting their self-interest and that of its members,[61] social movements focusing on social mobilization,[62] coalitions of bureaucratic actors composed of individuals in the service of bureaucratic organizations, [63] advocacy networks promoting principled ideas and norms,[64] or issue networks bringing ethical ideas into the international system.[65]

Since 1992, IR scholars have paid some attention to the concept. Most previous studies on epistemic communities remained narrow and focused only on empirical testing. The examination of single-case studies covered a broad spectrum of topics. Several of the testing studies focused on political negotiations at international and global levels in the European integration process,[66] environmental governance,[67] and business economics.[68] Apart from that, the existing studies also confirmed the epistemic communities's relevance at the national and local levels.[69]

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[60] Ibid., 31; Peter M. Haas, *Epistemic Communities, Constructivism, and International Environmental Politics* (London: Routledge, 2016), 6–7.

[61] Müller and Risse-Kappen, "From the Outside," 36–37.

[62] Khagram et al., "From Santiago to Seattle," 7.

[63] Graham T. Allison and Phillip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York: Longman, 1999), 5–6.

[64] Keck and Sikkink, *Activists*, 15.

[65] Ellen Lutz and Kathryn Sikkink, "Nongovernmental Organizations and Transnational Issue Networks in International Politics," *Proceedings of the Annual Meeting (American Society of International Law)* 89 (1995): 413–14; Ronnie D. Lipschutz and Judith Mayer, *Global Civil Society and Global Environmental Governance: The Politics of Nature from Place to Planet* (Albany: State University of New York Press, 1996), 75.

4. The Two Conceptions of Professionalism

Although the original concept of epistemic community is a cross-disciplinary product considering sociological perspective on knowledge and professions[70], and although the concept has been empirically evaluated since 1992, later research has done less to develop the idea theoretically.[71] Therefore, this paper strengthens its explanatory power. The update is based on using Desmond's conception of professionalism in order to develop Cross's conception of professionalism. As far as Cross's criteria for recognizing an epistemic community, they resulted from a comprehensive reconceptualization of Haas's original model. Her theoretical position stemmed primarily from social constructivism in IR[72] and the sociology of professions.[73] She defined an epistemic community as a functioning social mechanism coordinating its members' activities.[74] Her conception emphasized professionalism as the crucial factor for determining an epistemic community's internal cohesion and implicated its potential to persuade other actors through a process of institutional learning.[75]

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[66] Amy Verdun, "The Role of the Delors Committee in the Creation of EMU: An Epistemic Community?," *Journal of European Public Policy* 6, no. 2 (1999): 308–28; Frans van Waarden and Michaela Drahos, "Courts and (Epistemic) Communities in the Convergence of Competition Policies," *Journal of European Public Policy* 9, no. 6 (2002): 913–34; Jolyon Howorth, "Discourse, Ideas, and Epistemic Communities in European Security and Defence Policy," *West European Politics* 27, no. 2 (2004): 211–34.

[67] Toke, "Epistemic," 97–102; Clair Gough and Simon Shackley, "The Respectable Politics of Climate Change: The Epistemic Communities and NGOs," *International Affairs* 77, no. 2 (2001): 329–46; Klaus Hasselmann and Terry Barker, "The Stern Review and the IPCC Fourth Assessment Report: Implications for Interaction between Policymakers and Climate Experts. An Editorial Essay," *Climatic Change* 89, no. 3 (2008): 219–29; John S. Dryzek, *The Politics of the Earth: Environmental Discourses* (Oxford: Oxford University Press, 2013); Claire A. Dunlop, "The Irony of Epistemic Learning: Epistemic Communities, Policy Learning and the Case of Europe's Hormones Saga," *Policy and Society* 36, no. 2 (2017): 215–332.

[68] Amit Mukherjee and E. M. Ekanayake, "Epistemic Communities and the Global Alliance against Tobacco Marketing," *Thunderbird International Business Review* 51, no. 3 (2009): 207–18.

[69] Rob Kitchin et al., "Smart Cities, Epistemic Communities, Advocacy Coalitions and the 'Last Mile' Problem," *IT – Information Technology* 59, no. 6 (2017): 275–84; Reza Hasmath and Jennifer Y. J. Hsu, "Isomorphic Pressures, Epistemic Communities and State–NGO Collaboration in China," *The China Quarterly*, no. 220 (2014): 936–54; Löblová, "When Epistemic Communities Fail," 160–89.

[70] For example, Mannheim's *Ideology and Utopia* influenced Haas's work. See Karl Mannheim, *Ideology and Utopia* (New York: Harcourt & World, 1936).

[71] Dunlop, "Epistemic," 229–43; Cross, "Rethinking," 137–60.

Hugh Desmond introduced the second conception of professionalism.[76] Just like Cross, his theoretical position was also derived from the sociology of professions.[77] He also underlined internal cohesion and research methodology as the crucial variables for delimiting a scientific community.[78] In contrast with Cross's conception, Desmond incorporated NPM ideas into his model.[79] The NPM ideas included the bureaucratic[80] and market aspects[81] of scientific research imposing external control on scientific activity and provided a detailed delimitation of science as a professional occupation.[82] Furthermore, Desmond used concepts from the philosophy of science and sociology of professions perspectives for his analysis and final explanations. Contrary to Cross, he did not consider the concepts derived from the social constructivist approach in IR [83] So, Desmond's conception, emphasizing the professional aspect of scientific research, has the potential to broaden the scope of Cross's conception of epistemic community in IR.

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[72] Cross, "Rethinking," 148–49, 150; Kratochwil and Ruggie, "International," 753–75; Alexander E. Wendt, "Agent," 335–70.

[73] Abbott, *System of Professions.*

[74] Cross, "Rethinking," 149–50. Later, Cross also examined several groups of experts. See Mai'a K. Davis Cross, "The Limits of Epistemic Communities: EU Security Agencies," *Politics and Governance* 3, no. 1 (2015): 90–100; Mai'a K. Davis Cross, "Space Security and the Transatlantic Relationship," *Politics and Governance* 10, no. 2 (2022): 134–43.

[75] Claire A. Dunlop and Claudio M. Radaelli, "The Lessons of Policy Learning: Types, Triggers, Hindrances and Pathologies," *Policy & Politics* 46, no. 2 (2018): 259.

[76] Desmond, "Professionalism," 1290–94.

[77] Harold L. Wilensky, "The Professionalization of Everyone?," *American Journal of Sociology* 70, no. 2 (1964): 137–58; Magali Sarfatti Larson, *The Rise of Professionalism: A Sociological Analysis* (Berkeley: University of California Press, 1977).

[78] Desmond, "Professionalism," 1304.

[79] Hood, "Public Management," 3–19.

[80] Mirko Noordegraaf, "Hybrid Professionalism and Beyond: (New) Forms of Public Professionalism in Changing Organizational and Societal Contexts," *Journal of Professions and Organization* 2, no. 2 (2015): 187–206.

[81] Teresa Carvalho and Tiago Correia, "Editorial: Professions and Professionalism in Market-Driven Societies," *Professions and Professionalism* 8, no. 3 (2018): 1–8.

[82] Thomas Brante, "Professions as Science-Based Occupations," *Professions and Professionalism* 1, no. 1 (2011): 2–3.

[83] Popper, *Logic of Scientific Discovery.*

A conceptualization of the ideal types of occupations generated problems (see Table 1). Some occupations claimed professional status but did not fulfill the criteria of the traditional model of professions.[84] On the other hand, some occupations corresponded to the professions' traditional model and yet could not be considered professions.[85] Moreover, the discussions of ethics in research concluded that research ethics should be understood according to the professional model followed by the NPM.[86] The introduction of codes of conduct served as evidence of the shift toward the professionalization of scientific research according to the sociology of professions.[87] Codes of conduct established public responsibilities and granted a great deal of autonomy.[88] So, if the professionals adhered to public responsibilities, they could set their standards and rules. The ethical standards and rules set the highest degree of professional moral merits, promoting self-regulation and public responsibility.

professionalized and scientific knowledge	professionalized without scientific knowledge
not professionalized and no scientific knowledge	scientific knowledge without being professionalized

Table 1: The ideal types of occupations

The main concepts of NPM originated from the new institutional economics and the theories of business-type managerialism in the late

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[84] Andrew Abbott, "Varieties of Ignorance," *The American Sociologist* 41, no. 2, (2010): 174–75; Pierre Bourdieu and Loïc J. D. Wacquant, *An Invitation to Reflexive Sociology* (Cambridge: Polity Press, 2013), 242.

[85] Brante, "Professions," 3.

[86] Adil E. Shamoo and David B. Resnik, *Responsible Conduct of Research* (New York: Oxford University Press, 2015), 8–9.

[87] Steven Shapin, *The Scientific Life: A Moral History of a Late Modern Vocation* (Chicago: University of Chicago Press, 2008), 22; Andrew Abbott, *The System of Professions: An Essay on the Division of Expert Labor* (Chicago: University of Chicago Press, 1988), 168; Eliot Freidson, *Professionalism the Third Logic* (New York: Wiley, 2013), 72–73.

[88] Desmond, "Professionalism," 1288.

1970s and the 1980s.[89] The approach comprised a set of influential beliefs for implementing public sector reform.[90] In this period, NPM research tackled declining public service standards.[91] Therefore, the main topics dealt with the effects of social change on public administration, rational choice, and implementation of private sector management practices in the public sector.[92] Christopher Hood wrote the most cited article dedicated to NPM, entitled "A Public Management for All Seasons?"[93] He considered NPM a consequence of four trends in public administration. The trends are summarized as follows: efforts to slow down or reverse public spending and staffing, emphasis on quasi-privatization and privatization, expansion of automatization via information technologies, and intensification of the international agenda focused on the exchange of ideas devoted to public management, policy design, and decision styles.

Ongoing debates evaluated the emergence and outcomes of NPM. Some authors admitted that NPM influenced the reform schema of public management systems in some countries and provided various reform implementations.[94] Furthermore, NPM led to increased efficiency in some areas of health and education.[95] On the other hand, others, such as Cordella and Iannacci and de Vries, considered the NPM research program obsolete.[96] Even though NPM led to a more complex framework, the inability to solve societal problems remained its major disadvantage.[97] The roots of the limitations lay in NPM's emphasis on industrialization, professionalization, and social life technicalization. The authors marked the trends as typical for the private sector. In the public sphere, these tendencies eroded citizens' autonomous competencies to cope with their problems and weakened local communities' cohesion.

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[89] Oliver E. Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization* (New York: The Free Press, 1975), 1; Judith A. Merkle, *Management and Ideology the Legacy of The International Scientific Management Movement* (Berkeley: University of California Press, 1980).

[90] George H. Frederickson, *New Public Administration* (Tuscaloosa: University of Alabama Press, 1980), 4–7.

[91] Peter Wilenski, "Social Change as a Source of Competing Values in Public Administration," *Australian Journal of Public Administration* 47, no. 3 (1988): 214–15.

[92] Kenneth J. Arrow, *Collected Papers of Kenneth J. Arrow* (Cambridge: Belknap Press, 1984), 47–49; Sandra Dawson and Charlotte Dargie, "New Public Management," *Public Management: An International Journal of Research and Theory* 1, no. 4 (1999): 460.

[93] Hood, "Public Management," 3.

[94] Lode De Waele, Liselore Berghman, and Paul Matthyssens, "Defining Hybridity and Hybrid Contingencies in Public Organizations: An Alternative Conceptual Model," in *Contingency, Behavioural and Evolutionary Perspectives on Public and Nonprofit Governance*, vol. 4, eds. Luca Gnan, Alessandro Hinna, and Fabio Monteduro (Bingley: Emerald, 2015), 118.

[95] Steven Van der Walle and Gerhard Hammerschmid, "The Impact of the New Public Management: Challenges for Coordination and Cohesion in European Public Sectors," *Halduskultuur – Administrative Culture* 12 (2011): 200–202.

[96] Antonio Cordella and Federico Iannacci, "Information Systems in the Public Sector: The e-Government Enactment Framework," *The Journal of Strategic Information Systems* 19, no. 1

Regarding the criticism of NPM and the emergence of requirements to organize work tasks in complex and diverse networks, public managers and administrators demanded a new theoretical alternative.[98] Consequently, researchers tried to overcome these new practical challenges with several innovations, but they have not yet resulted in a coherent approach. Additionally, there is no consensus in the literature about a single term for NPM reform, and the need to study NPM concept development has been expressed.[99] Various terms were used to label the outputs of the following research, including new public governance,[100] public value management,[101] new public service,[102] whole of government,[103] and post–new public management.[104]

(2010): 53–54; Jouke de Vries, "Is New Public Management Really Dead?," *OECD Journal on Budgeting* 10, no. 1 (2010): 88–89.

[97] Patrick Dunleavy et al., "New Public Management Is Dead – Long Live Digital-Era Governance," *Journal of Public Administration Research and Theory* 16, no. 3 (2006): 467, 477.

[98] Gerry Stoker, "Public Value Management: A New Narrative for Networked Governance?," *The American Review of Public Administration* 36, no. 1 (2006): 41–42.

[99] Shaun Goldfinch and Joe Wallis, "Two Myths Of Convergence in Public Management Reform," *Public Administration* 88, no. 4 (2010): 1100; Lode and Paul, "Defining," 113–54.; John M. Bryson, Barbara C. Crosby, and Laura Bloomberg, "Public Value Governance: Moving Beyond Traditional Public Administration and the New Public Management," *Public Administration Review* 74, no. 4 (2014): 447; Ileana Steccolini, "Accounting and the Post-New Public Management: Re-Considering Publicness in Accounting Research," *Accounting, Auditing & Accountability Journal* 32, no. 1 (2018): 261.

[100] Stephen P. Osborne, "The New Public Governance?," *Public Management Review* 8, no. 3 (2006): 381–84.

[101] Stoker, "Public," 45–46.

[102] Janet V. Denhardt and Robert B. Denhardt, *The New Public Service: Serving, Not Steering* (London: Routledge, 2015), 42–45.

[103] Tom Christensen and Per Lægreid, "The Whole-of-Government Approach to Public Sector Reform," *Public Administration Review* 67, no. 6 (2007): 1059–66.

[104] Jong S. Jun, "The Limits of Post: New Public Management and Beyond," *Public Administration Review* 69, no. 1 (2009): 161–65; Goldfinch and Wallis, "Two," 1105–10; Tom Christensen and Per Lægreid, "Democracy and Administrative Policy: Contrasting Elements of New Public Management (NPM) and Post-NPM," *European Political Science Review* 3, no. 1 (2011): 132–37; Jose Luis Zafra-Gómez, Manuel Pedro Rodríguez Bolívar, and Laura Alcaide Muñoz, "Contrasting New Public Management (NPM) Versus Post-NPM Through Financial

Although the authors labeled the following research differently, they emphasized codes of conduct in the same way. Codes of conduct established position statements on essential values that underlie research, and defined the best research practices.[105] However, except for discussions on the definition of misconduct and its consequences on trust in science and research funding,[106] there is little academic literature addressing how codes of conduct and policy documents should be written, which implies that the crucial questions about scientists's values and responsibilities are still not solved. According to Desmond, a historical perspective should provide a clue for the relevant demarcation of non-professional and professional status.[107] In past decades, established professions in OECD countries have changed because of implementing NPM reforms.[108] The reforms responded to the inefficiency of the traditional welfare-state model, including irrationalities in the cost benefits of public services.

5. Systematic Literature Review

This paper conducted a systematic literature review to develop Cross' conception further.[109] Its core was the four-stage approach based on Charmaz' grounded theory, which combined two traditions: positivist and pragmatist.[110] The use of Desmond's conception to further enrich the concept of the epistemic community marked the review's scope.[111] The review proceeded

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Performance: A Cross-Sectional Analysis of Spanish Local Governments," *Administration & Society* 45, no. 6 (2012): 714–15.

[105] Desmond, "Professionalism," 1288–89.

[106] David B. Resnik et al., "Research Misconduct Definitions Adopted by U. S. Research Institutions," *Accountability in Research* 22, no. 1 (2015): 17–18; Håkan Salwén, "The Swedish Research Council's Definition of 'Scientific Misconduct': A Critique," *Science and Engineering Ethics* 21, no. 1 (2015): 117–18.

[107] Desmond, "Professionalism," 1291.

[108] Carvalho and Correia, "Editorial," 2.

[109] Joost F. Wolfswinkel, Elfi Furtmueller, and Celeste P. M. Wilderom, "Using Grounded Theory as a Method for Rigorously Reviewing Literature," *European Journal of Information Systems* 22, no. 1 (2013): 3; Robert Thornberg and Ciarán Dunne, "The Literature Review in Grounded Theory," in *The SAGE Handbook of Current Developments in Grounded Theory*, eds. Antony Bryant and Kathy Charmaz (London: SAGE, 2019), 217–18.

[110] Kathy Charmaz, *Constructing Grounded Theory* (London: SAGE, 2014), 9; Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine Pub. Co., 1967); Anselm L. Strauss and Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (London: SAGE, 1990).

[111] Cross, "Rethinking," 148–50; Desmond, "Professionalism," 1289–93.

in four steps. First, the years of the studies' publications (2013 and 2020) defined additional sampling criteria for determining the period 2013–2020 as the relevant time frame for the review.[112] Second, following the scope of published papers by Cross and Desmond, the reviewed research fields were social constructivism in IR, the sociology of professions, the philosophy of science, and NPM.[113] Third, the selection process of relevant texts occurred. The selection is based on the literature cited by Desmond for defining science as a professional occupation within the relevant time frame for review (2013–2020).[114]

The outputs included Freidson, Noordegraaf, and Carvalho and Correia.[115] This set of literature on professionalism preserved terminological continuity. Apart from that, the additional web search enriched the already existing set of literature. This research utilized the Google Books and Google Scholar web domains as the primary search databases. Following Desmond's study, the search terms "individual autonomy," "collective autonomy," and "service ideal" formed the elements for recognizing and implementing external professional control through NPM reform.[116] The search time range corresponded to the time frame of the selection process from 2013 to 2020. The reading of the titles, abstracts, and headings sorted the literature according to the elements of Desmond's model of professionalism.

Fourth, the analysis was carried out. It applied the grounded theory principles based on delineating categories to interpret meaning via coding.[117] The coding proceeded in three steps. First, following the results of the literature sorting, the initial coding identified textual phrases and expressed them in the form of concepts, including professional status,[118] rational discretion,[119] knowledge and autonomy relation,[120] collaborative decisions,[121] managerial autonomy,[122] and professional–client relationship.[123] Second, focused coding followed the open coding to examine the concepts more deeply.[124] The examination clarified the interpretations of professional status, rational discretion, and professional–client relationship.[125]

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[112] Wolfswinkel, Furtmueller, and Wilderom, "Using Grounded Theory," 45–55.

[113] Desmond's and Cross's conceptions are in contrast with pragmatism embraced by Haas and Haas because the pragmatism approach assumed researching hybrid facts deployed by institutions and policy makers. See Peter M. Hass and Ernst B. Haas, "Pragmatic Constructivism and the Study of International Institutions," *Millennium* 31, no. 3 (2002): 590.

[114] Desmond, "Professionalism," 1289–93.

[115] Freidson, *Professionalism*; Noordegraaf, "Hybrid," 187–206; Carvalho and Correia, "Editorial," 1–8.

[116] Desmond, "Professionalism," 1289–90.

[117] Uwe Flick, *Doing Grounded Theory* (London: SAGE, 2018); Bryant and Charmaz, *SAGE Handbook*, 32.

[118] Kevin T. Leicht, "The Professionalization of Management," in *The Routledge Companion to the Professions and Professionalism*, eds. Mike Dent et al. (London: Routledge, 2016), 206–17.

Third, theoretical coding ended the coding process.[126] It treated the concepts and clarified interpretations of existing theories as data and showed the general relationships between them. The theoretical coding integrated and structured its results deductively.[127] That is, the concepts and the forms of interpretations proceeded from generalizations, including a professional,[128] an autonomous individual, professional competence,[129] collaborative decisions,[130] and professional–client relationship,[131] to particulars. Fourth, a comparative analysis followed the coding process to refine the concepts and categories.[132] Fifth, this paper presented the final results. The presentational logic corresponded to Desmond's model. Thus, they were structured by the individual, collective autonomy, and service ideals.

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[119] Antony Evans, *Professional Discretion in Welfare Services: Beyond Street-Level Bureaucracy* (London: Routledge, 2016).

[120] Nabi Bux Jumani and Samina Malik, "Promoting Teachers's Leadership Through Autonomy and Accountability," in *Teacher Empowerment Toward Professional Development and Practices*, eds. Ismail H. Amzat and Nena P. Valdez (Singapore: Springer, 2017), 21–41.

[121] Retha Visagie Soné Beyers and J. S. Wessels, "Informed Consent in Africa – Integrating Individual and Collective Autonomy," in *Social Science Research Ethics in Africa*, ed. Nico Nortjé (Cham: Springer, 2019), 165–79.

[122] Stephen Ackroyd, "Sociological and Organisational Theories of Professions and Professionalism," in *The Routledge Companion to the Professions and Professionalism*, eds. Mike Dent et al. (London: Routledge, 2016), 33–48.

[123] Yvonne de Grandbois, *Service Science and the Information Professional* (Waltham: Chandos Publishing, 2016).

[124] Charmaz, *Constructing*, 116, 140; Uwe Flick, *Doing*, 71.

[125] Leicht, "Professionalization," 206–17.

[126] Charmaz, *Constructing*, 150, 151.

[127] Klaus Krippendorff, *Content Analysis: An Introduction to Its Methodology* (Los Angeles: SAGE, 2019), 43–44.

[128] Teresa Carvalho and Sara Diogo, "Exploring the Relationship between Institutional and Professional Autonomy: A Comparative Study between Portugal and Finland," *Journal of Higher Education Policy and Management* 40, no. 1 (2018): 18–33.

[129] Eric B. Ferreira et al., "Systematization of Nursing Care in the Perspective of Professional Autonomy," *Rev Rene* 17, no. 1 (2016): 86–92.

[130] Beyers and Wessels, "Informed," 165–79.

[131] Grandbois, *Service*.

[132] Wolfswinkel, "Using Grounded Theory," 181–82.

6. The Results of the Literature Review

In the context of the sociology of professions and NPM, the term “professional”[133] encompasses personal qualities that ensure a work task is performed adequately and appropriately. A professional is an individual who earns a living from a knowledge-based activity. Knowledge is the crucial element for distinguishing professionals from other workers.[134] Its linkage to theories and complex intellectual ideas improves its professional status and prestige.[135] Professional status and prestige are derived from the relationship between occupational tasks and societal values, and dominate labor division in the relevant field of work.

Eliot Freidson provides a consensual definition for the ideal type of professional occupation from the sociology of professions perspective.[136] His definition is composed of five occupationally controlled elements. They cover the recognized body of knowledge and skills based on abstract concepts and theories, the division of labor, a controlled labor market requiring credentials for career mobility, a training program that produces those credentials, and an ideology that justifies transcendent values beyond economic gain. Desmond compresses these five elements into autonomy and service ideals.[137]

6.1 Autonomy

Autonomy constitutes an essential element of achieving professional status and refers to being independent of external regulations or constraints.[138] Therefore, an autonomous individual discerns rationally and maintains control over her or his actions.[139] The discretions follow the scope of practice and arise from the need to turn broad goals into practical policy. Moreover, autonomy stands outside the balance and responsibility controlled by professionals. Therefore, individuals must demonstrate and utilize knowledge to provide quality service, which also relates to innovative habits.[140]

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[133] Sølvi Mausethagen and Jens-Christian Smeby, “Contemporary Education Policy and Teacher Professionalism,” in *The Routledge Companion to the Professions and Professionalism*, eds. Mike Dent et al. (London: Routledge, 2016), 230–31.

[134] Ferreira et al., “Systematization,” 90; Carvalho and Diogo, “Exploring,” 26.

[135] Leicht, “Professionalization,” 189.

[136] Freidson, *Professionalism*, 180.

[137] Desmond, “Professionalism,” 1291.

[138] Carvalho and Diogo, “Exploring,” 26; Beyers and Wessels, “Informed,” 169.

[139] Anne Marie H. Bularzik, Susan Tullai-Mcguinness, and Christina Leibold Sieloff, “Nurse’s Perceptions of Their Group Goal Attainment Capability and Professional Autonomy: A Pilot Study,” *Journal of Nursing Management* 21, no. 3 (2013): 589; Evans, *Professional*, 3.

The privilege of exercising rational discretions means that an autonomous individual decides how to use limited resources to complete a task and takes personal interest and consequences into consideration.[141] It implies that no one above the professional must sanction or approve the course of action she or he has chosen to take.[142] Thus, an individual professional strives to maintain her or his exclusive control over the selected action.[143] Exclusive control over actions implies competition over professional and societal power, legitimacy and jurisdiction of field expertise.[144] This autonomy exists on both individual level and group levels.

6.2 Individual Autonomy

On an individual level, autonomy assumes the application of theoretical knowledge to empirical examples via individual discretion.[145] The individual autonomy corresponds to Cross's first variable for recognizing an epistemic community operating through selection and training.[146] Selection, training, and promotion provide insight into a profession and largely determine its status.[147] Gaining and promoting autonomy in a highly competitive process confers a high level of expertise. To do that, professionals must make decisions based on theories and complex intellectual ideas, skills, and attitudes.[148] Only by demonstrating professional competence and ethics will they practice the profession independently.[149] The high level of expertise represents their chance to discern independently. Discretion relates to a suitable strategy for selecting and using theories and ideas to complete the work.[150] Therefore, individual professionals may learn and use innovative habits.[151]

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[140] Ferreira et al., "Systematization," 86.

[141] Gérard Reach, "Patient Autonomy in Chronic Care: Solving a Paradox," *Patient Preference and Adherence* 8 (2013): 16.

[142] Bularzik et al., "Nurse's Perceptions," 589.

[143] Reach, "Patient," 16; Beyers and Wessels, "Informed," 169.

[144] Synnöve Karvinen-Niinikoski et al., "Professional Supervision and Professional Autonomy," *Aotearoa New Zealand Social Work* 31, no. 3 (2017): 89.

[145] Desmond, "Professionalism," 1291.

[146] Cross, "Rethinking," 150.

[147] Bularzik et al., "Nurse's Perceptions," 589.

[148] Noordegraaf, "Hybrid," 191.

[149] Ferreira et al., "Systematization," 90.

Even though individual autonomy depends on individual discretion, it does not imply absolute freedom. Indeed, a person must respect authoritative rules and instructions.[152] So individual professionals rather give and obey commands themselves. Neither their own will nor their organization's justifies giving commands or exalting values beyond the reach of legitimate and professional activity.[153] When the individual professional employs independent discretion, they usually follow historical tradition and previous professional experiences.[154] Hence, the situations and demand from individual professionals to be more alert and conscious of the work task constantly challenges an individual's autonomy. Moreover, professionals must conduct self-evaluations and assessments to improve their own practices.[155] Thus, the individual's autonomy can be enjoyed only when the primary organization limits its control over individual professionals and shows strong trust in them.

6.3 Collective Autonomy

On a group level, collective autonomy specifies the relation between individual professionals and their community. The individual should make her or his individual discretion in accordance with decision a collective professional governing body on relevant tasks and activities.[156] The collective autonomy covers Cross's second variable for recognizing an epistemic community.[157] Collective autonomy is attributed to the nature of interaction among individuals. Face-to-face meetings most effectively reinforce shared professional norms, including protocol and procedure. The interaction lies in sharing knowledge and practical experiences with other individuals. Professionals obtain collective autonomy to make decisions related to designing their instructional strategies, developing new ideas and concepts based on others' ideas.[158]

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[150] David Warfield Brown, *America's Culture of Professionalism Past, Present, and Prospects* (Basingstoke: Palgrave Macmillan, 2014), 16; Jumani and Malik, "Promoting," 21–41.

[151] Ferreira et al., "Systematization," 90.

[152] Jumani and Malik, "Promoting," 21–41.

[153] Brown, *America's Culture*, 16.

[154] Ferreira et al., "Systematization," 90.

[155] Jumani and Malik, "Promoting," 34.

[156] Desmond, "Professionalism," 1291.

[157] Cross, "Rethinking," 150.

Collective autonomy gives professionals the capacity to act on shared beliefs. Furthermore, it encourages these individuals to organize, create professional practices, and justify professional authority based on cooperation and collegiality.[159] Collective autonomy also serves as an important communication process for preserving consistency among other professionals in using discretion independently.[160] In addition, knowledge sharing on a group level strengthens professionals' autonomy.[161]

Moreover, collective autonomy encompasses managerial autonomy.[162] This implies the necessity of collective autonomy in an organization where individual professionals may have to follow strict organizational rules and principles. However, the body of knowledge is strongly regulatory of conduct, being governed by the qualified membership. The elements of qualified membership allow effective occupational closure. Another key feature is that the principal providers of services own and control the organization delivering these services.[163] The combination of individual and collective autonomy reinforces trust in individual professionals.[164]

6.4 Service Ideal

According to Desmond's professionalism, service provision constitutes its second element.[165] It should secure using benefits of autonomy on individual and collective levels for making professional decisions that follow universally valid values, not self-serving purposes of individual professionals or a collective professional governing body. Cross's epistemic community model supposes maintaining quality in service provision by epistemic communities via common culture. The common culture secures the epistemic community's cohesion. and helps to maintain quality in service provision by epistemic communities.[166] A service is defined as a set of ideas and concepts representing an intangible transaction between individual professionals and clients.[167] It enters an act via a deliberate choice between them and forms the professional-client relationship. The relationship is a personal and fiduciary one. As both must be involved in the transaction, it implies the attribute of inseparability. An assumption for its existence is when the client entrusts an individual professional with a discretionary power over a vital interest.

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[158] Beyers and Wessels, "Informed," 169.

[159] Jumani and Malik, "Promoting," 34.

[160] Lina Rihatul Hima et al., "Changing in Mathematical Identity of Elementary School Students Through Group Learning Activities," *International Electronic Journal of Elementary Education* 11, no. 5 (2019): 461.

[161] Yang-Hsueh Chen and Pin-Ju Chen, "MOOC Study Group: Facilitation Strategies, Influential Factors, and Student Perceived Gains," *Computers & Education* 86 (2015): 56.

[162] Ackroyd, "Sociological," 21–22.

[163] Jumani and Malik, "Promoting," 34.

[164] Sølvi and Smeby, "Contemporary," 231.

[165] Desmond, "Professionalism," 1291.

An individual professional should protect the client's interest. Therefore, the client's interest typically relies on the professional's reputation, knowledge, and skills to help predict quality and make service choices.[168] An asymmetry of power characterizes the relationship between an individual professional and a client.[169] The reliance on individual professional discretionary choices has potential for client vulnerability, so service provision occurs under relatively anonymous conditions. This anonymity also supports the professional's expertise. Therefore, the intangible transaction is mutually beneficial based on reciprocity.[170]

The exchange of knowledge is not limited to the material dimension but includes a normative framework of solidarity and affiliation.[171] It generates a special kind of reliance between two actors, in that it entails a moral orientation in which others are held accountable to act according to moral principles. The transaction is neither primordial nor forced to be permanent. The exchange of knowledge between client and professional is voluntary and potentially limited in time, and it does not need a formal or non-formal organization.[172]

7. Conclusion

The concept of the epistemic community is a meso-level framework in IR for analyzing and interpreting the interactions between experts and decision-

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[166] Cross, "Rethinking," 148–50.

[167] Yvonne de Grandbois, *Service Science and the Information Professional* (Waltham: Chandos Publishing, 2016).

[168] Kelly, *Professional*, 22; Grandbois, *Service*, 3.

[169] Terrence M. Kelly, *Professional Ethics: A Trust-Based Approach* (New York: Lexington Books, 2018), 23–24.

[170] Dieter Neubert, "Elements of Socio-Cultural Positioning in Africa," in *Inequality, Socio-Cultural Differentiation and Social Structures in Africa*, ed. Dieter Neubert (Cham: Palgrave Macmillan, 2019), 159.

[171] Kelly, *Professional*, 24.

[172] Neubert, "Elements," 160.

-makers. Since its introduction in 1992, scholars have tested it in various domains, mainly in the context of transnational global governance. The literature on epistemic communities has not dealt with the bureaucratic and market aspects of a knowledge-based activity. Therefore, this paper focused on a novel path of investigating research integrity to strengthen the explanatory power of the latest comprehensive reconceptualization of the epistemic community framework in IR provided by Cross. The enrichment is based on using the Desmond's conception of professionalism. His position highlighted aspects of individual discretion in science and stemmed from prevalent perception in OECD countries treating science as a knowledge-based occupation.

The results of the systematic literature review confirmed Desmond's conception of a profession's compatibility with Cross's epistemic community framework. First, the analysis clarified the role of an individual earning a living from a knowledge-based activity. This finding served as the central point for classifying individuals in science as professionals and distinguishing them from other workers. Second, the autonomy and service ideal operationalized professional status achievement, so these elements underlined the professional nature of scientific research. On the individual level, autonomy gained relevance when applying abstract theoretical knowledge to discrete particular complex situations.

On the group level, collective autonomy gained relevance for cases when individual professionals share knowledge and practical experiences. In terms of collective professional autonomy, a governing knowledge-based body imposes strict organizational rules and principles on individual professionals. Second, the review incorporates the ideal service concept into scientific research. Service provision is associated with the professional-client relationship. It implies that a professional should protect clients and prioritize moral principles instead of acting for monetary gain.

Also, the results have several implications for further research on epistemic communities in IR. Considering criteria of autonomy and service ideal for evaluating the nature of policy actors in international arenas might contribute to a better understanding of interactions between expertise and decision-making processes. Regarding the relevance of expert inputs for ameliorating risk and uncertainty in international politics, clarifying internal conditions for gaining professional autonomy in an epistemic community might precisely evaluate the dynamics of political negotiations in future studies.[173] It would be interesting to consider access to information and technical competence in interpreting outputs that increase coercive effects in negotiations.[174] The elucidation could include Bourdieusian approaches to ideal sources of professional authority in the context of global governance. The approach contextualizes professional authority as a dynamic process searching for recognition in a social space in which a professional evaluates her or his position to others.[175] The conception of professional authority opens a window for evaluating the organizational and managerial aspects of research integrity for inquiry on codes of conduct and policy documents drawn by members of an epistemic community. They should pay particular attention to the specification of the link between individual and collective discretion.

Furthermore, researching the dilemma between discretion and career advancement provides perspective for capturing a factor of scientific negligence conducting to the decline of experts' legitimacy in international policy arenas.[176] The level of collective autonomy indicates that future research should consider the organizational environment in various platforms gathering experts and international institutions as well.[177] The investigation of the link between autonomy and service ideal, including its affinity with broader social values and principles, can help clarify understanding of public confidence in expertise in countries worldwide. At last, focusing on the compatibility of service ideals written in internal codes of conduct has the potential to clarify a coalition-building among epistemic communities with different expert backgrounds.

Acknowledgements:

I want to thank Prof. Mai'a K. Davis Cross, College of Social Sciences and Humanities at Northeastern University, and Prof. Peter M. Haas, College of Social & Behavioral Sciences at University of Massachusetts Amherst, for inviting me as a visiting scholar in 2020. My thanks also belong to Associate

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Professor Štěpánka Zemanová and Associate Professor Radka Druláková, Faculty of International Relations, Prague University of Economics and Business, and Tomáš W. Pavlíček Ph.D., The Masaryk Institute and Archive of the Czech Academy of Sciences, for their valuable insights during the completion of the paper. Regarding language proofreading, I want to thank Paige N. Welch, BA, Northeastern University, and Ing. Matthew D. Huntley, BSc, Prague University of Economics and Business. I also acknowledge the anonymous referees for their constructive and precise feedback.

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