Participating in Polycentric Climate Governance: The Partnership Choices of Latin American NGOs

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Abstract

We build on research on polycentric climate governance and the strategic behavior of nongovernmental organizations (NGOs) to assess the factors that determine the partnership choices of climate NGOs. More precisely, we are interested in how these factors relate to the type of governance actors and the governance scale at which their partners operate. We concentrate on 195 NGOs based in twenty-one Latin American countries. Our hypotheses postulate that the perceived benefits are shaped by both country-level factors and NGO-specific factors. Our network analysis reveals that the NGOs have formed networks with different types of organizations, which are located at different scales of the polycentric governance system. The findings of our regression models show that these factors especially explain the governance scale at which the NGOs' partners operate. The explanatory power of the models is lower for the types of actors with which the NGOs form partnerships, indicating the need for further theorizing.

Keywords: Latin America, networks, NGOs, polycentric climate governance, strategic action

In this study, we draw from two literatures and combine them: polycentric climate governance (PCG), on one side, and the strategic behavior of (climate) nongovernmental organizations (NGOs), on the other. We concentrate on NGOs based in the Global South, which—like other governance actors participating in PCG—have received scant academic attention (Sapiains et al. 2021). We contend that climate NGOs in Latin America, as one region representing the Global South, form networks with organizations whose similarity or difference to them makes them worthwhile partners. We advance our understanding of the engagement of NGOs based in the Global South by augmenting theories from the literature through interviews with NGO representatives and through a test of the resulting hypotheses using an original data set on the NGOs' partners.

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Polycentric governance, as rooted in the analysis of local governance by Ostrom et al. (1961) and Ostrom (1991), as well as in Ostrom's (1990) study on the governance of common goods, has been frequently applied to explain responses to climate change. One of the reasons for the prominence of this framework is that it shifts the focus away from international climate cooperation, which has suffered several setbacks, and onto how policies adopted by policymakers at the national and subnational levels can contribute to the goal of reducing greenhouse gas emissions (Cole 2015; Jordan et al. 2015; Jordan et al. 2018). The rationale underpinning PCG is that small- to medium-scale units are better positioned to commit themselves to reducing emissions and can trust that others commit themselves too, as they are linked to each other "through diverse information networks" (Ostrom 2010, 556).

Despite the wealth of insights offered by the literature on PCG, important knowledge gaps remain (see Tobin et al. 2024). For instance, Morrison et al. (2019) state that the role of power in PCG is still little understood. The existence of such a "black box of power," as the authors call it, is surprising since the conceptual literature contends that PCG could be dominated by powerful actors (Jordan et al. 2018). The importance of power relationships is also stated by Okereke (2018), who cautions that the existence of PCG arrangements could result in a more inclusive and equitable participation of actors but also in the opposite; that is, it could exacerbate existing inequalities. Empirically, the study by Kaiser (2022), for example, demonstrates the existence of North–South inequities in the participation in PCG.

Tackling climate change in an effective and equitable manner will require PCG, which in turn requires NGO participation. We conceive of NGOs as nonprofit, voluntary citizens' groups that are organized on local, state, national, or transnational levels and that perform a variety of tasks and functions (Davies 2020). Pertinent research has shown that NGOs are willing to participate in different institutional venues to realize their organizational goals (Murphy and Kellow 2013), and it has identified various factors for explaining their participation patterns in global governance (Bäckstrand et al. 2017; Charnovitz 2006; Hanegraaff 2015; Keck and Sikkink 1998; Mitchell and Schmitz 2014; Rodionov et al. 2021; Stroup 2020). However, these findings are predominantly based on empirical inquiries focusing on governance actors in the Global North.

In fact, under certain conditions, NGOs from the Global South may not be willing to engage in PCG because this requires investment in information networks, and developing these entails costs that may exceed the expected benefits. This study identifies factors that are important in NGOs' assessments of the costs of choosing partnerships with which to facilitate their participation in PCG.

A prolific literature exists on transnational advocacy networks, which builds on the influential work by Keck and Sikkink (1998), who elaborate on why and how such networks emerge, how they work, and when they are effective. In line with this literature, we ask which contextual characteristics and

which attributes of the NGOs themselves affect the networks they have formed with other PCG actors.

To address these questions, we investigate 195 climate-focused NGOs based in twenty-one Latin American countries and their networks. Latin America is an ideal region for an initial test of our hypotheses because of the relative similarity of the countries' political systems (which are almost all presidential systems; see also Tosun et al. 2023) and the similar political opportunity structures that arise from them (see McAdam et al. 1996; Özler 2013; Tarrow 1988).

The rest of this article is organized as follows. First, we position this study in the literature. Subsequently, we develop our theoretical argument and formulate hypotheses, which includes drawing on interview data for twenty-two Latin American NGOs. Then we proceed to discuss our research design and how we collected our data. We continue by presenting and discussing the results of our analyses before finally reflecting on our findings' implications for PCG.

Positioning This Study in the Literature

Climate change requires collaboration at the local, state, national, and international/transnational levels (Lubell 2015). As a result, decision-making venues—"centers" in the PCG terminology—have emerged at the various "scales" where different types of governance actors collaborate (Cole 2015; Jordan et al. 2015; Jordan et al. 2018; Kaiser 2022). However, it is not only the existence of multiple centers that characterizes PCG but also the fact that these centers are formally independent but still interlinked, which differentiates a polycentric system from a "fragmented" one, for example (Kim 2020). The relationships between the different centers produce stable patterns of coordinated behavior (Aligica and Tarko 2012; Dorsch and Flachsland 2017; Heinen et al. 2022; Ostrom 2010; Ostrom et al. 1961).

Consequently, an important element of PCG are the networks between the different decision-making centers (Kim 2019, 2020; Ostrom 2010). Network structures define the extent of information and resource sharing as well as the levels of coordination, cooperation, and collaboration in networks (Lubell et al. 2014), which is why they have received considerable attention in pertinent research. For example, Pattberg et al. (2018) offer a comprehensive mapping of the interlinkages between a set of international and transnational, public, private, and hybrid institutions involved in PCG. The literature not only describes network structures but also treats them as a variable for explaining the effectiveness of governance regimes (Di Gregorio et al. 2019; Galaz et al. 2012; Lubell 2015).

To assess whether North–South inequities among actors exist and how the actors partake in climate governance, Kaiser (2022) has examined the spatial distribution of centers in PCG. To complement the insights Kaiser offers, and to contribute to the literature on PCG more generally, we propose to shift the

focus from the centers to the governance actors and how they partake in the PCG landscape.

After all, the decisions made in every center and the reactions to these from the other centers depend on the actors represented in them and their respective interests (Morrison et al. 2023). If the interests represented in PCG are skewed toward certain governance actors, this could lead to less effective or less equitable climate governance. For example, contending that public support for transnational governance is ultimately important for its effectiveness, Bernauer and Gampfer (2013) show that the popular legitimacy of a governance arrangement increases when civil society actors are included. Research on Latin America has shown that NGOs are willing to participate in governance arrangements addressing climate change and sustainability and that they strive to promote public trust in them through accountability and transparency (Fifka et al. 2016).

While research has demonstrated that NGOs participate in PCG, the question arises of *how* they facilitate their participation in the corresponding governance arrangements by forming networks with organizations. Maintaining networks generally entails costs (Lubell 2015), and these are of particular concern to Latin American NGOs given their lower endowment with human and financial *resources* than their counterparts in the Global North (Partelow et al. 2020). Therefore we contend that the NGOs face trade-offs in choosing how to participate in PCG with regard to the types of partners they collaborate with and the governance scale at which these partners are located. The existing literature has paid scant attention to how governance actors in the Global South balance these trade-offs. To develop nuanced hypotheses pertaining to this research gap, we therefore consider it necessary to complement our theoretical reflections with insights gained through interviews with NGO representatives.

From May to July 2023, we conducted semistandardized interviews via online communication platforms with twenty-two NGO representatives based in fourteen countries (see Table A1 in the Online Appendix for the list of NGOs and Table A2 for the guiding questions). This group forms part of the wider population of NGOs that are the basis for the subsequent analyses.

The Intercultural Center for the Study of Deserts and Oceans (CEDO), the Mexican Fund for the Conservation of Nature (FMCN), Northeast Pronature (Pronature), and We Reforest Mexico (Reforestamos) are NGOs based in Mexico. The Life Foundation (LV), the Project Global Village (PAG), and the Rural Business Development Foundation (FUNDER) are Honduran NGOs. Law, Environment, and Natural Resources and the Peruvian Society of Environmental Law (SPDA) are based in Peru. The Moses Bertoni Foundation and the Federation for the Self-Determination of Indigenous Peoples (FAPI) are both Paraguayan NGOs, while Sustainable Water (AS) and the Chiquitano Forest Conservation Foundation (FCBC) are Bolivian ones.

For the remaining countries, we interviewed only one NGO per country: the Natural Patagonia Foundation (NPF; Argentina), Wildlife Conservation Society (WCS; Brazil), the Deep Sea Foundation (Chile), the Malpelo and Other

Marine Ecosystems Foundation (Malpelo; Colombia), the Forever Costa Rica Association (Costa Rica), the Charles Darwin Foundation for the Galapagos Islands (Ecuador), SalvaNATURA (El Salvador), the Lachuá Lagoon Foundation (Guatemala), and Biomuseo (Panama).

Conceptual Framework and Hypotheses

We conceive of NGOs as strategic actors that base their choices on a set of opportunities and constraints (Keck and Sikkink 1998), which originate from two sources: first, from the contextual characteristics, and second, from the attributes of the organization itself (Hadden and Jasny 2019). There exist different ways of conceptualizing these two sources. Our conceptualization combines arguments made by scholars in the fields of both PCG and the strategic behavior of NGOs.

To demonstrate that these arguments also apply to climate NGOs based in the Global South or to modify them so that they apply, we rely on insights provided by interviews with NGO representatives. In line with Di Gregorio et al. (2019), we concentrate on two outcome variables: first, the types of organizations with which NGOs form networks (i.e., other NGOs, governmental, business, and academic/educational organizations), and second, the governance scale at which the NGOs' partner organizations are based (i.e., transnational, national, state, and local).

Our overall expectation is that similarity, that is, common characteristics, facilitates the establishment of networks since similarity creates trust, as postulated by the concept of homophily (Atouba and Shumate 2015; Gulati 1995; Rodionov et al. 2021). Trust is also a key element in PCG. Ostrom (2010, 556) argues that polycentric systems are effective in inducing units to reduce their carbon emissions because they trust that the other units will do so too. The interviews provide initial support that homophily plays an important role in the NGOs' partnership choices. The interviewees from several NGOs (i.e., FCBC, FMCN, FUNDER, LV, Malpelo, NPF, SPDA, and WCS) stated that they find it easier to collaborate with other NGOs and thus prefer having them as their partners.

However, more precisely, we presume that NGOs choose their partners by balancing their preference for similar organizations, that is, homophily, with the need for including different organizations in their networks so that they can navigate PCG. To partake in PCG effectively, NGOs need to partner with different types of governance actors as well as with governance actors that operate at different governance scales (Di Gregorio et al. 2019; Preiser and Woermann 2019; Tosun et al. 2023). Along these lines, the interviewees from CEDO, FMA, Malpelo, NPF, PAG, and Pronature said that they are aware of the need to collaborate with different types of organizations so that they can fulfill their tasks and functions.

With regard to the importance of context for the strategic choices of NGOs, Salamon et al. (2017) have argued that distinct constellations of power relationships within countries result in cross-national variations in key dimensions of

civil society. More precisely, power relationships determine the opportunity structures for NGOs (Charnovitz 2006; Özler 2013), which we hypothesize to inform their partner selection.

Power relationships have many origins, including the degree to which power is centralized in a country (Di Gregorio et al. 2019; Tosun et al. 2023). In this regard, the interviewee from the Mexico-based FMCN explained that in multilevel systems, where power is exerted at multiple levels, climate issues entail the need to collaborate with partners across governance scales. The FCBC interviewee confirmed that Bolivia's multilevel system shapes the NGOs' strategic choices, which also includes the types of organizations with which they form alliances: "political changes at any level affect opportunities and the maintenance and achievement of purposes established in alliances."

H_{1a}: The types of organizations with which NGOs form networks depend on the degree to which decision-making is centralized in the country in which the NGOs are based.

H_{1b}: The governance scales at which the partner organizations operate depend on the degree to which decision-making is centralized in the country in which the NGOs are based.

The degree of centralization refers to the political system as a whole and affects all governance actors. Turning to NGOs more specifically, countries vary with regard to the extent to which policymakers consult civil society organizations. Numerous countries in the Global South, especially those with an autocratic past, are in the process of becoming more democratic. Depending on their progress toward democracy, the opportunities for NGOs to participate in consultation vary and are likely to determine their strategic choices for partnerships. In this regard, the interviewee from the Argentina-based NPF explained that they maintain their partnership with the federal environmental ministry because it listens to them. In contrast, the representative of the Mexico-based FMCN stated that access to the federal government is difficult.

Lacking access to the (federal) government can induce NGOs to strengthen their engagement with subnational governments, which aligns with the basic logic of forum shopping (Murphy and Kellow 2013). Likewise, NGOs in countries with limited access to public consultation could choose to form partnerships with organizations that stand a better chance of being consulted by the (federal) government (Di Gregorio et al. 2019). From this, we conject that country-specific differences in access to public consultation affect the NGOs' strategic partnership choices.

H_{2a}: The types of organizations with which NGOs form networks depend on the degree to which NGOs participate in public consultation in the country in which they are based.

H_{2b}: The governance scales at which the partner organizations operate depend on the degree to which NGOs participate in public consultation in the country in which they are based.

NGOs are not a uniform group of actors but instead have different orientations and fulfill different functions (Vakil 2018), which we hypothesize to shape the networks they form to participate in PCG. Some NGOs deliver services, others focus on providing education and research, while a third type is committed to policy advocacy (Davies 2020; Fifka et al. 2016). We postulate that NGOs with different orientations participate differently in PCG and form different types of partnerships because of their respective missions and their strategic considerations about how to achieve these (Mitchell and Schmitz 2014).

NGOs working on policy advocacy can be expected to have the highest likelihood to partner with governmental organizations, as this would grant them better access to policymaking, as supported by the interviewees from Bolivian NGO AS and the Paraguay-based FAPI. Similarly, we expect advocacy-oriented NGOs to be more open to partnerships with business organizations so that they can benefit from their organizational strengths and their access to policymakers. The interviewee of the Mexico-based NGO Reforestamos provided support for this expectation, stating that "when we carry out public policy advocacy processes, it is better to go with more organizations."

Compared to the advocacy-oriented ones, NGOs specializing in education and research can be hypothesized to prefer education-related organizations given their narrow focus and the overarching preference for including similar organizations in networks. As concerns NGOs providing services, we expect them to partner with a wide range of actors as they tend to have different target groups, as indicated by the interviewee from FUNDER in Honduras.

Turning to governance scale, we hypothesize that education-focused NGOs typically focus more on the national and subnational levels, as they work primarily with schools and research institutes as suggested by Biomuseo in Panama. However, NGOs committed to policy advocacy and service provision are more likely to partner with national and transnational organizations, as stated by the representatives of the Peru-based SPDA.

H_{3a}: The types of organizations with which NGOs form networks depend on the NGOs' functions.

H_{3b}: The governance scales at which the partner organizations operate depend on the NGOs' functions.

Rodionov et al. (2021) contend that the literature on civil society has put forth two competing propositions about how global integration may affect local NGOs: one perspective argues that being global excludes being local, whereas the other sees them as mutually reinforcing.

Following the assumption that organizations tend to form partnerships with similar organizations, the governance scale at which NGOs operate would be an explanatory factor, and the NGOs would be hypothesized to choose partners according to the concept of geography-based homophily (Atouba and Shumate 2015). The representative of Biomuseo in Panama, an NGO rooted in local-level governance, suggested that this reasoning holds true.

Following the logic of PCG, the governance scale would also matter for the NGOs' partnership choices and result in the selection of partners located at different scales to benefit from the strategic options provided by cross-level interactions (Aligica and Tarko 2012; Jordan et al. 2015; Jordan et al. 2018; McGinnis and Ostrom 2012). The interviewee from WCS confirmed that it is indeed necessary to have partnerships across governance scales.

The governance scales at which NGOs are based could also affect the types of partners they choose. The mechanism underlying this hypothesis is that the funding varies between local, state, national, and transnational NGOs (Rodionov et al. 2021). The latter tend to be more affluent and therefore have the capacity to form more extensive and arguably more diverse networks.

H_{4a}: The types of organizations with which NGOs form networks depend on the governance scales at which the NGOs operate.

H_{4b}: The governance scales at which the partner organizations operate depend on the governance scales at which the NGOs operate.

Research Design and Operationalization of the Key Concepts

The empirical scope of this study comprises 195 NGOs based in twenty-one Latin American countries that work on climate issues and are affiliated with the *International Union for Conservation of Nature* (*IUCN*) and/or the Climate Action Network Latin America (CANLA).[1] We chose this population of NGOs since both the IUCN and CANLA represent decision-making centers in PCG and participate as organizations in other decision-making centers.

While CANLA is focused on the issue of climate change, the IUCN is committed to nature conservation and the sustainable use of natural resources. However, the IUCN works on climate change as one of its additional topics, much like many other NGOs that originally worked on environmental issues (see Partelow et al. 2020; Tosun and Levario Saad 2023). The population of NGOs underlying this analysis is characterized in more detail in Table A3 in the Online Appendix.

We relied on the information provided by the NGOs on their websites to collect the data for our outcome variables: the NGOs' networks in terms of organization types and the governance scales at which their partners operate. One author, together with four research assistants, extracted the data from the various websites and coded them. Another author checked the data to ensure that they were coded accurately and consistently.

We operationalized the organization type by coding all the organizations that the NGOs listed as their partners; that is, we considered their publicly visible partnerships. We then divided these organizations into four categories:

1. Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela.

other NGOs, governmental, business, and academic/educational organizations. The dominant classification in the literature differentiates between three groups only—NGOs, governmental organizations, and business organizations—but we chose to add academic/educational organizations as a fourth category because scientific knowledge plays an important role in climate governance, and numerous studies assessing the involvement of nonstate actors in PCG acknowledge the role of academic/educational organizations (e.g., Bäckstrand et al. 2017). We used four categories to code the governance scale at which a partner organization operates, differentiating between the transnational, national, state, and local scales (Di Gregorio et al. 2019).

To test our hypotheses, we created disaggregated count variables that capture the number of organization types and the number of governance scales at which the partners operate. The value distribution of a count variable is not normal, meaning the estimation must be based on a distribution that better fits the data structure. In the present case, the negative binomial distribution has a better fit, especially when combined with a logit distribution, since the data exhibit excess zeros and overdispersion; that is, the variance of the count variable exceeds its mean. Therefore we used zero-inflated negative binomial (ZINB) models to test our hypotheses.

We operationalized the first explanatory variable using the country-level scores from the Regional Authority Index (RAI), which measures the level of self-rule and shared rule exercised by subnational governments within their countries (Hooghe et al. 2016). The higher the RAI score is, the higher is the decision-making powers of the subnational governments. The latest data release contains data for 2018 and assigns Belize and Suriname the lowest RAI score (0), whereas Argentina (24.5) has the highest RAI score and therefore the highest level of decentralization, followed by Peru (22.1), Brazil (21.8), and Mexico (21.4).

We coded the second explanatory variable using data from the Bertelsmann Transformation Index (BTI) for public consultation, which gauges the extent to which the political leadership consults civil society actors in policymaking (Bertelsmann Stiftung 2024, 44). The highest score is 10 and indicates that consultation with civil society actors occurs on a regular basis, whereas 1 as the lowest score indicates that civil society actors are excluded from consultations. In our sample, Nicaragua has the lowest score (1) and Uruguay the highest (9). No data are available for this variable for Belize and Suriname, so we had to exclude five NGOs based in these two countries from the ZINB regressions.

We produced the third explanatory variable by assigning the NGOs to the authoritative classification in the literature, which divides their functions into advocacy, education/research, and service provision (Davies 2020). The fourth explanatory variable captures whether the NGO is based at the transnational, national, state, or local scale (Davies 2020; Di Gregorio et al. 2019; Vakil 2018). Following Hadden and Bush (2021), we coded an NGO as transnational

if it works in multiple countries. Table A4 in the Online Appendix provides the descriptive statistics of all explanatory variables.

For illustrative purposes, we carried out two additional, descriptive analyses. The first is social network analysis. The second is based on the computation of various Herfindahl–Hirschman Index (HHI) scores. The HHI ranges from 0 to 1 and is usually computed to capture the concentration of a market, but it can also be applied to other phenomena. Here the HHI indicates the degree of concentration in relation to the types of partner organizations and the governance scale at which the partner organizations operate. The higher the HHI score is, the higher is the degree of concentration; that is to say, a certain type of partner organization dominates. The score is calculated by squaring the share of each partner organization type and then adding the resulting numbers.

Empirical Findings

As Table A5 in the Online Appendix shows, the IUCN- and CANLA-affiliated NGOs have developed networks with organizations of different types and with organizations located at different scales of the governance systems. The total number of relationships ("ties") between the NGOs and their partners is 2,263. Of these, 1,003 (44%) are ties with other NGOs, whereas governmental organizations account for 518 (23%) and business for 502 (22%). The smallest numbers of ties are with organizations based in academia and education, which total 239 (11%). The partner organizations are located both at higher and lower governance scales than the NGOs themselves (see Figure A6 in the Online Appendix), which aligns with the notion of cross-scale interactions postulated by PCG.

Figures A7–A11 in the Online Appendix present the HHI scores, which we calculated in various ways. Figures A7 and A8 show that the overall HHI score is slightly higher for the partner types (M = .61) than for the governance scales at which the partners operate (M = .57), indicating more diversity with regard to the latter. However, for both outcome variables, the partnership structure is concentrated, which means that one or two types of partner organizations or governance levels dominate the NGOs' networks when we aggregate this information at the country level. For a more nuanced presentation, the HHI scores are broken down by country (Figure A9), NGO function (Figure A10), and the level at which the NGOs operate (Figure A11). All figures indicate that there is variation at both the country and NGO levels, which supports our decision to consider explanatory factors in relation to both sources.

While the HHI scores are useful for characterizing the level of concentration of the NGOs' networks, they tell us little about which organization types dominate in them, nor do they convey information on the overall composition of the networks. This information is captured by the count variables, which are presented in Figures 1 and 2. Consistent with the impression obtained from the network analysis (see Table A5 and Figure A6 in the Online Appendix), Figure 1

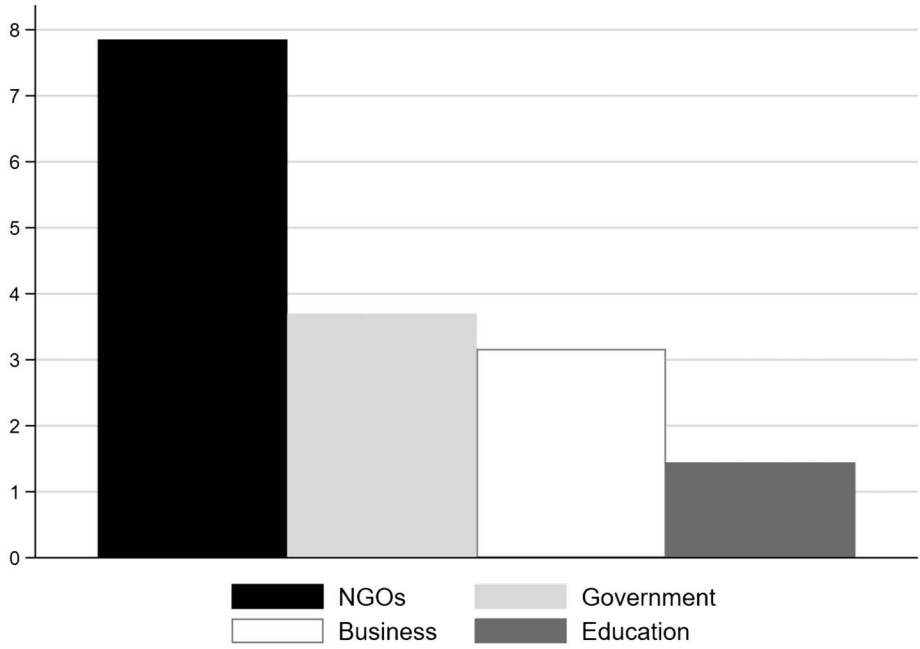

Figure 1
Average Number of Partner Organizations by Type

From authors' own elaboration.

shows that NGOs form partnerships mostly with other NGOs, followed by governmental organizations, business organizations, and then organizations based in the fields of academia and education, which lends initial and indicative support to the importance of homophily when forming networks.

Figure 2 complements this picture by showing that transnationally operating organizations dominate among the NGOs' partners, followed by national and then local ones. The smallest number of partner organizations operate at the state level. This observation is interesting because it underscores the importance of the transnational scale in PCG and shows that climate NGOs do not focus on the transnational level exclusively but select their partners carefully so that they can benefit from the existence of multiple governance scales.

Table 1 reports the ZINB models for the first outcome variable, which pertains to hypotheses H_{1a} to H_{4a}. Starting with H_{1a}, the findings reveal that none of the coefficients of the covariate capturing regional authority reach conventional levels of statistical significance. Therefore we can state that regional authority does not matter for the NGOs' partnership choices to the degree hypothesized, and thus we can reject H_{1a}.

In model 1, the coefficient of the covariate assessing the degree to which NGOs participate in consultation produces a positive and significant coefficient.

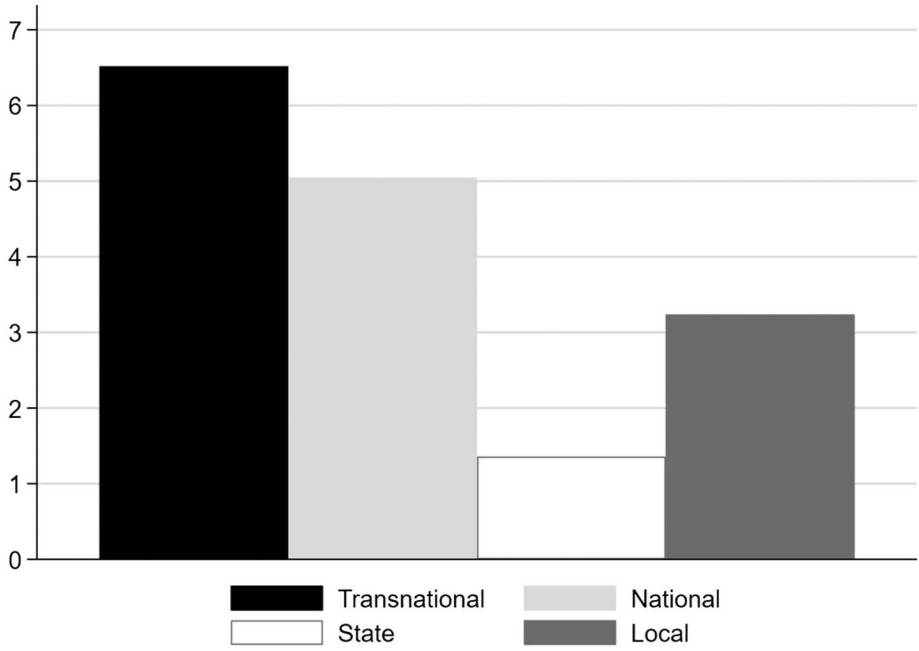

Figure 2
Average Number of Partner Organizations by Scale

From authors' own elaboration.

This finding suggests that the expected number of NGO partners that are also NGOs is higher when their participation in public consultation is higher, ceteris paribus. However, the coefficient is significant in one model, and only at the 10 percent level, which induces us to interpret the support for H_{2a} as weak.

The same holds true for the testing of H_{3a}. Model 4 reveals that compared to advocacy-oriented NGOs, those oriented toward education and research have a greater expected number of partnerships with education and research organizations, all else being equal. Similar to the previous hypothesis, the overall support for H_{3a} is weak, as the coefficient is significant in just one model, and only at the 10 percent level.

We can draw the same conclusion for hypothesis H_{4a}. Only model 4 supports it, for it shows that compared to transnational NGOs, those operating at the state level have a reduced expected number of partnerships with education and research organizations.

In conclusion, we can reject H_{1a}, while for H_{2a}–H_{4a}, we have weak support, which suggests that the main tenets of our conceptual framework are accurate but require further refinement.

Turning to hypotheses H_{1b}–H_{4b}, the empirical picture changes. Starting with H_{1b}, as model 7 in Table 2 reveals, NGOs based in countries with higher

Table 1
ZINB Regression for Testing H_{1a}–H_{4a}

	Model 1: NGOs		*Model 2: Government*		*Model 3: Business*		*Model 4: Education*	
	Coeff.	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*
				Count Part				
RAI	0.01	0.01	−0.00	0.01	−0.00	0.01	0.02	0.01
Consultation	0.04*	0.03	−0.03	0.04	0.03	0.05	0.00	0.06
Functions								
Advocacy	Base category							
Education	−0.11	0.11	−0.12	0.17	−0.26	0.23	0.42*	0.23
Service	0.00	0.11	0.06	0.13	−0.21	0.19	0.10	0.24
Scales								
Transnational	Base category							
National	−0.17	0.11	0.02	0.17	0.18	0.25	−0.26	0.24
State	0.13	0.17	−0.28	0.31	0.30	0.43	−0.47*	0.29
Local	−0.04	0.17	0.13	0.22	0.06	0.42	−0.41	0.31
Partners	0.04***	0.00	0.04***	0.00	0.04***	0.01	0.03***	0.01
Constant	0.90***	0.20	0.66**	0.28	−0.01	0.37	−0.19	0.47

Table 1
(Continued)

	Model 1: NGOs		*Model 2: Government*		*Model 3: Business*		*Model 4: Education*	
	Coeff.	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*
				Binary Part				
Partners	−13.10***	0.80	−2.74*	1.51	−0.33***	0.11	−0.36***	0.11
Constant	11.03***	1.53	7.12***	2.75	1.27**	0.51	2.71***	0.45
ln(alpha)	−1.58***	0.17	−1.19***	0.29	−0.62***	0.22	−1.28***	0.41
N	19		19		19		19	
n	190		190		190		190	
AIC	997.34		682.24		673.19		464.38	

Outcome variable is partner types. Robust standard errors. Alpha = negative binomial overdispersion parameter (here the natural logarithm of it). N = number of countries. n = number of NGOs. AIC = Akaike Information Criterion. RAI = Regional Authority Index. NGOs based in Belize and Suriname are excluded from the analysis because of missing values in the BTI dataset that measures consultation.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

Table 2
ZINB Regression for Testing H_{1b}–H_{4b}

	Model 5: Transnational		*Model 6: National*		*Model 7: State*		*Model 8: Local*	
	Coeff.	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*
				Count Part				
RAI	0.00	0.00	0.01	0.01	0.06***	0.01	−0.01	0.01
Consultation	0.06**	0.02	0.02	0.04	−0.12	0.07	−0.03	0.04
Functions								
Advocacy	Base category							
Education	−0.21*	0.11	−0.17	0.13	0.14	0.30	0.33*	0.18
Service	−0.09	0.10	−0.02	0.12	0.48***	0.18	0.19	0.17
Scales								
Transnational	Base category							
National	−0.25**	0.11	0.13	0.12	−0.22	0.24	0.07	0.20
State	0.03	0.15	0.19	0.15	−0.53	0.34	−0.24	0.31
Local	−0.18	0.15	0.03	0.20	−0.72**	0.37	0.37	0.25
Partners	0.04***	0.00	0.04***	0.00	0.02***	0.00	0.04***	0.01
Constant	0.95***	0.19	0.62**	0.27	−0.25	0.47	0.29	0.38

Table 2
(Continued)

	Model 5: Transnational		*Model 6: National*		*Model 7: State*		*Model 8: Local*	
	Coeff.	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*	*Coeff.*	*SE*
				Binary Part				
Partners	−0.02***	0.00	−2.02**	0.78	−0.45*	0.27	−1.19**	0.58
Constant	−22.93***	0.10	5.72***	1.56	3.38***	1.07	4.82***	1.57
ln(alpha)	−1.84***	0.17	−1.88***	0.25	−1.83***	0.59	−1.04***	0.24
N	19		19		19		19	
n	190		190		190		190	
AIC	930.76		712.55		415.14		611.91	

Outcome variable is scale types. Robust standard errors. Alpha = negative binomial overdispersion parameter (here the natural logarithm of it). N = number of countries. n = number of NGOs. AIC = Akaike Information Criterion RAI = Regional Authority Index. NGOs based in Belize and Suriname are excluded from the analysis because of missing values in the BTI dataset that measures consultation.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

levels of regional authority have a significantly higher expected number of partnerships with organizations operating at the state level. More precisely, a one-unit increase in the RAI score increases the expected number of state-level partners by 1.06 times (i.e., exp(0.06)) when holding all other variables in the model constant. We regard this finding as moderate support for H_{1b}.

Turning to H_{2b}, NGOs in countries where they can participate in public consultation have a higher expected number of partnerships with organizations operating at the transnational level, ceteris paribus (see model 5). The finding for this hypothesis is particularly compelling because the involvement in public consultation also increases the number of expected partnerships at the national level, where most policy decisions are made (see model 6). However, the coefficient for that covariate is insignificant. Nonetheless, the signs of the coefficients for this covariate are plausible in all four models, even if they fail to reach conventional levels of significance. As with the previous hypothesis, we have moderate support for H_{2b}.

Shifting the discussion to H_{3b}, in three of the four models, the coefficients of the covariates gauging the function of NGOs are significant. Model 7 produces the strongest finding in the sense that the coefficient of the covariate capturing service-oriented NGOs is positive and significant at the 1 percent level. In substantive terms, this means that compared to advocacy-oriented NGOs, those oriented toward service provision have a 1.62 (exp(0.48)) times higher expected number of partners at the state level, all else being equal. The coefficient of the covariate on education in model 5 is negative, suggesting a reduced number of partnerships with organizations at the transitional level compared to advocacy-oriented NGOs. Model 8 reports a positive coefficient for education-oriented NGOs relative to advocacy-oriented ones for their expected number of partners at the local level. Overall, the models therefore support H_{3b}.

With regard to hypothesis H_{4b}, model 5 reports a negative and significant coefficient for the variable capturing whether NGOs operate at the national level. Compared to NGOs that operate transnationally, national ones have an expected number of partnerships with organizations at the transnational level that is 0.78 (exp(−0.25)) times lower, ceteris paribus. Model 7 shows that compared to transnational NGOs, local ones have an expected number of partnerships with organizations operating at the state level that is 0.49 (exp(−0.72)) times lower, all else being equal. Consequently, there is moderate support for H_{4b}.

Overall, the explanatory power of the models is better for the second outcome variable, as the Akaike Information Criterion (AIC) also indicates. The lower the AIC values are, the better the model fits. All AIC values are lower for models 5–8 (Table 2) than for models 1–4 (Table 1). Thus the variables included in this analysis, which we derived from the concept of PCG, are better suited to explaining the governance scale at which the NGOs' partners operate than the types of partners they select. Tables A12 and A13 in the Online Appendix replicate the estimations by including either the RAI or the

involvement of NGOs in public consultation. The models fitted with the RAI scores thus include the observations for Belize and Suriname. The models reported in Tables A12 and A13 report additional significant coefficients, but overall, they confirm the findings of the models reported in Tables 1 and 2.

These findings have important implications for research on both PCG and NGOs working on climate issues. In relation to PCG, our analyses reveal that NGOs, as one actor type participating in such governance arrangements, form networks with partners operating at different governance scales. These multi-scale networks might empower them to participate in decision-making forums operating at different levels. However, NGOs' partnerships vary along two dimensions: the country context and the characteristics of the NGO itself.

Our insights suggest that climate NGOs in the Global South, especially those with access to policymaking in the national context, have the capacity and/or willingness to form networks with transnationally operating partners. It follows that climate NGOs that are marginally involved in policymaking in their countries are less likely to be able to shift their activities to the transnational level because they lack the necessary partnerships with transnational NGOs. Put differently, the domestic conditions determine the NGOs' possibilities to participate in the transnational dimension of PCG. They therefore deserve more attention from corresponding research.

As concerns the literature on the strategic behavior of NGOs, we have shown that it is worth focusing not only on transnational partnerships but also on partnerships with subnational organizations. This perspective aligns with PCG, which stresses the existence of multiple governance scales, including subnational ones. Furthermore, we were able to discuss the existence and significance of partnerships across different governance scales—another aspect to which the literature on NGOs has paid relatively little attention, even though such cross-scale partnerships constitute a key element of PCG and could therefore produce insights new to that academic community.

Conclusions

The literature on PCG has developed in a dynamic fashion and offers several important insights, especially for governance actors based in the Global North (Sapiains et al. 2021). To advance our understanding of PCG and how it works in reality (Tobin et al. 2024), we proposed to expand the scope of research to how actors based in the Global South participate in the corresponding governance arrangements. We chose to concentrate on NGOs in Latin America, as the similar political systems made them suitable for the analysis (Tosun and Levario Saad 2023; Tosun et al. 2023). The focus on NGOs also offered us a well-developed theoretical literature to build on when formulating hypotheses on how NGOs select partners.

We found that the 195 NGOs in our sample have established networks with different types of organizations located at different governance scales.

We could show that the country in which an NGO is based shapes its strategic choices with regard to the partnerships it forms. More precisely, we assessed how the degree of regional authority and the extent to which an NGO can participate in public consultation affects its partnerships. We were also able to demonstrate that the NGOs' functions determine with which organizations they partner.

Our study contributes to the literature on PCG first and foremost by enriching the state of theory. The insights yielded are also valuable thanks to our empirical focus on Latin America as one of the world regions constituting the Global South. Furthermore, our multilevel analysis of networks is novel in this literature strand. Polycentricity is still a relatively undertheorized concept, especially with regard to the actors participating in such governance arrangements. The ecology of games (Lubell et al. 2023; Lubell et al. 2014) and network theory (Kim 2019, 2020) are promising theoretical perspectives discussed in the PCG literature, but more opportunities for connecting polycentricity with actor-focused theoretical arguments exist.

Here we relied on the literature on the strategic behavior of NGOs (Hadden and Jasny 2019; Hanegraaff 2015; Mitchell and Schmitz 2014; Rodionov et al. 2021; Stroup 2012, 2020). We were able to show that this literature offers theoretical arguments that can explain how NGOs from the Global South participate in PCG.

Our empirical focus on Latin America facilitated an improved understanding of the strategic options for NGOs in weak institutional environments, thus advancing the insights yielded by previous work on only one or a few countries, such as the study by Di Gregorio et al. (2019), which focused on Brazil and Indonesia. In a next step, we encourage researchers to contrast the findings we obtained for Latin American climate-oriented NGOs with those based in other world regions. We consider it particularly instructive to assess whether transnational organizations feature equally prominently in NGOs based in other regions where institutional arrangements for climate policy are weak.

While this study mostly made use of concepts and theories relating to NGO behavior to advance the state of research on PCG, we contend that NGO-focused literature could also benefit from the perspective of PCG. The latter stresses the importance of interactions across different governance scales for achieving the desired governance outcomes (Aligica and Tarko 2012; Jordan et al. 2015; Jordan et al. 2018; McGinnis and Ostrom 2012), which means that the trade-offs NGOs face when choosing their partners also concern the governance scales at which they are based. The importance of governance scales has already been addressed by research on NGOs, but with the primary goal of demonstrating the degree to which NGOs act strategically to obtain funding or how they respond to funding (e.g., Rodionov et al. 2021). We see value in reflecting on the role of governance scales more broadly in the literature on NGO behavior.

We consider this study as a first attempt to investigate PCG using concepts and theories from the literature on NGO behavior. We are aware that we could

not test all the theoretical arguments advanced in the literature, but we could reduce some of the theoretical gaps in PCG, such as the one regarding the role of power (Morrison et al. 2019), which we captured with measurements of regional authority and participation in public consultation. Here we showed that the possibilities to participate in public consultations in the individual countries create opportunity structures that in turn shape the NGOs' strategic behavior.

Nonetheless, our operationalization of the concepts from the literature on NGO behavior could benefit from both expansion and refinement. For instance, homophily can refer to different dimensions (Atouba and Shumate 2015), which we have not addressed. Likewise, we did not pay attention to the NGOs' financial capacity and membership base. A third limitation is that we considered the NGOs' public partnerships only and not the hidden or private ones. We invite future research to overcome these limitations and to achieve an even closer integration of the two literature strands.

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