The Rationalization of Educational Development: Scientific Activity among International Nongovernmental Organizations

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Educational development organizations and related global movements emerged and expanded during the twentieth century. Today, most activities in the educational development field are characterized by a scientific outlook that schooling can be transformed using measurable and generalizable knowledge, and most of its leaders believe that experts can transport this knowledge internationally across diverse contexts. University-level certificates are now available for individuals who wish to become credentialed international development experts, and a cadre of professionals has been trained to apply the procedures of academic research to educational development. Scientific approaches to educational development have thus acquired great legitimacy in the modern world. The organizations and professionals pursuing scientific, expert, and knowledge-based activities have become a powerful international force and are increasingly the key players shaping global policies and practices in educational development, as evident from the global benchmarks laid out in the Education for All movement, as well as in international testing programs.

In this article, I analyze the characteristics of international nongovernmental organizations (INGOs) that pursue scientific, expert, and knowledge-based activities. Although scientific activities are immensely influential in the contemporary world, we have a poor understanding of which organizations engage in scientific activities and what types of organizations avoid or even reject them. Are such INGOs usually based in Western countries or headquartered worldwide? Are scientific activities compatible with alternative charitable and service provision approaches to educational development? Little is known about the types of organizations that are shaping educational development worldwide through their engagement in scientific, rationalized activities.

Educational development INGOs can be defined as those seeking to improve education in developing countries. They are neither government nor for-profit agencies, and they have ties to more than one country. One prominent example, the Bangladesh Rural Advancement Committee (BRAC), operates primarily in Bangladesh and secondarily in Afghanistan, both coun-
tries where rural children have little access to government schools. Currently, over 1.1 million students are enrolled in BRAC schools, and over 2.6 million students have graduated from BRAC schools since 1972 (BRAC 2006). Other examples include Escuela Nueva’s multigrade schooling in rural classrooms in Latin America and Room to Read’s construction of schools and libraries in Nepal. Within the broad similarities of being international and nongovernmental, these organizations vary on many dimensions, such as where they are located, how many countries they operate in, their relationship to governments, and the types of activities they pursue.

This article begins by noting the increasingly scientific emphasis among international development and nongovernmental organizations, despite the fact that such types of organizations were once guided by the religious logic of Christian charity. Next, I define the activities associated with a rationalized, scientific approach to educational development and provide a description of the prevalence of various types of activities. I argue that the presence of scientific activities is associated with the emergence of a rationalizing world culture and propose that more expert and knowledge-based activities are likely to be associated both with proximity to a world culture and a detachment from a charitable organizing logic. I test these arguments using linear regression analysis of founding dates and other characteristics collected from the biographies of 390 educational development INGOs in the Union of International Associations’ Yearbook of International Organizations (UIA 2009). The Yearbook is the most comprehensive database of international organizations and collects biographical data such as founding date, aims and activities, location, and partners. The evidence suggests that the expanded rationalization of educational development organizations involves not only greater linkages to world culture but also a distancing from the logic of Christian charity. I conclude with a discussion of what may be gained and what may be lost when educational development organizations embrace rationalized activities.

The Rationalization of International Organizations

INGOs have worked in educational development since the establishment of formal schooling systems. Christians were among the first nongovernmental groups to use education internationally, as a tool to spread their religion and as a way to demonstrate their piety. Servantes des Pauvres de Jeanne Delanoue is a typical example of these early educational development INGOs. Founded in France in 1709, it aims to “provide education and assistance to children and youth; provide nursing and caring of the old, the sick

1 Archer (1982, 1984); Boli et al. (1985); Ramirez and Boli (1987); Fuller (1991); Meyer et al. (1992).
or handicapped people; and give assistance to people suffering from exclusion, such as migrants, gypsies, prisoners” (UIA 2009).

The charitable flavor of these early organizations was characteristic of the field of international development more broadly, but since the end of World War II, there has been a dramatic proliferation in expert and knowledge-based activities. Collette Chabbott (1999) analyzed trends in over 1,500 development INGOs and discovered that most founded in the prewar period were missionary organizations. Around the war period, with the advent of scientific management and human capital theory, a new scientific logic for international development work emerged, and more than 80 percent of development INGOs were founded in the post–World War II period (Chabbott 1999; see Chandler [1977] for the rise of scientific management approaches to operating organizations). “Science,” in this use of the word, indicates that organizations are driven by notions of rationality, equality, justice, and rights, rather than principles of mercy, salvation, and grace.

The emergence of new, rationalized activities among international organizations has also been noted in related arenas. The field of health INGOs follows a pattern similar to international development, with organizational aims shifting from charity to rights, as well as an explosion of organizations founded after World War II. Keiko Inoue and Gili Drori (2006) observe that “all health-related international organizations founded before 1870 are exclusively religious orders” but that the field became increasingly diverse after World War II (206). A trend toward rationalized, scientific activities also appears in the emergence of transnational advocacy networks working in fields such as human rights (Keck and Sikkink 1998) and the Global Campaign for Education (Mundy and Murphy 2001). Advocacy networks influence policy outcomes by mobilizing information to persuade and pressure governments and to transform the nature of international debates through information and communication campaigns. The key tool of advocacy networks is information, as wielded and interpreted by relevant experts.

The reasons behind a shift toward rationalization are complex, but foundations, particularly the Rockefeller and Ford Foundations, played a central role in changing the field of international development (Chabbott 1999). Detailed studies of the Rockefeller and Carnegie Foundations show that these organizations were among the first to establish a scientific approach to charity and illustrate how the principles of scientific management influenced their work, as does Andrew Carnegie’s famous 1889 guidebook to effective philanthropy, The Gospel of Wealth. Judith Sealander (2003) describes the philanthropists’ “certain faith that society could be improved through the systematic discovery and application of knowledge” (239), as, for example, in Carnegie’s belief that “he could systematize solutions to war . . . if only enough facts were unearthed, if only root causes were explored” (228–29). These early philanthropists believed that rather than providing direct aid to those in
need in society, social problems should be solved by “conducting interviews, passing out questionnaires, accumulating statistics, and producing charts and tables. . . . Society’s machinery, like that of a steel mill, could be disassembled, examined, and eventually understood” (236). Thus, traditional charity involved individuals directly helping those in need, but rationalized approaches to social problems require the leadership of experts and are focused on generating knowledge and disseminating information in order to design effective and efficient institutions.

In the field of educational development, the scientific view advocated by powerful foundations was spread worldwide through a process of professionalization (Chabbott 1999, 2003). Activities such as establishing training programs, holding international conferences or meetings, and setting standards for professionals and organizations in the field start from the assumption that educational development activities worldwide are comparable and can be solved through the application of Western notions of rationality. “Professionals” are increasingly seen as the appropriate actors to respond to problems of management, knowledge, and information. In a cyclical process, as more educational development experts and organizations are created, the scope and scale of interactions among professionals increases, and the field of educational development becomes more established, structured, and rationalized.

Moreover, research on charities in the United States indicates that rationalizing trends are driven by broad social forces that likely influence organizations worldwide (Hwang and Powell 2009). One source of pressure comes from a general increased value on and demand for expertise worldwide, as clearly evidenced by the creation of a field of educational development professionals described by Chabbott (2003). There is also a general expansion of “scientific management” and administrative professionals worldwide, as in, for example, the rise of business schools. Further, there are increasing external demands for accountability and efficiency among nongovernmental organizations (NGOs), and these outcomes are linked to the implementation of business principles. In sum, social problems are increasingly defined as problems of effective management. Finally, there is a general increasing orientation toward formal knowledge worldwide through the expansion of higher education, leading problems to increasingly be defined in relation to knowledge and information (Schofer and Meyer 2005). These global trends that valorize scientific approaches to solving social problems are part of a world culture that emphasizes Western Enlightenment ideals of rationality, progress, and justice (Meyer et al. 1997; Chabbott 1999, 2003; Drori et al. 2003). Taken as a whole, the above studies suggest that the field of educational development is likely to be increasingly dominated by an expert-based, scientific logic, particularly since World War II.
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Scientific Activities

The rise of a scientific logic in educational development is associated with a range of particular aims and activities among organizations. Rationalized, or scientific, activities are those that involve the production and dissemination of knowledge, such as advocacy, networking among experts, conducting research, or providing expert advice to policy makers. Other activities could include training professionals, disseminating information about best practices, or convening conferences and meetings to bring together experts in the field. The Association for the Development of Education in Africa is an example of one educational development INGO with this scientific approach to education. The organization, currently located in Tunisia and founded in 1988, began as an initiative of the World Bank. It is a collaboration among African ministries of education, development agencies, education specialists, and researchers who meet for regular roundtable discussions on issues like the impact of HIV/AIDS on schooling and the improvement of higher education. They aim to improve education systems through meetings of educational development professionals to exchange ideas and discuss challenges.

Table 1 outlines the breadth of scientific activities pursued by educational development organizations listed in the *Yearbook of International Organizations*, which is the most extensive database of international organizations currently available and is described in greater detail in the “Data, Measures, and Method” section of this article. Just over 40 percent of these organizations work to generate knowledge related to educational development through research, and 40 percent are concerned with disseminating information to the public and other organizations as a central part of their mission. Over three-quarters actively produce a publication, and 65 percent host seminars, meetings, or workshops in which professionals in the field can interact and learn. Sixteen percent of organizations have formal training programs to produce professionals and experts through degree and certificate programs, and 20 percent offer their expert services to governments or other organizations through consulting or evaluation. A smaller group of organizations are concerned with building the field of educational development globally, either by standardizing practices (7 percent) or by expanding and strengthening the field through the creation and support of other organizations (6 percent). Highly scientific organizations will pursue many of these activities simultaneously, while others just focus on one or two areas or, in the 12 percent of cases that are the least scientific, do not take part in any of these activities at all.

Arguments

The central goal of this article is to consider the organizational characteristics associated with the pursuit of expert-based, scientific activities. The
## TABLE 1
**Description of Scientific Activities** \( (n = 390) \)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Count (%)</th>
<th>Keywords</th>
<th>Example(s) (Organization, Year Founded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generating knowledge</td>
<td>164 (42)</td>
<td>Research, study</td>
<td>“A research organization concerned with economic development, political and social organization” (Centre for Research on Latin America and the Caribbean, 1978)</td>
</tr>
<tr>
<td>Managing information</td>
<td>155 (40)</td>
<td>Maintain resource center, disseminate information</td>
<td>“Develop a system for world-wide exchange of information” (International Federation of Training and Development Organizations, 1973); “Serve as an international centre for materials and information” (Academy for Educational Development, 1875)</td>
</tr>
<tr>
<td>Publishing</td>
<td>297 (76)</td>
<td>Publish, quarterly or annual publication</td>
<td>Publishes <em>CCVIS News</em> (three times a year in English and French) and <em>African Directory</em> (Coordinating Committee for International Voluntary Service, 1948)</td>
</tr>
<tr>
<td>Providing professional space</td>
<td>251 (65)</td>
<td>Meetings, seminars, conferences, workshops, colloquia, professional exchanges, encourage cooperation or collaboration</td>
<td>“International and regional Conferences and Seminars” (Asian Regional Training and Development Organization, 1974); “Supports and facilitates regular meetings” (Association for the Development of Education in Africa, 1988)</td>
</tr>
<tr>
<td>Standardizing</td>
<td>28 (7)</td>
<td>Standardize, harmonize, systematize</td>
<td>“Act as catalyst for broader capacity building efforts which have a high impact in setting standards and best practices” (African Capacity Building Foundation, 1991)</td>
</tr>
<tr>
<td>Expanding the field</td>
<td>165 (6)</td>
<td>Create (or promote) new organizations, strengthen or expand the field</td>
<td>“Encourage the formation of new national federations” (International Federation of Training Centres for the Promotion of Progressive Education, 1954)</td>
</tr>
<tr>
<td>Providing expertise</td>
<td>77 (20)</td>
<td>Evaluate, assess, advise, consult</td>
<td>“Provide consultancy and management services” (Development and Project Planning Centre, 1969); “Work as advisor to governments” (Global Futures Network, 1981)</td>
</tr>
<tr>
<td>Training</td>
<td>64 (16)</td>
<td>Certify, degree, diploma, postgraduate training course, professional program</td>
<td>“Diploma in Humanitarian Assistance: one-year multidisciplinary postgraduate programme for workers in humanitarian aid” (Network on Humanitarian Assistance, unknown)</td>
</tr>
</tbody>
</table>

**Source.** Examples are taken from the *Yearbook of International Organizations* (UIA 2009).
rationalized approaches to educational development represented by scientific activities constitute a powerful organizing logic in the contemporary world, shaping educational development at the highest level. Yet we do not have a clear view of the organizational landscape or of which organizations participate in the highly rationalized global conversation through scientific activities and which are on the margins.

Neoinstitutional theorists argue that a world culture characterized by an overarching ideology of rationality, progress, and justice has expanded particularly in the period since World War II, explaining both a postwar explosion of international organizations and the rise of new rationalized and scientific activities (Boli and Thomas 1997, 1999; Drori et al. 2003). The postwar intensification of cultural globalization is the result of a long historical process and has multiple explanations that are difficult to disentangle. In part, the two world wars and the Great Depression were understood to stem from dangerous nationalism, contributing to a celebration of global cooperation for the protection of human rights (seen in, e.g., the creation of the UN system). Further, Enlightenment-era notions of progress and rationality increasingly became viewed as the means for protecting rights and achieving global justice. As a result, a key factor influencing an organization’s pursuit of scientific activities is likely to be whether it was founded in a postwar world, when approaches to development were becoming highly rationalized, or in an earlier era dominated by charity-driven activities. Although organizations may change over time, characteristics of the external environment are imprinted into core organizational structures during the initial founding period (Stinchcombe 1965).

In addition to the durable effects of early characteristics, world society scholars have shown that country embeddedness in the international community through memberships in INGOs predicts the adoption of many types of innovations (see Koo and Ramirez [2009] on the adoption of national human rights institutions, for a recent example). At the organizational level, Brian Uzzi (1999) similarly shows that an organization’s embeddedness in networks is one mechanism that affects its behavior. I combine the organizational research on network effects with the linkage arguments of world society scholars to argue that organizations more linked to world culture through a greater number of relationships with other international organizations and country memberships will pursue more scientific activities than isolated organizations will.

While linkage to world culture may increase scientific emphases, an organization’s embeddedness in an older, charitable logic of educational development may be associated with the opposite. Recognizing the rise of a scientific logic among voluntary organizations, political philosophers argue that it exists in opposition to a preexisting logic of charity. For Robert Gross (2002), the purpose of a scientific approach is to obviate the need for charity.
He describes the historical shift from charity—which he associates with direct acts of individual compassion—to philanthropy. As Gross writes of philanthropy (31), “Its object is the promotion of progress through the advance of knowledge. By eliminating the problems of society that beset particular persons, philanthropy aims to usher in a world where charity is uncommon—and perhaps unnecessary.”

Will Kymlicka (2001) agrees with Gross’s position that secular notions of justice crowd out the practice of traditional charity, but he goes farther, arguing that these scientific approaches are morally superior. He says that in contemporary beliefs about justice and progress, “charity is a second-best response to injustice. The main obligation is to change institutions so that they treat people justly, rather than trying to rectify institutional injustice through private alms” (Kymlicka 2001, 10). Regardless of whether one fully agrees with Gross and Kymlicka, it seems appropriate to expect an opposition between charitable and scientific approaches to educational development.

One clear indicator of a charitable approach is having a Christian religious affiliation. Given the tension between scientific and charitable approaches, Christian organizations should be less likely to pursue scientific activities. Further, a recognizable feature of most Christian organizations in educational development is the social services they provide directly to students and teachers, as opposed to scientific activities, which are typically indirect or upstream. Karen Mundy and Lynn Murphy (2001) point out that traditional educational development organizations offer direct service, while the new advocacy organizations do not. As they say, “Organizations involved in this campaign [transnational education advocacy] have moved into the international education arena, not as service providers but, rather, as advocates” (Mundy and Murphy 2001, 125). Thus, the direct service approach may also reflect a charitable logic, even among organizations that do not have an explicit Christian affiliation. The term “direct service” could have many interpretations, but its use here means specifically activities where INGO staff or volunteers work face-to-face with teachers or students in developing countries. From training teachers and teaching students to building schools and providing textbooks, the range of direct service activities is easily identifiable.

It is important to note that there is no necessary incompatibility between the scientific activities identified in this study and the indicators of a charitable approach. Christian charities and/or direct service organizations could also, for example, seek to disseminate information on best practices in educational development or to set standards for service provision. I propose, however, that organizations with a Christian affiliation and that offer direct services

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2 Only a few organizations in the sample were identifiable as having Jewish, Islamic, or other religious affiliations, which suggests that they are underrepresented in the data set. Thus, it was not possible to consider differences in how extensively organizations associated with various religious traditions participate in scientific activities.
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are unlikely to pursue scientific activities because of a conflict with their underlying logic. A central goal of this study is to weigh the extent to which these charitable and scientific logics indeed conflict or coexist within organizations.

The roots of scientific approaches to charity can be traced back to the Enlightenment. Gross (2002) says that scientific approaches to philanthropy “became associated with the Enlightenment, for it sought to apply reason to the solution of social ills and needs. . . . It aspires not so much to aid individuals as to reform society” (31). Thus, organizations based in the West may be more influenced by the cultural system that spurred the rise of scientific activities through greater access or exposure to Western experts. At the same time, the charitable logic of development is also deeply rooted in Christianity, and most direct service providers are Western-based Christian groups. This suggests a possible divide among Western-based organizations: those with a charitable logic may be relatively less rationalized, while non-charitable organizations may be particularly more so. The next section describes the data, measures, and method used to explore these propositions.

Data, Measures, and Method

I use information from the Yearbook of International Organizations, published online by the Union of International Associations (UIA 2009), to explore the properties of educational development INGOs associated with greater rationalization. Since 1953, the Yearbook has been the United Nation’s official registry of international organizations and has a mandate to have as complete coverage as possible of international organizations. The current online data set contains information on 62,790 organizations in 300 countries and territories, making it the most extensive directory of international organizations available (UIA 2009). These data have been widely used and accepted in cross-national research, and they include a large amount of biographical information about education INGOs relevant to my research questions. Boli and Thomas (1999) estimate that the Yearbook contains 80–90 percent of organizations about 10 years prior to its publication and about 60 percent of organizations 5 years prior to publication. That is, the total number of organizations appears to fall in the years immediately preceding the Yearbook’s publication, but this is likely due to a lag in data collection rather than an actual drop in number.

As a result of its extensive use in research, the Yearbook’s other weaknesses

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3 Additionally, it is plausible that scientific activities require a certain level of access to technology and resources that is more readily available if based in the West. However, one could also argue that some scientific activities, like disseminating information, are actually less resource intensive than direct service provision.

4 To facilitate coverage, there is no cost or obligation for organizations wishing to be listed in the Yearbook. Organizations are included either by contacting the UIA directly or through research by the UIA staff to collect information from other sources.
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are also well known. I am unable to determine an organization’s size from the data because information about the number of staff members and total budget size is missing for most organizations. It is also difficult to link records of individual organizations over time, and there is no systematic coverage of dead or dissolved organizations. As a result, my consideration of the rationalization of organizations is limited to a cross-sectional analysis of organizations that exist in 2009.

Finally, it is impossible to know the extent to which this sample is representative of the entire population of education INGOs. Anecdotal evidence and a comparison with other data sets (the Organization for Economic Cooperation and Development [OECD] list of development organizations and an online database) suggest that the Yearbook covers only a proportion of the entire population. However, the descriptive trends described above closely match trends found in research using other data sets and other groups of INGOs, such as work by Chabbott (1999) and Inoue and Drori (2006). A possible selection bias exists if data are presented more completely for certain organizations than for others or if some are systematically excluded entirely. But neither previous scholarly research using UIA data nor the UIA’s data collection method indicates that this is the case.5 Despite these weaknesses, the Yearbook is the most complete set of information on INGOs available, and the UIA has built extensive academic credibility over a long history of compiling information.

The sample of educational development INGOs used here relies mainly on the classification scheme used by the UIA in the Yearbook. The Yearbook contains only international organizations, with a subcategory for NGOs, meaning that intergovernmental organizations and for-profit organizations are excluded. In this case, “international” refers to either organizations operating in more than one country or organizations operating in one country but with international aims, such as foundations that give grants abroad or universities that teach international development courses.

From the 2009 online version of the Yearbook, I collected a sample of 429 organizations working in the field of educational development. Organizations identify themselves as being members of particular substantive categories of work in the Yearbook. I began my selection by considering the 6,445 organizations listed under the categories of “Education” and all its subcategories (Training, Vocational Guidance, Further Education, Physical Education, Primary Schooling, Secondary and Higher Education, Preschooling, Distance Education, Schools, Universities, Colleges, Academies, Educators, Rectors, Students, Graduates, Educational Content, and Educational Level). I also consider the 8,085 organizations listed under “Development” and all its subcategories (Development, Sustainable Development, Reform, Potential, Pro-

5 For more detailed information on the UIA’s data-gathering methodology, visit the UIA’s Web site at http://www.uia.org/organizations/faq.php#source (accessed April 22, 2010).
gress, Aid, Assistance, and Help). Of these, 493 education organizations and 1,207 development organizations were excluded because they were intergovernmental rather than nongovernmental, leaving 13,321 organizations. Two-thirds of these were excluded because they fall outside the realm of INGOs under consideration here, such as multilateral treaties, autonomous conference series, unconfirmed organizations, and subsidiary organizations, leaving 4,558 organizations.\(^6\) Roughly another 3,000 were excluded because they were founded after 2004 or were missing a description of their aims and activities.\(^7\) I omit organizations founded in the most recent 5 years because there is likely to be a large lag in data collection, as described above, possibly biasing my results. Of the remaining group, approximately 1,500 organizations, I examined organizational mission statements and excluded organizations that either were purely “education” organizations not in the field of development or were international development organizations not involved in education. The final sample consists of 428 organizations, of which 38 are listed as “inactive or dissolved” and were used to check the robustness of results but were not included in the analyses.\(^8\) The analyses presented here contain 390 active educational development organizations.

In order to examine the propositions about factors that are associated with greater emphases on science, I use ordinary least squares regression on a scientific activities index created using a factor analysis of the eight dimensions listed in table 1. All eight items load heavily onto one factor and have an interitem reliability coefficient of 0.60 using Cronbach’s alpha.\(^9\) Rather than give each item equal importance, I weighted them by the extent to which they load onto the underlying latent concept of scientific emphases, using regression scoring.\(^10\) This creates a single continuous outcome ranging from 0 to 1.32.\(^11\)

The dimensions themselves were created using a variant of discourse

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\(^6\) I excluded the following organizational types: national organizations (types G and N), organizations recently reported but not yet confirmed (type J), subsidiary and internal bodies (type K), autonomous conference series (type S), multilateral treaties and agreements (type T), and currently inactive nonconventional or unconfirmed bodies (type U). These Yearbook types are defined by the UIA at http://www.uia.be/noder/163543 (accessed June 29, 2010).

\(^7\) I included organizations missing information other than the mission statement. Seven organizations were missing a founding date, and 43 organizations were missing the number of country members.

\(^8\) Models including dead and dissolved organizations, as well as a dichotomous indicator to check whether these organizations vary significantly from the rest of the sample, showed no cause for concern. These organizations were not significantly different, and the results remained the same.

\(^9\) The first factor has an eigenvalue of 2.84, and the second largest eigenvalue is 0.84. Rotated factor loadings are all 0.33 and higher. The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.67.

\(^10\) The weighting coefficients are as follows: publishing, 0.37; generating knowledge, 0.21; managing information, 0.15; providing expertise, 0.10; training, 0.06; providing professional space, 0.23; standardizing, 0.11; and expanding the field, 0.10.

\(^11\) Note that results also held when using a simple nine-point scale where organizations get one point for each form of scientific activity they mention, as well as when using alternate indices that excluded the most and least common items.
analysis developed by Klaus Krippendorf (2004). Emergent coding of an initial examination of the mission statements was used to allow the broadest list of scientific activities possible to emerge. The initial list was refined and grouped into categories guided by subsequent readings and existing research. Through five rounds of coding, the eight dimensions of rationalized activity shown in table 1 emerged. They are (1) generating knowledge, (2) spreading information, (3) creating publications, (4) creating non-certification-related opportunities for professionals to interact, (5) working to create standards, (6) expanding the field, (7) acting as experts, and (8) certifying or training professionals.

The independent variables used to estimate an organization’s score on the science index include three substantive categories. The first group concerns linkages to world culture measured by whether an organization was founded after 1945 (dichotomous, 1 = founded post-1945), which is intended to capture differences imprinted on organizations at their time of founding; namely, between organizations founded before the rapid expansion of world culture and those founded after the war in a context characterized by world cultural emphases on rationality, progress, and justice. Additional measures of linkage to world culture include the number of country members of an organization (continuous, transformed using a natural log plus one), number of intergovernmental organization (IGO) ties (continuous, transformed using a natural log plus one), and number of INGO ties (continuous, transformed using a natural log plus one). The second group measures connection to a charitable logic through Christian affiliation (dichotomous, 1 = Christian) and whether the organization provides direct services (dichotomous, 1 = service provider). Third, possible associations with Western cultural traditions are assessed through a dichotomous indicator for whether an organization has headquarters in Western Europe, North America, Australia, or New Zealand. The organizations vary widely in their level of emphasis on scientific activities and on the independent variables, as described in the next section.

Findings

Figure 1 shows the founding dates of educational development INGOs since 1900, of those currently in existence. It illustrates a dramatically uneven distribution, with a clear division of very few organizations founded before 1945 and a great many afterward. This indicates either a rapid increase in the number of organizations founded each year after World War II or a disproportionately high death rate among organizations founded earlier. Just

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12 Figure 1 begins in 1900 rather than at the establishment of the first educational development INGO because the field is extremely old, dating back to the early 1200s, but only 59 of 390 organizations existing today in my sample were founded in the first 700 years. Also, the apparent decline in organizations founded in the 1990s is likely due to a lag in data collection, as discussed in the “Data, Measures, and Method” section.
over 80 percent of the sample is founded after World War II, parallel to Chabbott’s (1999) findings in an analysis of international development organizations using data collected by the OECD.

The content analyses of organizations’ aims and activities revealed that all educational development INGOs founded before 1900 are Christian service providers. Groups that are neither Christian nor service providers begin to gradually appear among organizations founded around the turn of the twentieth century, such as the Association of Commonwealth Universities in the United Kingdom in 1913 and the International Union of Students in Prague in 1946. Their activities include research, information dissemination, networking, and organizing regional conferences. Another example, the African Association for Literacy and Adult Education (founded in 1984 in Kenya) aims to “contribute to development of the African peoples through adult education by enhancing development of greater institutional capacities and organizational effectiveness” (UIA 2009). Science-based activities such as these are rare among organizations founded before the middle of the twentieth century, but they dramatically increase among groups founded after 1945.

Table 2 shows additional differences between organizations founded before and after 1945. As well as becoming more scientific, organizations founded after World War II are less likely to have a Christian affiliation or to be direct service providers. Eighty-six percent of organizations founded before World War II are Christian, compared to just 2 percent of those founded in the later period, and the proportion of organizations that provide direct services drops from 89 to 22 percent. Although most organizations founded after World War II continue to be based in the West, the proportion is significantly lower, dropping from 91 to 58 percent. Finally, organizations are significantly more connected worldwide on all three measures—country memberships, ties to other INGOs, and ties to other IGOs. I argue that these measures of global connectedness are indicators of embeddedness in a world
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TABLE 2
Descriptive Statistics for Educational Development INGOs (n = 390)

<table>
<thead>
<tr>
<th></th>
<th>Pre-1945 (n = 76)</th>
<th>1945–2003 (n = 314)</th>
<th>Whole Sample (n = 390)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific activities index</td>
<td>.24</td>
<td>.76***</td>
<td>.65</td>
</tr>
<tr>
<td>Independent variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founded post-1945</td>
<td>NA</td>
<td>NA</td>
<td>.81</td>
</tr>
<tr>
<td>No. of country members</td>
<td>23.6</td>
<td>31.29*</td>
<td>29.79</td>
</tr>
<tr>
<td>No. of INGO ties</td>
<td>1.92</td>
<td>8.09*</td>
<td>6.89</td>
</tr>
<tr>
<td>No. of IGO ties</td>
<td>1.01</td>
<td>4.32***</td>
<td>3.68</td>
</tr>
<tr>
<td>Christian</td>
<td>.86</td>
<td>.02***</td>
<td>.18</td>
</tr>
<tr>
<td>Direct service provider</td>
<td>.89</td>
<td>.22***</td>
<td>.35</td>
</tr>
<tr>
<td>Western headquarters</td>
<td>.91</td>
<td>.58***</td>
<td>.64</td>
</tr>
</tbody>
</table>

Note.—All significance tests are two-tailed. INGO = international nongovernmental organization; IGO = intergovernmental organization; NA = not available.

**P < .10,
*P < .05,
***P < .001.

culture that emphasizes rationalized forms of organizing and that they will likely be associated with higher levels of scientific activities in the regression analyses that follow. These descriptive findings suggest a clear break in the field of educational development in both the number of organizations founded after 1945 and the specific type of organizations—highly rationalized, non-Christian, and globally interconnected.

The distinctions between organizations founded before and after 1945 could be interpreted in different ways. Neoinstitutional scholars attribute the growth and rationalization of international organizations to the emergence of a world culture rooted in notions of rights, progress, and justice (Boli and Thomas 1997, 1999; Meyer et al. 1997; Drori et al. 2003). In this vein, I argue that the significantly greater level of scientific activities among organizations founded after 1945 supports this view. Further, organizations founded after 1945 are more connected to a world culture through ties to other international organizations and a broader range of country memberships. In contrast, those founded before 1945 are far more likely to have a Christian affiliation and to provide services directly.

More direct mechanisms may also play an important role in changing the field of educational development. For example, it was simply not imaginable for there to be a large number of NGOs founded outside the West before decolonization. But in the wake of decolonization, domestic educational development organizations could be created to tackle social problems in a wider range of countries. Today, international organizations are routinely expected to collaborate with local partners to provide educational development services, which may account for relatively fewer numbers of service providers. World changes could influence educational development directly through political and legal regulations that explicitly allow or prohibit certain types of activities. However, changes in the regulatory environment of edu-
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cational development could also be thought of as stemming from a world cultural shift where social and cultural norms generate extensive support for organizing around the logic of science, and where charitable activities are increasingly seen as a less legitimate form of organizing. In addition, advancements in information and communication technology, cheaper international travel, and decreasing political tension at the end of the Cold War facilitated the growth of INGOs and their ability to become involved in scientific activities like agenda setting at the international level (Mundy and Murphy 2001). Unfortunately, it is not possible to conduct a finer-grained analysis of the mechanisms of global change using these data. All these factors likely play important roles, and this study affirms that educational development INGOs founded after 1945 are dramatically different from those founded earlier.

The descriptive trends presented above indicate that educational development organizations founded before World War II are less scientific, less embedded in global networks, and more likely to be associated with a charitable logic than those founded later. Table 3 presents multivariate regression results that support and extend these findings. Model 1 shows that, as expected, younger organizations are more scientific. Alone, it explains 35 percent of the variation in the scientific activities index, suggesting that global changes since 1945 explain much of the trend toward scientific educational development.

Model 2 shows that even after accounting for the global changes since World War II, greater embeddedness in the international community is associated with greater levels of rationalization. Ties to other INGOs and IGOs and greater country membership diversity are, as predicted, significantly and positively associated with higher levels of rationalization. Organizations with more ties to IGOs are especially scientific in their approach. Many of the IGO ties in this study are formal levels of consultative status with various UN agencies. It is likely that pursuing such formal ties drives a higher level of rationalization in an organization but also reflects a possible preference among IGOs to form relationships with scientific INGOs. These measures of linkage to world culture account for an additional 10 percent of variation in the outcome.

Offering insight into the mechanisms underlying how organizations are shaped by the external environment, Paul DiMaggio and Walter Powell (1983) identify three paths through which organizational practices travel—

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15 One possible concern about these results is that organizations may be more likely to have ties with groups like themselves, and there are far more non-Christian, non-service providers than other organizations. However, a methodological check indicates the results are robust. Even after adjusting the number of ties by organizational type, those with more ties are more highly scientific. This weighting was accomplished by dividing the number of ties by the number of similar organizations (four Christian non-service providers; 67 Christian service providers; 71 non-Christian service providers; 248 non-Christian non-service providers). The magnitude of the coefficients decline, but they remain positive and significant.
**TABLE 3**

Ordinary Least Squares Estimates of Score on Science Index by Organizational Characteristics \((n = 390)\)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founded post-1945</td>
<td>.517</td>
<td>.411</td>
<td>.151</td>
<td>.150*</td>
<td>.136</td>
<td>.107</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.045)***</td>
<td>(0.032)***</td>
<td>(0.080)*</td>
<td>(0.080)*</td>
<td>(0.073)*</td>
<td>(0.074)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of member countries (log)</td>
<td>.024</td>
<td>.024</td>
<td>.019</td>
<td>.024</td>
<td>.025</td>
<td>.026</td>
<td>.028</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.015)*</td>
<td>(0.015)*</td>
<td>(0.015)*</td>
<td>(0.014)*</td>
<td>(0.014)*</td>
<td>(0.014)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of INGO ties (log)</td>
<td>.092</td>
<td>.080</td>
<td>.124</td>
<td>.081</td>
<td>.079</td>
<td>.080</td>
<td>.077</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.016)***</td>
<td>(0.020)***</td>
<td>(0.020)***</td>
<td>(0.021)***</td>
<td>(0.021)***</td>
<td>(0.021)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of IGO ties (log)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian affiliation</td>
<td>.445</td>
<td>.292</td>
<td>.282</td>
<td>.037</td>
<td>.247</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.028)***</td>
<td>(0.086)***</td>
<td>(0.087)***</td>
<td>(0.198)***</td>
<td>(0.083)***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service provider</td>
<td>.220</td>
<td>.030</td>
<td>.032</td>
<td>.033</td>
<td>.109</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.054)***</td>
<td>(0.049)***</td>
<td>(0.048)***</td>
<td>(0.048)***</td>
<td>(0.050)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West × Christian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West × service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.241</td>
<td>.125</td>
<td>.536</td>
<td>.502</td>
<td>.404</td>
<td>.420</td>
<td>.423</td>
<td>.415</td>
</tr>
<tr>
<td></td>
<td>(0.042)***</td>
<td>(0.055)*</td>
<td>(0.052)***</td>
<td>(0.053)***</td>
<td>(0.081)***</td>
<td>(0.083)***</td>
<td>(0.078)***</td>
<td>(0.078)***</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.348</td>
<td>.451</td>
<td>.473</td>
<td>.349</td>
<td>.483</td>
<td>.484</td>
<td>.488</td>
<td>.505</td>
</tr>
</tbody>
</table>

**Note.**—Reported robust standard errors take into account the clustering by location of INGO headquarters (country). All significance tests are one-tailed. INGO = international nongovernmental organization; IGO = intergovernmental organization.

* \(P < .10\)

* * \(P < .05\)

* * * \(P < .01\)

* * * * \(P < .001\)
mimetic, normative, and coercive. Ties to other organizations could coercively influence INGOs to adopt scientific activities if, for example, a large funder requires evaluation as part of ongoing grants. At the same time, links to other organizations can also be a rich source of influence from professional norms and values, driving the normative adoption of scientific activities. Last, organizations might mimic the practices perceived to be successful among other groups. This research does not distinguish between organizations that internalize the rationalizing values associated with scientific activities and those that adopt practices because of coercion or pragmatic expediency in, for example, fund-raising. Even adopting scientific activities superficially to conform to the expectations of external audiences speaks to the great authority and legitimacy of rationalizing pressures in the modern world. Possibly, organizations that buy into the rationalizing logic of scientific activities would implement these activities more effectively. However, I would argue that actual technical effectiveness of educational development is extremely difficult to assess. We should also consider the factors associated with a pervasive emphasis on scientific activities regardless of whether they are more efficient or effective than charitable approaches.

The next set of analyses in models 3–5 consider the relationship between the logic of charity and the pursuit of scientific activities, net of linkage to world culture. Descriptive analyses indicated that the correlations between an organization’s founding date, Christian affiliation, and service provision are high, raising the possibility that statistical models will be unable to separate out independent associations of these variables with the science index. To reduce the concern of multicollinearity, these variables are entered singly and then compared to a full model.14 Models 3 and 4 show that Christian affiliation and service provision are significantly negatively associated with the science index, net of international linkages. Together with international linkages, Christian affiliation accounts for 47 percent of the variation in the outcome (model 3), while service provision accounts for just 35 percent (model 4). Thus, holding international linkages constant, having a Christian affiliation accounts for slightly more variation in the outcome than founding date does, and service provision accounts for substantially less than either. Model 5 indicates that in analyses with all three highly correlated variables, we still observe marginal associations between Christian affiliation and founding date with the science index. In other words, holding founding date and international linkages constant, organizations with a Christian affiliation are less scientific. The relationship between service provision and the science index remains negative but becomes insignificant, suggesting that service

14 The full models are reported here because, despite concern over possible multicollinearity, the direction and significance of all coefficients, except service provision, are robust to alternative model specifications. Results should be interpreted cautiously, however, with the awareness that it is not possible to fully separate out associations between post-1945, Christian affiliation, service provision, and the science index.
provision cannot be disentangled from the founding date and Christian affiliation of an organization. Analyses not reported here indicate that the overlap lies mainly between Christian affiliation and service provision rather than Christian affiliation and founding date. Following this discussion of multivariate results, additional descriptive analyses are used to further explore the relationship between service provision, Christian affiliation, and the science index. Together, models 3–5 show that global linkages are positively associated with more scientific activities, net of ties to a charitable logic, and vice versa.

Model 6 shows, perhaps surprisingly, that a Western headquarters is negatively (although not significantly) associated with scientific activities. One possible explanation is that scientific approaches used to be primarily Western but had spread worldwide by 2009, and so there is no effect of this measure. Alternatively, the location of an organization’s headquarters may be chosen for purely pragmatic reasons, such as on the basis of countries supporting NGOs through tax incentives, and may have little to do with cultural influences or access to resources. Finally, organizations in non-Western countries may be relatively more influenced by large, highly rationalized IGOs, while Western organizations may be more capable of resisting rationalizing pressures. Resistance could be attributed to a stable resource base, or perhaps Western organizations are more deeply connected to a charitable logic, which is also deeply rooted in Western philosophies.

Models 7 and 8 explore further the possibility that Western organizations that emphasize charity have a different relationship to a scientific approach than do non–charity organizations. Model 7 shows a marginally significant negative relationship for an interaction between Western headquarters and Christian affiliation. This provides some evidence that groups with a Western headquarters and Christian affiliation are less scientific than others. Model 8, which introduces an interaction between Western headquarters and service provision, shows an even stronger relationship. Service providers based in the West pursue scientific activities to a far lesser extent than their counterparts do. Interestingly, the main effect coefficients of service provider and West also change substantially. Among organizations in the non-Western world, service providers are actually more scientific than non–service providers.15 And among non–service providers, groups based in the West have a higher score on the science index, although this relationship is not statistically significant. These interaction effects suggest that the relationship between a charitable logic and rationalization is mediated by the influence of a Western headquarters. In particular, service providers based in the West are less scientific than others, while service providers outside the West are more sci-

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15 A possible explanation is that in the developing world, larger organizations provide direct services as well as many highly scientific activities, but a key weakness of these data is the inability to control for organizational size.
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Fig. 2.—Scientific activities index score of educational development INGOs, by type of organization.

Note.—There are a total of 390 organizations, but there are only two Christian non–service providers in each of the two periods.

The rationalization of educational development INGO activities overlaps with the charitable logic (fig. 2). A central difference between the two periods is the type of organizations created. Of those founded before 1945, 83 percent are Christian service providers, while these groups make up only 1 percent of organizations founded since 1945. Christian service providers founded before 1945 also have, by far, the lowest score on the scientific activities index (0.16). This score increases to 0.53 for organizations founded later, which is still lower than that for non-Christian groups but not as drastically different from that for organizations founded earlier. Conversely, only 8 percent of organizations founded in the earlier period are non-Christian non–service providers, compared to 77 percent of organizations founded later. Nearly all Christian organizations are service providers, and just two Christian groups founded in each period pursue nonservice activities. In general, the scientific activities
score tends to be higher among more recent organizations, as the estimates of regression analyses show. These tabulations illustrate that it is not the presence of a Christian affiliation or direct service provision activities alone that are associated with extremely low levels of rationalization, but the combination of both among organizations founded before 1945.

These findings suggest that organizations involved in scientific activities tend to possess related features. In general, educational development groups that pursue expert and knowledge-based activities are more closely tied to world culture through their global networks and are less associated with a charitable logic through Christian affiliation or service provision. The results also provide a more nuanced understanding of how scientific and charitable approaches coexist and conflict in educational development organizations. The two logics are largely distinct, particularly in the case of Christian service providers founded before 1945. Further, the cultural context of Christian charity may have particular resonance in the West, where it provides an alternative institutional frame from the logic of science and where it garners material support from domestic religious donors. Among non-Western service providers, however, the logics of charity and science coexist. A likely explanation is that these types of organizations are influenced differently by important stakeholders, especially IGOs.

There are a number of limitations of this research, and its results should be interpreted cautiously. Methodologically, the cross-sectional design of this research precludes causal analysis of change. Changes in the categorization of organizations and the types of activities that organizations pursue make it difficult to track individual organizations over a long period of time. From a data standpoint, it is a drawback that key organizational variables, such as staff size or annual income and expenses, are unavailable and that a large number of organizations fail to report mission statements and had to be excluded from the analyses. In addition, a more complete data set would include both international and national NGOs. National NGOs would be important to consider because it is likely that much direct service work has been outsourced to national organizations as part of the broad global changes that have occurred in the field of educational development since 1945. The results do, however, provide insight into the characteristics of educational development INGOs that practice scientific activities.

Discussion and Implications

Should educational development organizations focus on science or charity? There are numerous advocates and critics of each approach. Although

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16 The only exception to an increase in scientific activities over time is for Christian non–service providers. This should not be interpreted as an actual decline because it is based on just two organizations in each time period.
the first INGOs were Christian, today some view the linkage of faith and NGOs with suspicion. This group “holds that philanthropy is really about public purposes and that donors should focus on the needs of the community, putting their own private interests and values aside. . . . The goal of this approach is to ensure that philanthropic funds are used wisely and efficiently, that they match the needs of the community, and that the public interest is served” (Frumkin 2002, 104). As mentioned earlier, some normative philosophers go further, arguing that scientific approaches are more likely to lead to long-term solutions to social problems and are therefore a more just pursuit than charitable activities (Kymlicka 2001; Gross 2002).

Some are also critical of the continuing role of NGO involvement in direct service provision, claiming it enables governments to neglect their obligation to education. Peter Frumkin (2002) states that there is a real concern among progressives that “overreliance on the nonprofit and voluntary sector might also lead to the government’s being released from its responsibility for important social problems” (90). This tension is exacerbated by the reduction of welfare services in many countries since the 1990s, which may create even greater demand for NGOs to provide educational services. In the field of educational development, Archer (1994) argues that his experiences at Action Aid and other educational development organizations led him to believe that while service provision may have been appropriate for NGOs in an older world, in the modern context of decentralization NGOs have unwittingly become agents of privatization that help create a two-tier system and undermine local capacity. In this view, the appropriate role for NGOs is in advocacy and other indirect activities, such as research or awareness raising rather than direct service provision.

Regardless of whether assumptions about paths to effectiveness are initially correct, as beliefs about appropriate strategies become institutionalized, organizations may gain from signaling adherence to these norms through an increased ability to raise funds or other support. Because of the endogeneity of institutional systems, rationalized “myths,” to use the terminology of Meyer and Rowan (1977), acquire actual market rationality for organizations (Edelman 1992; Edelman et al. 1999). Adherence to rational myths can influence the ability of educational development INGOs to marshal resources if foundations tend to fund organizations that pursue professional activities if they become accepted solutions to educational problems, regardless of actual effectiveness.

Setting aside the question of what ought to be, there are three main implications from the findings of this analysis. First, the tension between Christian service provision and rationalized activities may be cause for concern. The rationalizing activities carried out by professionals include the influential roles of agenda and standard setting (Ferguson 1998). These activities set the boundaries of what counts as “educational development,” who
the appropriate actor is, and what the “proper” approaches to problem solving are (Finnemore 1993, 1998; Boli and Thomas 1997). The lack of attention to these activities by Christian groups working on the ground suggests a split in the field, creating a challenge that is both top-down and bottom-up. The absence of an important group of educational development organizations from scientific activities like international standard setting may result in global policies that are far removed from the realities of practice on the ground among many organizations, rendering them less useful. At the same time, isolated organizations may miss the potential to learn about valuable practices that are being developed and shared globally.

Second, scientific activities may help increase the professionalization, accountability, and effectiveness of NGOs in educational development through activities like certifying professionals, establishing minimum operating standards, or tackling high-impact policy-level issues. However, an emphasis on scientific approaches to solving social problems may become counterproductive by giving priority to evaluation and measurement at the expense of service provision. Many educational development INGOs provide services where the outcomes are difficult to quantify, such as providing trauma therapy to children in refugee camps or programs to build self-esteem among HIV orphans. But external pressure—be it coercive, normative, or mimetic—to be more scientific, to count, and to measure may drive organizations away from such programs or put them out of business.

Finally, if science is indeed displacing charity as a rationale for INGOs, there may be unexpected social losses beyond the realm of educational development. In the words of Michael Walzer (1982), “the act of giving is good in itself. . . . It involves ordinary citizens in work that parallels and supplements the work of officials and generally increases the level of socially useful activity” (434). Scientized activities are generally carried out by experts and professionals, limiting the role of other citizens to thin forms of participation in civil society and checkbook advocacy. The consolidation of solving social problems in the hands of experts has potentially negative consequences for both democracy and the pluralism of civil society (Skocpol and Fiorina 1999; Putnam 2000).

As we have seen, greater linkage to world culture is associated with greater engagement in influential scientific activities. In some types of organizations, especially Christian service providers, there is little overlap between charitable and scientific logics, but in non-Western service providers, the two logics coexist. Overall, older, Christian organizations that provide direct educational services have few ties to other international organizations, have limited national representation, and are the least involved in scientific activities. These findings raise many further questions. Future studies should provide a more in-depth analysis of how national and global changes since 1945 are influencing organizations. Scholars and practitioners should consider whether
there is adequate communication between organizations with a charitable logic and those that are more highly rationalized, particularly in global discussions that establish standards and norms in educational development. In addition, organizations and funders need to carefully consider whether their use of the tools of science, such as quantitative evaluation, comes at the expense of organizations and programs that tackle hard-to-measure outcomes in education. Despite these potential hazards, the rise of a scientific logic in educational development is also associated with greater global interaction and may facilitate the creation and sharing of knowledge about best practices, thereby increasing the effectiveness of educational development organizations worldwide.

References


