

Scopic Systems, Pipes, Models and Transfers in the Global Circulation of Educational Knowledge and Practices

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The purported “liquidity” of knowledge is often posed as one of the defining characteristics of the present “age of globalization.” Liquidity describes the present moment as one marked by flows, flexibility and flux, and it also can be invoked to define the here-and-now by suggesting contrasts and departures from earlier historical eras. A statement such as the following: “*Knowledge is no longer an immobile solid, it has been liquefied. It is actively moving in all the currents of society itself,*” would seem to have tremendous import for the study of education. This might, for example, cause us to think about the “pedagogies of dislocation” (Edwards & Usher, 2007) that accompany and are prompted by this seeming increase in the mobility of knowledge. It might also prompt us to consider not just the ways that distance education, overseas “satellite” campuses, and the internationalization of education systems represent new institutional configurations and *trans*-local social networks, but also how they emerge against the backdrop of fundamentally altered epistemic paradigms. These are, no doubt, important angles to consider in the study of education. However, our focus in this chapter will be on “educational knowledge”—the corpus of rationalized expertise, best practices, and outcome-oriented scientific problematizations of educational practice and school organization (Popkewitz, 2000). Educational knowledge, one can argue, has become as mobile and liquid as other forms of knowledge. Yet, here we propose to take a step back and focus our attention on what makes liquidity and flow possible: the material and nonmaterial structures and organizational forms that enable and facilitate the mobility of knowledge. An orienting premise of this chapter is that these structures and forms are domain-specific, and, thus, one needs specifically to look at the particular historical circumstances and configurations that sustain (and sometimes accelerate) the worldwide flows of educational knowledge.

One of the points of contention in the social science literature on globalization concerns the extent to which researchers need to rethink

the analytic tools used to study global phenomena (Rossi, 2008). This chapter proceeds by examining three different scholarly currents and their understandings of how and why ideas move. We attempt to assess what is offered by and what is obscured by the conceptual tools and modes of analysis used (1) by a line of scholarship in the field of comparative education (dating back to the nineteenth century but demonstrating some remarkable continuities over time) that examines “educational transfer”; (2) in more recent neo-institutionalist sociology work, again primarily housed in the field of comparative education, that discusses a “world culture of schooling”; and (3) in scholarship undertaken in recent years by anthropologists who look at the formation of global epistemic communities and the “scopic systems” that sustain these communities, specifically in relation to world financial markets.

To gain perspective on this problem, it is useful to remind ourselves that these present circumstances may not be as historically novel as they are sometimes presented. The quotation above, suggesting that knowledge is *now* actively moving in all currents of society, in fact comes from an 1899 lecture by John Dewey, who was comparing the turn of the twentieth century with previous times. Dewey spoke of a “high-priesthood of learning” that parceled out education “to the masses under strict restrictions.” With Gutenberg, and later with the industrial revolution, he argued, all of this changed:

Printing was invented; it was made commercial. Books, magazines, papers were multiplied and cheapened. As a result of the locomotive and telegraph, frequent, rapid, and cheap intercommunication by mails and electricity was called into being. Travel has been rendered easy; freedom of movement, with its accompanying exchange of ideas, indefinitely facilitated. The result has been an intellectual revolution. Learning has been put into circulation. (Dewey, 1900/1990, pp. 17–18)

Dewey’s gloss on the ways that technological advances spurred ideas into circulation directs attention to the mediality and material structures and forms by which ideas “move.” In his account, it is inevitable that simply the increase in the quantity of printed matter has liberalized knowledge. Similarly, increased “freedom of movement” has facilitated the exchange of ideas. Though this notion is commonplace to the point of banality, some historical evidence of its significance might be drawn from Carlo Ginzburg’s (1980) masterful analysis of the inquisition transcripts of a sixteenth-century miller from the Friuli-Venezia Giulia region of northern Italy. Domenico Scandella, known as Menocchio, was unusual in being literate and also being able to travel to Venice,

where he purchased books, including Boccaccio's *Decameron* and possibly an Italian translation of the *Koran*. On the basis of this exposure to a wider world of ideas—and, Ginzburg pivotally argues, in a syncretic combination with a long-enduring oral, peasant culture—Menocchio articulated a heretical cosmogony that ultimately led to his being burned at the stake in 1599. The Catholic Church's great interest in where Menocchio acquired his ideas (which is, ironically, the same question pursued by Ginzburg the historian) is indicative of the threat that the circulation of knowledge has historically posed to what Dewey referred to as "high-priesthoods of learning."

Dewey's narrative of progressive expansion prompts us to pay attention to the multiplication of paper as well as to individuals' geographic journeys and whom and what they encounter. The case of sixteenth-century Menocchio reminds us, however, that not all ideas can necessarily be traced with the level of determinacy and certainty that a causes-style and influences-style (Newtonian) modeling of circulation would strive to deliver. The question of how and why ideas travel brings to the table a whole host of cultural, social, historical, political, economic, not to mention epistemological, issues. In the following sections we discuss a set of research traditions and attempt to discern how each explains (or would explain) the globalization of educational knowledge.

Globalizing Educational Knowledge as Strategic Learning

The question of how ideas, practices and institutional forms related to education cross borders has long occupied researchers in the field of comparative education. One of the key "father figures" of the field, Marc-Antoine Jullien de Paris (1775–1848), who proposed a science of education in a series of 1816 and 1817 publications, was deeply interested in how features of schooling could be transferred from one nation to another. Jason Beech (2006) argues that Jullien conceived of education as intrinsically independent from context; meaning therefore that an idea or ideas from nation X could be seamlessly "transported" to nation Y (for more discussion of the cosmopolitan features of Jullien's social science see, Sobe [2002]). In his *Plan for Comparative Education*, for example, Jullien asked about the extent to which the Bell-Lancaster monitorial method was used in different countries. In this schema, the sheer act of comparison facilitates the "borrowing" of ideas. A second "father figure" of the field, Michael Sadler (1861–1943), is famously posed as a counterpoint to Jullien's optimism regarding borrowing (for

a similar, earlier contrast see, Ushinsky [1857/1975]). Sadler cautioned that educational reformers not “wander at pleasure among the educational systems of the world,” and, invoking ideas of native acclimatization, he likened deliberate borrowing to picking flowers and expecting “that if we stick what we have gathered into the soil at home, we shall have a living plant” (as quoted in Bereday, 1964, p. 310). As this suggests, one of the key problematics of transfer has thus been the appropriateness/inappropriateness of the circulation, whether the moved educational knowledge “fit” or did not fit its new context. And, relatedly, this has generated extensive discussion in the field across the twentieth century on whether transfer should or should not occur.

Such debates notwithstanding, deliberate “transfer” and “borrowing” from elsewhere does appear to occur with relative frequency. And, regardless of whether comparative education researchers are involved in the design and execution of the movement, it is something they can study and analyze. Beech (2006) argues that scholars have tended to view educational transfer as following a certain trajectory where

(1) a local problem was identified; (2) solutions were sought in foreign educational systems; and (3) a “tested” institution or educational practice (that had worked or was believed to have worked) was adapted to the new context and then implemented. (p. 2)

As Beech notes, an important feature of transfer research is the specification of a chronological trajectory. Study-tours and other officially sponsored forms of travel to foreign countries are one of the key means by which improvement-oriented reformers can learn about ideas that have been “successful” (or not) and determine which ideas to transfer or avoid transferring to their homeland.

Social science modeling of educational transfer has become increasingly complex in the last decade (e.g., Phillips & Ochs, 2004; Rappleye, 2006). In this current of scholarship, the circulations of educational knowledge can be posited, for example, not as simply linear but as a circular process that can be viewed as a transfer “cycle” that witnesses multiple stages, interest-pursuing actors and varying levels of political deliberation, negotiation and compromise. As diligent social scientists, educational transfer researchers typically place a premium on understanding how agency and structure interact to limit and enable the mobility and liquidity of educational knowledge. One noted leader in the field of educational transfer studies, Gita Steiner-Khamsi (2004), has argued that transfer studies often implicitly rely on the existence of “social networks” to help explain how certain things appear “attractive”

and how they “move,” and she recommends making the analysis of social networks a more central feature of scholarship in the field. Nonetheless, despite the inclination towards examining the globalization of educational knowledge in relational and transactional terms, scholarship in this tradition does not view knowledge itself as “distributed” or taking on any special “networked” properties. In adherence to a long-standing tradition of Western thought, knowledge is still very much seen to take an epi-phenomenal form, even though it can be “actively moving” in different currents of society, as Dewey put it over a century ago. In this paradigm, knowledge is out there to be accessed and leveraged strategically by social actors in accordance with their prefigured interests.

Educational transfer lends itself to convenient analytic dichotomies or continua, in designations such as possible/impossible, desirable/undesirable, voluntary/involuntary, universal and abstractable/particular and context-bound. Some key presuppositions emerge from across the literature. One is that it is possible (and at times relatively straightforward) to distinguish between educational knowledge that is “inside” or “native” to a given setting and that which is “outside” or “foreign.” A second is that in large part we can look to the “agency” of individuals and, though with less emphasis, to the agency of institutional actors to explain movement. A third is that despite the apparent “liquidity” of discourses, texts and ideas, they are more or less bound to have localized or indigenized forms. A fourth is that we can rely on a standard set of sociological explanations for why educational knowledge is rendered mobile. Educational transfers, thus, serve some sort of functional purpose—purposes that might include furthering the technologization or rationalization of society, preserving elite interests or contributing to elite formation, helping achieve social justice and social welfare objectives, or advancing nation-building or other collective identity projects.

As the above suggests, educational transfer studies tend to offer actor-centered explanations for why and how educational knowledge moves. They can also offer explanations for why consensus forms around particular strands of educational knowledge. Not all “mobile” educational knowledge is equal in terms of its reach, its force or its global acceptance, and researchers face the challenge of explaining why certain pieces of educational knowledge attain *trans*-local acceptance while others do not. Jullien (1816-7/1964) understood the perfection of educational systems to be tantamount to “a universal tendency toward a similar goal” (p. 36) and the comparative tables he proposed were to

develop a universal, ideal model in education. Other comparative education scholars across the twentieth century have spoken of “absolute values” (Nicholas Hans) and of “general aims” (Joseph Lauwerys), and one enduring goal of certain sectors of the field has been to identify a model of schooling that can be shared globally. “Darwinian” notions of natural selection also govern the selection of best practices, suggesting that studies of transfer, simply stated, show us “what works” and “what doesn’t.” Thus, from a transfer paradigm, educational comparisons enable not only the movement of educational knowledge but also contribute to the formation of a global consensus on an ideal model of schooling. In contrast, the body of scholarship that we examine next argues that educational ideals themselves—the ideational, symbolic sphere, more than the “best” practices that can be identified on a technical level—are what *trans*-local consensuses on educational knowledge are built around.

Globalizing Educational Knowledge as the Movement of Cultural Models

The comparative education research literature that is grouped around neo-institutionalist sociology, and specifically scholars such as John Meyer and Francisco Ramirez of Stanford University, who discuss “world cultural models,” offers a different set of tools and techniques for analyzing how and why educational knowledge is both mobile and moves. First, however, some background is necessary. Frequently, the starting point of this body of scholarship is to account “for a world whose societies, organized nation-states, are structurally similar in many unexpected dimensions and change in unexpectedly similar ways” (Meyer, Boli, Thomas, & Ramirez, 1997, p. 145). Meyer and his colleagues argue that power relations-based and functional rationality-based explanations for why different institutions across the globe are becoming increasingly similar or “isomorphic” fail to acknowledge the ways in which world culture exogenously informs states and societies. In their view, the “world models” that are diffused through global cultural and associational processes have become the causal motor for institutional isomorphism. Many states seem willingly to adopt world models, something that power relations-based theories seem unable to explain satisfactorily. Functional-rationalist theories, according to Meyer, are not very successful at explaining why many states and societies have a “loose coupling” between their formally espoused models/principles and the actual practices that can be observed.

Neo-institutionalist sociologists place greater explanatory power in world “cultural myths.” For example, a functionalist-rationalist approach to the idea that education is a means to remedying social maladies (e.g., inequalities) would be deeply troubled by the questionable ability of schools to actually perform this capacity (for discussion of this in the context of post-conflict educational reform see, Sobe [2009a]). Instead, if we take the idea that education serves the betterment of society as a “common-sense world model” we have a better purchase on both the significance of policy actions and why their repeated endorsement is so important.

Ramirez and Meyer (2002) argue that world-level entities are “organizational carriers of the world educational order” (p. 95). International organizations and “rationalized others”—the sciences and the professions—are examples of world-level entities. In this vein, Colette Chabbott (2003) identifies international development organizations and international professionals as carriers of “packages of ‘correct’ principles, ‘appropriate’ policies, and ‘best’ practices to national governments and local nongovernmental organizations alike” (p. 2). These scholars argue that the current time period in particular is well suited to diffusing world models which are codified and publicized. The appearance and subsequent expansion of authoritative, legitimizing international organizations and rationalized others has dramatically increased the visibility of world models and their liquidity: “Rationalized others are now everywhere, in massive arrays of international associations and epistemic communities, generating veritable rivers of universalistic scientific and professional discourse” (Meyer et al., 1997, p. 162). Few international governmental organizations were in existence in 1940 and the League of Nations—forerunner of the United Nations—was effectively inoperative. Emergency relief organizations after both world wars and international public health campaigns of the 1930s and 1940s fostered faith in addressing international issues on an international scale (Chabbott). In the aftermath of World War II, an organizational pattern was established, with the United Nations and its affiliates, in which international discourses could achieve a heretofore unprecedented standardization and could advance a modernist agenda of progress, rights, and development. Meyer et al. argue that “world organizations are, thus, primarily instruments of shared modernity” (Meyer et al., p. 164). World-level entities circulate particular discourses and agendas on an international scale, and thus foster consensus on issues that warrant worldwide attention. International organizations, sciences and professions, and other rationalized others derive their expert and legitimizing

identities through posturing themselves as impartial, rationalized parties that disseminate necessary universal knowledge. Through this process, particular knowledge is rendered “common-sense.” Meyer et al. also argue that direct relationships between local actors and world culture enable the mobilization of world models. In the context of schooling, the authority of local educational actors is often validated globally. Through professional development and networking, local educational actors are familiar with the “latest word on curricular and pedagogical matters” and the “knowledge bases of world centers” (Ramirez & Meyer, 2002, p. 96). In this schema, *trans*-local educational knowledge is thus circulated locally through globally validated local educational actors (and organizations). It is also important in this schema that educational knowledge—like knowledge writ large—is seen as constructing subject positions and helping to constitute subjectivities (see, e.g., Meyer, 1987).

Meyer and his colleagues also direct attention to the importance of a globally recognized nation-state “template” that is validated by the United Nations and the other world bodies who determine whether nation-state “candidates” have appropriately formulated their claims for sovereignty, that they appropriately control a population and territory, and that they express the right objectives. General adherence to this template (for purposes of formal recognition) engenders *trans*-local consensus with regard to the qualities and/or characteristics of nation-states. Systemic maintenance of nation-state actor identity refers to the ways in which world society structures/organizations aid nation-states in “conforming” to the “proper” world model. This maintenance furthers institutional isomorphism and also generates the category of “pariah” states. A focus on cultural models offers an explanation for the strong advocacy power that nongovernmental organizations have in this milieu. As Chabbott (2003) documents, international government organizations rely on regional, national, and local nongovernmental organizations to “monitor the implementation of declarations and national plans of action at the national and local levels” (p. 10). Technological developments have fostered the networks between local nongovernmental organizations and international development organizations, facilitating consensus-building and institutional isomorphism (see also Riles, 2000). The Internet and assorted online technologies have made it easier to attract international attention in instances when governments fail to live up to (their own) commitments to human rights, democratic principles, environmental stewardship, etcetera. Conforming pressures can thus come into play at the nation-state level

(as governments attempt to please international authorities) or at sub-national levels (as local entities appeal to supra-national institutions and pressures to force national governments to act as “proper” nation-states).

Comparative education research in the neo-institutionalist sociology tradition focuses both on the nature of the knowledge that is rendered mobile and what vehicles or “carriers” are responsible for moving it. In terms of the former, Francisco Ramirez notes that “the education reforms that travel most extensively have both a universalistic and rationalizing quality” (Ramirez, 2003, p. 249). These same qualities of universability apply to the carriers as well, whose authority (and capabilities) are bolstered by their very ability to act in a worldwide or international manner. As noted above, these carriers exist “in massive arrays of international associations and epistemic communities” (Meyer et al., 1997, p. 162).

A number of contrasts can be drawn with the comparative educational scholarship on transfer as we discussed it above. For one, the educational transfer literature does not consistently distinguish what is responsible for some kinds of educational knowledge being more “liquid” than others. Two, while both bodies of literature share an interest in change over time, the work of Meyer et al. is deliberately calibrated to capture general, broad-scale trends rather than to chart or document the specific movement of any particular element of educational knowledge around the globe. Interestingly enough, however, both strands of scholarship see the act of comparison itself as implicated in advancing the circulation of educational knowledge. The global reports that demarcate educational “winners” and “losers” via league tables and international rankings lend visibility, according to Ramirez and Meyer (2002), to world models themselves. In the transfer paradigm, enterprises such as TIMSS and PISA lend themselves to “what works” and “what doesn’t work” kinds of policy discourses—and, once again, we see a revealing difference between these two areas of scholarship on whether the mobility of educational knowledge occurs more in a symbolic and cultural context, or in a practical, and immediate results-oriented realm.

Globalizing Educational Knowledge Outside of Networks

The third area of scholarship that we examine here in relation to explaining how and why ideas move is the work undertaken by Karen Knorr Cetina (Knorr Cetina, 2003, 2008; Knorr Cetina & Bruegger,

2002), an anthropologist who has devoted a great deal of attention to world financial markets and what it means for information to flow in networked and non-networked ways. In standard understandings of networks, the links between nodes function as “pipes” through which information and resources can pass. The passage of information between nodes serves immediate instrumental purposes and also the broader, coordinating purpose of holding the arrangement together. In this schema, one or more conduits can lead to a single node, thus enabling the creation of central nodes and of multiple collectives (hence the appellation “rhizomatic” that is so frequently applied to network configurations).

Knorr Cetina discerns a different organizational schema in the currency markets which she investigates. Unlike most other financial markets which are organized as centralized markets (as, for example, national/regional security, bond and commodity markets), foreign exchange is an over-the-counter market that inheres in inter-dealer transactions housed within global banking institutions. Knorr Cetina (2008) reports that currency traders have up to six computer screens in front of them, fully capturing their gaze, with “the market [composing] itself in these produced-and-analyzed displays to which traders are attached.” These terminals “deliver the reality of financial markets, the referential whole to which ‘being in the market’ refers” (p. 71). According to Knorr Cetina, the relational idiom of “network” or “being networked” does not capture the totality and reflexive comprehensiveness of the projection and reality being composed in this instance. She proposes the concept of a *scopic system* to describe this structure:

Like an array of crystals acting as lenses that collect light, focusing it on one point, such mechanisms collect and focus activities, interests, and events on one surface. . . . When such a mechanism is in place, coordination and activities respond to the projected reality to which participants become oriented. . . . When such an ordinary observer constructs a textual or visual rendering of the observed and televises it to an audience, the audience may start to react to the features of the reflected, represented reality rather than to the embodied, pre-reflexive occurrences. (Knorr Cetina, 2008, p. 8)

Information that moves through a scopic system thus has considerably different effects than information that moves through networks. Against an embedding of circulation in social relations, Knorr Cetina’s work suggests a way of seeing a global system that tends toward a single collective (as opposed to multiple collectives or “pluri-centered” clusters). Based on her ethnographic study of currency trading floors in

Zurich and New York, she proposes that the configuration of screens, content and options that traders confront compose a *global reflex system*. She uses this term to denote

a reflexive form of coordination that is flat (nonhierarchical) in character while at the same time being based on a comprehensive summary view of things—the reflected and projected global context and transaction system. (Knorr Cetina, 2003, p. 8)

Though Knorr Cetina does not rely upon notions of mediality in her analysis, the emphasis she places on technologies and the ways they interact with and transform human beings/human bodies actually returns us to the “new chapter of human history” that John Dewey narrated in 1899 and the emphasis he placed on what technology (of a different order) enabled and transformed. One of the recurring themes of some globalization discourses is that we could well stand on the threshold of new modes for setting learning into circulation.

What, however, do currency markets, scopic systems and global reflex systems have to do with the liquidity and circulation of educational knowledge? We are not (yet?) at the point where policy makers and education professors in Birmingham, Brasilia and Bangalore sit in front of screens that supply them with instantaneous educational research journal table of contents alerts, real-time MCAT score reporting, the RSS feed from the UNESCO International Institute for Educational Planning, and the online social network “status updates” or “tweets” of prominent Ministers of Education. Knorr Cetina’s concepts and insights do however, provide us with some tools for thinking about projected realities (and the means of projection) as well as the importance of reflexivity in the constitution of global communities (whether they be a singular collective or multiple collectives).

To think through this we continue our panning back a century and look at World’s Fairs and International Expositions as the Reuters/Bloomberg screens and the scopic and global reflex systems of their time. This will also help us to think about the extent to which, or ways in which, global educational assessment projects such as TIMSS and PISA, as well as present-day academic conferences, function scopically and reflexively.

One of the more important points to be drawn from Knorr Cetina’s work is that one-worldness, i.e. notions of belonging to a single collective and inhabiting a singular “global reality,” can be constructed in certain domains. The International Expositions and World’s Fairs of the end of the nineteenth and beginning of the twentieth centuries

served a similar function of constructing a singular global reality and projecting forth a modern future. Exhibits on schooling were a regular feature of these international expositions, some of which could attract tens of millions of visitors and sizeable foreign delegations. As Martin Lawn notes:

A major significance of exhibitions was that they provided systems of classifications, and the models needed to illustrate them, which materialized the comparative process. Objects were placed in relation to each other by increasingly standardized systems of rules of measurement. . . . So, through this exhibitionary prism, hierarchies were established in the signs and sites of progress and modernity. (Lawn, 2009, pp. 16–17)

The technologies of museum display and their accompanying norms of spectatorship (Sobe, 2007) can be seen, in Knorr Cetina's terms, as a scopic system. The exhibits and what Lawn appropriately calls their "systems of classification" did not simply supply visitors with modes of viewing and "lenses" for examining existing schooling practices. Rather, in modeling the future and establishing scores of comparative matrices, much as TIMSS and PISA do today, they brought visitors and exhibitors into what one might call a "house of mirrors" where projections reflected an anticipated or actual "reaction." An example of this is Spain's educational exhibits at the 1876 Centennial Exposition in Philadelphia. These exhibits not only reflected an effort to present Spain as the spiritual mother of the Americas, but also an attempt to mitigate the supposed perception that Spain was deficient and far behind other European nations in advancing the cause of popular education. The solution was to send neither charts nor devices nor building models but handsomely printed books, which, since they were printed in Spanish—the Spanish Ministry of Education explicitly strategized in advance—had the added advantage of (probably) being unreadable by the American jurors who would award the education exhibit prizes. And indeed, this proved to be successful, for at this fair Spain received 93 awards in the education section, the most of any country after the United States (Pozo Andrés, 2009, pp. 162–163). Thus, while the World's Fairs/Expositions did provide countries with a platform on which to display themselves, this was a platform set within the scopic system of international competition and comparison that was at the same time a system through which modernity was debated and enacted.

The great International Exhibitions of the end of the nineteenth and early twentieth centuries purported to present a comprehensive,

encyclopedic survey of the world. And, despite the great swaths of territory and human experience that were excluded, these “exhibitionary prisms” did much to construct the reality of a “single world” as an all-encompassing, texturally even sphere within which codified distinctions and standardized differences could be established (in reference to concepts like “civilization,” “progress,” and “modernity”). When we consider the way that these events functioned like a global reflex system, it becomes clear that if one accepts the neo-institutionalist sociologists’ idea that “world cultural models” play an important role around the world today, one needs to go back farther than the close of World War II to find the genesis of an increasingly isomorphic global educational system.

International Expositions continue today (as a follow-up to the Beijing Olympics, China is hosting EXPO 2010 in Shanghai), though no longer do they play the same coordinating role on the global scene that they once did. In some domains, this kind of coordination now takes place via the flickering glow of computer and television screens. However, the fanciful image of a Reuters and Bloomberg service for teachers, administrators and educational policy makers that we discussed above seems rather unlikely. And, even though meetings of organizations like the American Educational Research Association (AERA) have become vast international affairs, it is unlikely that we will return to the exhibitionary complexes of World’s Fairs in their turn-of-the-twentieth-century heyday. Nonetheless, we should attend to the ways that an AERA annual meeting is not simply a singular episodic event but is tied up with a massive scientific journal production effort. Several hundred sub-specialization networks are coordinated through face-to-face and electronic communication, and there are multi-directional efforts to raise the legitimacy and professional profile of educational research, both in the public eye and vis-à-vis other academic disciplines. In like manner, an event like the 1990 Education For All (EFA) conference in Jomtien, Thailand, with its extensive preparatory conferences, textual circulations and institutional coalition-building, seems very much to have worked to create a sense among participants (and those who have worked on EFA in the two decades since) of belonging to a single collective that inhabits one global educational reality. Attention should also be paid to the international conferences of “umbrella organizations” such as the World Council of Comparative Education Societies (WCCES), whose membership consists of national, regional and linguistic comparative education associations across the globe (Maseman, Bray, & Manzon,

2008). WCCES meetings can surely be understood in network terms, yet they also stand to be analyzed in terms of the extent to which they function as an array of crystals that collects and focuses light on one surface.

Knorr Cetina's work invites us to consider the scopic systems and global reflex systems that condition/enable the circulation of educational knowledge today. And, while her ideas certainly do not annul the possibility of fragmentation and multi-perspectivalism, they do stand in some contrast to the oft-cited "-scape" notions proposed by Arjun Appadurai (1990). They suggest that the comparative education endeavor, however, fractured and incomplete, is helping to create not multiversal but universal standards and systems of coordination. Lawn writes:

High modernity might have lost its capacity for modeling the education future, the state might have retreated from state building and globalisation might have dislocated the clear meanings of education, but once, the future was crystallised in the work of the exhibitions, museums and magazines of the nineteenth century. (Lawn, 2009, p. 11)

While we agree with Lawn that there is much to indicate that the globalization of our present day and age has troubled some of the "clear" meanings of education, the overlapping efforts under way (and we can think of educational researchers as well as the institutions and carriers discussed by Meyer, Ramirez and Chabbot) to craft a "global reality" within which it is possible to think comparatively about education systems suggest that there are still crystallizing prisms at play. These are prisms which, to paraphrase Knorr Cetina (2008, p. 8), focus activities, interests and events such that participants and bystanders (1) become oriented to an increasingly shared understanding of reality and (2) increasingly begin to react to the features of that reflected and represented reality rather than to embodied and lived pre-reflexive occurrences.

Conclusion

Flow Architectures of Educational Knowledge

One of the important themes that ran through each of the sections above concerned questions of reflexivity, recursive processes and how to take account of "conversational interactions" that are at once intense and diffuse. Transfer approaches to historically studying the circulation

of ideas and practices have been faulted for a “reflexivity deficit” (Werner & Zimmermann, 2006) that, for example, makes it difficult to untangle situations where “movement” involves reciprocal, reversible, and multiple vectors. While there may be certain instances where interrelationships are strictly two-sided, it is probably more the case that the circulation of educational knowledge takes place within dense, overlapping webs of relationships (for more on this see Sobe, 2009b). The paradigm of bilateral, diachronic analyses that characterize most transfer research does not automatically capture the complexity and multiplicity of these relationships, particularly the “house of mirrors” dimensions where multiple refractions of images of self and other infiltrate and pattern the circulation of educational knowledge, and, in fact, may well exceed the possibility of a relational analysis.

The argument that world cultural models prominently figure in the movement of educational knowledge around the globe allows us to see this movement as more than the result of strategic learning. By focusing on the various carriers of world-level ideologies and educational ideals, this strand of scholarship is also predicated on networks playing an important role, yet it too fails to capture the possible multiple vectors that might be in play as these world cultural myths are shuttled around the globe. Meyer and his colleagues do in fact recognize this. They acknowledge that their emphasis on the ways external world models regulate states’ and societies’ identities could be enhanced by a more complete model that took account of recursive processes and demonstrated the ways in which “states, organizations, and individuals also contribute to the content and structure of world culture” and world-cultural change (Meyer et al., 1997, p. 151). That being said, the world models that spread are considered to be relatively dynamic and generative of diversity. The implication is not that all educational systems are precisely the same but more that the ways in which they are different has become standardized according to whether they are “tightly coupled” or “loosely coupled” with world models.

Institutional isomorphism arguments rely on these global “models” to supply the content of the educational knowledge that moves and they tend to presume network-based distribution/dissemination mechanisms. In contrast to the idea of a substance-filled model, the idea of a “scopic system” describes a technology or mechanism that establishes the *mis-en-scène*—the overall context and “reality” within which ideas emerge and move. This contrast becomes more evident in Knorr Cetina’s comments on networks and on the need to pay attention to things that network analyses cannot capture:

Networks are embedded in territorial space, and they do not suggest the existence of reflexive mechanisms of projection that aggregate, recontextualize, and augment the relational activities within new frameworks that are analytically relevant to understanding the continuation of activities. (Knorr Cetina, 2003, p. 8)

Turn-of-the-twentieth-century World's Fairs and exhibitions were undeniably sites of intense social networking and helped to move educational knowledge between various nodes. Nonetheless, we argued above that exhibitions also functioned in some important non-network ways in projecting and drawing people into the recursive enactment of a global educational "scene."

In studying the globalization of educational knowledge, insights can be drawn from each of the three bodies of scholarship discussed above. However, we would argue that alongside analysis of the "currents" and "pipes" through which educational knowledge moves around the globe, it is critical to think about the "prisms" that crystallize and focus individuals, actions, institutions, events, and interests on a "global educational reality." Exhibitionary complexes that physically gather people together and produce recursive reams of text commemorating and analyzing the occasions are no longer the key prisms they once were. The research challenge becomes one of ascertaining what prisms are at play in the globalization of educational knowledge today and of explaining how these prisms change over time. One might ask, for example, what kind of scopic functioning there is to the distinction between qualitative and quantitative research. What kind of global comparability does this commonplace division engender? What kind of collective might it be contributing to forming? Similar questions could be asked about concepts such as "educational stakeholder," "community-school partnership," and "data-driven decision-making." The point being not simply that educational knowledge moves and becomes global, end of story. Rather, it is that what moves is linked into certain projections of reality that then become carried forward in a continual unfolding.

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