# Boundlessly Entangled: Non-/Human Performances of Education for Health through Open-Air Schools

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This article starts from *histoire croisée* to develop a genuinely relational analysis of performances of health education in the context of open-air schools. It interrogates through places, people and things conceived of as being performatively entangled the notion of an internationalization of school hygiene. These places, people and things – "international" conferences and exhibitions, "figureheads" of the aspiring New Schools and open-air schools movements, and printed, photographed, and designed materials – reveal open-air schools as "practice[s] and movement[s]" unbound by national or otherwise (real-)imagined borders. Fragmentation accompanied their circulation and ensued from their co-constitutive role in the mediation of knowledge and praxis around hygiene. While still underexplored, economic factors were key to this process. Their analysis from within the "meshwork" in which non-/humans were (are) entangled opens up new lines of inquiry.

Keywords: open-air schools, *histoire croisée*, non-/humans, performances, meshwork

## *Histoire croisée*, internationalization, and entangled non-/human beings

This article develops a genuinely relational analysis of health education across and beyond what is now known as Europe through the example of open-air schools, moving beyond an *histoire croisée* approach.[1] Expanding previous research in this area,[2] it critically examines

[1] Werner and Zimmermann, "Beyond Comparison: Histoire Croisée and the Challenge of Reflexivity," *History and Theory* 45, no. 1 (2006): 30-50.

[2] See, for instance, Roy Lowe, "The Early Twentieth-Century Open-Air Movement: Origins and Implications," in *The Fitness of the Nation: Physical and Health Education in the 19th and 20th Centuries*, eds. Nicholas Parry and David McNair (Leicester: History of Education Society, 1983), 86-99; Linda Bryder, *Below the Magic Mountain: A Social History of Tuberculosis in Twentieth Century Britain* (Oxford: Oxford University Press, 1988); Ibid., "'Wonderlands of Buttercup, Clover and Daisies': Tuberculosis and the Open-Air School Movement in Britain, 1907-39," in *In the Name of the Child: Health and Welfare, 1880-1940*, ed. Roger Cooter (London: Routledge, 1992), 72-91; Anne-Marie Châtelet, Dominique Lerch and Jean-Noël Luc, eds., *L'école de plein air: Une expérience pédagogique et architecturale dans L'Europe du xxe siècle*/*Open-Air Schools: An Educational and Architectural Venture in Twentieth-Century Europe* (Paris: Éditions Recherches, 2003); Geert Thyssen, "Between Utopia and Dystopia? Case Studies of Open-Air Schools in Belgium, France, Germany and

through entangled places, people, and things the concept of an "internationalization" of school hygiene – implying the spread or circulation of knowledge and praxis between nation-states – and reflects upon how several "possible viewpoints" from which this topic can be considered may jointly be "generative of meaning."[3]

The theoretical and methodological approach started from is indeed that of *histoire croisée*, which is centred around the figure of crossing and the notion of intersection and is committed to exploring, on an empirical level, intercrossings proper to a topic of study while analysing, on an epistemological level, the very act of crossing scales, categories and viewpoints.[4] Yet there are flaws to this approach, among which its drawing of artificial lines between the ontological and epistemological; its turning of that which continually moves and morphs into objects and subjects which it fixates as such and as crossing over or intersecting; and its calling for reflexivity upon entanglements – denoted by the quantum physicist Karen Barad as a gesture of "mirroring" rather than attuning to the question of how these "matter", as both "substance and significance".[5] Therefore, *histoire croisée* itself is here threaded with more genuinely relational theoretical and methodological approaches like those developed by the anthropologists Tim Ingold and – particularly for the analysis of photographic materials – Elizabeth Edwards.[6]

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Italy (c. 1904-1979)" (PhD diss., University of Leuven, 2009); Anne-Marie Châtelet, *Le souffle du plein air: Histoire d'un projet pédagogique et architectural novateur (1904-1952)* (Geneva: MetisPresses, 2011).

[3] Werner and Zimmermann, "Beyond Comparison," 32.

[4] Ibid.

[5] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC/London: Duke University Press, 2007), 36, 72, 3.

[6] I have come to interweave such approaches with the "intra-active", "agential realist" approach adopted by Barad, thorough discussion of which however goes beyond the scope of this paper. See: Joyce Goodman, "Circulating Objects and (Vernacular) Cosmopolitan Subjectivities", *Bildungsgeschichte: International Journal for the Historiography of Education* 7 no. 1 (2017): 115-126; Ibid., "Thinking through Sonorities in Histories of Schooling," *Bildungsgeschichte: International Journal for the Historiography of Education* 7, no. 2 (2017): 277-288.

In line with recent histories of "education systems" which have not taken for granted "the national" as a reference frame and focused neither simply on comparison nor transfer,[7] the article is less concerned with "dissemination, flows (…) and exchanges *between* different spaces [emphasis added]"[8] than with moving and morphing *along* interwoven paths and *across* boundaries "imagined" (but therefore not necessarily less "real").[9] In the context of

[7] For instance, Damiano Matasci, "Le système scolaire français et ses miroirs: Les missions pédagogiques entre comparaison internationale et circulation des savoirs (1842-1914)," *Histoire de l'Éducation* 125 (2010): 5-26; Geert Thyssen, "The Stranger within: Luxembourg's Early School System as a European Prototype of Nationally Legitimized International Blends (ca. 1794-1844)," *Paedagogica Historica* 49, no. 5 (2013): 625-644; Daniel Tröhler and Thomas Lenz, eds., *Trajectories in the Development of Modern School Systems* (New York and London: Routledge, 2015); Martin Lawn, "A Systemless System: Designing the Disarticulation of English State Education," *European Educational Research Journal* 12, no. 2 (2013): 231-241; Matias Gardin and Thomas Lenz, eds., *Die Schule der Nation: Bildungsgeschichte und Identität in Luxemburg* (Weinheim and Basel: Belz Juventa, 2018).

[8] Joëlle Droux and Rita Hofstetter, "Going International: The History of Education Stepping Beyond Borders," *Paedagogica Historica* 50, no. 1-2 (2014): 1. This implies a shift away from linear concepts like "networks" and "assemblages" (cf. Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford: Oxford University Press, 2005), and "linkages" or "connections" (cf. Pierre-Yves Saunier, "Taking up the Bet on Connections: A Municipal Contribution," *Contemporary European Issues* 11, no. 4 (2002): 507-527, especially 512).

[9] Boundaries increasingly imposing themselves from the eighteenth century onwards across Europe and beyond as "imaginaries" with "material bearings" are those of the nation, as threaded cultural stories, images and memory places invoking nationhood or national belonging, and the nation-state, as an administrative body. As, for instance, in the cases of Luxembourg and Italy, they did so not necessarily in synchrony and both needed continuously to be worked at. Other boundaries like those of the region and municipality (not to mention churches) long traversed that of the nation or nation-state. See, for instance, Pit Péporté and others, *Inventing Luxembourg: Representations of the Past, Space and Language from the Nineteenth to the Twenty-First Century* (Leiden: Brill, 2010), especially 43-44. This helps to explain why the formation of nation states and of national systems of compulsory schooling did not always coincide, contrary to a common historiography of education trope, which is not to deny their close interrelation. Cf. Cynthia P. de Sousa and others, "School and Modernity: Knowledge, Institutions and Practices. Introduction", *Paedagogica Historica* 41, no. 1-2 (2005): 1-8; Daniel Tröhler, "Menschen, Bürger und Nationen: Motive, Argumente und Organisationsprinzipien moderner Schulsysteme im Westeuropa des frühen 19. Jahrhunderts," in *Die Schule der Nation*, eds. Matias Gardin and Thomas Lenz, 33-54. For Italy, see also ongoing research by Fabio Pruneri on small schools and the myth of compulsory schooling emerging with the nation-state.

open-air schools it focuses in particular on intertwined "enactments" or "performances"[10] around school hygiene involving both humans and non-humans, conceived indiscriminately as "wayfarers".[11] Central to the stance adopted here is the notion that these performances reveal evidence of "intimate transformation[s]"[12] undergone by non-/humans through their very travelling and threading, as they inhabit the world. In short, the anthropology-inspired theoretical-methodological approach pursued is one that goes beyond analysing multi-scalar hybrid "states of matter"[13] (in the case of photographs to be captured through representations or "visual content") and focuses instead on the work or active lives of non-/human beings in growing webs of embodied, affective social and cultural engagement.[14]

[10] I borrow the term from Françoise Poos and Edwards. Elizabeth Edwards, "Photography and the Material Performance of the Past," *History and Theory* 48, no. 4 (2009): 130-31; Ibid., "Objects of Affect: Photography beyond the Image," *Annual Review of Anthropology* 44 (2012): 221-234; Françoise Poos, "Hidden Images: The Making of a National Family Album" (PhD diss., De Monfort University, Leicester, UK, 2015).

[11] Building on and departing from Heidegger, who considered the human condition to be one of "dwelling", Ingold has thought of both humans and non-humans as "living beings" who "inhabit" the world travelling as "bundles of lines". He has distinguished "wayfaring" from transport as their mode of travelling; the former is not destination-oriented (about "carrying *across*") but about "development *along*" certain paths, which always leaves "trails." See Tim Ingold, *Lines: A Brief History* (London and New York: Routledge, 2007), 75-81; Ibid., "Bindings against Boundaries: Entanglements of Life in an Open World," Environment and Planning A 40 (2008): 1796-1810; Ibid., *Being Alive: Essays on Movement, Knowledge and Description* (Oxon and New York: Routlegde, 2011), 3-4, 10, 12-13; Ibid., "Bringing Things to Life: Creative Entanglements in a World of Materials," (http://eprints.ncrm.ac.uk/1306/1/0510_creative_entanglements.pdf, accessed 21 April 2015). While this concept of non-/humans as "wayfarers", further inspired by the work of Lefèbvre, Deleuze and Guattari, Bergson, Latour and others (Idem, 80-86) and adopted here, may seem problematic in view of its blurring of racializing and racist historical discourse regarding so-called wandering Jews and Gypsies, invading immigrants [cf. Alan Kraut, *Silent Travellers: Germs, Genes and the "Immigrant Menace"* (New York: Basic Books, 1994)] etc., the very conception of *all* beings as wayfarers, rather than particular kinds along the lines of race, ethnicity or migration background, productively counters such discourse.

[12] Pierre-Yves Saunier, "Circulations, connexions et espaces transnationaux," *Genèses* 4, no. 57 (2004): 110-126.

[13] Ingold, "Bringing Things to Life," p. 3.

[14] Edwards, "Objects of Affect," 221, 230.

Consistent with such a focus on open-ended non-/human growth and its effects, the article assumes that open-air schools are descended from, and have in turn contributed to, entangled performances of knowledge and praxis. Tracing back open-air schools to a specific origin and capturing their essence in some definition thus seems meaningless. As part of reform efforts in the field of preventive health education, these initiatives indeed have always lacked clear delineation from other projects "designing childhoods".[15] Like holiday camps and children's preventoria and sanatoria, for instance, they were intended to safeguard the "race,"[16] the flesh and bones of emergent nations and nation-states.[17] In the light of efforts to establish a genuine international open-air school movement – the result of which has been interpreted in more than one way as a "fruitful failure"[18] – it would not seem far-fetched to claim that open-air schools contributed to the internationalization of health education. Proclaimed by their advocates as "centres of school hygiene that constitute an indispensable factor in the fight against tuberculosis,"[19] they were viewed as a panacea, as model institutions in which the most advanced principles and methods of school hygiene were believed to be tested with a view to replacing in all modern nations the school of the bad old days with that of the future.

[15] Marta Gutman and Ning de Coninck-Smith, eds., *Designing Modern Childhoods: History, Space, and the Material Culture of Children* (New Brunswick, NJ, and London: Rutgers University Press, 2008).

[16] Ligue Française pour l'Éducation en Plein Air, *Premier congrès international des écoles de plein air en la Faculté de Médecine de Paris (24-25-26-27-28 Juin 1922)* (Paris: Maloine, 1925), 14, 144.

[17] Lowe, "Early Twentieth-Century Open-Air Movement".

[18] Anne-Marie Châtelet, "Bilan et perspectives"/"Reviews and Reflections," in Châtelet, Lerch and Luc, eds., *L'école de plein air/Open-Air Schools*, 403, 406; Depaepe and Simon, "Freiluftschulen"; Thyssen, "Between Utopia and Dystopia".

[19] Américo Mola, "Sur l'utilité des Congrès Internationaux des Écoles de Plein Air et la Nécessité d'un Comité International," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 1, no. 1 (1935): 6.

Starting from the observation that open-air schools did not become the standard anywhere and in fact remained quite marginal internationally,[20] the article addresses the following questions: To what extent and in what ways have open-air schools helped to internationalize school hygiene and to what effects? How helpful is internationalization as a concept to assess the ways that open-air schools have helped school hygiene to travel and shape-shift across boundaries? And what dimensions require particular attention in order to understand more fully the entangled border-crossing performances of school hygiene? I would like to propose the following hypotheses: First, while open-air schools have gathered "drawn threads" of knowledge and praxis around school hygiene which in turn have been "drawn into other knots with other threads"[21] across real-/imagined borders, this has involved much fragmentation and yielded all but straightforward effects; second, as an analytical term, internationalization fails to grasp the extent to which open-air schools have thus been caught up in a "meshwork"[22] that has traversed and indeed blurred all kinds of boundaries in the area of school hygiene; and third, key characteristics of the wayfaring of knowledge and praxis around school hygiene are that it involved non-humans as much as it did humans, and that there were commercial dimensions to their political, socio-cultural and material entanglement.

Concretely, the article will first expose part of the context, that is: the border-crossing meshwork from which open-air schools have emerged. It will then interrogate through places,

[20] All evidence suggests open-air schools indeed were a peripheral phenomenon even within the primary education sector to which they were largely confined. See Depaepe and Simon, "Freiluftschulen," 718-733; Jean-Noël Luc, "L'école de plein air: Une histoire à découvrir"/"Open-Air Schools: Unearthing a History," in *L'école de plein air/Open-Air Schools*, eds. Châtelet, Lerch and Luc, 17; Thyssen, "Between Utopia and Dystopia," 3; Châtelet, *Le souffle du plein air*.

[21] Ingold, *Lines*, 169.

[22] Ibid., 80. Ingold's concept of a meshwork, denoting an ever-ramifying web made up of tangled bundles of lines of movement and growth, seems to be best suited to account for the scale- and border-crossing "flows of all sorts" understood by Saunier as "entangled components of the modern age" beyond any "scalar conception". Pierre-Yves Saunier, "Learning by Doing: Notes about the Making of the Palgrave Dictionary of Transnational History," *Journal of Modern European History* 6, no. 2 (2008): 172, 176.

people, and things seen as being performatively entwined the notion of an internationalization of health education in the context of open-air schooling. The places, people and things here analysed in conjunction are international conferences and related exhibits;[23] "figureheads" of the aspiring New Schools and open-air schools movements; and printed, photographed and designed materials including mobile school furniture, sometimes referred to as a "materiality" of education.[24] Across these interwoven places, people and things, researched on the basis of archival and published sources including minutes, reports, journal and newspaper articles, and patents, the paper pays particular attention to what Lawn has termed "awkward knowledge," that is, indications of unwillingness on the part of a given research topic "to stay within its borders."[25]

**Hygiene/health education – gathered threads of knowledge and praxis**

Open-air schools adopted the forms they did as they gathered threads of praxis and knowledge around what were then seen as "social plagues" – in particular tuberculosis – and remedies to

[23] Among studies having focused on these topics taken separately, are the following: Anne Rasmussen, "L'hygiène en congrès (1852-1912): circulation et configurations internationals," in *Les hygiénistes: enjeux, modèles et pratiques (XVIIIe-XXe siècles)*, ed. Patrice Bourdelais (Paris: Belin, 2001), 213-239; Eckhardt Fuchs, "Educational Sciences, Morality and Politics: International Educational Congresses in the Early Twentieth Century," *Paedagogica Historica* 40, no. 5-6 (2004): 757-84; Damiano Matasci, "International Congresses of Education and the Circulation of Pedagogical Knowlegde in Western Europe, 1876-1910," in *Shaping the Transnational Sphere: Experts, Networks and Issues from the 1840s to the 1930s*, eds. Davide Rodogno, Bernhard Struck and Jacob Vogel (New York/Oxford: Berghahn, 2015), 218-238.

[24] Martin Lawn and Ian Grosvenor, eds., *Materialities of Schooling: Design-Technology-Objects-Routines* (Oxford: Symposium Books, 2005); Karin Priem, Gudrun M. König and Rita Casale, eds., *Die Materialität der Erziehung: Kulturelle und soziale Aspekte pädagogischer Objekte* (Weinheim and Basel: Beltz, 2012). For Ingold, the concept of materiality implies a reduction of "things" caught up in the currents of life to "objects" upon which humans, in second instance, bestow "agency." In his view, the material world is made up of "matter in flux" or "material" understood as movement. Ingold, "Bringing Things to Life," 8; Ibid., "Materials against Materiality," *Archaeological Dialogues* 14, no. 1 (2007): 1-16.

[25] Martin Lawn, "Awkward Knowledge: The Historian of Education and Cross-Border Circulations," in *Zirkulation und Transformation: Pädagogische Grenzüberschreitungen in historischer Perspektive*, eds. Marcelo Caruso, Thomas Koinzer, Christine Mayer and Karin Priem (Cologne: Böhlau, 2014), 15.

these plagues offered by educationally conceived school hygiene.[26] That local knowledge and praxis bound up with specific actors and settings travelled in material forms, indeed "exist[ed] within points of circulation", like journals, conferences and exhibits, "so that they [were] (…) 'persistently reshaped by distant influences and agents' [at] 'mobile and mutable'"[27] nodes of exchange. In the wake of the Great Exhibition held at the Crystal Palace in London in 1851, there emerged, for instance, international conferences on health, hygiene and demography, holiday camps, tuberculosis, school hygiene, and the protection and welfare of children, which ca. 1900 started to include sections on *Waldschulen*, *écoles de plein air*, in short: "open-air schools."[28] As Châtelet has pointed out, the very terms used to label open-air schools were not neutral but carried with them cultural and supposedly nation-specific perceptions of the "curative value" [29] of certain natural elements. Conferences and related exhibits and publications, offering occasions for the proliferation of such imaginaries of specific practices and symbolic meanings, were in fact purposely used by representatives of "imagined communities"[30] to construct these very communities as "nation-states"[31] – that is, as social bodies concerned with the health of their members.

Indeed, starting roughly in the mid-nineteenth century, all modernizing societies were increasingly considered to be in need of transformation, and all kinds of reformers thus started to focus attention on the "sanitation" of society, at first at the level of the environment,[32] but

[26] See, for instance, Séverine Parayre and Alexandre Klein, eds., *Éducation et santé: Des pratiques aux savoirs* (Paris: L'Harmattan, 2014).

[27] Lawn, "Awkward Knowledge," 24 [David Livingstone, *Putting Science in its Place: Geographies of Scientific Knowledge* (Chicago: University of Chicago Press, 2003) cited therein].

[28] See, for instance: Fuchs, "Educational Sciences," 757-84.

[29] Châtelet, *Le souffle du plein air*, 54-55.

[30] Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1983).

[31] Fuchs, "Educational Sciences," 782.

[32] Jürgen Osterhammel, *Die Verwandlung der Welt: Eine Geschichte des 19. Jahrhunderts* (Munich: Beck, 2009).

from the 1860s onwards increasingly in terms of shaping people's behaviour and interrelations. On both these domains was grafted a fully-fledged sanitary offensive, inspired by social physics or social mechanics (terms then used for human statistics in writings such as those by Adolphe Quetelet).[33] The rationale behind this health offensive was to instil, through a variety of social-hygiene reforms, a broad range of civil norms and values – from self-control to patriotism –, which would help to create a stable, orderly and cohesive community. Members of the medical professions were not the only ones who deemed themselves competent; so did politicians, industrial entrepreneurs and educators.[34] In fact, hygiene, as an aspiring scientific discipline, was all but homogeneous and uncontested. While highly militant, hygienists were not exactly representative of their respective professions – some have therefore wondered whether scholars have not been giving too much weight to these "cabinets of rarities" and the medical tropes they used.[35] Moreover, hygienists were inspired by partly contradictory theories about illnesses and related categories and practices.

Around 1850, for instance, degeneration theories like those developed by Benedict Augustin Morel[36] circulated and traveled across the world, epitomizing what could be called a turn from environmentalism to interpersonalism. They stressed the far-reaching impact of detrimental environmental conditions on the hereditary material of groups of people exposed to them, while offering a new lexicon to describe these groups' conditions and behaviour. Around the 1880s, biological, evolutionary theories like those expounded by Morel gradually

[33] Adolphe Quetelet, *Sur l'homme et le développement de ses facultés, ou essai de physique sociale* (2 vols.) (Paris: Bachelier, 1835). See Frank H. Hankins, *Adolphe Quetelet as Statistician* (New York: Columbia University Press, 1908).

[34] Liesbet Nys, "Nationale plagen: Hygiënisten over het maatschappelijk lichaam," in *De zieke natie: Over de medicalisering van de samenleving, 1860-1914*, eds. Liebeth Nys and others (Groningen: Historische Uitgeverij, 2002), 222.

[35] Liesbeth Nys and others, "Een medisch object: Veranderingen in menswetenschap, cultuur en politiek," in *De zieke natie*, eds. Nys, de Smaele, Tollebeek and Wils, 17.

[36] Benedict A. Morel, *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine* (Paris: Baillière, 1857).

were challenged by infection theories, which reframed illnesses like tuberculosis as contagious diseases,[37] thought to manifest themselves more easily in those having a "hereditary predisposition"[38] – ascribed above all to the working classes. Discoveries by bacteriologists such as Louis Pasteur and physicians such as Robert Koch offered a scientific basis for reforms of what Herbert Spencer, in the late nineteenth century, called the societal organism.[39] Eugenic interpretations of such social Darwinists in turn stressed the importance of a hereditary healthy race[40] and further fuelled yet at the same time contradicted contemporary health-education debates.

It is from this epistemic meshwork that open-air schools, like holiday camps (*colonies de vacance*, *Ferienkolonien*) and New Schools in the countryside with boarding and residential provision (*Landerziehungsheime*, *écoles nouvelles*), emerged, performing – by their names alone – imaginaries of preventive and curative elements and their specific value for nation-states in mutual competition. Thus, for instance, in the United Kingdom the term "open air" from the Edwardian era onwards was to symbolize all that was "honest and good,"[41] whereas in Imperial and Weimar Prussia the forest or *Wald* became a vital part of the nation's self-construction as a social body.[42] What is of interest here is not that such connotations were attached to certain elements rather than others nor even that they, while

[37] Cf. Andrew R. Aisenberg, *Contagion: Disease, Government, and the "Social Question" in Nineteenth-Century France* (Stanford: Stanford University Press, 1999); Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge, MA, and London: Harvard University Press, 1999).

[38] Bryder, *Below the Magic Mountain*, 221-22; Bryder, "'Wonderlands'," 73-74; Thyssen, "Between Utopia and Dystopia," 171-72.

[39] Herbert Spencer, *The Principles of Sociology* (Vol. 1) (London: Williams and Norgate, 1877), 467-80.

[40] Cf. Mark B. Adams, "Towards a Comparative History of Eugenics," in *The Wellborn Science: Eugenics in Germany, France, Brazil and Russia* ed. Mark B. Adams (New York: Oxford University Press, 1990), 217-31.

[41] Andrew Saint, "Premier jours de l'école de plein air anglaise (1907-1930)"/"Early Days of the English Open-Air Schools (1907-1930)," in *L'école de plein air/Open-Air Schools*, eds. Châtelet, Lerc and Luc, 58, 73; Châtelet, *Le souffle du plein air*, 54.

[42] Châtelet, *Le souffle du plein air*, 54.

varying over time across different places, have in fact contributed to the emergence of more or less diverse conceptions of open-air schools in various countries. Rather, it is the awkwardness experienced when tempted to conceive of these conceptions as nation-specific, as this very awkwardness hints at boundaries unquestioned both in the context of national mythology and "methodological nationalism."[43] One expression, or rather: performance of such form-taking, along trails that interwove conferences and related exhibitions and literature preceding the first so-called International Conference on Open-Air Schools, can be found in a definition of open-air schools formulated in the 1910s by Karl König, a Mulhouse school inspector: "La *Waldschule* est une *école de plein air* pour les enfants faibles, avec un temps d'enseignement réduit, un nombre d'élèves limité, une attention particulière pour les faiblesses corporelles et dont le but est la guérison ou l'amélioration de l'état physique, sans *handicap* pour la formation scolaire [italics added]."[44] Such performances of circulating knowledge allow for an understanding of open-air schools as "movement[s] and practice[s]"[45] which were local, regional, national and international at the same time. The explicit merging of languages and the implicitly associated categories and practices in this case may to some extent have been specific to the context of Alsace-Loraine. Yet examples of transborder entanglements of knowledge, discourse and praxis around school hygiene in the context of open-air schools nonetheless abound, as shall be clear from the joint analysis of spaces, people, and things undertaken hereafter.

**Conferences and exhibits, people and things – knots of entwined stories**

Health conferences – as places where the lives of beings, both human and non-human, were

[43] Andreas Wimmer and Nina Glick Schiller, "Methodological Nationalism and Beyond: Nation State Formation, Migration and the Social Sciences," *Global Networks* 2, no. 3 (2002): 301-24.

[44] Cited in Châtelet, *Le souffle du plein air*, 33.

[45] Lawn, "Awkward Knowledge," 25.

performatively bound up with each other – indeed testify to such boundary-blurring travel and transformation par excellence. The First International Conference on Open-Air Schools, held in Paris in June 1922, is no exception to this rule. Although it may appear quite "national" at first sight, given the limited number of participating individuals (some 200) and nations (six to ten), the dominance of French individual and collective actors involved in its organization, the many French participating ministries, officials, institutions and societies, and the relatively high number of French presenters,[46] it still presented a "knot of stories,"[47] a path along which people and things "la[id] trails"[48] that became intertwined. Along this path the national was re-/configured, for instance, through the choice of instances that were deemed responsible administratively for responding to border-crossing illnesses like tuberculosis. Relevant to the argument here is that even those initiatives most distinctly profiled as national bore references to experiences that resisted the confines of nation-state borders. A case in point is the Paris Repatriation Centre for Children, reorganized and relabelled *école aérium* in 1920 and presented at the Paris conference as the brainchild of the French open-air school "pioneer" Gaston Lemonier (1866-1936?).[49]

Both the concept of an *aérium* (not dissimilar to a preventorium-sanatorium) and that of a *Waldschule* had been circulating long before the advent of open-air school conferences. The International Conference on Tuberculosis organized in Paris in 1905 discussed both the *Waldschule* in Charlottenburg, founded one year earlier by the educator Hermann Neuffert (1858-1935) and the school physician (Jacob) Bernhard Bendix (1863-1943), and the *Aérium*

[46] Anne-Marie Châtelet, "Le movement international des écoles de plein air"/"The International Movement for Open-Air Schools," in *L'école de plein air/Open-Air Schools*, eds. Châtelet, Lerc and Luc, 26, 34; Ibid., "Des idées aux bâtiments"/"From Ideas to Buildings," in Châtelet, Lerc and Luc, eds., *L'école de plein air/Open-Air Schools*, 173, 185.

[47] Tim Ingold, "Against Space: Place, Movement, Knowledge," in *Boundless Worlds: An Anthropological Approach to Movement*, ed. Peter W. Kirby (Oxford, UK: Berghahn Books, 2009), 41.

[48] Ingold, "Against Space," 33.

[49] Châtelet, *Le souffle du plein air*, 47. Lemonier's name disappears from the international scene around 1936.

*de l'Hospice Géneral* in Rouen established in 1901 by the physician Raoul Brunon (1854-1929).[50] Through the *Ligue Française d'Hygiène Scolaire* and the *Alliance d'Hygiéne Sociale*, which it joined not only members of the medical profession were familiarized with both concepts but also teachers and educators.[51]

Among the teachers whose curiosity thus seems to have been aroused was Gaston Lemonier. As a teacher and occasional school principal, Lemonier – not unlike the future "German" open-air school figurehead Karl Triebold (1888-1970) – was himself a wayfarer par excellence, partly as a result of his conflicts with school authorities. Like Triebold, he too had become proficient in at least one "foreign" language (in his case, German), which allowed him to inform himself broadly. Again like Triebold, he became a board member and editor of a journal (in his case, of *L'Hygiène à et par l'École*) connecting members of the medical and educational professions. And yet again like Triebold, he seems to have used this journal to disseminate his ideas and those of his fellow teachers recently recruited to the cause in veiled opposition to members of the medical profession who had until then primarily concerned themselves with school health issues.[52] In late 1912, he rallied the former under the umbrella of an association, *L'Éducation en Plein Air*, which after the First World War seems to have merged into the *Ligue (Française) pour l'Éducation en Plein Air*.[53]

Under the auspices of this League, Lemonier in 1920 relabelled the repatriation centre to which he had been transferred an *école aérium* and proclaimed it the first open-air school in Paris. Looking at how this institution was organized, it is striking how many elements were not in any way particular, local or national. At the school, everything referred to knowledge

[50] [Association Internationale contre la Tuberculose,] *Congrès international de la tuberculose, tenu à Paris de 2 au 7 octobre 1905* (vol. 2) (Paris: Masson, 1906), also cited in Châtelet, *Le souffle du plein air*, 39.

[51] Châtelet, *Le souffle du plein air*, 42-44.

[52] Ibid., 45-47; Thyssen, "Between Utopia and Dystopia," 88-89; Ibid., "Mapping a Space of Biography: Karl Triebold and the Waldschule of Senne I Bielefeld (c. 1923-1939)," *History of Education*, 41, 4 (2012): 457-67.

[53] Châtelet, *Le souffle du plein air*, p. 46-47, 103.

that by then was circulating internationally and materializing in common praxis: its makeshift redesign with an added Bessonneau pavilion, the pergola "'à l'italienne'," the classification of children admitted according to perceived pathological conditions upon medical examination, the heliotherapy and hydrotherapy treatments (improvised ablutions and monitored gradual sun exposure), the cosmetic changes made to regular teaching methods, the measurements of height, weight and lung capacity, the compilation of a school medical file, the translation of *aérium* cure results into gained kilos, the way all this was visually represented, and so on.[54] Lemonier had been further exposed to such knowledge at the *Congrès Interallié d'Hygiène Sociale pour la Reconstitution des Régions Dévastées par la Guerre* held in Paris in 1919, where the Swiss doctor Auguste Rollier (1874-1954) presented the heliotherapy that was to make him famous[55] and which he practiced at a hospital he had opened in Leysin in 1905 and in an *école au soleil* (occasionally also termed *clinique-école*) he had set up in Cergnat sur Sépey in 1910.

In short, the conferences attended, the literature digested, and the likeminded souls sought out by Lemonier, further broke open any national reference frame from which he might have been operating and facilitated transformation. That is, they helped to transform *him* into a partly self-declared figurehead of an aspiring "French" movement able to promote certain forms of school hygiene rather than others; they moreover helped convert *through him* a repatriation centre into a so-called first "French" open-air school. A cheeky observation made by a Dutch government representative at the Paris open-air school conference where Lemonier presented the *école aérium*, about buttermilk – a presumably typically Dutch drink which he was made to believe had been imported from Paris[56] – further highlights three key relay stations upon the paths along which knowledge and praxis moved and morphed, namely:

[54] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 53-59.

[55] Auguste Rollier, *La cure de soleil* (Lausanne and Paris: Payot/Bailliere, 1915).

[56] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 10.

people, places, and things. Both human subjects (with their individual and collective agendas) and places and things (with their historically specific affordances, meanings and values) were intertwined to the extent that changes incurred to either one of them affected the other. Foodstuffs considered indigenous yet to which foreign origins were ascribed could thus help render possible people's open resistance to nationalization and, crucially, transform them in the process (if only into more zealous defenders of "the national"). Communication and education technologies, as other types of context-specific, transformative mediators of knowledge and praxis likewise were entwined with people,[57] thus contributing to transborder proliferation of open-air schools and related transformation of health education. This shows, for instance, from texts and photographs connected to two conferences following the 1922 Paris event upon which it will be focused next; that is, the sixth International Conference on the Welfare and Protection of Children organized in Paris in July 1928, and the second International Conference on Open-Air Schools held in Brussels in April 1931.

At the 1928 meeting, Adolphe Ferrière (1879-1960), a figurehead of the New Education Fellowship, presented two reports on open-air schooling: a general one, and one focused on achievements in the German-speaking areas. For his reports Ferrière enquired about various forms of open-air schooling through his contacts and personally sent a survey to people he knew in Switzerland, Germany and Austria,[58] including Auguste Rollier.[59] From the commented translation of Ferrière's reports by Karl Triebold,[60] as well as archival sources

[57] Bruno Latour, "On Technical Mediation – Philosophy, Sociology, Genealogy," *Common Knowledge* 3, no. 2, (1994): 29-64.

[58]Adolphe Ferrière, "L'éducation dans les écoles de plein air au point de vue pédagogique"/"Education in Open-Air Schools," in *Congrès International de Protection de l'Enfance: Communications* (vol. 1) (Paris: Deshayes, 1928), 263, 277.

[59] Ibid., 263, 277-278.

[60] Adolphe Ferrière and Karl Triebold (trans.), "Die pädagogische Pflege in den Freiluftschulen," *Westfälische Schulzeitung* 11, no. 23-24 (1930): 348-351; Adolphe Ferrière and Karl Triebold (trans.), "Die Freiluftschulen in

containing both earlier drafts of Ferrière's reports and materials sent to him by Triebold in 1930 after the publication of his translation,[61] it is clear that Ferrière had missed out on recent developments in the field and in the context of Germany, for instance, mistaken children's villages (large-scale outdoor health camps of military origin) for open-air schools.[62] This in part explains his reluctance to qualify open-air schools as New Schools proper. A key factor enabling Triebold to renegotiate Ferrière's concept of open-air schools and of any supposed German model based on his own situated knowledge was the time-specific entanglement of non-/human beings in communication. In this case these included letters of correspondence sent to Ferrière (unfortunately not preserved), published manuscripts brought to his attention (a number of which he mentioned in his reports), his informers (each with their own purposes and connections), and Ferrière himself who selected what he deemed essential to the narrative he wished to convey. In short, the mediation that led to reports like Ferrière's was characterized by the time lag and fragmentation inherent in and typical of the then available communication technologies. Their specific affordances as well as Triebold's agendas affected the wayfaring of knowledge and praxis regarding open-air schools and that which was considered model health education through recurrent flows of feedback that further eroded any (real-)imagined boundaries.

Prior to the Paris conference, Ferrière obviously had not been acquainted with Triebold, who indeed only announced himself on the "international" scene in June 1928 at a conference on open-air schools in Amsterdam. Then a recently retired principal of a *Waldschule* in Senne I-Bielefeld following a trial against the school's sponsor, the Social

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Deutschland, Österreich und der deutschen Schweiz. (Übersetzt und mit einem Nachtrag versehen von Karl Triebold.)," *Die Neue Deutsche Schule: Monatsschrift für alle Fragen der Volksschule* 3, no. 5 (1929): 711-20.

[61] Adolphe Ferrière, "L'éducation dans les écoles de plein air: Rapport general," s.d., [c. 1927-1928]. Archives Institut Jean-Jacques Rousseau (IJJR), File AdF/A/73/4; Adolphe Ferrière, "Les écoles de plein air en Allemagne, en Autriche et en Suisse Allemande," s.d. [c. 1927-1928], IJJR, File AdF/A/73/4. The documents sent by Triebold to Ferrière are preserved at the following location: IJJR, File AdF/C/1/72.

[62] Ferrière and Triebold (trans.), "Die Freiluftschulen," 712.

Insurance Company of Westphalia, Triebold received permission from the local school authorities to dedicate himself to the promotion of health education. By founding and presiding over the German Association of Open-Air Schools starting in 1927, he presented himself as the leading figure of German open-air education.[63] The circulation, in the summer of 1928, of an open-air school survey which he himself had designed and which, in his own estimate, reached over a hundred institutions in Germany and beyond, belongs to this context, as does his compilation of an "international" overview of the open-air school "movement"[64] which he presented as a gift to the second International Open-Air School Conference in Brussels in 1931.[65] Triebold's translations of, and amendments to, works by key figures like Ferrière[66] should also be seen in this light. As textual/material "performances" along a tangled trail, they played their part in his becoming vice president of the *Comité International des Écoles de Plein Air* created in the wake of the 1928 Paris conference and, through him, in the directions that open-air education and the expressions of school hygiene it promoted were to take.

Thus, the Second International Open-Air School Conference reflected (and reflected on) a sense of desirability of both the increasing pedagogization of school hygiene[67] and the growing involvement of teachers and educators in the promotion and organization of open-air

[63] Thyssen, "Between Utopia and Dystopia," 89-90; Ibid., "Mapping a Space," 457-67.

[64] Karl Triebold, ed., *Die Freiluftschulbewegung: Versuch einer Darstellung ihres gegenwärtigen internationalen Standes* (Berlin: Richard Schoetz, 1931).

[65] *Second congrès international des écoles de plein air, Bruxelles 6-11 avril 1931, rapports et comptes rendus* (Brussels: Ancienne Librairie Castaigne, 1931).

[66] Triebold also translated works by the renowned English architect Widdows, the Swiss doctor Béguin, and his French counterpart Lemonier, appropriating their symbolic capital. Cf. Pierre Bourdieu, "Les conditions sociales de la circulation internationale des idées," *Actes de la recherche en sciences sociales* 5, no. 145 (2002), 6.

[67] In the broader field of child medicine, members of the medical professions themselves not seldom championed the consignment of child health issues to the realm of education. Eckhardt Fuchs, "Die internationale Organisation der edukativen Bewegung: Studien zu Austausch- und Transferprozessen im Aufbruch der Moderne," Habilitation treatise, University of Mannheim, 2004, 273.

school-like initiatives. At the conference, bringing together twice as many nations and participants than its predecessor, it was further claimed that the open-air school was essentially an educational establishment, or better still: a new pedagogical principle, to which a special, medically supervised regime of hygiene was attached, which was to form the basis for a revolution of the education system as a whole.[68] In a political and economic climate of temporarily peaceful international cooperation,[69] both the more medically oriented section and the pedagogical section of the conference testified to an educational turn aimed at expanding open-air education principles to all schools and also to healthy children of all ages.[70]

Of course, the envisaged transformation of all schools into open-air schools did not guarantee that the educationally conceived hygiene theory and praxis promoted in this context uniformly crossed (real-)imagined borders. Just as diversity prevailed in terms of forms of expression, there remained much debate among open-air school proponents, who, moreover, as in the case of Lemonier, sometimes seemed to have been but very selectively informed.[71] Likewise, education and hygiene authorities, too, responded in different ways. French and Prussian authorities, for instance, were rather enthusiastic, perhaps more so at the municipal than at the national level (their fervour translating into surveys conducted, subsidies granted, and decrees or laws issued relative to school hygiene or school building).[72] Elsewhere,

[68] *Second congrès*, 50, 79.

[69] Ibid., 55, 62, 71; Châtelet, *Le souffle du plein air*, 156-57.

[70] *Second congrès*, 75; Thyssen, "Between Utopia and Dystopia," 39, 40, 189.

[71] Châtelet, *Le souffle du plein air*, 159.

[72] Thus, in Germany a decree was issued at the instigation of Triebold, the State Minister Adolf A. Domenicus, and the Gelsenkirchen Councilman of Health and Welfare Friedrich Wendenburg. Karl Triebold, "Die Stellung des Lehrers zum Ministerialerlaß vom 10. Februar 1926. Einschließlich praktischer Vorschläge für seine Durchführung im Schulunterricht," in Friedrich Wendenburg, ed., *Gesundheitliche Schulerziehung: Eine Vortragsreihe zur Durchführung des Erlasses des Preußischen Ministers für Wissenschaft, Kunst und Volksbildung vom 10. Februar 1926* (Berlin: Richard Schoetz, 1926), 239-66. In France a law was issued in

however, enthusiasm failed to ensue (for instance, in New Zealand),[73] or had already started to wane (as in the United States),[74] or yet, on the contrary, temporarily assumed exceptional forms, as in the county of Derbyshire (United Kingdom) where all newly established schools had integrated features of open-air schools even before the conference.[75]

**Portable school equipment – mutable commercialized hygiene material**

All of this complicates the notion of an internationalization of school hygiene via open-air schools, which also photographs were to help proliferate. Like graphs, charts, tables, documents and designed equipment in the context of open-air schools, they were imbued with such aspirations and imaginaries, as can clearly be sensed while browsing through the minutes of the Brussels conference[76] and the booklet of the accompanying exhibition.[77] At the official opening of this exhibition, just prior to the conference's opening session, the Belgian secretary general of the local organizing committee, Emile Vincent, advised all delegates: "'Quand vous passerez d'un stand à l'autre, ne comparez pas.' *Omnis comparatio peccat*. Toute comparaison pèche. … Comment, en effet, pourriez-vous comparer, puisque toutes les circonstances des réalisations que vous jugerez ont différé: climate, époque, moyens et but? Opposez deux produits similaires de l'industrie, mais ne pensez pas à établir un parallèle entre

1927, which was the work of mayors rather than ministers and which enabled the construction of new school buildings. Châtelet, *Le souffle du plein air*, 109, 111-12.

[73] *Second congrès*, 75.

[74] Louise Strachan, "Evolution of the Open-Air School in the United States," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 2, no; 11 (1936): 1; Mary Waldo Taylor, "Open-Air Schools in the United States," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 2, no. 11 (1936): 4.

[75] George H. Widdows and Karl Triebold (trans.), "Freiluftschulbauten in England," *Das Schulhaus: Zentralorgan für Bau, Einrichtung und Ausstattung der Schulen* 24, no. 3-4 (1929): 63-66.

[76] *Second congrès*, 310, 312, 318, s.p. [unpaginated page between 324 and 325].

[77] *Exposition internationale des écoles en plein air, du 7 avril au 30 mai 1931 Bruxelles/Internationale tentoonstelling van openluchtscholen, van 7 april tot 30 mei 1931 Brussel* (Brussels, 1931).

deux écoles de plein air. Elles n'ont vraiment pas de commune mesure."[78] Delegates did, of course, compare, as comparison and competition had long been built into the very format of exhibitions like these.[79] Vincent, who had organized a so-called international exhibition on open-air schools in Antwerp in 1925, the year before the French League of Open-Air Education allegedly set up an *Exposition Permanente des Écoles de Plein Air*,[80] must have known and anticipated that. What is at least as interesting is his reference to products of industry that one was allowed to compare. One such product was portable school furniture, the kind of material that seemed particularly suited to open-air schools and the healthy outdoor teaching they championed. Multipurpose, ergonomic, practical and lightweight – even for "delicate" children, or so its designers would have it –, portable school furniture could easily have become uniformly internationalized as a material signifier of school hygiene. And yet it did not, for many reasons, one of which is to do with economic factors and the laws of commerce in particular.

The first portable school furniture that clearly made its appearance in this context was the kind allegedly developed by Rollier for his *école au soleil* in Leysin,[81] which served as a model for similar institutions in entangled French-speaking areas in France and Switzerland.[82]

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[78] *Second congrès*, p. 332.

[79] Martin Lawn, ed., *Modelling the Future: Exhibitions and the Materiality of Education* (Oxford: Symposium Books, 2009).

[80] Isidore Poiry, "L'école de plein air," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 1, no. 3 (1935): 10.

[81] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 30, 93-96; Auguste Rollier, "Warum Freiluftschulen," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 2, no. 6 (1936): 12. See also Châtelet, *Le souffle du plein air*, 52-53.

[82] This applied to a school in Monnetier-Mornex and to the Gally farm in Trianon instigated by Dr. Armand-Delille and Dr. Wapler. Paul-Félix Armand-Delille and Philippe Wapler, *L'école de plein air et l'école au soleil* (Paris: Maloine, 1919), 14, 17; Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 31, 48-53, 87; *Second congrès*, 93; Châtelet, *Le souffle du plein air*, 53, 94-95, 114-115, 351.

Portable school furniture was reportedly used also elsewhere, for instance, in open-air schools in Rome, which were "proudly presented" by official delegates in the early 1910s, perhaps at the International Conference on Tuberculosis.[83] In Uruguay, too, according to a report delivered by Américo Mola at the 1931 Brussels conference,[84] all three open-air schools of Montevideo had the pupils bring lightweight and foldable desks and set them up at a spot most suitable for the hour and day. It is certain that the foldable furniture Rollier promoted was manufactured in Geneva by Jules Rappa,[85] who produced several other patented school desks,[86] and that it was also available in France.[87] Yet, the precise extent to which the schools in Montevideo adopted and/or modified Rollier's furniture, in addition to his "method" of heliotherapy, is unclear.

At least one photograph of open-air education in one of the schools, which somehow found its way to the French National Archives, suggests that while the equipment itself underwent only minor changes it may have been embedded in a different choreography of schooling – with images staged in the Franco-Swiss context hinting at more frequent adaptation and transport of school furniture. Yet, as Elizabeth Edwards has argued, photographs like these must not be seen as mere "images (…)[to be] understood only through forensic and semiotic analysis of content,"[88] but rather as "things"[89] which "constitute material performances of a complex range of historiographical desires in the negotiation of the relations between past, present, and future."[90] The photograph mentioned may well have

[83] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 31.

[84] *Second congrès*, 141.

[85] Armand-Delille and Wapler, *L'école de plein air*, 28.

[86] Geneviève Heller, *Tiens-toi droit! L'enfant à l'école au 19e siècle: Espace, morale et santé* (Lausanne: Editions d'en bas, 1988), 99, 254.

[87] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 50.

[88] Edwards, "Photography," 130.

[89] Ingold, "Bringing Things to Life," 3.

[90] Edwards, "Photography," 130.

performed such a myriad of desires. It was no doubt intended to accurately record a historic moment and whatever experiences may have been attached to it but it also interwove "experience, imagination, and memory"[91] as a "gathering"[92] of "entwined practices."[93] Importantly, photographs like this one, as much as the things, people, expertise and routines they were perhaps naively intended to convey, did help to proliferate school hygiene internationally. Yet, partly due to the imaginaries, desires and memories bestowed upon them and how these resonated differently in contexts varying across space and time, as non-humans they elicited diverse responses. In this way they indeed both facilitated and hindered any eventual internationalization of school hygiene. Among imaginaries inscribed in these practices surrounding the photograph analyzed, which played their part in dissipating and fragmenting school hygiene, were those of the weight to be attributed to medical and pedagogical concerns (in relation to posture, movement, exposure to sunlight, air free from airborne bacilli, sensory stimuli, cleanliness, order, and so on), of possible hygienic uses of designed materials (in relation to the built and uncultivated environment), of potential users (from the sick to the healthy – or the "not-yet-sick"), and of what qualified as a full-fledged open-air school and open-air school furniture.

[Figure 1 here.]

Figure 1: "Une école en plein air à Montevideo (Uruguay): [photographie de presse] / Agence Mondial". 1932 Source: Bibliothèque nationale de France, département Estampes et photographie, EI-13 (2947). (Obtained via http://gallica.bnf.fr, accessed 21 April 2015.)

In this last respect, delegates at the Second International Open-Air School Conference sadly had to admit that no real open-air school furniture existed; for lack of funds, schools everywhere had to improvise and use ordinary, well-worn, obsolete or rejected material. So it

[91] Ibid., 135.

[92] Ingold, "Bringing Things to Life," 4.

[93] Edwards, "Photography," 130.

was that in certain open-air schools one could see long, massive ten-seater school desks already in use during the nineteenth century, while others featured more modern two- or single-seater desks. Disagreement existed as to whether an inclined or flat desk plane was preferable; likewise, none of the many "very lightweight" foldable desks that were known to exist was explicitly favoured.[94] At this conference and exhibition, the Jewish merchant Oscar Brodsky (1859-1949), who had immigrated to Belgium from his then-Russian native town of Odessa,[95] presented his school furniture as anchored in knowledge of children's physiology and needs.[96] He did his best to convince the audience that the foldable desks-and-chairs one had lately come to introduce in open-air schools in Switzerland, Italy, France, and Uruguay, however lightweight and moveable, did not offer the necessary conveniences for weakly children.[97] Making a comment during another session, he referred to his experiences as a member of an Odessa school committee to again criticize the foldable furniture commonly adopted and to point out improvements he had introduced.[98] At the conference exhibition, however, he faced competition from at least two other manufacturers, which, unlike Brodsky, seemed to be producing at an industrial scale: the *Societé Anonyme des Usines à Tubes de la Meuse*, a steel furniture company based in Flémalle-Haute (in the province of Liège), and an unspecified Haarlem-based furniture factory.[99]

Other scholars who have traced the history of his foldable school material in greater detail have pointed out that Brodsky's one-man enterprise likely shrunk into insignificance

[94] Ligue Française pour l'Éducation en Plein Air, *Premier congrès*, 99.

[95] Frederik Herman and others, "The School Desk: From Concept to Object," *History of Education* 40, no. 1 (2011): 97-117, esp. 112; Marc Depaepe, Frank Simon and Pieter Verstraete, "Valorising the Cultural Heritage of the School Desk," in *Educational Research: Material Culture and its Representations*, eds. Paul Smeyers and Marc Depaepe (Dordrecht: Springer, 2014), 13-30, esp. 16.

[96] Herman and others, "The School Desk," 16; *Exposition internationale*, 13.

[97] *Second congrès*, 181.

[98] *Second congrès*, 215.

[99] *Exposition Internationale*, s.p. [back cover].

compared to the industrial production of furniture like that of the Rettig desks in Germany.[100] Despite the numerous patents Brodsky secured between the late 1910s and early 1920s and the awards and endorsements he obtained and exploited,[101] his foldable furniture business was not precisely a success story.[102] Not only did he face much competition on a saturated market,[103] where various other patents were awarded for supposedly hygienic school furniture (in Belgium at least most often to educators in spite of the mobile school desk's roots in medically inspired anti-tuberculosis efforts)[104]; he also was confronted with "cultural customs" ingrained in common school praxis.[105] He thus seems to have focused in particular on the open-air school market and, for instance, advertised in journals of national open-air school committees and participated in other exhibitions and fairs in the Low Countries, occasionally providing information also in English with a view to overseas markets.[106] In the context of the Third International Conference on Open-Air Education that took place in Germany (Bielefeld and Hannover) in 1936 and attracted only some 200 delegates representing, however, 26 nations Brodsky is mentioned neither in the conference minutes[107]

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[100] Marc Depaepe and others, "Brodskys hygienische Klappschulbank: Zu leicht für die schulische Mentalität?," in *Die Materialität der Erziehung*, eds. Priem, König and Casale, 65.

[101] Herman and others, "The School Desk," 113.

[102] Depaepe, Simon and Verstraete, "Valorising the Cultural Heritage," 16.

[103] Herman and others, "The School Desk," 100.

[104] Ibid., 105-6.

[105] Depaepe, Simon and Verstraete, "Valorising the Cultural Heritage," 17-18.

[106] *Belgische Vereeninging voor Open-Luchtopvoeding/Ligue Belge pour l´Éducation de Plein Air* 1, 1936, s.p. [back cover]. See also Herman, Van Gorp, Simon and Depaepe, "The School Desk," 115-16.

[107] [Karl Triebold,] "Kurzberichte der gelegentlich des 3. Internationalen Freiluftschulkongresses (18. bis 23.7.1936 Bielefeld und Hannover) gehalteten Vorträge," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 2, no. 12 (1936): 1-17; Margarete Hecker, "Der gegenwärtige Stand der Freilufterziehung. (Zugleich: Bericht und Gedanken über den 3. Internationalen Freiluftschulkongreß in Bielefeld und Hannover vom 18. bis 23. Juli 1936)," *Die Deutsche Sonderschule* 3, no. 12 (1936): 938-52; Karl Triebold, "[Tagungen] 3. Internationaler Freiluftschulkongreß 1936," *Zeitschrift für Kinderforschung: Organ der Gesellschaft für Heilpädagogik und des Deutschen Vereins zur Fürsorge für Jugendliche Psychopathen* 46, no. 1 (1937): 64-70.

nor in local newspaper articles,[108] both of which were re/discovered in the frame of doctoral research. If his school furniture was indeed not exhibited at the *Internationale Freiluftschulausstellung*,[109] this may, of course, be partly explained by his Jewish descent, which would have been problematic in Germany at the time. Yet it is also possible that Brodsky's non-lucrative manufacturing business by then had folded.

Two points seem relevant here. First, appropriations at regional and local levels of "national" imaginaries around school hygiene bound up with, and worked at through, for instance, foldable school desks at times prevented their very spread. Fragmentation in this case resulted not least from the equipment's wayfaring along particular paths. As goes for the niche of New Schools and similar threads gathered there, the open-air school market was one that did not facilitate the entangling of this material's life with that of the average child. It did so, not with that of the "healthy" or "normal" but with that of the neither-sick-nor-healthy (the "pretuberculous" or "TB-threatened", the "delicate" or even "nervous"", the "backward" and "retarded", and the later "social cases").[110] Indeed, the traversing of national, regional and local borders on the part of foldable school desks and entangled imaginaries went together

[108] See, for instance, copies of the *Westfälischen Neuesten Nachrichten*, *Westfälische Zeitung*, and *Bielefelder Stadtanzeiger* [Stadtarchiv und Landesgeschichtliche Bibliothek Bielefeldt, file "3. Freiluftschulkongreβ Hannover-Bielefeld.].

[109] [Karl Triebold,] "Exposition Internationale des Écoles de Plein Air du 18 Juillet – 3 Août 1936 à Bielefeld (Allemagne)," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 1, no. 3 (1935): 12-13; [Karl Triebold] Internationale Freiluftschulausstellung vom 18.7.-17.8.1936 in Bielefeld (Deutschland)," *Zeitschrift des Internationalen Komitees für Freiluftschulen/Bulletin du Comité International des Écoles de Plein Air/Bulletin of the International Committee on Open-Air Schools* 2, no. 8 (1936): 1.

[110] Bryder, "'Wonderlands'," 74-75; Teemu Ryymin, "'Tuberculosis-Threatened Children': The Rise and Fall of a Medical Concept in Norway, c. 1900-1960," *Medical History*, 52, no. 3 (2008): 347-364; Nelleke Bakker, "Fresh Air and Good Food: Children and the Anti-Tuberculosis Campaign in the Netherlands c. 1900-1940," *History of Education* 39, no. 3 (2010): 343-361; Geert Thyssen and others, "From Popular to Unpopular Education? The Open-Air School(s) of 'Pont-Rouge', Roubaix (1921-1978)," *History of Education and Children's Literature* 5, no. 2 (2010): 199-227; Geert Thyssen, "The 'Trotter' Open-Air school, Milan (1922-1977): A City of Youth or Risky Business?," *Paedagogica Historica* 45, no. 1-2 (2009): 157-170.

with fixating – as well as blurring – of boundaries between the sick, the healthy and the weakly.

Second, patenting, although clearly an international enterprise that may well have led to a certain measure of "standardization,"[111] in its turn stood in the way of internationalization of particular concepts of school furniture and associated hygienic knowledge and praxis. In most countries it was local authorities who had the last word in the matter, and they were often not so much motivated by the most "modern" scientific and commercial proposals, but by pragmatic, conservative and economic motives; which is not to say that the hitherto under-researched commercial side of the story does not deserve more attention.[112] On the contrary, as Châtelet has shown, a similar story can be told in the sphere of open-air school architecture about the Doecker, Bessoneau and other barracks and tents, which could be adapted to the extent that their "national" origins got lost. Thus, much in the way that the "Swedish" schoolhouse promoted at the Centennial Exhibition in Philadelphia in 1876 was "both real and ideal, and both actual and mythological,"[113] and as such went on to live a life of its own, the patented military hospital barracks designed by the Dane Johann G. C. Doecker (1826-1904) and used in Charlottenburg in 1904 swiftly spread as the "German" model of open-air school building but found the most diverse forms of expression both in Germany and beyond, neither of which became a blueprint for modern hygienic school building.[114] Indeed, no single model of open-air school proliferated and can be said to have uniformly influenced regular schools.[115] In the United States, for instance, open-air schools materialized on rooftops and

[111] Herman and others, "The School Desk," 101; Depaepe, Simon and Verstraete, "Valorising the Cultural Heritage," 16.

[112] Ibid., 116 and 16, resp.

[113] See Christian Lundahl and Martin Lawn, "The Swedish Schoolhouse: A Case Study in Transnational Influences in Education at the 1870s World Fairs," *Paedagogica Historica* 51, no. 3 (2015): 319-34.

[114] Châtelet, *Le souffle du plein air*, 25-29.

[115] Ibid.

discarded ferryboats or as annexes to preventoria, seaside hospitals, etc.[116] The "national" as a frame of analysis here falls short of accounting for geographies of performative circulation that can be traced along paths traversing and blurring imagined boundaries and communities within larger socio-cultural, political and economic constellations.[117]

**Beyond internationalization: awkward knowledge or boundless tangles**

Returning to the questions that have guided the analysis, it can be concluded that while open-air schools surely contributed to flows of knowledge around hygiene or health in such areas as education, material design and architecture, they did not unambiguously help to spread school hygiene between nations and influence regular praxis. From a closer look at the wayfaring of knowledge and praxis through people, conferences and exhibitions, and hygiene materials, it becomes clear that the rule rather than the exception was fragmentation: continuous morphing or material "form-giving" (transformation)[118] in various directions. Open-air schools may thus perhaps best be seen as entwined movements and practices which remain open-ended and co-constituted by a range of (f)actors, not least commercial ones, as the contemporary examples of the "Danish" *udeskole* and "English" Forest School illustrate.[119] A turn to wayfaring helps to illuminate the complex interwoven processes behind particular performances of health or

[116] See, for instance, Leonard P. Ayres, *The Open-Air School* (New York: Double Day/Page, 1910); Sherman C. Kingsley, *Open Air Schools* (Washington: Government Printing Office, 1917).

[117] The German *Zollverein* and Greater Region of Luxembourg constituted such border-crossing knots of stories. Geert Thyssen, "Engineered Communities? Industry, Open-Air Schools, and Imaginaries of Belonging (c. 1913-1963)," *History of Education and Children's Literature* 10, no. 2, (2015): 297-320.

[118] Ingold, "Bringing Things to Life," p. 3.

[119] Sue Waite, Mads Bølling and Peter Bentsen, "Comparing Apples and Pears? A Conceptual Framework for Understanding Forms of Outdoor Learning through Comparison of English Forest Schools and Danish 'Udeskole'," *Environmental Education Research* 22, no. 6 (2016): 868-892. In the UK schools, universities and students can now buy into Forest School curriculum packages and show they are in tune with the most "current" developments in education. The approach is oddly disentangled from open-air schooling and ascribes particular origins in a curious mix of "pioneers" to Pestalozzi, Margaret and Rachel McMillan and others.

outdoors education in such contexts across the borders open-air schools helped to permeate as well as rearticulate. Non-/humans as entangled "mediators" or transformers of an education deemed healthy were each in their way responsible for fragmentation, for reasons to do with their life geographies, personalities, interests, agendas, and contacts, and with their historically specific material affordances and social, cultural and economic value. Market mechanisms, cultural customs and pragmatic responses of local authorities in sometimes economically and politically turbulent times also partly explain the diversity of performances of health education bound up with open-air schools. Paying attention to technicalities inherent in the border-crossing and interweaving of knowledge and praxis through technologies and processes of communication adds further layers to the analysis of developments in education and design for health.

Why precisely open-air schools drew the attention of those promoting them, and what calls for them and their performances of school hygiene did and why is difficult to establish in any general sense. Yet the research evidence gathered (also from Lowe, Bryder, Depaepe and Simon, Thyssen, Bakker, etc.), does offer clues. They helped perform a sense of both urgency regarding real-imagined decline in the health of certain people(s) and of modern, practical and importantly affordable options available at the national and more local levels. Thus, for some decades open-air schools and their promoters were seen as offering more or less hygienically justified solutions to various problems, some of which seemed to belong to the medical field (the threat of TB and related conditions more and less easily diagnosable and interpretable) yet nevertheless allowed for pedagogisation.[120] Place-, people- and thing-bound pedagogical strategies pursued were thus the promotion of "new", "child-centred" curricula or pedagogies (and "pioneers" thereof), the accommodation of "weak", "subnormal" target groups (flexibly defined) at times in apposite subsidised branches of the special education stream which in an

[120] Marc Depaepe and others, "About Pedagogisation: From the Perspective of the History of Education," in *Educationalization of Social Problems (Educational Research)*, eds. Paul Smeyers and Marc Depaepe (Dordrecht: Springer, 2009), 13-15.

historical twist of irony were actually to facilitate their demise. As applies to other wayfarers co-constitutive of "national" education systems (and their by-products like school statistics), they further helped nations to position and understand themselves as more/less healthy and advanced than others. The paper has shown they did so in ways (through places, people and things) which were at once local, regional, national, international and transnational.[121]

Investigating the internationalization of something like school hygiene, then, demands not just reflection about subjects, categories and levels of analysis used but also consideration of how work done by non-/humans in this context "matters" in both a figurative and material sense. Indeed, while the risks of presentism and teleological thinking always lurk in the shadows whenever the "national" is taken as a natural reference frame or starting point and internationalization or the spread of knowledge and praxis transnationally is measured by its supposed effects on phenomena observable today across borders, "the problem we have," as Lawn has argued – in geography and sociology of science terms – "is whether to exclude all external linkages [sic] or follow them, and in either case, we have problems. This is the root of awkwardness".[122] Within the relational approach pursued, the following of paths moreover implies their (re)creation. Thus, "methodological nationalism" and "national mythology" are entangled across the boundaries of historiography and history, and just as in this case borders may be at once real and imagined, so too the permeability of boundaries may be an imaginary with material bearings. Imagining on the part of historians is bound up with that of historical actors (non-/humans) through what Joyce Goodman – with reference to Barad – has termed "researcher cuts".[123] This means that we as scholars, that is: (we and) our "apparatuses", are always implicated in "phenomena" we observe, the term "phenomenon" implying this.[124] If anything, this article has shown that seeing non-/human entanglements as boundless can add

[121] Cf. Lawn, "Awkward Knowledge".
[122] Ibid., 15.
[123] Goodman, "Circulating objects," 124.
[124] Barad, *Meeting the Universe Halfway*, 26.

complexity to facile observations from a present-day perspective. Any observing in itself only constitutes another thread along many threads, the "trailing ends" of which leave ample room for further meaning to be generated.[125]

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[125] Ingold, *Lines*, 169.