

**Environmental Knowledge and Nature(s) in Africa:
Collecting, Producing and Analysing Research Materials**
(forthcoming 2021)

Special issue coordinators:

Luisa Arango

(University of Strasbourg, UMR 7363 SAGE, CEDEJ-Khartoum, MAEDI/USR 3123 CNRS)

Émilie Lavie

(University of Paris-Diderot, UMR 8586 PRODIG)

Émilie Guitard

(CNRS, UMR 8586 PRODIG)

Authors' calendar

- 30 November 2019: Sending abstracts consisting of a summary of about twenty lines with the provisional title, name(s), contact details and affiliations of the author(s). An e-mail address must also figure.
The summary shall include: Information on the nature of the materials treated, their concise description, and elements of contextualisation in relation to the discipline and research question of the article.
- 16 December 2019: Response sent to the author(s) (accepted or rejected)
- 15 April 2020: Sending of the article
- 15 July 2020: Evaluation report sent to the author(s)
- 1st October 2020: Submission of the final versions of the articles
- 1st February 2021: Release of the special issue

The abstracts and articles shall be sent to:

arango@unistra.fr, emilie.lavie@univ-paris-diderot.fr and emilie.guitard@gmail.com

The texts must be submitted in .doc format and consist of about 7 300 words (including the bibliography, abstract, and keywords) but shorter or longer texts will also be considered.

Presentation

Africa is a place of reference in the production of naturalist and environmental knowledge worldwide that materialise in numerous objects and media. Researchers are confronted with various conceptions of nature that are particularly valued today, at a time when knowledge as large acquire new social and economic values (Moity-Maïzy, 2011).

The continent has long been considered a laboratory for environmental research—from explorers' accounts about African environments and their uses to the development of colonial and imperial sciences in the nineteenth and twentieth centuries (Tilley, 2011). Thus, the accumulated knowledge in Africa has strongly influenced the development of environmental knowledge in Europe (Lachenal, 2005). Maps and travelogues, naturalistic inventories and collections of animals, living or stuffed, materialise these processes of knowledge production. It can be added to these objects, the local tales and legends, but also vernacular knowledge and know-how about nature that, accompanied by artefacts dedicated to hunting, breeding or cultivation, were collected by ethnologists, geographers and missionaries (Bondaz, 2013).

The current dynamics of the patrimonialisation of genetic resources, living things, landscapes and knowledge are incarnated in the collections of natural history museums, photography and naturalistic

drawing. These objects of knowledge have a value that is not only technical or economic, but also an aesthetic, heritage and ecological one. They testify to both the particular relations with African milieus and the procedures put in place to produce environmental knowledge and knowledge on nature(s) in Africa (Tilley & Gordon, 2010) by various social groups: local populations, scientists, amateur or professional naturalists, Africans and Europeans, but also from other continents.

In this framework, the statistics on flora and fauna and climate or biodiversity modelling, which are intended to provide information on the state of African ecosystems and their futures, show significant changes in theoretical and methodological paradigms, but also technical advances and new power relations that are established in relation to knowledge (Pinton, 2014).

This issue of the journal *Sources* would like to place at the centre of reflection those objects that have become research materials and have participated and, for some, still participate in the production, transmission and discussion of naturalistic and environmental knowledge in Africa and about Africa. Their analysis makes it possible to elucidate the various, often neglected, forms of co-production of knowledge, starting from the work of identifying, selecting and translating accomplished for European explorers by the local populations who were qualified in some works as "dark companions" (Simpson, 1975, Chrétien, 2005). Cooperation between research assistants and anthropologists and sociologists in colonial Africa in the 1940s-1950s (Schumaker 2001; Lawrance et al., 2006) and current intercontinental collaborations with African scientists can be considered within these forms of knowledge coproduction.

These questions are rooted in the theoretical framework of the "material turn" that invites us to first look at the hands, the eyes and the material context of "those who know" in order to try to understand, through them, the production and circulation of knowledge (Latour, 1987: 32). It is important to return to the origins and academic traditions of these experts, African or otherwise, to account for both the material inequalities inherent in the production of environmental knowledge, but also the influence of cultural contexts, creativity and the scientific do-it-yourself approach they propose in their work.

In addition to the geographical and historical contextualisation of references to the nature(s) we encounter in our fields, this reflection around the materiality of naturalistic knowledge allows to question our epistemological positioning. As researchers, it is necessary to consider our relationship to the knowledge regimes mobilised by our interlocutors and the institutions we study (Stehr, 2000). Thus, particular attention will be paid to the objects and media collected in the contexts of referencing, systematisation, learning, teaching, exchange and controversy regarding environmental knowledge in Africa.

This attention is important in a moment of proliferation of international biodiversity management programmes or public conservation policies that often rely on the classical model of knowledge transfer from "erudite knowledge" (scientific, expert or academic) to "secular knowledge" (practical or popular) (Steyart, 2006). It is within the framework of environmental regulations, which are supposed to induce changes in practices, that notions such as "ethno-ecology" or "traditional environmental knowledge" emerge. These have been the subject of many controversies concerning the simplistic instrumentalisation of vernacular typologies (Roy et al., 2000). In this normative context, management plans, charters for protected sites, environmental protection awareness sheets and even school and university education programs (Berthelot, 2008, Losego, 2008) are objects that act as "vectors of learning" (Kaine, 2002: 176) and can become sources to be highlighted or discussed.

Starting from the idea that they are the result of the choices and relationships between the actors involved, they invite us to interrogate the dichotomic qualifications of nature and epistemic communities, but also the essentialist conceptions of knowledge. This debate is thus about a discussion of power relations between very diverse regimes of truth or classification systems of life, stemming from knowledge communities increasingly called upon to collaborate in Africa (Jankowski, 2013; Gowing et al., 2004; Viard-Crétat, 2016).

These objects of knowledge are also multiplying with the increase in ecological emergencies on a global scale and in Africa, a continent particularly affected, in parallel with technical innovations in environmental research and communication. Pollution imagery, lists of endangered species, educational documentaries and radio and television programmes confront researchers, beyond scientific rhetoric, with the material transformation of the environment. This question is part of broader debates on the democratisation of environmental knowledge, the accessibility of knowledge and the modalities of research governance. It is related to the emergence of environmental movements on the African continent, for which it has been demonstrated that the engagement of actors often participants in the construction of identities and otherness (Gommart et Hennion, 1999; Callon, 2006). Participatory science and interventional research or action research are also dynamics to be considered in this context (Leach and Fairhead, 2002). They produce research materials that mediate between diverse knowledge. Thus, citizen databases, mental maps or attempts to translate localised knowledge are situated in a context in which the geography and the economy of knowledge are profoundly transformed. These objects, the sources of our analyses, contribute to the production of a new “geopolitics of knowledge capacities” (Vinck, 2017: 2–3), for which the dissemination mechanisms and modes of circulation, appropriation and recognition call into question the usual power centres of their production.

There are many ways to deal with these sources of environmental knowledge in Africa. Returning to the materiality of these objects of knowledge (technical characteristics, mobility capacity, appropriation, clarity, fidelity, performance) makes it possible to discuss the interest of certain technical innovations or the economic and social cost of environmental research in Africa. The genealogical path of certain objects, meanwhile, can make it possible to follow filiations between schools of thought or institutions, to reveal ways of co-producing knowledge or to identify changes in how to apprehend and understand the natures of the continent. It is also possible to highlight the various arrangements by which these “frontier objects” or “intermediate objects” are located (Vinck, 2009, Griesement and Star, 1989), to underline the relationships that actors play between them, with these artefacts of knowledge and with natures. Lastly, semiological (perception) and phenomenological (experience) approaches, decrypting the aesthetic, sensory and even artistic dimensions of certain sources, can inform us about the place of affects, the recognition and the attachments that environmental issues in Africa can generate. Without being exhaustive, these approaches constitute the many lines of thought that should be enriched and developed in this collective issue.

Bibliography

Berthelot, Michèle. 2008. ‘La dimension critique de l’éducation relative à l’environnement dans un pays en développement : réflexions issues d’une expérience sénégalaise’. *Éducation relative à*

- l'environnement. Regards - Recherches - Réflexions* 7 (September).
<http://journals.openedition.org/ere/3209>.
- Bicker, Alan, Roy Ellen, Peter Parkes, Roy Ellen, and Peter Parkes. 2003. *Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives*. Routledge.
<https://doi.org/10.4324/9780203479568>.
- Bondaz, Julien. 2013. 'L'ethnographie parasitée ? Anthropologie et entomologie en Afrique de l'Ouest (1928-1960)'. *L'Homme. Revue française d'anthropologie*, no. 206 (June): 121–50.
<https://doi.org/10.4000/lhomme.24519>.
- Callon, Michel. 2013. 'Pour Une Sociologie Des Controverses Technologiques'. In *Sociologie de La Traduction : Textes Fondateurs*, edited by Madeleine Akrich and Bruno Latour, 135–57. Sciences Sociales. Paris: Presses des Mines. <http://doi.org/10.4000/books.pressesmines.1196>.
- Chrétien, Jean-Pierre. 2005. 'Les premiers voyageurs étrangers au Burundi et au Rwanda : les "compagnons obscurs" des "explorateurs"'. *Afrique histoire* 4 (2): 37–72.
<https://www.cairn.info/revue-afrique-et-histoire-2005-2-page-37.htm>.
- Gomart, E., and A. Hennion. 1999. 'A sociology of attachment: music amateurs, drug users'. In *Actor Network Theory and After*, edited by J. Law and J. Hassard, J.: 220–7. Oxford: Blackwell.
- Gowing, J., R. Payton, and M. Tenywa. 2004. 'Integrating Indigenous and Scientific Knowledge on Soils: Recent Experiences in Uganda and Tanzania and Their Relevance to Participatory Land Use Planning'. *Uganda Journal of Agricultural Sciences* 9 (1): 184-191–191.
<https://www.ajol.info/index.php/uja/article/view/134887>.
- Kaine, Élisabeth. 2002. 'Les objets sont des lieux de savoir'. *Ethnologies* 24 (2): 175–90.
<https://doi.org/10.7202/006645ar>.
- Lachenal, Guillaume. 2005. 'L'invention africaine de l'écologie française. Histoire de la station de Lamto (Côte d'Ivoire), 1942-1976'. *La revue pour l'histoire du CNRS*, no. 13 (November).
<https://doi.org/10.4000/histoire-cnrs.1662>.
- Latour, Bruno. 1987. 'Les "Vues" de l'esprit'. *Réseaux. Communication - Technologie - Société*, no. 27: 79–96. <https://doi.org/10.3406/reso.1987.1322>.
- Lawrance, B.N., E.L. Osborn, and R.L. Roberts, ed. 2006. *Intermediaries, Interpreters, and Clerks: African Employees in the Making of Colonial Africa*. Madison: University of Wisconsin Press.
- Leach, Melissa, and James Fairhead. 2002. 'Modes de contestation : le "savoir indigène" et la "science des citoyens" en Afrique de l'Ouest et dans les Caraïbes'. *Revue internationale des sciences sociales*, no. 173: 337–51. <https://doi.org/10.3917/riss.173.0337>.
- Losego, Philippe. 2008. 'Quelle politique de la science pour un pays intermédiaire ? Le cas des sciences de la nature en Afrique du Sud (1945-2006)'. *Revue d'anthropologie des connaissances* 2 (3): 361–90. <https://doi.org/10.3917/rac.005.0361>.
- Moity-Maïzy, P., ed. 2011. *Savoirs et reconnaissance dans les sociétés africaines*. Paris: Éditions Karthala.
- Pinton, Florence. 2014. 'De la période coloniale au développement durable. Le statut des savoirs locaux sur la nature dans la sociologie et l'anthropologie françaises'. *Revue d'anthropologie des connaissances* 8 (2): 425–50. <https://doi.org/10.3917/rac.023.0425>.

- Roy, E., Parkes P., Bicker A., ed., (2000), *Indigenous Environmental Knowledge and its Transformations. Critical Anthropological Perspectives*, Amsterdam, Overseas Publisher Association.
- Schumaker, L .2001. *Africanizing Anthropology: Fieldwork, Networks, and the Making of Cultural Knowledge in Central Africa*. Durham (NC): Duke University Press.
- Star, Susan Leigh, and James R. Griesemer. 1989. 'Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39'. *Social Studies of Science* 19 (3): 387–420. <https://doi.org/10.1177/030631289019003001>.
- Stehr, Nico. 2000. 'Le savoir en tant que pouvoir d'action'. *Sociologie et sociétés* 32 (1): 157–70. <https://doi.org/10.7202/001773ar>.
- Steyaert, Patrick. 2006. 'La race bovine maraîchine, objet de médiation de différentes formes de savoirs'. *Revue internationale des sciences sociales*, no. 187: 91–99. <https://doi.org/10.3917/riss.187.0091>.
- Tilley H. 2011. *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge (1870–1950)*. Chicago: University of Chicago Press.
- Tilley H., and R. Gordon, ed. 2010. *Ordering Africa: Anthropology, European Imperialism, and the Politics of Knowledge*. Manchester: Manchester University Press.
- Viard-Crétat, Aurore. 2016. 'Savoirs tactiques et expertises. La candidature camerounaise pour le programme forestier Redd+ de la Banque mondiale'. *Revue d'anthropologie des connaissances* 10 (2): 279–301. <https://doi.org/10.3917/rac.031.0279>.
- Vinck, Dominique. 2017. 'Repenser la connaissance'. *Revue d'anthropologie des connaissances* 11 (2): 101–4. <https://doi.org/10.3917/rac.035.0101>.
- Vinck, Dominique. 2017. 'Rethinking Knowledge'. Translated by Bernadette Goth. *Revue d'anthropologie des connaissances* 11 (2): 101–4. <https://www.cairn-int.info/journal-revue-anthropologie-des-connaissances-2017-2-page-101.htm>.
- Vinck, Dominique. 2009. 'De l'objet intermédiaire à l'objet-frontière'. *Revue d'anthropologie des connaissances* 3 (1): 51–72. <https://doi.org/10.3917/rac.006.0051>.