

YANN PHILIPPE TASTEVIN

RESEARCH SCIENTIST AT CNRS

INTERNATIONAL RESEARCH LABORATORY "ENVIRONMENT, HEALTH, SOCIETIES", UNIVERSITY OF DAKAR, SENEGAL - CNRS-PARIS, FRANCE.

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Date of birth 30 August 1977

Nationalité French

Location Dakar, Senegal

2 children

PROFIL

My research achievements fall under two main themes: low-tech innovation in the Global South and waste recycling in a global economy. My scientific approach is collaborative and interdisciplinary, at the crossroads of human and social sciences, engineering sciences, and environmental sciences. It is also multi-site and comparative, with my fieldwork taking place in France, Egypt, India, and more recently Senegal. From the artisan workshop in Dakar to the industrial kiln in Uttar Pradesh, my investigations aim to characterize the diversity of technical processes, and the heterogeneity of forms in the circulation and transformation of recovered metals. For the first time in Senegal, I have mobilized community-based participatory research methods to document a blind spot in globalized recycling chains: the local effects of urban metal extraction on local residents and their environment. This experience is the basis of my participation in COMBINE and my contribution to move from "waste studies" to "discard studies".

ACADEMIC POSITIONS

2021-today	Research Scientist at CNRS, IRL ESS, Cheikh Anta Diop University, Senegal.
2014-2021	Research Scientist at CNRS, University of Toulouse, France.
2014	Postdoctoral grant <i>LabexMed</i> , Aix-Marseille University, Mucem, France.
2013	Postdoctoral grant <i>LabexSMS</i> , University of Toulouse, France.
2013	Awarded the prize for the best French-language thesis on the Muslim world 2010-2013, Institut d'études de l'Islam et des sociétés du monde musulman, EHESS, France.

LEADING RESEARCH GRANTS

2023-2027	SO-RRYL: <i>A SOciety of Reuse and RecYcLing?</i> PEPR RECYCLAGE, General Co-PI, 1,264 M€ (National with international review).
2023-2026	FeMineTal: <i>Coping with urban mining in the energy transition</i> . TIRIS-University of Toulouse, Co-PI, 273 k€ (Regional with national review).
2023-2024	REPAIRMAMA: <i>Research into the Effects of Air Pollution on the Health of Mothers and Children</i> . African Center of Excellence - AGIR, World Bank, Co-PI, 35 k€ (International : West-Africa).
2023-2024	AEROSEN : <i>Aerosols, air quality and health in Senegal</i> . MITI CNRS, PI, 30 k€ (National).
2021-2023	AIRGEO Belmont Forum-ANR (6 countries). Co-PI-Sénégal 70k (International).
2021-2022	RECYCL'BATT : <i>Battery recycling processes: description of operating chains, experimental studies and thermodynamic modeling of metal recovery stages</i> MITI CNRS, Co-PI, 170 k€ (National).
2021-2023	MinURBA : <i>For an interdisciplinary and collaborative South-South-North platform on Urban Mining</i> . CNRS, PI, 28 k€ (National).

REFERENCES

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EDUCATION

2012

PhD in Anthropology, University of Paris Nanterre, France.

AWARD

2013

Prize «best French-language thesis on the Muslim world» 2010-2013, Institut d'études de l'Islam et des sociétés du monde musulman, EHESS, France.

PUBLICATIONS & PRESENTATIONS

22 articles, 1 book (forthcoming), 26 international conference presentations, 2 special issues of scientific journals, 6 book chapters.

MAJOR COLLECTIVE INVOLVEMENT

2023 - today

Deputy Director of the International Research Laboratory "Environment, Health, Societies" (CNRS/UCAD/UGB/USTTB/CNRST), Dakar, Sénégal.

2023 - today

Leader of the Transdisciplinary Observatory of Environmental and Social Change in the Sebikotane - Diamniadio area ([SOSI - Senegal](#)).

2023 - 2026

Member of the national committee of CNRS - Interdisciplinary Commission - CID 52: Environments societies: from knowledge to action.

STUDENTS & YOUNG RESEARCHERS' SUPERVISION

(co)-Supervision of 1 PhD candidates; participation in the supervision of 4 PhD candidates.

(co)-Supervision of 7 MSc- 2nd yr, 5 MSc- 1st yr.

(co)-Supervision of 1 post-doctoral researcher.

RESEARCH ACHIEVEMENTS & PEER RECOGNITION

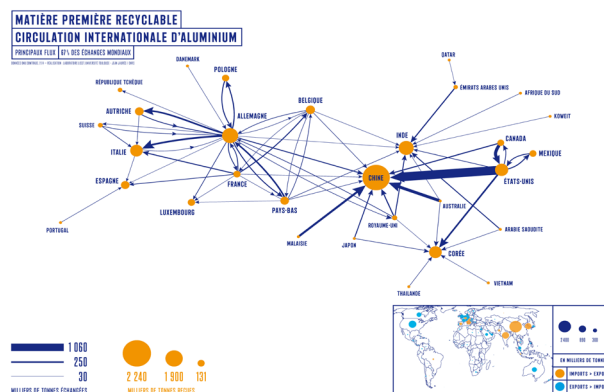
WASTE, RECYCLING, AND URBAN MINING IN A GLOBAL ECONOMY

- [1] Cavé J., **Tastevin Y.P.**, *La civilisation du déchet*, Paris, éditions les Arènes (in press).
- [2] De Bercegol R., **Tastevin Y.P.** « Urban Mines: Flow of Materials and Recycling » (in press)
- [3] Lhoste, P., **Y.P. Tastevin**, R. De Bercegol, S. Gowda, M. Macouin, L. Cassayre, 2022. L'interdisciplinarité en actes: le recyclage artisanal du plomb dans les ateliers de l'Uttar Pradesh, Tracés.
- [4] Chevallier D., **Tastevin Y.P.**, 2017. *Vies d'ordures - de l'économie des déchets*, Coédition Mucem/Artlys Presse, 240p.
- [5] Furniss J., Joulain F., **Tastevin Y.P.** 2016. « Fixing the world : Excess, Leftover and innovation », *Techniques&Culture*, n°65-66, 508 p.

I use the term «discard studies» rather than «waste studies», to ensure that the categories of what is systematically left behind, devalued, abandoned, and externalized remain open. My research questions waste as a process, a category, a judgment, an infrastructural and economic challenge, or an ecological problem. The main contribution of my work has been to change scale to analyze the broader socio-technical systems that generate it [1-5]. Thus, the main task of my latest book is to change focus, to understand how these large-scale, long-term material and social arrangements have made modern waste possible [1]. Incommensurable, synthetic, heterogeneous, our waste has become unpredictable. They can be toxic, long-lasting, and made up of complex, often unknown, components. We are engaged in a mode of inquiry (the critical investigation of case studies) that gives us the means to grasp these strange materialities that dictate how waste travels through environments and economies. Postulating that garbage, waste, pollution, and scrap are phases in the life of a thing, my first studies analyzed how objects enter this phase, how they leave it, and how they circulate during it. They showed under what conditions and how residues can be put back into circulation, be dangerous or cause damage, and finally revealed the types of technical systems and policies in which they are entangled [4,5].



Since 2017, my research has focused on the socio-ecological issues of waste recycling in a global economy. It explores the social, political, technical, spatial, and environmental dimensions of the exploitation of what is known as urban mining. The re-circulation of materials represents a new cross-disciplinary theme of study, whose major originality lies in its ability to federate interdisciplinary approaches and to articulate analytical, critical, and applied approaches [2]. At the crossroads of process engineering and the anthropology of techniques, I supervised Paul Lhoste's thesis in collaboration with Laurent Cassayre, the aim of which was to study the core of recycling processes as developed and practiced in southern countries. Few studies take the trouble to describe in detail the processes at work, even though value is created precisely in the diversity of material processing capacities. It was a great step forward for the COMBINE PIs to join forces in a single strategy in the field of P. Lhoste's thesis, and to articulate the anthropological analysis of technical operations, the physico-chemical analysis of metallurgical processes, and the contamination emitted by recycling facilities. On the strength of this «pathbreaking» experience, this original approach gave rise to a first collective publication [3] and nourished the COMBINE project.



RESEARCH ACHIEVEMENTS & PEER RECOGNITION



These interdisciplinary, and then transdisciplinary, collaborations gave rise to a series of projects that are now funded. The re-focusing of my investigations in Senegal has led to a reorientation of my research on contamination due to recycling activities and metallurgical processes. The urban mining industry is also a toxic mine. What does pollution do to those who live near its source? After following transnational recycling networks, my aim was to anchor my fieldwork in the industrial margins of the Dakar metropolis, in order to analyze the interactions between local communities, recycling industries, and contamination process. By investigating these affected territories, I am able to document the citizen perspective, which is at the heart of the COMBINE project, as I seek to describe intimate forms of knowledge of pollution and the accommodations made to cope with it. Ethnography informs us about the ordinary, everyday relationship with danger, but also about the deeper social upheavals caused by air pollution. It is in this context that I am coordinating the AirGeo participatory project in Senegal, led by M. Macouin, where a preliminary assessment of ambient air particle concentrations and dispersions is being carried out in order to monitor contaminant emissions linked to anthropogenic activities in urban mining. The primary objective is to produce a synthesis of emissions linked to the combustion of recycled metals by creating a network of transdisciplinary academic and non-academic players. This experience now makes it possible to carry out the COMBINE project.

LOW-TECH INNOVATION IN THE GLOBAL SOUTH

[6] Tastevin Y.P., *Les mondes du rickshaw à moteur*, Paris, éditions Karthala, collection « Terre et gens d'Islam », (to be published in 2024).

[7] Tastevin Y.P., 2021. « The chronicle of a conception : Experimenting in a crisis situation in Dakar », *Azimuts*, n°52, pp. 53-77.

[8] Tastevin Y.P., Grimaud E., Vidal D. 2017. « Low-tech ? / Wild-tech ! » *Techniques&Culture*, n°67, 288 p.

[9] Tastevin Y.P., 2017, « From Ox-Carts to Borewell Rigs : Maintenance, Manufacture and Innovation in Tiruchengode ». *Subaltern Urbanization in India*, Denis E., Zehra M-H. (dir.), New Delhi, Springer, pp. 497-525.

[10] Tastevin Y.P., 2015, "The Indian Auto Rickshaw in Egypt: An Ethnography of Transnational Trade Connections", *Articulo - Journal of Urban Research*, n°12.

My research also focuses on innovation processes in the Global South and the globalized circulation of technologies. How objects, manufacturing processes, materials, and components can be recomposed and reinvented as they circulate between different social milieus and different parts of the world [6]. These little-known production models illustrate unprecedented «models of making» [9]. They challenge the industrial development of the South as much as the way in which innovation can emerge in the South and travel to the North. By examining the ways in which various forms of technology invented at different times coexist and are used worldwide, my research aims to go beyond the broad divisions between local and global, low-tech and high-tech, obsolescence and innovation [10]. I have been a pioneer in low-tech thinking, and I have never stopped getting involved in field research projects to gain a finer insight into the potential of low-tech from a cross-cultural perspective [8]. I have been working for a long time to set up a collaborative platform, bringing together the knowledge and know-how of researchers, engineers, makers, and craftsmen, between West Africa, India, and France [7]. For COMBINE, the aim is to capitalize on the thinking developed in these different fields of expertise, as well as the networks that have been set up, to pursue the development of sensors and low-tech measurement instruments in SEN, at the interface between environmental sciences, anthropology, and design.



PEER RECOGNITION

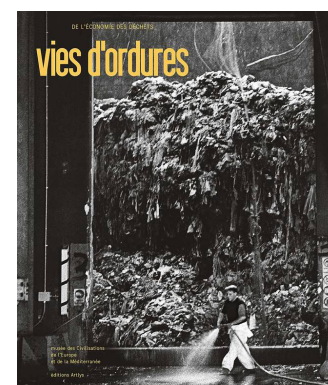
Associate curator of the «Junk!» Exhibition

I coordinated the design and production of an exhibition with a budget of **€800,000**. Close to **130,000** visitors will have browsed this exhibition at the *Musée des civilisations européennes et de la Méditerranée - Mucem* - in Marseille in 2017. Over 450 objects, films, maps, and maquettes reveal a little-known economy. From the initial questioning to the opening to the public, it took three years of collective adventure. From March 21 to August 14, 2017, Mucem's large exhibition space hosted a tour devoted to the waste economy in the Mediterranean, its shores and its cities. Orchestrated by the Mucem's Research department, the creation of the exhibition collection was based on a «survey-collection» campaign carried out in Turkey, Albania, Egypt, Italy, Tunisia, Morocco and France. In an unprecedented move for an ethnographic exhibition project, scientific and artistic direction were combined from the outset.

I defended a curatorial approach rooted in the heritage of the «reflexive» and «investigative» museum, but also singular in its working method. Research seminars, in partnership with Mucem and Ehess, preceded and accompanied the development of the program, while the first sites identified were the subject of multidisciplinary and iterative surveys. 3 years of surveys and interactions with researchers from a wide range of disciplines, during which I gained valuable experience of interdisciplinary exchanges.

Teaching

On the teaching front, after giving 48 hours of lectures a year in the Master of Anthropology at the Université Jean Jaurès in Toulouse, I joined the teaching team of the interdisciplinary Master of Biological Anthropology at the Université Cheikh Anta Diop in Dakar. I regularly lecture at the Ecole Polytechnique in Paris.



ADDITIONAL INFORMATION

DEPUTY DIRECTOR OF AN INTERNATIONAL LABORATORY

In order to build a strong study case on industrial pollution in West Africa, I joined the Laboratoire International de Recherche Environnement, Santé, Sociétés in 2021. Since the end-2023 I have taken the position of deputy director of this first joint international laboratory created in sub-Saharan Africa. It comprises teams of teacher-researchers from the University in Dakar and the French CNRS, who study interactions between the environment, health, and societies. I develop projects on the Urban Mine, closely combining scientific leadership, research, and the socialization of knowledge.

OTHER CONTRIBUTIONS

A MAJOR EDITORIAL ACTIVITY

Member of the Editorial Board of *Techniques&culture*, an interdisciplinary journal in the humanities and social sciences (rank A), devoted to the material dimensions of social life. With an international reading committee, it publishes articles submitted to a double-blind peer review procedure. It is published by EHESS. From 2016 to 2020, I edited 173 papers as co-editor-in-chief of the journal.

HEAD OF A TRANSDISCIPLINARY OBSERVATORY

I am the founder and leader of the Transdisciplinary Observatory of Environmental and Social Change in Senegal (SOSI). This observatory makes it possible to carry out continuous studies of a territory, in this instance the urban mines of Sebikotane, 45 km from Dakar. It is transdisciplinary in the sense that it involves researchers from Senegalese and French universities and local stakeholders. It is funded by the CNRS at 30k€/year, with a renewal contract every 5 years. This observatory is the basis for one of the two COMBIN project sites.