

**SCIENCE, SOCIETY AND NEW TECHNOLOGIES SERIES**

**COMMUNICATION, ENVIRONNEMENT, SCIENCE AND SOCIETY SET**



**Volume 4**

# **Pesticides**

*Pluridisciplinary Dialogues  
in Social and Human Sciences*

**Edited by  
Nataly Botero, H el ene Ledouble  
and Fran ois Allard-Huver**

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Do you think that citizens have the right to propose expertise in scientific controversies? What about the role of scientists and their voice in such matters?

What led you to choose BioCheck as your laboratory for urinalysis?

For several years now, legal levers have been increasingly used in activist measures. When did they start to be used and what were the obstacles and advantages?

Farmers despise the fact that their production needs are not being considered, and that they do not have enough alternatives to deal with the ban

on certain products (or active substances) that are deemed to be harmful. How would you respond?

Certain alternatives to pesticides (known as biocontrol products), such as sulfur and copper, have a potentially negative impact (on health, the environment and, in the case of copper, in the neighborhood through odors). What do you think of their use in place of conventional pesticides?

Several actions were covered by the media, notably when activists painted glyphosate cans in garden centers. What can you say about these actions? Do you think they are useful (or even convincing) for citizens? Is it to draw attention to the potentially toxic products sold in garden centers (and often packaged in green)? Or is there another objective?

In terms of campaigns, what are the methods of action, the images and the speeches that succeed in mobilizing the greatest number of people? What are the powerful symbols, as the media are fond of this type of action? What becomes audible and can be picked up by the media?

Apart from glyphosate, what are the other most symbolic products or molecules that the general public is calling for to be regulated or banned?

And what about neonicotinoids? Thanks to questions about beetroots this is becoming increasingly visible, even though we have been using them for 30 years and no one had ever heard of them. Is it this whole political effect of prohibition, reauthorization and derogation that is making it visible?

We all know that the climate issue has become central to environmental action. So what role does the pesticide issue currently play in society?

Have you seen any changes in the way the issue has been handled by the media, say over the past 10 years or so? And how would you describe your relations with the media?

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**Communication, Environment,  
Science and Society Set**

coordinated by  
Andrea Catellani and Céline Pascual Espuny

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First published 2024 in Great Britain and the United States by ISTE Ltd and John Wiley & Sons, Inc.

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Library of Congress Control Number: 2024946270

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British Library Cataloguing-in-Publication Data  
A CIP record for this book is available from the British Library  
ISBN 978-1-78630-950-1

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# Author Presentation

## Editors

### ***François Allard-Huver***

François Allard-Huver is an Associate Professor in strategic and digital communication at Université Catholique de l'Ouest, Angers (UCO). His work focuses on environmental and health controversies surrounding food and pesticides. He is particularly interested in the question of “affairs” in the media and the public sphere. He also works on risks, sustainable development and organizations, with a particular focus on the CSR communication and public relations strategies of various players in the public sphere (institutions, civil society, lobbies, industry). He regularly participates in symposia and conferences on the relationship between sustainable development, risks, controversy, food and communication.

A member of the management committee of the *Communication, environnement, science et société* (CESS) study and research group of the *Société française des sciences de l'information et de la communication*<sup>1</sup>, he is also the scientific director of the *Académie des controverses et de la communication sensible* (ACCS)<sup>2</sup>.

### ***Nataly Botero***

Nataly Botero is an Associate Professor in information and communication sciences at the Université Paris-Panthéon-Assas and a researcher at Carism, France. As a discourse analyst and semiotician, her research focuses on the mediatization of ecological issues in France, both in terms of the formal features of these discourses (romanticism, use

of metaphors) and public issues (programmed obsolescence, air pollution, pesticides). She has also worked on digital practices related to health and healthcare (rare dermatological conditions, continuation of pregnancy and neonatal palliative care). Her most recent publications are *Influenceurs et influenceuses santé*<sup>3</sup> and *Pollution atmosphérique à la une : visibilité médiatique d'un problème environnemental*<sup>4</sup>.

## **Hélène Ledouble**

Hélène Ledouble is an Associate Professor in applied linguistics at the Université de Toulon, France, and a researcher at the Babel laboratory. She works on popular science publications dealing with environmental issues, and is particularly interested in the field of agroecology. Her most recent publications are dedicated to the media coverage of natural plant protection mechanisms (biocontrol, biological control and biopesticides) in the French and English daily press<sup>5</sup>.

## **Authors**

### ***Estera Badau***

Estera Badau is an Associate Professor in information and communication sciences at the CIMEOS laboratory at the Université de Bourgogne (Communications, media coverage, organizations, knowledge), France. Since completing her doctorate, her research has focused on the links between health and food. After her CIFRE thesis on the links between antibiotic resistance and food, she joined the CIMEOS laboratory, where she is currently leading a research project on thyroid diseases. Her most recent publications are *Médiatisation des liens entre l'usage alimentaire du sel et la santé dans le quotidien Le Monde*<sup>6</sup>

and *L'alimentation à l'épreuve du risque et de la controverse*<sup>7</sup>.

### **Carole Barthélémy**

Carole Barthélémy is a sociologist at Aix-Marseille Université (Population Environment Development Laboratory). She is involved in environmental sociology, working on environmental conflicts and mobilization and on pollution in urban and rural areas. Since 2020, she has coordinated the SHS-pesticides network with Eve-Bureau Point.

### **José Ramón Bertomeu Sánchez**

José Ramón Bertomeu Sánchez is a professor of the history of science at the University of Valencia and a member of the Institut Interuniversitari López Piñero (Spain). His research focuses on the history of forensic medicine and toxic products in France and Spain in the 19th and 20th centuries. He is the author of *Entre el fiscal y el verdugo*<sup>8</sup>, a biography of Matthieu Orfila (1787–1853), a renowned Spanish toxicologist. His latest book is *Tóxicos: Pasado y Presente*<sup>9</sup>. His current research project focuses on the social and cultural history of pesticides in 20th-century Spain<sup>10</sup>.

### **Antoine Blanchard**

Antoine Blanchard holds a degree in agricultural engineering and a master's degree in the social studies of science and technology. His personal and professional career has taken several directions. His first focus is on digital transformations in the academic and research field: he has been working on these issues at the University of Bordeaux, France, since 2014, with a break between 2020 and 2023 within the Dataactivist cooperative society. His

second focus is a personal and associative commitment to science-society issues; after co-founding and chairing the Café des sciences community of web popularizers, he joined the board of directors of the Traces association. Last but not least, he holds an interest in environmental issues, particularly in relation to agriculture. He is a freelance researcher on these topics, drawing on approaches from information and communication sciences, digital humanities, and social studies of science and technology.

### ***Eve Bureau-Point***

Eve Bureau-Point is an anthropologist at the French National Center for Scientific Research (Centre Norbert Elias, Marseille). She conducts research in France and Cambodia on the social life of pesticides (production, market, regulation, uses, waste and residue management). At various stages of her career, she has studied the social construction of environmental health problems. Since 2020, she has coordinated the SHS-pesticides network with Carole Barthélémy.

### ***Louis Galey***

Louis Galey is a lecturer in ergonomics at the Université Paris Nanterre, France and a member of the Travail, ergonomie, orientation et organisations (TE2O) team within the Laboratoire parisien de psychologie sociale (LAPPS). He took part in the ARC-CMR project as a member of the EPICENE (Epidemiology of Cancers and Environmental Exposure) team (INSERM, Université de Bordeaux). His doctoral thesis focused on the development of a method for “understanding nanoparticle exposure situations by integrating work activity into the measurement process” in order to build prevention. His postdoctorate at the Centre de recherche sur le travail et le développement (CRTD,

CNAM) focused on the activities of social partners in the context of digital transformations.

### ***Alain Garrigou***

Alain Garrigou is a professor of ergonomics in INSERM's EPICENE team, and the vice-president in charge of quality of life and health at work at the Université de Bordeaux. His doctoral thesis, supported in 1992 at the CNAM, focused on worker participation in the design of the Figaro printing works. He carries on the legacy of ergonomics pioneers such as Alain Wisner, Catherine Teiger and Antoine Laville, both conceptually and methodologically, as well as the political role of ergonomics research in responding to the social and technological challenges put forward by studies and its changes. For over ten years, he has contributed to the development of ergotoxicology, a transdisciplinary approach integrating ergonomics, public health, toxicology, anthropology and law, with the aim of contributing to the prevention of exposure to substances which can cause cancer.

### ***Fabienne Goutille***

Fabienne Goutille is a researcher-speaker in HSS, attached to INRAE's ETTIS (Environment, Territories in Transition, Infrastructures and Societies) research unit. She took part in the ARC-CMR project as a member of the EPICENE team at INSERM (Université de Bordeaux, France). Her doctoral thesis in ergonomics deals with the construction of pesticide risk prevention, and addresses the issue of how farmers' concerns can be taken into account in occupational health policies through extended research communities. The aim of her current work is to support individuals who are working and to make visible and address what challenges them by contributing to the development of personal and collective agency, particularly

through the proposal of methods for shared analysis of work or exposures based on popular metrology and developmental ergotoxicology.

### ***Annie Martin***

Annie Martin holds a doctorate in private law and is a research fellow at the CNRS Societies, Stakeholders and Governments in Europe. She has a background in private international law and international trade law. Her publications focus on economic law and space law. More recently, her research has focused on conflicts of interest in the field of pharmaceuticals, European pesticide regulation, and the dissemination of standards between international organizations in the chemical sector. She is the author of several book chapters, including “Managing conflicts of interests at the European Medicines Agency. Success or weakness of the soft law tools?”<sup>11</sup> and “The limits to access to information on risks concerning pesticides”<sup>12</sup>.

### ***Clémence Rambaud***

Clémence Rambaud, a labor lawyer, took part in the ARC-CMR project in 2015 as part of INSERM’s EPICENE team.

### ***Jan Smolinski***

Jan Smolinski holds a doctorate in sociology, specializing in the sociology of uses, markets and the digital environment, using pragmatic methods. His research ranges from the design of innovations to their assessment, and examines how digital technologies transform user experiences. Sectors include the food industry, mechanical engineering training, tourism, mobile marketing and cultural mediation. As a postdoctoral fellow in the SAGE (Societies, Actors, Government in Europe) laboratory at the University of Strasbourg, France, he is currently involved in the NA’Stras

(digital tools for healthy and sustainable food in Strasbourg and the Bas-Rhin region) and Phyt'Info (digital tools for pesticide reduction) projects. His most recent publications are entitled *Des dispositifs numériques d'aide aux choix alimentaires aux dispositifs des jugements : quelle régulation de l'information des consommateurs?*<sup>13</sup>, *Un musée qui conjugue les temps composés*<sup>14</sup> and *How can the use of a mobile application change the course of a sightseeing tour?*<sup>15</sup>.

### **Laurence Thery**

Laurence Thery is the Director of Aract Hauts-de-France (Agence régionale d'amélioration des conditions de travail), and holds a master's degree in sociology from Sciences Po Paris. She coordinated the ARC-CMR project with Alain Garrigou in 2015.

### **Albin Wagener**

Albin Wagener is Professor in discourse and communication analysis at the School of Social Sciences at the Catholic University of Lille. Working in the ETHICS research lab, he specifically works on digital, social and environmental discourse in the public, media and political spheres. He specializes in communication issues within social networks. He is the author of *Blablabla : en finir avec le bavardage climatique*<sup>16</sup>, *Mèmologie : théorie postdigitale des mêmes*<sup>17</sup>, *Ecoarchie*<sup>18</sup> and *Discours et système*<sup>19</sup>. He has also written a study on representations and perceptions linked to climate issues in France, during Emmanuel Macron's first five years in office (2017-2020)<sup>20</sup>.

## **Notes**

- 1 French Society for Information and Communication Sciences.
- 2 For more information and recent publications, see: [www.allardhuver.fr](http://www.allardhuver.fr) and [www.cv.archives-ouvertes.fr/francois-allard-huver](http://www.cv.archives-ouvertes.fr/francois-allard-huver).
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- 5 Ledouble, H. (2024). *Popularizing Science: The Complex Terminological Interactions between Scientific and Press Discourses within the Field of Agroecology*. ISTE Ltd, London, and John Wiley & Sons, New York.
- 6 Badau, E. et al. (in press). Médiatisation des liens entre l'usage alimentaire du sel et la santé dans le quotidien *Le Monde. Le Temps des médias*, 41.
- 7 Badau, E. and Hugol-Gential, C. (2023). L'alimentation à l'épreuve du risque et de la controverse. *Manifeste du réseau AGAP*.
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- 9 Bertomeu, J.R. (2021). *Tóxicos: Pasado y Presente*. Icaria, Barcelona.
- 10 For a list of his publications, see: [www.orcid.org/0000-0003-2040-4507](http://www.orcid.org/0000-0003-2040-4507).

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- [13](#) Smolinski, J. and Lambert, E. (in press). Des dispositifs numériques d'aide aux choix alimentaires aux dispositifs des jugements : quelle régulation de l'information des consommateurs ? *Revue interdisciplinaire d'études juridiques*.
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- [15](#) Smolinski, J. and Calvignac, C. (2019). How can the use of a mobile application change the course of a sightseeing tour? *Tourist Studies*.
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- [18](#) Wagner, A. (2021). *Ecoarchie*. Éditions du Croquant, Vulaines-sur-Seine.
- [19](#) Wagner, A. (2019). *Discours et système*. Peter Lang, Lausanne.
- [20](#) See: [www.sysdiscours.hypotheses.org](http://www.sysdiscours.hypotheses.org).

## Foreword

With the growing power of questioning, social mobilization and lawsuits brought against industries, and also with the increase in public policy systems with reduction objectives, pesticides have become a concerning matter, shaking up the social, economic and political spheres. Researchers in the humanities and social sciences (HSS), attuned to societal changes, have become increasingly involved in these issues. Up until the end of the 20th century, pesticides were rarely the subject of studies in the HSS in their own right. However, since the 2000s, a field of study has been progressively emerging in French academia, with numerous studies, teams and researchers documenting the controversies raised by the production, regulation and use of pesticides<sup>1</sup>. It was against this backdrop of expanding work in the social sciences and humanities that a network was set up in February 2020. Coordinated by Eve Bureau-Point and Carole Barthélémy, it had a view to better identify the scientific community on the subject, the diversity of work in progress, and link people with their knowledge on the subject.

The network's activities focused on organizing a series of study days (annual or biannual) and managing a mailing list designed to facilitate the flow of information concerning HSS work on pesticides (events, publications, calls for projects, etc.). To date, 120 people have subscribed: an almost equal number of men and women, 50 researchers, around 20 teacher-researchers, and 40 doctoral and postdoctoral students, underlining the interest of the subject for young researchers. Around 50 people work for EPSTs, mainly INRAE, while the others work in joint research units. Sociology (37 people) and anthropology (18

people) are the most represented disciplines. Researchers in agronomy (11) and life sciences (10) have also subscribed, underlining the network's appeal to colleagues outside the HSS field. Economics (11), geography (7) and history (5) are the other main disciplines represented. In addition to facilitating exchanges within the pesticide research, this list is proving to be a very useful way of linking researchers with public policy or civil society players. They can also be used to meet a variety of social demands (such as finding speakers for public debates, improving the research-public policy interface, etc.). They also have several objectives during the study days: to deepen the angles of analysis in HSS on the "pesticides" matter, to reinforce interdisciplinarity (HSS/environmental sciences/medical sciences interactions) and to improve the link between science/society (impact of research in society, research systems and knowledge sharing). On each day, a moment of collective reflection is devoted to the network's coordination and the choice of themes to be addressed on future days. Participants propose new topics, and an organizing committee is set up with the network's initiators and theme leaders. Three study days were thus organized in 2020, 2021 and 2022, each of which was the subject of a publication (a thematic issue in the *Vertigo*<sup>2</sup> journal, an article for the "Vie de la recherche" section of the *Natures, sciences et sociétés*<sup>3</sup> journal, and a collective work published by OCTARES)<sup>4</sup>. The fourth study-day event was held in Paris in March 2024, on the theme of pesticide industries.

Other events were organized in parallel with those of the network, such as the "*Pesticides : dialogues pluridisciplinaires en sciences humaines et sociales*" (Pesticides: multidisciplinary dialogues in the humanities and social sciences) study days in Dijon in October 2021, which led to the publication of this collective work.

Organized by Nataly Botero, H el ene Ledouble and Fran ois Allard-Huver, as well as laboratories specializing in communication and media issues (CIMEOS, CREM, BABEL), these events have provided an opportunity to approach pesticides from the original perspective of linguistics, communication and interdisciplinarity. Case studies from sociology, ergonomics and economics were also presented on other aspects (prevention, public policy, farmer/riparian relations, etc.). The two-day event brought together around 30 participants, who specifically examined the discursive and argumentative activity surrounding pesticides, scientific and communication practices, legal initiatives and court proceedings, as well as productions from the cultural industries. These events were unique in that they brought together academic researchers, independent researchers and activists (crop reapers). Each of the conference contributors addressed these diverse issues from the perspective of their own discipline. Interdisciplinarity was a rare feature of the contributors' research. As the title of this book suggests, the focus was on multidisciplinary. Interdisciplinarity, which implies a real co-construction of research from different disciplines, was ultimately not very frequent in the research schemes of the participants over these few days. Its modalities, benefits and limits can be analyzed in a more specific framework, yet to be determined.

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## Notes

- 1 Bureau-Point, E. and Temple, L. (2022). La recherche en sciences humaines et sociales sur l'objet pesticide dans le cadre académique français : état des lieux et perspectives. *VertigO - la revue électronique en sciences de l'environnement*, 22, 2.
- 2 Bureau-Point, E. et al. (2021). Les mondes agricoles face au problème des pesticides. Compromis, ajustements et négociations. Introduction au dossier. *VertigO - la revue électronique en sciences de l'environnement*, 21, 3.
- 3 Bureau-Point, E. et al. (2022). Focus sur les deuxièmes journées d'études du réseau sciences humaines et sociales/pesticides. *Natures, sciences, sociétés*, 30(1), 82-88.
- 4 See: <https://www.octares.com/accueil/306-exposition-aux-pesticides-ce-que-n-disent-les-scienceshumaines-et-sociales.html>.

# Introduction

This book presents the work of researchers in the humanities and social sciences (SHS), presented at a conference held at the University of Burgundy in Dijon on October 21 and 22, 2021. The aim of this scientific event was to provide an overview of contemporary research on pesticides in the humanities, as well as to encourage multidisciplinary and interdisciplinary approaches on the subject.

Conceived and organized by researchers from the fields of information and communication science and linguistics, this conference outlined insufficient research in these disciplines. Indeed, the problem of pesticides seems to have been little explored in its communication, language and lexical aspects: a few articles were produced on the media coverage of pesticides in the written press (Ledouble [2020](#); Botero [2021](#)) or on the controversial aspects of the subject. (Allard-Huver [2021](#)). However, this issue was already debated by numerous geographers, sociologists, ergonomists, anthropologists and historians, which the conference brought together. Some were members of the SHS-Pesticides network, whose work reflects both a growing interest and a change in perspective in the SHS. While for much of the 20th century, pesticides were seen as a vector for agricultural modernization, a turning point has been reached in recent years: pesticides are increasingly being studied as problematic and controversial technologies (Galochet et al. [2008](#); Roussary et al. [2013](#); Aulagnier and Goulet [2017](#); Chateauraynaud and Debaz [2017](#); Chlous et al. [2017](#); Catellani et al. [2019](#); Foucart [2019](#); Jouzel [2019](#); Lambert [2020](#); Bureau-Point et al. [2022](#)). The emergence of this research group and questions

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