Bodies, Borders, Berry Fields:

The Planetary-Intimate in Agricultural Labor Migration

Inaugural dissertation
of the Faculty of Science,
University of Bern

submitted by

Nora Helen Komposch

from Walzenhausen, Switzerland

Bern, October 2024

Supervisors:

Prof. Dr. Carolin Schurr (University of Bern, CH)

Prof. Dr. Julie Guthman (University of California, USA)

Promotion committee

Supervisors:

Prof. Dr. Carolin Schurr, Institute of Geography, University of Bern (CH)

Prof. Dr. Julie Guthman, Department of Sociology, University of California, Santa Cruz (USA)

External referee:

Prof. Dr. Karin Schwiter, Department of Geography, University of Zürich (CH)

Examinator:

Prof. Dr. Christine Eriksen, Institute of Geography, University of Bern (CH)

Chair:

Prof. Dr. Adrien Mestrot, Institute of Geography, University of Bern (CH)

Can we live on this planet without constantly battling its disasters […],
can we stay here in such a way that we remain free,
that we can enjoy an abundance of time,
and that we can look up to a sky
where swallows are dancing?

Eva von Redecker (2023, p. 24, own translation)

Abstract

Europe's largest berry-production sector, located in Huelva, Spain, relies on thousands of seasonal agricultural workers each year. A notable proportion of these come from Morocco via a bilateral labor migration agreement. The peculiarity of this program is that only women with children are recruited. While the mothers work in Spain, their families must remain in Morocco—a geopolitical strategy aimed at preventing workers from migrating permanently. This dissertation examines the links between this export-oriented berry production and the reproductive lives of female workers in agricultural labor migration between Morocco and Huelva—two areas increasingly affected by the climate crisis. It analyses how workers experience their reproductive lives within this labor migration, how they deal with challenges related to their reproductive health, transnational family life and environmental degradation, and how these experiences and strategies are entangled with transnational state policies.

Based on ethnographic research conducted in Spain and Morocco between 2021 and 2023, this dissertation reveals how the separation of agricultural wage labor from reproductive lives in areas increasingly affected by the climate crisis leads to workers experiencing numerous everyday challenges, such as limited access to reproductive healthcare and the emotional strain of family separation. Furthermore, the research also highlights how workers navigate these difficulties through various forms of mutual support, solidarity, and political action.

Conceptually, this thesis offers three main contributions to the literature on feminist geopolitics, agricultural labor, and migration. By highlighting the importance of an embodied, intersectional, and multi-scalar approach to liminality, it shows how the geopolitical prescriptions of the Spanish–Moroccan labor migration regime, combined with harsh working conditions in Huelva's berry industry, lead to experiences of "intimate liminality." Additionally, the dissertation develops the notion of "geoviolence" to understand the harm caused by anthropogenic adverse geophysical conditions at the nexus of reproductive and climate injustice. Finally, by stressing the entanglements between intimate experiences and environmental processes, it extends a multi-scalar analysis with a planetary perspective, and conceptualizes the notion of the "planetary-intimate."

In order to make these findings accessible to a wider audience, this dissertation also presents creative methods of knowledge dissemination, including a research-art-exhibition and a documentary film. Through highlighting the potential of such transdisciplinary and multi-sensory approaches, these methodological contributions aim to facilitate access to knowledge and encourage its practical application.

Acknowledgements

The four years spent working on this dissertation have been marked by a wide range of intense highs and lows. This work would not have been possible without the support, advice, friendship, and love of many important people, to whom I would like to express my heartfelt gratitude.

Above all, I would like to thank all of the workers, activists and other research partners in Huelva and Morocco for your invaluable cooperation in this research. Without your sharing of your knowledge and experience, this dissertation would not have been possible. I greatly appreciate your support, trust, and your warm welcome in your communities. Since numerous of you have told me that you prefer to remain anonymous, I thank you from the bottom of my heart without mentioning your names.

Furthermore, I would like to express my deep gratitude to my main supervisor, Carolin Schurr. Thank you for your constant support, critical feedback, openness to discussions, and your trust in my work. Your very warm and encouraging supervision has been invaluable, and I am truly grateful for all I have learned through our conversations and collaboration.

My sincere thanks also go to my second supervisor, Julie Guthman. Although our collaboration was limited by geographical distance, I remain truly grateful for your advice, inspiring thoughts, and your insightful writings, which have accompanied me throughout all these years.

I would also like to thank Karin Schwiter for being the external referee of this thesis, Adrien Mestrot for being the chair, and Christine Eriksen for being an examinator of my PhD defense. Thank you all for your interest in my work, the inspiring discussions we have had so far, and for the time you dedicate in providing my work with valuable feedback.

A special thank you also goes to Angels Escrivá. I am so grateful for your support in Huelva, your encouraging feedback on my work, our inspiring discussions, and collaborative fieldwork sessions and writing projects. I also thank you and your research group for inviting me as a visiting scholar to the University of Huelva, thereby providing me with a local academic home and support network during my stay in Spain.

Furthermore, I am also deeply grateful to Soumia Benlfatmi El Garrab and to the second interpreter (who prefers to remain anonymous) for their outstanding support during my fieldwork. Beyond your invaluable work in translation, I especially appreciate the personal exchange and our shared reflections during the many hours we spent together in the field. These experiences not only deepened my understanding of the research context, but also were crucial in helping me navigate the challenges of fieldwork.

The writing of this dissertation was partly done in a co-authored manner, due to its being a cumulative dissertation. I would therefore like to thank all of my co-authors, Carolin Schurr, Angels Escrivá, Mirko Winkel, Laura Perler, Susanne Schultz, Nina Etter, Lucy Sabin, and Adrien Mestrot, for the insightful collaborative writing and the resulting mutual learning. In terms of the writing, I would also like to express my deep thank to all those who have carefully read and provided critical and helpful feedback on earlier drafts of parts of this dissertation: Nicholas Pohl, Laura Perler, Carolin Schurr, Devran Koray Öcal, Andrea Zimmermann, and Yolinliztli Pérez-Hernández, as well as to the anonymous reviewers of published or submitted work. I would also like to thank Sushila Mesquita for coaching me in my writing process with encouraging strategies, Abdallah Alaoui for helping me with translating Arabic documents, and Mirko Winkel for helping design the final graph. Furthermore, I thank Nina Etter for the help with the bibliography and Nora Rugama for supporting me in the transcription. Moreover, I also acknowledge the support in English proofreading by the developers of DeepL Write and anonymous English proofreaders.

I would also like to thank the Social and Cultural Geography research group at the Institute of Geography of the University of Bern, which provided daily support through inspiring discussions, motivating chats, and warm laughter. I feel very privileged to be a part of this great team, with many relationships having become invaluable friendships over the past years. Thank you, Laura Perler, Devran Koray Öcal, Rosa Philipp, Surangika Jayarathne, Yolinliztli Pérez-Hernández, Jeannine Wintzer, Carolin Schurr, Mirko Winkel, Milena Wegelin, Susanne Schultz, Lukas Batschelet, Nina Etter, Elisabeth Militz, Jasmine Truong, Elisa Probst, Leonie Haller, Mariana Matthei, Maaret Jokela-Pansini, Thérèse Laubscher, Claudia Pfister, Amena Schwabe, Franziska Schutzbach and Veronika Siegl.

Beyond my research team, I would also extend my thanks to the Institute of Geography in general, which made me feel very much in-place. A special thanks goes to Milka Todosijevic, Milojka Drinčić, Saliba Saliba, Ashish Kulshreshtha, Manuela Roten, Isabella Geissbühler, Amaya Kolbrunner, Marlis Röthlisberger, Sabine Röthlin, Rekha Nandedkar and Elisabeth Roggli-Schläppi for performing all the infrastructural and administrative work needed to enable our research.

A big thank you also goes to all of the active members of the Institute's Intermediate Staff and Climate Action Group for investing your time, in addition to your own research, in working together toward more solidarity within and beyond academia. Special thanks go to Jessica Verheij, Alexander Vorbrugg, Martina Kauzlaric, Adrian Grunder, Giulia Curatola, Vladimir

Wingate, Adrien Guisan, Mauro Fischer, Noemi Imfeld, Tobias Wechsler, Elena Brander, Sarah Steinegger, Moritz Gubler, Jean-David Gerber and Johanna Paschen.

I would also like to thank Sven Rufer for the collaboration on the documentary film, which has been a journey of its own. It has taught me a lot about filmmaking and transdisciplinary collaboration, and confirmed that constructive critical discussions can lead to both progress and friendships. For all the work related to this documentary and beyond, I would also like to thank Kaja Ramseier, Luzius Müller, Salvatore di Pino and Inés Parisch from Filmerei GmbH, Yann Hakam and Jeanne Planche from the Rosa Luxemburg Foundation, Perico Echevarría from la Mar de Onuba, Ana Pinto and Najat Bassit from Jornaleras de Huelva en Lucha, activists from the Sindicato Andaluz de Trabajadores/as and all the other participants and supporters in Huelva.

I am also grateful to Lucy Sabin, Adrien Mestrot and all of the other people who supported us three in realizing the research-art-exhibition, which forms part of this thesis. It was wonderful to see how so many helping hands could achieve a creative art-piece.

A special thanks also goes to the Graduate School of the Interdisciplinary Center for Gender Studies (IZFG) of the University of Bern, which enabled me to extend my theoretical, methodological, and empirical horizon in many ways. While my thanks goes to all of its members, I would especially like to mention Tina Büchler for all you do to make this network possible.

For providing me with exciting opportunities to connect with other geographers, I would also like to thank the Swiss Geography Association (ASG). Special thanks therefore go to Yvonne Riaño, Sven Daniel Wolfe, Katharina Pelzelmayer and Isabelle Schöpfer for the amazing team work within the executive committee.

Beyond all of the personal support I have received from members of the university, I also want to acknowledge the funding of the University of Bern and the Swiss National Science Foundation, which enabled me to conduct this research in the first place.

This work would not have been possible without all of the support, inspiration, and love of people outside of academia. I thank all the members of the Warmbächli housing cooperative for being wonderful neighbors and giving me a warm place to come back to every day. I would also like to thank all of the members of our Güter Foodcoop for keeping my hopes alive that a more sustainable way to organize food production and consumption is possible. A very warm thank you also goes to my dearest friends, Anna, Beni, Deniz, Eveline, Hester, Laura, Lina,

Luca, Miriam, Nina, Noemi, Nora, Sarah, Sarah, Silvia, Soumia, Tina, and Trinidad. Thank you for being there all along the way.

Finally, I want to thank my dear family, who gives me a stable and peaceful base where I can always return. Thank you, Cornelia, Martin, Jonas, Armin, Lea, Gina-Maria, Darou, Nala, Endo and especially also Rio and Elora-Rosa who brought new joy into my life. My last deep thank goes to you, Nick, who has been with me through all of the ups and downs of these past years. Thank you for all your support, your critical reflections, your patience, and your love.

Table of contents

List of abbreviations

Anapec	Agence nationale de promotion de l'emploi et des compétences (Moroccan National Agency for the Promotion of Employment and Skills)
CHG	Confederación Hidrográfica del Guadalquivir (Hydrographic Confederation of the river Guadalquivir)
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
FLDF	Fédération de ligues des droits des femmes (Federation of Women's Rights Leagues)
Global Gap	Global Good Agricultural Practice
ILO	International Labor Organization
INE	Instituto Nacional de Estadística (Spanish National Institute of Statistics)
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
MAPA	Ministerio de Agricultura, Pesca y Alimentación (Spanish Ministry of Agriculture, Fisheries, and Food)
NGO	Non-governmental Organization
Orden Gecco	Orden Gestión Colectiva de Contrataciones en Origen (Order of collective contracting management at origin)
SNS	Sistema Nacional de Salud (Spanish National Health System)
SOC-SAT	Sindicato de Obreros/as del Campo—Sindicato Andaluz de Trabajadores/as (Rural Worker's Union—Andalusian Union of Workers)
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
WLW	Women's Link Worldwide

List of figures

List of tables

PART A: INTRODUCTION

1. Interrogating the production-reproduction-divide through a planetary lens

> *During one of my first observation visits in front of a health center in a rural village in the province of Huelva, Fatima*[1] *(one of the translators I have been working with) and I got to know Amara and Dalia. Both had been temporarily migrating from Morocco for the past four years to work in Huelva's berry industry. When I asked Dalia about her work in the industry, she said: "The conditions here are very hard, especially with the strawberries. But I want to continue this work and come back next year to give my children a better future. I left my two boys in Morocco with my mother. I miss them, so I call them every day after work." The day we met, Amara and Dalia were both seeking medical attention. Amara wanted a health check as she was in her fourth month of pregnancy. Dalia told us that she had collapsed at work the second day after arriving from Morocco, without knowing why. While the company didn't call for an ambulance, Amara encouraged Dalia to accompany her. However, as neither of them had a health card, they were unable to see a doctor that day. Therefore, we arranged to pick them up from their workplace a few days later and drive them to the health center. When we arrived, nobody from the medical staff spoke Arabic, and if Fatima hadn't been there, the women wouldn't have been able to communicate with the health workers. There were also no information signs in Arabic, which was surprising given that the majority of the people in the waiting room were Moroccan women.* (Fieldnotes by the author, February 2022)

During my ethnographic fieldwork in the berry production sector in Huelva, Spain, I frequently encountered instances of dismay that led me to question the phenomena I was observing. Indeed, it was perplexing to observe that, despite the labor migration agreement between Spain and Morocco having existed for two decades—facilitating the annual migration of up to 20,000 Moroccan women to Huelva for the berry production season every year—access to healthcare remains a significant challenge for these women, as exemplified by Dalia and Amara's experiences. It was also confounding to learn about the temporary labor migration program, which only allows Moroccan women with children to work in Huelva's berry harvest, as well

[1] As agreed with the people involved, all names of the research participants and translators have been anonymized.

as to listen to the accounts of migrant mothers about the emotional challenges and coping strategies involved in being separated from their children for up to nine months each year.

Due to the specific recruitment process, all seasonal (visa-permitted) workers coming from Morocco are mothers.[2] This gendered recruitment is designed to achieve the geopolitical objective of maintaining the circularity of the labor program, thereby preventing permanent migration. Thus, this strategy paradoxically intertwines the reproductive and productive aspects of the women's lives, while simultaneously maintaining a strong distinction between the two. It is this apparent contradiction that I intend to explore in this dissertation. Building upon my reading of the global and the intimate (Pratt & Rosner, 2012), I seek to understand the geopolitical, multi-scalar entanglements between global food production and the intimate, embodied experiences of reproductive lives. How are the reproductive lives of female migrant workers governed to secure global food production? And how do the migrant women who are part of this labor migration program experience and deal with the separation of their wage labor and reproductive lives?

As the site where human activity meets geophysical nature, agricultural production has long been a central research theme of geographic inquiry, leading to the development of agricultural geography as a sub-discipline (Andreae, 1977; Grigg, 1984; Ilbery, 1985; G. Robinson, 2013). The production of food is a defining characteristic of societies and fosters connections across social and geographic boundaries. At the same time, modern, industrialized food production often leads to social and environmental instabilities which threaten the overall well-being of the planet (Blanchette, 2020; Hetherington, 2020). However, as feminist scholars have demonstrated in a wealth of theoretical and empirical work, an exclusive focus on productive labor—e.g., waged food production—without incorporating an analysis of the deeply-intertwined reproductive labor, fails to provide a comprehensive understanding of labor in its totality (Dalla Costa & James, 1972; Davis, 1981; Federici, 2004; Fraser, 2016; Mies, 1981). Challenging Marx's (1959) separation of reproduction and production, these scholars question the emphasis on wage labor that marginalizes (unpaid) domestic work as a devalued, gendered "other" (Gibson-Graham, 1996, p. 121). Feminist geographers have further shown how the division between the workspace and the home reinforces a hierarchical, gendered binary (Domosh, 1998; Massey, 1994; McDowell, 1999; Pratt, 2004a; Rose, 1993). In line with Federici (2004), who viewed reproduction not as a simple "precondition" for production (as

[2] While these criteria are widely mentioned in human rights reports (Doval Hernández, Jiménez Sánchez, & Zamora Gómez, 2021; Hellio et al., 2019), and academic texts (see, for example, Arab, 2018; Hellio, 2008; Moreno Nieto & Hellio, 2012), they are not formalized within the bilateral agreement itself (Ministerio de Inclusión, Seguridad Social y Migraciones, 2022).

proposed by Davis, 1981, p. 11), but rather as deeply intertwined, numerous feminist geographers have revealed the spatial dimension of (social) reproduction as "the fleshy, messy, and indeterminate stuff of everyday life" (Katz, 2001, p. 711; Meehan & Stauss, 2015; Mitchell, Marston, & Katz, 2004; Rodríguez-Rocha, 2021; Teeple Hopkins, 2015; Winders & Smith, 2019). In line with these scholars, I seek to emphasize the inseparability of production and reproduction. When using the term "reproduction," I refer to all aspects of reproductive lives, and thereby avoid the separation of the biological reproduction (i.e., the process of human reproduction and childbearing) and social reproduction (i.e., the ways in which societies sustain and reproduce social life, including caregiving, household organization, and the perpetuation of family life) (Delphy, 1984).[3]

Both the production of food and the performance of reproductive labor through the creation and care of families are among the most fundamental aspirations for social well-being. However, through the expansion of capitalism, both the production of food and reproductive labor have been continuously devalued—as evidenced by their low or non-existent pay. Consequently, such essential, as well as physically- and emotionally-demanding, work has been increasingly stratified in terms of gender, class, and race, and thus unevenly distributed on a global scale. Scholars have repeatedly highlighted how gender, class, and race play important roles in the fragmentation and hierarchical categorization of the global workforce (Preibisch & Binford, 2007), thus confirming the essentiality of an intersectional approach (Flippen, 2014).

In Spain, as in many other regional contexts, a considerable share of agricultural work is outsourced to migrant workers from financially-disadvantaged countries,[4] who are willing (and, to some extent, forced out of precarity) to accept low pay and precarious living and working conditions. Therefore, when analyzing an industrialized agricultural labor context, such as that of Huelva, it is essential to study the phenomenon from a global perspective, including the analysis of transnational migration patterns.

Through this research, I seek to shed light on the geopolitical interlinkages of agricultural labor migration and the reproductive lives of migrant laborers. My focus on reproductive lives is twofold: It includes an analysis of female migrant workers' access to reproductive health, and

[3] Multiple scholars have critiqued the separation of the two, arguing that biological and social reproduction cannot be considered in isolation. For instance, Susanne Schultz challenged the separation of these two concepts, asserting that every instance of biological reproduction is influenced by social conditions, including the organization of sexuality, contraception, and access to reproductive health in a given society (Schultz, 2022). In light of these critiques, this thesis avoids such a separation by instead focusing on the overarching theme of reproduction and reproductive lives.

[4] At the regional level, in Huelva, roughly half of the approximately 100,000 agricultural workers are international migrants (Escrivà, 2022).

of the a/effects[5] of this labor on their family[6] lives. In so doing, I strive to answer the following questions:

1) How are the reproductive lives of female migrant workers within the agricultural labor migration between Morocco and Huelva governed through specific policies and regulations implemented at various scales?
2) How do female migrant workers experience and navigate their reproductive lives in this specific labor migration context?
3) What strategies do they employ to address or contest challenges related to their reproductive health and transnational family lives?

To answer these questions, I employed a research design combining multi-sited ethnography with creative methodologies. This entailed seven months of research in Huelva and one month in Morocco between April 2021 and June 2023. By extending the focus of my research from the main production site of Huelva to the Moroccan rural regions from which the workers migrate, I was able to include a broader range of stakeholders, such as the family members of the migrant women. Furthermore, this approach enabled me to consider the significance of climate change and environmental degradation in understanding the phenomenon under study. Both Morocco and Spain have faced increasing periods of droughts in recent years (Khalid & Moujahid, 2023; Serrano-Notivoli et al., 2023) and scientific predictions expect both regions to continue to be highly affected by climatic changes (IPCC, 2021; Vicente-Serrano et al., 2014). Not only does this affect agricultural practices, but it also exacerbates social inequalities and related migration patterns (Ferreira Fernandes, Alves, & Loureiro, 2023; Schilling, Freier, Hertig, & Scheffran, 2012; Van Praag, Ou-Salah, Hut, & Zickgraf, 2021).

The realization that such intense droughts in both regions have affected both the negotiation and experience of agricultural production and reproductive life allowed me to understand the importance of adopting a planetary perspective on my research topic. A planetary approach entails analyzing the interrelations between humans, more-than-humans, and their environment on the planet as a whole (Chakrabarty, 2021; Clark & Szerszynski, 2021; Verne, Marquardt, & Ouma, 2024). A planetary perspective is especially useful in research on rural geographies, not only for understanding planetary supply chains, but also for grasping the increasing effects of the climate crisis, such as biodiversity loss, food insecurity, and water and energy scarcity

[5] With the word "a/effect," I refer to the combination of "affect" and "effect." Similarly, I combine the words "affectively" and "effectively" into "a/effectively."

[6] I understand families as social units that "transcend spatial boundaries of residence to include wider kinship networks" (McIlwaine, 1999, p. 83).

(Wang, Maye, & Woods, 2023). Building upon the seminal work of Pratt and Rosner (2012) on trans-scalar interconnections, I seek to expand upon their analysis through a planetary perspective. I propose the conceptual framework of the "planetary-intimate" as a means of emphasizing the complex interweaving of planetary and intimate realms. As outlined in further detail in Chapter 3, I evaluate the framework as useful for delineating the profound interdependencies between such planetary processes as rising sea levels, declining air quality, or transnational migration on the one hand, and, on the other, the intimate everyday experiences of individuals, including those related to health, relationships, and emotions—which become particularly salient in the context of an accelerating climate crisis.

Alongside this planetary perspective, I approached my research through an intersectional feminist geographical lens, focusing on power dynamics and social inequalities across national borders. As a collective endeavor toward social justice, this approach also embraces research underscoring the importance of marginalized perspectives (for an overview on feminist geography see Nelson & Seager, 2005). Adopting such an approach inevitably also entailed reflecting on my own positionality in relation to the research theme (McDowell, 1992; Moss, 2003; Sharp, 2005). Studying a topic connected to my lifeworld was important to me, as it enabled me to identify opportunities to make my research engaging for both an academic audience and the wider public. The berries produced in Huelva, and consequently the reproductive lives of the respective Moroccan workers, are linked to the everyday lives of those living in Switzerland via the global food trade. Huelva berries can be found year-round in Swiss supermarkets and restaurants, either as fresh fruit or in processed forms, such as in jams and jellies. The essential labor of Moroccan workers in Huelva's food production thus enables consumers in Switzerland and other European countries to sustain their everyday lives.

One of the primary motivations for pursuing this research was my conviction that identifying spatial interconnections can facilitate the transfer of knowledge and, consequently, the formation of transnational solidarity. My decision to study this topic was thus influenced by my status as a member of a society that consumes these products. Moreover, this link to my personal background also formed part of my constant reflections during my fieldwork, as the following fieldnote from the beginning of my second stay in Huelva exemplifies:

> *Today, I visited informal settlements of berry pickers, which are located right next to the berry packaging plants. When we got out of the car, a strong, sweet strawberry smell hit my nose—it was so strong that, for a moment, it reminded me of summer holidays with strawberry ice cream in my childhood. However, what I saw was in stark*

> *contrast to the sweet smell: piles of garbage next to the workers' homemade huts—the precarity at the expense of which we, people living in Switzerland, can consume strawberry ice cream, strawberry jam, or fresh berries almost all year round. It makes me feel uncomfortable to see this precarity from my privileged position, knowing that the fruits of these labor situations in Huelva literally contribute to our globally-privileged lives.* (Fieldnotes by the author, February 2022)

Learning from such embodied experiences and emotions, which arose from reflecting on my own positionality within the field (Laliberté & Schurr, 2016), further strengthened my methodological goal of producing research output that would be accessible not only to academics, but also to a wider public audience—especially policymakers in consumer countries. Indeed, one of my aims is to find ways to communicate research findings in an a/effective manner so as to increase the audience's resonance with the women's testimonies. As noted by other scholars, creative practices within academic research can contribute to transformative planetary activism (Karkulehto, Koistinen, & Ugron, 2022). Therefore I chose to use affective methods (Militz, Faria, & Schurr, 2020), such as cartographic (Gastaldo, Magalhães, Carrasco, & Davy, 2012; Sweet & Ortiz Escalante, 2017), audio (Kanngieser, 2011), and visual methods (Dowling, Lloyd, & Suchet-Pearson, 2018; Garrett, 2011; Rose, 2011), and to strive for a collaborative approach (Sharp, 2005). Accordingly, I extended geographic knowledge production beyond text-based analysis (Hawkins, 2019) and collaborated with an artist and a documentary filmmaker. Further to written contributions in the form of journal articles and book chapters, an important part of this dissertation thus entailed the collaboration on a research-art-exhibition and a documentary film, both of which were based on my research.

This dissertation consists of four main parts. The first, Part A, entails an introduction to what I call the planetary-intimate in the agricultural labor migration between Huelva and Morocco. In Chapter 2, I situate the research within the historical and political context of berry production in Huelva and the associated labor migration from Morocco. The chapter also explains the background of migrants' (limited) access to healthcare in Huelva and elaborates on the region's environmental challenges. In Chapter 3, I introduce my conceptualization of the planetary-intimate. I do so, first, by elaborating the conceptual research gaps, followed by discussing my research prospective, which includes an understanding of reproduction through a geopolitical and planetary lens. I then discuss my conceptual contributions to the existing literature on reproductive justice, liminality, and everyday violence, and finally present my suggestion of an

overall planetary-intimate perspective. Lastly, in Chapter 4, I explain my methodological procedure, aimed at capturing these insights in an e/affective way.

In Part B, I present my main conceptual and empirical contributions in the form of three peer-reviewed journal articles. I first present an article collaboratively written with Carolin Schurr, Susanne Schultz, Laura Perler, and Nina Etter, which provides an overview of how the reproductive justice framework can advance geographical scholarship, and vice-versa (Chapter 5). In the following article (Chapter 6), co-written with Carolin Schurr and Angels Escrivà, we show how the geopolitical prescriptions of the above-described labor migration regime, along with the working and living conditions of female migrant workers in Huelva, lead to experiences of "intimate liminality," i.e., the emotional and embodied effects of being *in-between* Morocco and Spain. In the third article (Chapter 7), I conceptualize the term "geoviolence" at the nexus of reproductive and climate injustice, based on my analysis of the harm experienced by Moroccan migrant workers, their communities, and their environments as a result of anthropogenic adverse geophysical conditions.[7]

In Part C, I present the two collaborative creative research outputs: the research-art-exhibition and the documentary film. In a journal article (Chapter 8) co-authored with Lucy Sabin and Adrien Mestrot, and a book chapter (Chapter 9), written in German and co-authored with Mirko Winkel, Carolin Schurr, and Laura Perler, my colleagues and I reflect on exhibitions' potential as knowledge dissemination methods and provide a concrete example of our collaborative research-art-exhibition about the pesticide exposure of migrant workers in Huelva. Furthermore, in Chapter 10, I present my contribution to a documentary film on the precarious working and living conditions of migrant farmworkers in Huelva, which resulted from a collaboration with a film team.

In Part D, I summarize my main empirical findings and outline how this dissertation contributes to the development of a planetary-intimate perspective in agricultural labor migration. I furthermore stress the usefulness of using creative methods and an embodied approach when conducting engaged research. Finally, I reflect upon the limitations of this research, and suggest future research directions and policy recommendations.

[7] In addition to the empirical and conceptual works presented in this dissertation, I contributed to several smaller publications during my Ph.D.. While these publications are not formally included in the dissertation, they are still related to its themes (Escrivà & Komposch, 2025; Escrivà, Komposch, & Ribas-Mateos, 2025; Komposch & Perler, 2022).

2. Encountering Huelva at the crossroads between global migration and berry trade

This chapter situates my research topic within its historical, political, and ecological context. I begin by examining the emergence and growth of the berry industry in Huelva before providing a historical overview of the migration patterns for this agricultural sector, with a focus on the bilateral agreement between Morocco and Spain. I then discuss the precarious working and living conditions faced in the berry industry, and key features of Huelva's health system and migrants' positions within it. Finally, I address the region's environmental challenges so as to facilitate a planetary perspective.

2.1. A growing berry monoculture

In the context of the increasingly-global food trade, the Spanish autonomous community of Andalusia has emerged as Europe's leading exporter of fruits and vegetables. Within Andalusia, the southwestern province of Huelva is particularly known for its focus on strawberry production. Until the 1960s, agriculture in Huelva included a variety of plantations, including olives, vines, and various crops and fruits, mostly for local and regional consumption (Castro & Pinto, 2023). However, significant changes occurred during the late part of the fascist regime under Franco, when Spain received support from the World Bank and the Food and Agriculture Organization of the United Nations (FAO) to modernize its agriculture. This modernization policy led each agricultural region to specialize in a few key products, thereby increasing export-oriented production and shifting the focus from local consumption to export agriculture (Castro & Pinto, 2023). In their book on Huelva's berry industry, Castro and Pinto (2023) describe how mechanization and agro-industrialization—including the increased use of fertilizers, pesticides, and irrigation systems—not only transformed local economies, but also induced cultural shifts in rural villages from the valuation of agricultural labor. As manual agricultural labor became less valorized, many rural inhabitants migrated to urban centers in search for work, contributing to the demographic decline of many of the country's rural areas—a phenomenon that is part of what is often referred to as "emptied Spain" (*España vaciada*).[8]

The promotion of strawberries in the 1960s, supported by government subsidies, transformed Huelva's agricultural landscape into a monoculture. Huelva's favorable environmental

[8] For more information on this phenomenon, referring to the increasing depopulation of rural areas in Spain, see, for example, the work of Hernández Maeso and Cruz Hidalgo (2020).

conditions, such as warm temperatures, ample sunlight, and (at the time, still) abundant water resources from the Doñana wetlands, created ideal conditions for berry cultivation. The introduction of the "Camarosa" strawberry variety from California in the 1990s further boosted production, allowing farmers to begin the production already in January and export high-quality strawberries without any European competition (Hellio, 2008). This accompanied other outcomes of a broader neoliberal shift, such as increased industrialization and technological advancements in agriculture, including the adoption of greenhouses, drip irrigation, and modern farming machinery (Castro & Pinto, 2023), which resulted in a large berry monoculture (see Figure 1).

Figure 1: Strawberry monoculture and houses for temporary migrant workers directly next to the fields in Palos de la Frontera. Photo: Nora Komposch 2021.

While strawberries—known locally as "red gold"—still dominate Huelva's agriculture, the regional sector is nowadays also renowned for other berries (blueberries, raspberries, blackberries). In a region with one of the highest unemployment rates in Spain,[9] the berry sector is a key pillar of the local economy, creating approximately 100,000 jobs and contributing 8% to the provincial GDP.[10]

Spain is currently the EU's largest strawberry producer, representing 30% of total EU strawberry production, and Huelva, with a total berry planting area of 13,447 hectares, delivers a production share of 97% (Valverde & Kuypers, 2023). In the 2022–2023 berry season, a total of 345,940 tons of berries, with a value of 1026.8 million euros were exported,[11] approximately 80% of which were destined for Germany, the UK, and France (Freshuelva, 2023).

[9] In 2023, the employment rate in Huelva was 18.4%, compared with 12.1 % for the whole of Spain (INE, 2024).
[10] This number was published by the Andalusian strawberry interprofessional association Interfresa (Interfresa, 2024).
[11] These figures are divided into strawberries (571 million euros and 243,000 tons), blueberries (219 million euros and 53,190 tons), raspberries (222.5 million euros and 47,750 tons), and blackberries (14.3 million euros and 2,000 tons).

An understanding of the evolution of Huelvan agriculture, from a family-based, small-scale model designed for local and regional consumption to a monoculture-oriented model focused on international export, reflects the significance of this economic sector at the regional and global levels.

2.2. The agricultural labor migration between Morocco and Huelva

While a significant proportion of the region's agricultural workforce was initially composed of local laborers, the advent of strawberry cultivation and the subsequent expansion of the agricultural sector in the 1960s saw an influx of migrant labor, initially from other parts of Spain and subsequently from Eastern Europe and North Africa. The agricultural boom in the late-20th and early-21st centuries further intensified this trend, transforming Huelva into a destination for seasonal agricultural workers. To remain profitable in a context of high intermediate costs, rising seed prices, and price pressure from large retailers, employers rely on flexible and low-cost workers from foreign countries. Consequently, migration plays a pivotal role in determining profitability.

Currently, approximately half of the 100,000 workers employed in the Andalusian berry industry (seasonally) migrate to Huelva from abroad for periods of between one to nine months, while the other half are Spanish workers from Huelva and the surrounding areas (Escrivà, 2022). The composition of the migrant labor force has undergone a notable shift in recent decades, becoming increasingly multinational and feminized. As in other gendered low-paid sectors, the myth that women have more delicate hands (making them preferable to men for berry-picking) has shaped the discourse of gender-based worker selection (Hellio, 2008). In the initial stages of the industry's development, the majority of strawberry pickers came from Eastern European countries, such as Poland and Romania. Many migrated seasonally through Spain's origin-based contract migration program (*contratos en origen*), which was established in 2000 and fully implemented in 2002 (Márquez Domínguez, Gordo Márquez, & Delgado, 2009; Reigada, 2016). Origin-based contracts allow employers to recruit workers on a temporary basis directly from their home countries.[12] When Poland and Romania joined the EU, in 2004 and 2007, respectively, their workers gained the legal right to work freely across the entire EU, and were thus no longer obliged to apply for temporary work permits (Hellio, 2013). This extended their opportunities to also work in other EU nations, leading to a decrease

[12] In the initial decade of the program, origin-based contracts for work in Huelva were granted to migrants from Colombia, Ecuador, the Philippines, Poland, Romania, Bulgaria, Ukraine, Morocco, and Senegal (Hellio, 2016).

in seasonal migration to Huelva from these countries. However, female workers from Eastern Europe continue to constitute a significant portion of Huelva's current labor force (Molinero-Gerbeau, 2021).[13]

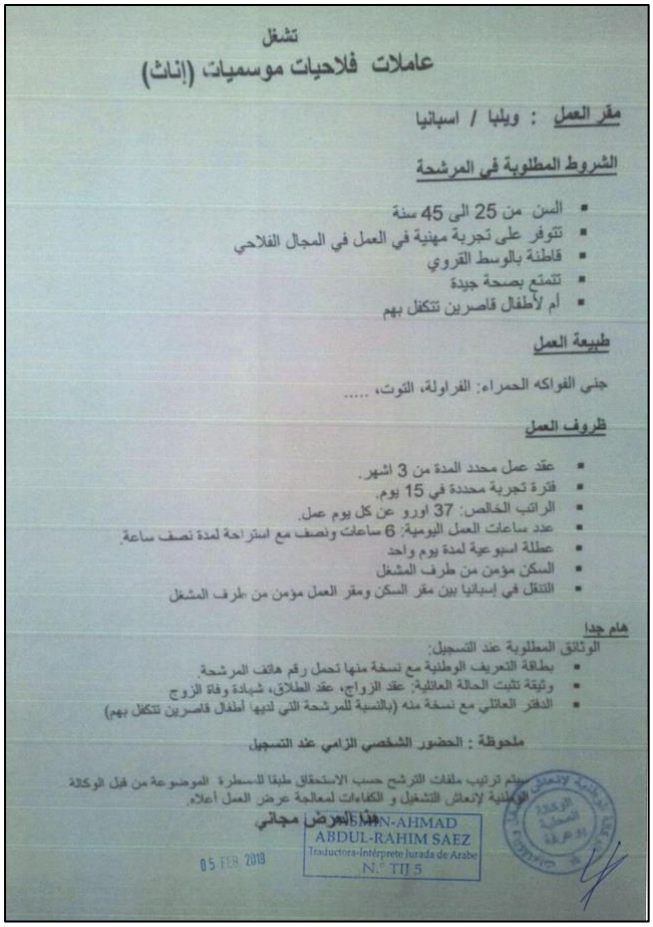
In the mid-2000s, sectoral organizations began to prioritize the origin-based recruitment of women from Morocco. As was done with other countries, Spain established a targeted origin-based recruitment program with Morocco (*Gestión Colectiva de Contrataciones en Origen*, or simply *orden GECCO* (Ministerio de Inclusión, Seguridad Social y Migraciones, 2022)), which enabled the seasonal employment of up to 20,000[14] Moroccan women in Huelva (Escrivà, 2022). In addition to Morocco, a pilot program with new origin-based contracts was initiated in 2022, when 250 workers each from Honduras and Ecuador were recruited with such contracts to work in Huelva's berry industry. While the origin-based recruitment program was bilaterally established between Morocco and Spain as a base for labor migration, the recruitment of workers is organized between Morocco's National Agency for the Promotion of Employment and Skills (Anapec) and the employers in Spain. The selection of employees and the signing of contracts occur in Morocco, which is why this process is referred to as "origin-based" *(en origen)*. In 2020, over 500 berry companies were registered to participate in this program (Löning, 2020). In accordance with the terms of the bilateral agreement, Spanish employers are required to inform the Moroccan agency of the number of workers they require. Based on this total number, the Moroccan agency then assumes responsibility recruitment in Morocco. The selected workers are required to be women who have children younger than 15, who are married, divorced, or widowed, and who are between the ages of 25 and 45. Additionally, they must come from rural areas and possess experience in agricultural labor (Hellio et al. 2019). While these selection criteria are not explicitly stated in such bilateral agreements as the *Orden GECCO* (Ministerio de Inclusión, Seguridad Social y Migraciones, 2022),[15] they instead emerge as practical implementation practices used by the Moroccan agency Anapec (Morocco).

[13] For more information on how the number of workers from Bulgaria and Romania has changed over the years, see Molinero-Gerbeau et al. (2021) or Hellio (2013).

[14] The numerical data for each respective year of my research period are as follows: 2019/2020: 16,500; 2020/2021: 12,743; 2021/2022: 12,300; and 2022/2023: 16,700 (Government Subdelegation Huelva, 2023).

[15] Other official documents, such as the original decree implementing the program (Ministro del Interior de España & Ministro de Empleo, de Formación Profesional, del Desarollo Social y de la Solidaridad de Marruecos, 2001) and the program description of Cartaya, the first municipality to participate in the program (Ayunamiento de Cartaya, 2008), do not explicitly mention these selection criteria either.

However, the criteria *have* been written down in calls for applications, as reported by the online newspaper *La Mar de Onuba* (Figure 2)[16].



تشغل

عاملات فلاحيات موسميات (إناث)

مقر العمل : ويلبا / اسبانيا

الشروط المطلوبة في المرشحة

- السن من 25 الى 45 سنة
- تتوفر على تجربة مهنية في العمل في المجال الفلاحي
- قاطنة بالوسط القروي
- تتمتع بصحة جيدة
- أم لأطفال قاصرين تتكفل بهم

طبيعة العمل

جني الفواكه الحمراء: الفراولة، التوت، .....

ظروف العمل

- عقد عمل محدد المدة من 3 اشهر.
- فترة تجربة محددة في 15 يوم.
- الراتب الخالص: 37 اورو عن كل يوم عمل.
- عدد ساعات العمل اليومية: 6 ساعات ونصف مع استراحة لمدة نصف ساعة.
- عطلة اسبوعية لمدة يوم واحد
- السكن مؤمن من طرف المشغل
- التنقل في إسبانيا بين مقر السكن ومقر العمل مؤمن من طرف المشغل

هام جدا

الوثائق المطلوبة عند التسجيل:

- بطاقة التعريف الوطنية مع نسخة منها تحمل رقم هاتف المرشحة.
- وثيقة تثبت الحالة العائلية: عقد الزواج، عقد الطلاق، شهادة وفاة الزوج
- الدفتر العائلي مع نسخة منه (بالنسبة للمرشحة التي لديها أطفال قاصرين تتكفل بهم)

ملحوظة : الحضور الشخصي الزامي عند التسجيل

يتم ترتيب ملفات الترشح حسب الاستحقاق طبقا للسطرة الموضوعة من قبل الوكالة الوطنية لإنعاش التشغيل و الكفاءات لمعالجة عرض العمل أعلاه.

هذا العرض مجاني

N-AHMAD
ABDUL-RAHIM SAEZ
Traductora-Intérprete Jurada de Arabe
N.° TIJ 5

05 FEB 2019

Figure 2: A public call for job applications to work in Huelva, issued by Anapec, which states that applicants must be women, come from rural areas, be between the ages of 25 and 45, and be mothers of young children, as proven by the family record book. Source: La Mar de Onuba (Echevarría, 2020)

This transnational population policy is primarily driven by geopolitical considerations. Through the implementation of a temporary labor policy, the objective is to ensure the return of workers to their countries of origin following the conclusion of the harvesting season. As written in the program description of Cartaya (the first municipality to participate in the program), one of the main goals is to "alleviate the problem of illegal immigration through origin-based recruitment, with a commitment to return as a fundamental objective in the management of migratory flows" (Ayunamiento de Cartaya, 2008, p. 182, own translation). In accordance with this legal recruitment system, workers are supposed to migrate to Huelva for a limited period to perform

[16]While the age of the children is not mentioned in this call, reports indicate it has been stated in other job advertisements (Hellio et al., 2019).

their agricultural work and to return to their home country thereafter. To ensure this, the workers are required to sign a return commitment upon their recruitment (Hellio, 2008).

In addition to those who migrate seasonally to Huelva, there are also numerous other migrant groups who work in Huelva's berry industry, predominantly from Eastern Europe and Sub-Saharan Africa. Some live permanently in Huelva, while others move seasonally within Spain, following the different vegetable and fruit harvest seasons. While the experiences of some individuals of these groups are showcased in the documentary film (see Chapter 10), the remainder of my research focuses on the experiences of migrant women from Morocco and their specific recruitment criteria. This focus allows for a deeper understanding of the intricate relationship between reproductive lives and agricultural wage labor, as well as a comprehensive grasp of the significance of intimate scales of reproduction in shaping geopolitics of migration.

The overview of the historical development of agricultural labor migration and the contemporary demographic profile of migrant populations of this section provides a framework for contextualizing the experiences of Moroccan migrant women, as discussed within the broader migration landscape.

2.3. Precarious working and living conditions

Berry picking, which mainly takes place between late December to July, is physically demanding, as the labor is performed in a bent-over position for extended periods, and the job requires weight carrying and constant crouching under (on occasion) exceedingly-high temperatures.[17] In addition to harvesting ripe fruit, the work entails packing the berries into containers and transporting them by cart to the roadside or onto a pallet. Moreover, the findings suggest that there are several environmental health risks associated with this occupation, including exposure to such chemicals as pesticides, as discussed in greater detail in (Sub-)chapters 3.1, 6.5 and 8.

In addition to the physical health risks, there are also socio-psychological factors that adversely impact workers' health, including the working atmosphere, which is often characterized by intense productivity pressure and fear. Unionists and workers have repeatedly informed me of the common practice of displaying productivity lists on farms, indicating the quantity of berries picked by each worker, from the highest to the lowest. It is understood that those occupying the

[17] In the summer months, the temperatures within the berry polytunnels can reach 52 degrees Celsius (Castro & Pinto, 2023). These high temperatures carry considerable health risks for workers, which are further compounded by tremendous pressure to achieve high levels of productivity. As documented in other regional contexts, this combination of factors can result, in the worst cases, fatal heat strokes (Horton, 2016).

lowest positions would be the first to be made redundant when the harvest diminishes. The local self-organized workers collective *Jornaleras de Huelva en Lucha* ("Huelva Day Laborers in Struggle") has documented a series of recurring grievances reported by workers relating to non-compliance with minimum wages,[18] working hour regulations, unfair dismissal, sexual harassment, physical or verbal abuse, or the provision of housing unfit for human habitation (Castro & Pinto, 2023). In some instances, it has been documented that workers are prohibited from conversing with their colleagues, answering phone calls, or even carrying a bottle of water into the field.[19] These issues have gained greater visibility in the wake of the global COVID-19 pandemic, with the border becoming an important point of immobilization for numerous temporary workers (Castillero-Quesada, 2020b; Güell, 2022; Molinero-Gerbeau, 2021). However, the recently released book by Castro and Pinto (2023) suggests that the circumstances have not greatly improved in the last years.

The Provincial Agricultural Labor Agreement (*Convenio Provincial del Campo*),[20] implemented in 2018, sought to alleviate some of these problems, such as by introducing a new article on "equal treatment and opportunity" or a "Protocol for prevention and response to incidents of sexual and gender-based harassment" (Hellio et al., 2019, p. 6). However, as noted by human rights reports, the agreement is not only incompatible with the discriminatory in-country hiring process in Morocco, but is also often not enforced in practice, contributing to the challenging conditions among the predominantly female, migrant workforce (Hellio et al., 2019). Although the seasonal contract provides a minimum of three months of employment, only the actual days worked are remunerated. The number of workers engaged by employers tends to fluctuate according to the demands of peak production periods, meaning that a considerable number of these workers remain partially unoccupied at the outset or conclusion of the season (Escrivà, 2022). Moreover, the prevalence of crop failures resulting from shifts in weather patterns further complicates the situation.[21] Consequently, the migrant workers earn a day-to-day salary, dependent on weather and market conditions (Escrivà, 2022), leading to the initially-expected income often going unachieved.

[18] A number of unions and organizations, including *Jornaleras de Huelva en Lucha* and the Rural Worker's Union—Andalusian Union of Workers (*Sindicato de Obreros/as del Campo—Sindicato Andaluz de Trabajadores/as*, SOC-SAT), have criticized the discrepancy between the minimum wage for agricultural workers, which was 49.30 euros per day in 2021, and the actual remuneration received by many of these workers, which ranges between 38 and 55 euros per day.

[19] For a comprehensive examination of labor law violations, see the report by Women's Link Worldwide (Hellio et al., 2019) or the book by Castro and Pinto (2023)

[20] The 2018 Provincial Agricultural Labor Agreement was signed in October 2018 between the Workers Union *(Comisiones Obreras)* and the Young Farmers Agricultural Association *(Asociación Agraria Jóvenes Agricultores—ASAJA)* that represents the agricultural sector in the province of Huelva (Hellio et al., 2019).

[21] I elaborate on these aspects in Chapter 7.

Contesting labor law violations is a particularly challenging issue for migrant workers. The majority of Moroccan workers encounter language barriers due to their lack of proficiency in Spanish, with some also being illiterate. The temporary nature of their stay, limited to a few months due to the circular migration regime, further complicates union-organizing efforts (Arab, 2018). Additionally, workers typically reside in isolated, on-site accommodations, as employers are legally obliged to provide adequate housing free of charge. However, numerous human rights organizations and unions have documented instances of employers charging workers for electricity and water (Castro & Pinto, 2023). This exemplifies the exploitation of the precarious status of migrant women.

When discussing precarity in Huelva's berry industry, it is important to highlight the phenomenon of informal settlements, also known as *chabolas* (see Figure 3). These makeshift dwellings, typically found in southern Spain, are usually built by the workers themselves using such materials as wood, sheet metal, or plastic (or bought from informal markets for several hundred euros). They are characterized by poor living conditions and a lack of basic amenities, such as access to water and electricity.

Figure 3: Informal settlements, known as *chabolas*, in the region of Lucena del Puerto. Photo: Nora Komposch 2021.

It is difficult to assess the number of people living in these informal settlements, especially since many people do not live in them permanently, but rather migrate between informal settlements in different regions according to harvest seasons. Around 3,500 people are living in such conditions in Huelva during the harvest season (Buier, 2024). In the province of Huelva, these settlements are located mainly in the municipalities of Lepe, Moguer, Lucena del Puerto, and Palos de la Frontera. Although the backgrounds of the inhabitants of *chabolas* are highly diverse in terms of origin, gender, and citizenship, the majority have a history of migration. It

is not only the lack of residence permits[22] that forces people to live in such conditions, but also structural racism that makes it very hard—especially for people of color—to find decent housing in the region. My research focuses on female Moroccan workers who come to Huelva with circular labor contracts and, therefore, live directly on the farms. Consequently, this dissertation does not analyze in depth the realities of people living in *chabolas*. However, this issue is addressed in the documentary featured in Chapter 10. Although not the central focus of my study, understanding the phenomenon of *chabolas* is crucial for comprehending the overall working conditions in Huelva, as many migrants who choose to stay in Huelva irregularly often encounter these living conditions.

Grasping the complexity of precarious working and living conditions in Huelva's berry industry, as outlined in this section, is crucial for contextualizing the worker experiences discussed in the following chapters. This understanding allows one to view these accounts not merely as individual cases, but as reflections of underlying structural patterns.

2.4. Migrants' access to health care in Huelva

Since I also address the question of how migrant women navigate access to (reproductive) healthcare during their temporary stay in Huelva, it is crucial to understand some key characteristics of the local healthcare system. The Spanish system (*Sistema Nacional de Salud*, SNS) is a universal healthcare system financed through taxation and providing comprehensive health coverage to all residents. Formally, migrants are entitled to the same comprehensive healthcare coverage as Spanish nationals. Nevertheless, research has indicated that, despite Spain's commitment to universal healthcare access, migrants encounter significant obstacles in this regard. These include language and cultural barriers, administrative complexities, and for some concerns about their undocumented status (Serre-Delcor et al., 2021). In contrast to populist right-wing discourses about migrants exploiting the host country's health system, studies have repeatedly demonstrated that obstacles to healthcare access contribute to a lower use of health services by migrant communities compared to populations with citizenship status[23]

[22] In order to become regularized in Spain, individuals must demonstrate three years of registration in the census, prove that they have not committed any criminal offenses, and present a job offer. Due to this precarious situation, some employers sell work contracts for up to 6,000 euros (Castro & Pinto, 2023). As an alternative, non-regularized workers may choose to work without compensation for several months to obtain a work contract. This practice contributes to the rationale behind characterizing this work context as "modern slavery"—a topic I address in Chapter 10. The precarious nature of these employment situations often results in individuals being unable to pay rent in formal housing arrangements, thereby forcing them to resort to residing in informal settlements.

[23] Another reason could be the self-selection process prior to migration, which prevents sick people from migrating (Gimeno-Feliu et al., 2015).

(Sarría-Santamera, Hijas-Gómez, Carmona, & Gimeno-Feliú, 2016; Serre-Delcor et al., 2021). To access non-emergency health services, migrants in Spain are required to register their stay in a municipality and obtain a health card (*tarjeta sanitaria)*. Although irregular migrants are also entitled to a health card, the process of obtaining one entails a number of additional obstacles that have prompted legislative changes in recent years.[24] These practical impediments to accessing healthcare result in a higher reliance on emergency care among immigrants in Spain, as evidenced by Llop-Gironés et al. (2014). As this dissertation shows, this phenomenon is also prevalent in Huelva.

In Huelva, the healthcare sector is confronted with considerable challenges. In a nationwide comparison, Andalusia is the region with the lowest average number of practicing physicians per inhabitant (Dubas-Jakóbczyk et al., 2024).[25] Moreover, within the regional Andalusian context, the density of healthcare centers in Huelva is also relatively low (Aguilar, 2017). In recent years, Huelva's healthcare sectors has been shaped by financial cutbacks and privatization initiatives, which have prompted repeated protests from social movements in the city of Huelva (Montenegro, 2023). Migrants in Huelva also encounter numerous obstacles when attempting to access healthcare. Indeed, as the ability to use healthcare services is frequently constrained, it is often the role of non-governmental organizations (NGOs) to assist migrants in navigating the healthcare system and obtaining the necessary services.

This section's overview of Huelva's health system, and the position of migrants within it, provides a broad context for understanding the health challenges faced by workers described in the following chapters. By highlighting the migration and health policies that affect access to healthcare, the multiplicity of influential areas of governance is demonstrated.

2.5. Environmental challenges

The industrialization of Huelva's berry industry, coupled with additional industrial evolution in the region, has led to significant environmental degradation. The extensive greenhouse monoculture—that visually resembles a vast sea of plastic, similar to the vegetable-producing

[24] While access for undocumented migrants has been restricted by a 2012 law passed by the former government of Mariano Rajoy, in 2018, the Spanish Congress voted for a decree that foresaw to remove that restriction and allow all migrant workers to receive healthcare services irrespective of whether or not they had registered with a municipality (Hsia & Gil-González, 2021). However, irregular migrants still had to request and obtain approval from social services, proving their desire to reside in Spain before consulting a medical practitioner. This often resulted in a months-long bureaucratic procedure. Therefore, the Spanish government finally approved a law in May 2024 guaranteeing full access to healthcare for undocumented migrants, which should make the whole procedure faster and easier for patients (infoMigrants, 2024).

[25] As documented by Dubas-Jakóbczyk et al. (2024), in 2021, the average number of practicing physicians per 1,000 inhabitants in Spain as a whole was 3, but only 2.3 in Andalusia.

region of Almería in eastern Andalusia—has contributed multiple environmental degradation outcomes in the region. The berry-producing area is partly located within the larger Doñana wetland, which includes the protected Doñana National Park, a crucial habitat for many animals and plants, and a breeding ground for numerous migratory birds moving between North Africa and Northern Europe. In recent years, the region's biodiversity has dramatically declined, soil quality has deteriorated, and groundwater levels have significantly decreased. Since 2013, the flooding of over 3,000 lagoons have decreased by 60%, and during the summers of 2022 and 2023 all lagoons, both temporary and permanent, dried up completely (WWF, 2024). According to the Hidrographic Confederation of Gualalquivir (*Confederacion Hidrografica de Gualalquivir*, CHG) three of the five groundwater bodies that feed the natural park no longer reach good quantitative status (Maldito, 2022). Research has linked this environmental degradation to the overuse of water—particularly the illegal use of groundwater of the strawberry industry[26]—and the overuse of chemicals in agriculture (Camacho et al., 2022; Green et al., 2017).

Further to the berry monoculture, the province of Huelva is also home to several other significant sources of pollution, which contribute to the region's overall environmental contamination and pose a threat to public health. The fertilizer industry's waste dump and an immense chemical industrial park are situated between Huelva's capital and the berry fields of Palos de la Frontera—that is, immediately adjacent to some of the temporary housing for migrant workers (Figure 4).

Figure 4: Strawberry monoculture and houses for temporary migrants (visible at the left side in the back of the polytunnels) with the industrial chemical park in the background in Palos de la Frontera. Photo: Nora Komposch 2021.

[26] In February 2022, the regional parliament of Andalusia voted to support a plan to legalize 1,500 hectares of illegally-irrigated land used by the berry farmers. This decision faced opposition from the Spanish central government, the EU, UNESCO, and several NGOs (Camacho et al., 2022). In November 2023, the Spanish government signed an agreement to block this regional law and instead financially support sustainable practices that protect the wetland (Salas, 2023).

Additionally, the mines in the province's north contribute to environmental contamination via the river courses that originate from the mountainous terrain (Davis et al., 2000). The region between Huelva, Sevilla, and Cadiz has one of the highest rates of cancer fatalities in Spain, and is thus commonly referred to as the cancer triangle (*triangulo del cáncer*) or death triangle (*triangulo de la muerte*)—a problem which can be partly attributed to the high levels of environmental pollution (Castro & Pinto, 2023; Dueñas, Fernández, Cañete, & Pérez, 2010; García-Pérez et al., 2020; Lozano & Iriberri, 2017).

Awareness of the environmental degradation in the region of Huelva, stemming from the berry monoculture and other industrial activities, is important to contextualize the environment-related health risks. Furthermore, it this environmental information that also enables the adoption of a planetary perspective in order to evaluate the potential risks that worsening climate change might bring to this region, and to the lives of its permanent and temporary human and non-human inhabitants.

3. Conceptualizing the planetary-intimate in agricultural labor migration

Having outlined the historical, political, and ecological context of my research topic, this chapter presents my conceptual framework, which integrates debates about agricultural production, reproduction, and migration in times of climate crisis. As numerous scholars have argued, the global division of labor tends to conceal not only precarious labor conditions, but also the environmental costs associated with them (Collard & Dempsey, 2018; Federici, 2012; Katz, 2001; Mies & Bennholdt-Thomsen, 1999). As Collard and Dempsey (2018) argued: "nature plays a structurally analogous role to that of reproductive workers within capitalism" (p. 1356). Examining the specific labor context of Huelva through a planetary lens on reproduction enables me to analyze not only the creation, maintenance, and exploitation of the labor force, but also the production and destruction of nature (Katz, 2001). Furthermore, connecting these insights with geographies of critical migration, which aim to "understand and challenge migration as a site of exploitation" (Gilmartin & Kuusisto-Arponen, 2019, p. 18),[27] can shed light on the unequal distribution of the social and ecological burden of the global division of labor.

I begin this chapter by identifying conceptual research gaps in the field of agricultural labor migration studies. I then present a conceptual framework that integrates the analytical tools of reproductive geopolitics with a planetary perspective. In a further subchapter, I illustrate how this lens enabled me to develop conceptual contributions to debates on reproductive justice, liminality, and everyday violence through the articles in Part B of this dissertation. Finally, I extend the individual articles' conceptual contributions by proposing an overarching conceptual framework, termed the "planetary-intimate."

3.1. Identifying research gaps in geographies of agricultural labor migration

In examining the phenomenon of agricultural labor migration, I identified three areas requiring further academic attention: (1) workplace-related pollution and migrant workers' reproductive health, (2) the accessibility of reproductive health services for migrant workers, and (3) the dynamics of their family lives within the context of labor migration. As discussed in the

[27]The title of this dissertation was inspired by a book chapter by Mary Gilmartin and Anna-Kaisa Kuusisto-Arponen (2019), entitled *Borders and bodies: Siting critical geographies of migration*, as well as Alison Mountz's (2021) article, *Bodies, borders, babies: Birthing in liminal spaces.*

following three subsections, there is a particular need to address these topics from a socio-ecological, or, as I subsequently refer to it, a "planetary" perspective.

Workplace-related pollution and reproductive health

The literature on migrant farmwork suggests that both migration (Martikainen, Sipilä, Blomgren, & van Lenthe, 2008) and agricultural labor (Holmes, 2013; Horton, 2016) can negatively impact migrant workers' health. Moreover, a growing body of research is pointing to the alarming occupational (reproductive) health risks, particularly linked to environmental contaminants, such as pesticides (Barbour & Guthman, 2018; Galt, 2017; Guthman, 2016, 2019; Hansen & Donohoe, 2003; Harrison, 2011; Saxton, 2015). These links clearly show that "pesticide exposure [is] a reproductive justice issue" (Mansfield et al., 2024, p. 404). Studies of berry production in California (Guthman & Brown, 2016) and Spain (Mozo, Moreno Nieto, & Reigada, 2022) have shown how policies and quality standards, such as GLOPAL GAP,[28] that address pesticide-related health risks focus almost exclusively on the health of consumers, while neglecting the same for the farmworkers themselves. As Guthman and Brown (2016) highlighted in their paper on the Californian strawberry industry, a "biopolitical sorting" is revealed by analyzing how the health concerns of different population groups are treated:

> *Letting die is more than a metaphor in the case of fumigants and other pesticides. As we have noted, consumer voice has sometimes led to chemical formulations and regulatory systems that are safer to consumers while leaving workers in the (chemical) dust.* (p. 583)

The extant literature indicates that women are particularly susceptible to pesticide exposure due to both social and biological factors. These include relatively higher levels of adipose tissue or hormonal changes, and gender-related working conditions, such as women having a, comparative, greater representation in lower-paid jobs with fewer safety measures (García, 2003; La Merrill et al., 2013). However, as observed by various researchers (Atinkut Asmare, Freyer, & Bingen, 2022; Boudia & Jas, 2016; Dedieu, Jouzel, & Prete, 2015), as well as the FAO of the United Nations (FAO, 2022), the occupational health risks linked to pesticide exposure of workers—particularly of women—remain underreported and therefore underestimated, especially in relation to reproductive health. Thus, this nexus between environmental pollution and the reproductive lives of migrant workers, along with the gendered, class-based, and racial dimension of health risk exposure, requires further attention.

[28] For more information about GLOBAL GAP see https://globalgapsolutions.org/.

Furthermore, effective methods are needed to disseminate knowledge based on this empirical data, as well as to raise awareness among the broader public and policy-makers about the occupational health risks faced by female migrant workers, as has been done in the context of consumer health.

(Lacking) Access to reproductive health care

These work-related health risks for migrant women underscore the need to ensure access to reproductive healthcare for migrant populations. A substantial body of literature has elucidated the interconnection between migration and health disparities (Bambra, 2022; Boyle & Norman, 2009; Darlington-Pollock & Peters, 2021; Malmusi, Borrell, & Benach, 2010; Migge & Gilmartin, 2011; Smith & Easterlow, 2005). Another body of geographical literature has identified structural barriers to accessing systems of reproductive healthcare (Hall, 2023; J. Nash, 2021), emphasizing the "raced, classed, and gendered (among others) dimensions of inaccessibility" (Lopez, 2019, p. 840). However, a significant proportion of this literature is geographically focused on the US and UK (Hall, 2023; Lopez, 2019; Nash, 2021). Despite the aforementioned insights and the value of a geographical perspective on the socio-spatial dimensions of reproductive issues (for an overview see England, Fannin, & Hazen, 2018) the geographical literature on agricultural labor migration remains limited in addressing migrant workers' access to reproductive healthcare. While a handful of studies have addressed this issue in the Canadian (Cohen & Caxaj, 2018) or US (Galarneau, 2013) contexts, the topic has remained largely unexamined in Spain. Accordingly, such scholars as Angels Escrivà have proposed that further research is required on the topic of reproductive health and the accessibility of related services within the context of temporary migrant labor in Huelva (Escrivà, 2022).

However, the lack of regional research is not the sole reason for the need to further explore the subject of migrant workers' access to reproductive health services. A deeper understanding of how migration (and, particularly, its temporary variety) situates migrants in a liminal position (Hennebry, McLaughlin, & Preibisch, 2016), and the associated effects on access to reproductive healthcare, can yield significant insights into the ways in which bodies and their health are differentially valued within national and international modes of governance. Further research is required to understand how geographical location, transportation systems, socio-economic status, gendered norms, and cultural barriers place migrant workers in liminal positions, and thus affect their ability to access reproductive healthcare. In particular, the gender-specific health risks associated with temporary work (Escrivà, 2022), especially in such

sensitive situations as pregnancy, have yet to receive sufficient scholarly attention. Finally, as climate change increasingly alters migration patterns (Khan & Janjua, 2021), understanding such migration-related liminal states becomes even more important.

Family and care relations in agricultural labor migration

Critical migration geographies offer extensive insights into how care and family dynamics are negotiated within and beyond migrant families. They highlight how family ties are shaped by governmental geopolitics, such as displacement (Al-Sharmani, 2010), evictions (Brickell, 2014), or deportation (Hiemstra, 2021) and examine the intimate labor involved in maintaining cross-border familial relations (Al-Sharmani, 2010; Gilmartin & Migge, 2016; Hyndman, 2010; Nolin, 2002; Pratt, 2012). Critical migration geographers have also shown how this intimate labor both sustains family structures and challenges exclusionary geopolitical practices (Askins, 2014; Barabantseva, Mhurchú, & Peterson, 2021; Botterill, Hopkins, & Sanghera, 2020), such as restrictive migration policies. Malene Jacobson (2023) highlighted this through the following:

> *A feminist geographical focus enables us to better understand how strategies and practices of life-making [like the intimate labor of maintaining familial relations] are co-constitutive of geopolitics, rather than merely responses to it.* (p. 1306)

In geographical studies, the topics of maternal migration and the associated family separation have predominantly been discussed in the context of global care chains (see, for example, Banta & Pratt, 2022; Parrenas, 2001; Pratt, 2012). Exploring how women from economically-disadvantaged regions migrate internationally to perform care work for families in the Global North, as well as the related care gaps in their own the families, have received growing attention in feminist geographical literature (Komposch, 2022; Komposch, Pohl, & Riaño, 2021; Muelle, Ojeda, & Fleischer, 2021; Schilliger, 2015; Schilliger, Schwiter & Steiner 2023; Schwiter, Berndt, & Schilling, 2014; Schwiter, Strauss, & England, 2018; Schwiter & Steiner, 2020).

Given the importance of family relations in understanding the governance and experiences of migration, the comparative scarcity of geographical works on these issues in the literature on agricultural labor migration is striking. Research has been conducted into the remittances from agricultural migrant workers for their families (Campos-Flores & Martin, 2024; D. Wells, McLaughlin, Lyn, & Mendiburo, 2014), gendered differences in the perception of family separation during agricultural work abroad (Preibisch & Santamaría, 2006), or a wider perception of care of agricultural migrant workers, including a more-than-human perspective

(Bolokan, 2022). However, given the large number of agricultural labor migrants, there is comparatively little geographical research on the experiences of care and kinship within agricultural labor migration (some very noteworthy exceptions are Campos-Flores & Rosales-Mendoza, 2023; Jakobsen, Scott, & Rye, 2023; McLaughlin, Wells, Mendiburo, Lyn, & Vasilevska, 2017).

Furthermore, the ongoing environmental transformations resulting from the climate crisis underscore the need to approach this subject from a planetary perspective. While some studies have pointed to the suffering related to migrants' family separation (Lee, 2019), particularly when related to climate change (Bernzen, Jenkins, & Braun, 2019; McMichael, McMichael, Berry, & Bowen, 2010; Ty Miller & Thai Vu, 2021), there is a paucity of geographic literature on this topic in the context of temporary agricultural labor migration.

3.2. Combining reproductive geopolitics with a planetary perspective

In light of the aforementioned research gaps, I adopted a conceptual lens to focus on reproduction as a means of understanding the lives of female workers in agricultural labor migrations from a planetary perspective in order to elucidate the related socio-ecological implications. In the following two subsections, I first outline my approach to reproduction as a geopolitical issue, before expounding on the planetary lens that helps to understand the research subject.

Rethinking reproduction as geopolitical

In the two last decades, feminist geographers have increasingly underscored the geopolitical significance of mundane practices, such as intimacy, embodiment, and emotions, which led to the vibrant field of feminist geopolitics (Dixon & Marston, 2011; Dowler & Sharp, 2001; Massaro & Williams, 2013). Feminist geopolitics—that is, a theoretical base that this dissertation builds on—can be understood as a critique of the traditional white, masculine, and nation-state-centered geopolitical analysis, foregrounding instead the body as pivotal for understanding power dynamics across scales. Central to this approach is the concept of the global and the intimate (Pratt & Rosner, 2006, 2012), emphasizing that "the intimate is inextricable from the global" (Mountz & Hyndman, 2006, p. 448). By centering on the intimate as the focal point of the analysis, this approach criticizes the hierarchical understanding of scales, embracing instead their fluidity and the interconnectedness of the local, national, and global dimensions, thereby enriching our understanding of how these realms mutually shape one another. Studies on feminist geopolitics often focus on marginalized populations, such as

migrants (Ehrkamp, 2017; Jacobsen, 2023; Mountz, 2011), who are typically overlooked in traditional geopolitical analyses. Incorporating an intersectional perspective—by examining how power operates differently across gendered, racialized, sexualized, and otherwise differentiated bodies, and the spaces these bodies occupy—is a crucial component of this approach (Torres, 2018). A special focus is thus directed at how geopolitical practices intersect with people's intimate lives (Barabantseva et al., 2021; Pain, 2015; Smith, 2012, 2020). This focus on the intimate sphere was conceptualized by Smith (2012) through the term "intimate geopolitics," referring to the body as a site through which the geopolitical is produced. Pain and Staeheli (2014) further suggested placing the focus of analysis on how geopolitics is configured in intimate ways:

> *Intimacy is not simply the terrain on which broader sets of power relations are written. It is already out there, quietly working to produce domination as well as resistance across all practices and sites.* (p. 346)

In developing the larger research project (of which this dissertation forms part),[29] my colleagues and I have already argued that studying reproductive life through a geopolitical lens enables one to learn much about whose reproduction counts as desirable and whose bodies are discarded as disposable within particular territories (Perler, Schurr, Komposch, Winkel, & Cervantez Rodríguez, 2023; see also Fassin, 2009; Wright, 2006). We argue that while, in the past, the territorial management of populations was explicitly framed as population politics, nowadays the governance of reproduction occurs more implicitly through regimes of healthcare, migration, and sexual politics (Perler et al., 2023; Schurr, Komposch, Pérez-Hernandez, & Perler, forthcoming). With the concept of "reproductive geopolitics," we center reproduction in geopolitical debates and make invisible population politics explicit. We ask whose families count as desirable and how these are promoted and supported by state politics, while other racialized, classed, and nationalized groups are being deprived from living their reproductive and familial desires. This aligns with the writings of Smith et al. (2019) on the importance of paying attention to how varieties of racialized kinship are being constructed, thereby "taking kinship and families as central to the affective and embodied production of territory, borders, and nation-states" (p. 2). A geopolitical lens enables one to think about reproduction in conjunction with capitalist modes of production, as well as to critically reflect on the role of reproductive geopolitics in ensuring future populations of workers or limiting the amount of the

[29] This dissertation is part of a larger research project on reproductive geopolitics, funded by the Swiss National Science Foundation. More information about the research project can be found here: www.reproductivegeopolitics.ch.

so-called surplus population.[30] Thus, the concept of reproductive geopolitics (Perler et al., 2023) helps to reveal trans-scalar and historical geopolitical entanglements:

> *Reproductive geopolitics show how intimate desires and practices of reproduction are entangled with state and international politics as well as with (post)colonial imaginaries.* (p. 105)

Our understanding of reproductive geopolitics consists of a three-level analysis:

1. *Governance* of reproduction through planetary,[31] global, national, and local actors, and policies and practices;
2. *Everyday experiences* of stratified access to reproductive health and family life; and
3. *Practices of individual and collective contestation* against reproductive injustice.

When focusing on reproduction, I seek to address questions of governance, experiences, and contestation of family policies, as well as of uneven access to reproductive health.

Adopting a planetary perspective

An examination of reproduction in the context of agricultural labor migration would be partial without including environmental factors and thereby incorporating a planetary analysis. A growing body of scholarship has illustrated the significance of understanding reproduction as inherently connected to environmental issues (de Onis, 2012; Dow & Chaparro-Buitrago, 2023; Gay-Antaki, 2023; Hoover, 2018; Sasser, 2023). Gay-Antaki (2023) summarized the relevance of this nexus as follows: "By expanding our conception of the environment to include the place where we live, toil, and work, we underscore that all environmental matters are reproductive" (p. 18). As a result of the impact of climate change on the geographical regions under consideration in this dissertation, it became increasingly evident during the course of my fieldwork that environmental degradation and the planetary climate crisis represent central themes within the context of this research project. This led to the realization that a planetary lens was necessary.

Gayatri Chakravorty Spivak was among the first to use the term "planetary," thereby challenging the notion of a comprehensive, unified image of the "globe." In her acclaimed work, she wrote that "the globe is on our computers. No one lives there. It allows us to think

[30] The concept of "surplus population" refers to a segment of the population that exceeds the needs of the labor market and therefore includes "the unemployed, partially or under-employed, permanently unemployed, and those forcibly displaced from—or otherwise compelled to leave—land or country" (Nast, 2011, p. 1454).

[31] The *planetary* perspective is only introduced through this dissertation. Thus, we have not yet used the planetary scale in the above article.

that we can aim to control it. The planet is in the species of alterity" (Spivak, 2003, p. 72). Subsequently, an increasing number of scholars have criticized the "global" as an entry point for understanding the worldwide. They argue that the concept of "globalization" is too human-centric, homogenizing, and totalizing (Mould, 2023). Accordingly, there has been a notable shift toward a "planetary" perspective, which involves acknowledging that "making worlds is not limited to human[s]" (Tsing, 2015, p. 22). Instead, it recognizes the agency of plants, animals, and other species, as well as the "vibrant materialities" (Bennett, 2010), such as soil, forests, water, fires, rocks, or air.[32] A planetary approach thus allows for the inclusion of a more-than-human perspective (Clark & Szerszynski, 2021). Chakrabarty (2021) asserted that there is a "growing divergence in our consciousness between the global—a singularly human story—and the planetary, a perspective to which humans are incidental" (p. 67). A planetary perspective thus considers the interrelations between diverse beings and their environment, and directs attention to environmental issues affecting the planet as a whole. Furthermore, a planetary approach embraces "seeing connections not only across the Earth's surface, but into the atmosphere and subterraneanly" (Wang, Maye, & Woods, 2023, p. 2), which is of particular importance when analyzing or predicting outcomes of the anthropogenic climate crisis.

The concept of planetary urbanization, as proposed by Brenner and Schmid (2011), has garnered significant attention in recent years. They suggested that the urban realm has become so pervasive that there is no longer any distinction between urban and rural spaces, arguing that urban processes, such as resource extraction, air pollution, and infrastructure development, not only shape urban areas, but also profoundly impact rural regions. The critiques of the concept have been numerous (for an overview see Peake et al., 2018), but they primarily focus on the problematic conceptualization of the "urban" for being conceptualized in a totalizing manner (Derickson, 2018), with insufficient attention paid to the everyday realities of those involved (Ruddick, Peake, Tanyildiz, & Patrick, 2018), leading to an inadequate understanding of different places (Jazeel, 2018; Kipfer, 2018; R. N. Reddy, 2018). While I concur with these concerns about the holistic "urbanization" concept, I still perceive there to be significant value in the *planetary* perspective.

I find myself agreeing with the proposition that planetary thinking not only facilitates a more comprehensive understanding of the Earth, but also provides a framework for criticizing and challenging the pervasive influence of hegemonic and colonial modes of thought (Mould, 2023). The planetary approach to safeguarding the Earth "from below" (Mould, 2023, p. 9) is

[32] An inspiring empirical example of such an approach can be found in Eriksens and Ballard's (2020) book, which explores the alliances between humans, plants and fire.

not a novel concept, but rather resonates with enduring perspectives in Indigenous, post-colonial, and feminist political ecology, that emphasize the interconnectedness of humans and more-than-human entities (Coombes, Johnson, & Howitt, 2013; Escobar, 1998; Sidaway, Woon, & Jacobs, 2014; Silva Santisteban, 2020; Ulloa, 2021). Spivak (2003, p. 101) suggested that the planetary "is perhaps best imagined from the precapitalist cultures." However, the persistent underrepresentation of Indigenous and non-Western thought in academic discourse (Johnson & Murton, 2007) continues to limit the visibility of such promising approaches.

Further to providing a framework for questioning the nature-culture divide, a planetary perspective also enables one to question such human-constructed boundaries as national borders (Litfin, 2003). Indeed, scholars have argued that a planetary perspective can provide the "discipline [of geography] with a radical potency" (Mould, 2023, p. 9) that should enable geographers to not only interpret the world, but also to effect change, thereby contributing to more "planetary justice" (Lobo, Mayes, & Bedford, 2024).[33]

In order to address the research gaps identified in the previous section, I chose to adopt a dual approach. On the one hand, I applied the concept of reproductive geopolitics; on the other, I combined this framework with a planetary perspective.

3.3. Expanding debates on reproductive justice, liminality, and everyday violence

In this section, I outline the ways in which my dissertation contributes to filling existing conceptual research gaps in agricultural labor migration. By linking the geographical sub-disciplines of feminist geopolitics, health and labor geographies, and critical geographies of migration through a planetary lens, I aim to provider deeper insights into how environmental and reproductive injustices shape the health and familial wellbeing of migrant workers. In so doing, I also seek to understand how differently racialized, nationalized, and gendered bodies are assigned varying values in different societies.

Through three conceptual and empirical chapters, I address the above-described research gaps regarding: (1) intimate experiences of (lacking) access to reproductive healthcare, (2) family challenges in agricultural labor migration contexts, and (3) the lack of a planetary perspective on these topics.

[33] Planetary justice "focuses on the multiscalar interconnectedness of the human and more-than-human, and highlights the extent to which actions taken in one region, or even one community, impact the web of life across the planet" (Lobo, Mayes, & Bedford, 2024, p. 12). It can also be described as the combination of social justice (understood as "justice in the wide array of social relations between persons, from cultural to political to economic relations") and environmental justice (focusing on unequal "distribution of environmental benefits and burdens" (Hickey & Robeyns, 2020, p. 1,5)

In Chapter 5 ("Geographies of reproductive justice"), my co-authors and I expand the geographical debates about reproductive justice. This framework, coined by the SisterSong Women of Color Reproductive Justice Collective, denotes the human entitlement to personal bodily autonomy, including decisions regarding childbearing, childlessness, and the nurturing of children within safe and sustainable communities (Ross & Solinger, 2017). In recent years, an increasing number of geographers (England, Fannin, & Hazen, 2018) have engaged with the space-, place-, and mobility- aspects of reproduction, underscoring its geographical significance. We show how a geographical perspective and the reproductive justice approach can mutually enrich one another. With the socio-environmental aspects as the focus, my main contribution to this article can be found in Section 5.5 ("Environmental geographies of reproductive justice,"), highlighting how the planetary and the intimate intersect in reproductive matters.

In Chapter 6 ("Intimate liminality in Spain's berry industry"), together with my co-authors, I advance debates about liminality (Banfield, 2020; McConnell & Dittmer, 2018; Turner, 1967). We show how the geopolitical prescriptions of the Spanish–Moroccan labor migration regime, along with the working and living conditions of migrant workers in Huelva, result in experiences of "intimate liminality." By centering the emotional and embodied effects of being in a liminal position, migrant worker's reproductive health, and social relationships with family members, we extend the conceptual debates about marginalization and liminal spaces. Pointing toward the interrelations of occupational pesticide exposure of female workers and their reproductive health, we further show the inseparability of reproduction and the ecological environment.[34] We conceptualize migrant workers' "sense of not really belonging anywhere" (Binford & McLaughlin, 2021, p. 262), as experiences of "intimate liminality." In showing how migrant workers experience intimate liminality due to their territorial separation from their children—which can be mitigated (at least to some extent) by digital communication—we contribute to the fields of intimate geopolitics (Pain, 2009; Smith, 2020). In the same chapter, we also show how, despite their liminality, migrant workers contest precarious conditions through everyday solidarity practices, thereby using familial bonds as a method for engaging in geopolitics. In sum, we advance a feminist approach to liminality, emphasizing the importance of an embodied, intersectional, and multi-scalar perspective.

[34] This dissertation was written in a cumulative manner, and I did not begin to work with the concept of "planetary" until after the publication of this article. Therefore, the term "planetary" is not yet used in this article.

In Chapter 7 ("Geoviolence: Understanding the making of climate and reproductive injustice in global labor migration"), I further analyze the connections between climate change, migration policies, and the intimate suffering of agricultural migrant workers' families through a planetary perspective. Building on the nexus of environmental (Kosek, 2000, p. 201) and reproductive (Ross & Solinger, 2017) (in)justice, I emphasize the importance of conceptualizing the oppression resulting from this injustice as what I term "geoviolence." Using these two social justice frameworks in combination not only allows us to see reproductive health concerns as being interlinked with climate change, but it also reveals other systemic issues of discrimination of marginalized communities. In developing the term "geoviolence," I show how the effects of human-made climate change, manifested through diminishing rainfall and severe droughts in both regions, coupled with restrictive migration policies, exacerbate the familial hardships experienced by Moroccan agricultural laborers and their family members. I argue that addressing family fracturing, as well as the ways of dealing and contesting such challenging familial situations from a conceptual perspective of violence, enables the identification of responsibilities across multiple scales. In so doing, I advance debates about everyday forms of violence (Christian & Dowler, 2019; Pain, 2021; Pain & Staeheli, 2014) in the face of climate change (Chakrabarty, 2021; Nixon, 2011). This approach enables us to identify and acknowledge the interconnections of climate change, agricultural labor migration, and intimate experiences of family.

3.4. Introducing the planetary-intimate

Based on the conceptual contributions from the different chapters, it became evident that there are multiple interlinkages between the intimate experiences of female migrant workers and such environmental factors as toxic pollution or climate change. When considering these contributions together, the broader conceptual framework of a "planetary-intimate" emerged.[35] Following Pratt and Rosner (2012), I argue that "the intimate allows us to break out of established categories; it creates an opening to think something new" (p. 22). A number of geographers have already identified global climate change as a phenomenon that affects the body and space of the intimate (Bee, Rice, & Trauger, 2015; Neimanis & Walker, 2014), picturing bodies as "archives" of environmental pollution or revealing the affective politics of climate change (Anderson, 2023; Ryan, 2016). I argue that a planetary perspective would extend the understanding of such interconnections, potentially leading us to determine the most suitable avenues for change. In light of Pratt and Rosner's (2012) seminal work on the

[35] I would like to express my gratitude to Carolin Schurr for her invaluable help in refining this argument.

interconnections between the global and the intimate, and in alignment with a planetary perspective, I propose the term "planetary-intimate"[36] as a means to emphasize the complex interweaving of planetary and intimate realms. This conceptualization elucidates the profound interdependence between planetary processes on the one hand, such as rising sea levels, declining air quality, transnational migration, or the proliferation of bioplastic in microcells, and, on the other, the intimate, everyday experiences of individuals, including those related to health, relationships, and emotions. The concept of the planetary-intimate, similar to the concept of the global and the intimate proposed by Pratt and Rosner (2012), highlights the complex and evolving interconnections between multiple scales. I adopt a similar approach to Pratt and Rosner (2012), "focusing on the specific, the quotidian, the affective, and the eccentric" (p. 2), but suggest extending it to the planetary scale. As numerous scholars have noted, focusing on the intimate sphere of the body can allow us to, for instance, see the permeability and blurriness of the distinction between the human and nonhuman worlds (Haraway, 1991; Mansfield, 2018; Nash, 2007). As Julie Guthman and Becky Mansfield (2015) concluded: "bodies are environments and environments are made up of bodies, always and everywhere interacting" (p. 566). The mutual interactions between the intimate and the planetary demonstrate that planetary processes can alter intimate experiences, while also illustrating that actions within intimate spheres can directly impact the planetary scale. The concept of the planetary-intimate also builds on the foundational work of feminist geographers, emphasizing the non-hierarchical, non-binary relationality and hybridity of scales and spaces (Massey, 1994; Pratt & Rosner, 2012). Accordingly, the planetary-intimate perspective encompasses a more-than-human and material understanding of the planet, extending beyond a human-centric view of scales to include non-human species and geophysical processes in the analytical focus. In the context of an accelerating climate crisis, the interlinkages between the planetary and the intimate are particularly salient. This more earthly view promotes the recognition of interconnections with all beings on this planet, thus contributing to what Lobo et al. (2024) called a "planetary justice."

---

[36] I suggest writing the term with a hyphen so as to emphasize the interconnectedness of the two spheres. To my knowledge, no conceptualization of the scalar entanglements between the planetary and the intimate exists within the field of geography. The term "planetary intimacy" appears once in Ahuja's (2017) work on the Anthropocene, but without further conceptual elaboration. Additionally, Allen (2021) uses this same term in art studies, though he refers not to the interrelationship between planetary and intimate scales, but rather to a specific kind of intimacy, which he describes as "the necessary trust in and opening out into vulnerable, fluid attachments that provide means of survival for living beings" (p. 24).

4. Engaging through a/effective methodologies

This chapter presents my methodological framework, which combines qualitative and creative methods. Recognizing collaboration as a cornerstone of feminist methodologies (McDowell, 1992; Moss, 2003; Sharp, 2005), my approach is shaped by engaging with multiple actors with diverse areas of knowledge. This includes continuous discussions with colleagues from university and activism, ongoing consultations of various participants in my research fields, and collaborations with an artist, a filmmaker, and journalists for effective knowledge dissemination. I argue that such a collaborative, multi-method approach is not only suitable for capturing data about such intimate topics as family and health, but can also create personal bonds and provides an ideal foundation for a/effective knowledge dissemination.

4.1. Conducting multisided ethnography

Data collection

Focusing on female Moroccan workers' everyday experiences of family and access to reproductive health, I followed Migge and Gimartin's (2011) example and took "migrant social and spatial activities as […] starting point" (p. 4) of my methodology. I used a multi-sited ethnographic research approach (Marcus, 1995), and conducted a total of seven months of fieldwork in Spain and one month in Morocco between April 2021 and June 2023, spread over four stays. The fieldwork included observations at workers' homes, workplaces, hospitals, and health centers in Huelva and different regions of Morocco.[37] In Morocco, I also visited female workers' families and accompanied some of them on their journey to Huelva. I conducted over 40 interviews with seasonal workers, doctors, midwives, employers, Spanish and Moroccan public administrators, activists, and unionists.[38] Furthermore, I held many informal conversations with activists, employers, workers, and their family members (in person or remotely via WhatsApp), which were recorded in fieldnotes. The interviews lasted between 20 minutes and 3 hours, and included biographic and problem-centered questions (Rosenthal, 2007; Witzel, 2000). They were conducted in Spanish or French, or facilitated through interpreters in Darija (Moroccan Arabic). Based on the divergent cultural backgrounds and positionalities of myself and the research participants, the two interpreters

[37] The visited regions where Tanger-Tetouan-Al Hoceima, Casablanca-Settat, Béni Mellal-Khénifra, Rabat-Salé-Kénitra, Guelmim-Oued Noun, Marrakesh-Safi, and Fès-Meknès.

[38] Some participants were interviewed several times and some group interviews were conducted. For an overview of the number of interviews with the respective groups, see Table 1.

(both Moroccan women) contributed significantly to aiding my cultural understanding in addition to the linguistic translation work. I remain in frequent informal contact via phone and social media with four of the female Moroccan research participants to this day.

Additionally, I organized two participatory body-mapping workshops (Gastaldo et al., 2012) with a total of 10 participants to communicate body-related knowledge collectively using creative methods. Body-maps are life-sized drawings that participants draw during the body mapping workshops (Figure 5).

Figure 5: Example of a body map from a Moroccan worker drawn during the first workshop in 2022. Photo. Nora Komposch 2022.

Body mapping is a visual participatory method used to understand people's spatial and embodied experiences with a variety of social phenomena, including (in)security, violence, migration, health, and trauma (Sweet & Ortiz Escalante, 2017). The method is increasingly used by feminist researchers due to its participatory nature and its potential for reciprocity toward participants, who often benefit from the exchange. The workshops followed guided prepared questions on the research themes, and the participants "answered" these questions by drawing, using newspaper images, symbols, and slogans. In order to involve myself, I also participated by drawing my own body-maps and telling my own story to the participants. Eventually, the body-maps were discussed in the group. Drawing on these creative and participatory methods,

I tried to spatially capture women's embodied experiences of reproductive health and family relations in the context of seasonal agricultural labor in Huelva.

The following table provides an overview of the different data-collection methods used:

Participants	**Interviews**	**Participant observation**	**Body-mapping**
Workers by nationality (all female if not mentioned otherwise)	- 17 Moroccans (with origin-based contract) - 4 Spaniards - 2 Romanians - 2 male Hondurans - 1 male Moroccan	Observations and informal conversations during - Farm visits - Visit in their temporary housing - Joint shopping trips - Accompaniment to medical practitioners or hospitals - Visits in their hometowns in Morocco - Attendance of union activities with workers - Journey from Morocco to Spain	2 workshops with a total of 10 Moroccan workers
Family members of workers	-	Informal conversations with 6 families of Moroccan workers in their homes (each with 2–8 family members)	-
Employers	- 1 CEO of a berry company in Huelva (18 requests to other companies were either not answered or denied)	Informal conversations at 3 conferences about the berry sector in Huelva, Almonte, and Sevilla	-
State representatives	- 1 Anapec staff member (Morocco) - 1 staff member Spanish administration - 1 former administrative staff member of 1 of the main berry producing municipalities in Huelva	Informal conversations at conference about the berry sector in Huelva	-
Union and NGO representatives	- 3 union representatives of SOC/SAT - 2 representatives of self-organized workers' collective *Jornaleras de Huelva en lucha* - 1 staff member of the migrant support organization *Huelva Acoge* - 2 representatives of the feminist collective *Mujeres 24H* - 4 representatives of the feminist organization FLDF (Morocco)	Observations and informal conversations during associational activities with workers and gatherings with other political groups	2 activists of the feminist collective *Mujeres 24H* participated in 1 of the 2 workshops
Medical Staff	- 3 doctors - 2 midwives	Observations and informal conversations during medical consultations in an emergency center of a rural village	-

Table 1: Overview of different data collection methods. Source: Nora Komposch.

Data analysis

The data were pre-processed by transcribing most of my interviews and writing up and digitalizing (whenever possible) all of my observational notes and memos immediately after the interviews and observations. The first stage of my analysis consisted of a global analysis, as per Flick (2009). This step included a review of all the relevant interview transcripts, observational notes, documents, memos, and body maps, and sought to establish the basis for a refined analysis. Since my dissertation was written cumulatively, I repeated this step several times with the relevant data material before the content analysis for the respective article. I also performed this step in a participatory manner by sharing some interview transcripts with the colleagues of the larger research project, including their feedback.

I then proceeded with a qualitative content analysis so as to describe, summarize, structure, and explain the collected data (Mayring, 2015). To do so, I systematically summarized the data by combining specific content into superordinate thematic codes. Using MAXQDA qualitative software, I combined initially-defined basic theory-driven structuring deductive codes (e.g., "access to healthcare," "reproductive health," "family life," "reproductive justice," or "environmental justice") and then formulated the data-driven codes with inductive codes that emerged from the empirical data (e.g., "pregnancy," "climate of fear," "precarity," "climate change," or "solidarity"). By reading through the documents and the resulting codes several times and adding new codes, I captured important themes (e.g., "being in-between," or "violence linked to environmental degradation") in memos and used them as building blocks for my conceptual and empirical contributions.

Throughout this process, I confined myself to my observational notes and the spoken word in interviews and workshops. I opted not to interpret the cartographic data from the body-mapping-workshops from my position directly, but rather use the recorded spoken word of the participants about their way of interpreting the maps. I paid particular attention to how the different types of data related to each other, as well as to how both the visual data and my observation notes contextualized and complemented the spoken and written words. For example, the observation method significantly facilitated the identification of acts of solidarity and practices of resistance that were not necessarily framed as political agency in spoken words. The understanding of the different types of data as distinct modes of knowing, rather than merely disparate categories of evidence (Pink, 2009), entails a process of triangulating diverse data sources and critically reflecting on the methodology's application. This approach serves to

both enhance ethnographic validity (Sultana, 2007) and yield a more comprehensive understanding of the data.

4.2. Striving toward a/effective knowledge dissemination

One of the main aims of this research project was to create knowledge not only for an academic audience, but also for a wider public. Global challenges, such as climate change and geopolitical conflicts, result in a pressing need for the scientific community to communicate findings in such a manner as to enable broader publics, particularly political decision-makers, to access and practically apply knowledge (Gardner, Thierry, Rowlandson, & Steinberger, 2021). As Rachel Carson (1967) noted in her famous book, Silent Spring, on the devastating social and environmental effects of pesticide use: "Much of the necessary knowledge is now available but we do not use it." (p. 28). It is thus critical for the scientific community to not only generate new knowledge, but also find ways to disseminate it effectively so that it can be used.

Situating myself within the feminist geography tradition, my methodological approach also included the use of affectual methodologies (Militz, Faria, & Schurr, 2020). In so doing, I aimed to advance discussions around geography's creative turn so as to expand geographic knowledge-making beyond text-based analysis (Hawkins, 2019, 963) and to enable the a/effective communication of the results in such a way as to increase the audiences' resonance to the testimonials and intimate experiences. Further to the above-described ethnographic data collection methods, I collaborated with an artist and a documentary filmmaker in assisting them in using sensory methods, including sonic (Kanngieser, 2011) and visual methods (Garrett, 2011; Rose, 2011) to collect data for a/effective knowledge dissemination.

As detailed in Chapters 8 and 9, I partnered with Lucy Sabin and soil scientist Adrien Mestrot on a research-art project called *Toxic Textures,*[39] aimed at highlighting pesticide use in strawberry production and its potential effects on the reproductive health of female farmworkers. Multiple geographers have already shown how interdisciplinary collaborations can illuminate the uneven socioecological effects of pesticides (Mansfield et al., 2024). Based on these insights, we combined social geography, soil science, and art to explore and make different forms of pesticide exposure more palpable, and make toxic relations and their uneven distributions perceptible as "toxic textures": a kind of demarcation practice for attuning to the liminal spaces between inside and outside, earth and sky, body and world, and as a framing for toxic chemical encounters to invite embodied understandings of exposure processes and

[39]More information of its outline can be found on the project website: https://reproductivegeopolitics.ch/toxic-textures/.

histories. The collaboration was grounded upon a commonly-held question: How can we make the presence and effects of toxins perceptible in order to mobilize an effective response and response-ability befitting the scale of the problem? To gather data for this collaboration, the artist Lucy Sabin visited me in Huelva for a week in March 2022. Together, we toured strawberry plantations, where I assisted Lucy in photographing landscapes, plantations, and workers' housing. Additionally, we employed sonic methods by capturing sounds, voices, and ambient atmospheres in soundscapes. This collaboration culminated in an art exhibition in Bern in May 2022.[40]

A further project, through which I strived to increase the visibility of my empirical research, consisted of collaborating with a documentary film team, led by the Swiss filmmaker Sven Rufer from the Filmerei GmbH. As outlined in Chapter 10, the collaboration consisted of helping the film team gain access to the research field, finding participants, assisting in collecting visual data, and letting them accompany and film me in my ethnographic fieldwork. The collaboration resulted in the production of a one-hour documentary, called *The invisible: Modern slavery in Europe*, which has since been showcased at international film festivals, exhibited in Spanish and Swiss cinemas, and is now accessible to the wider public online, with subtitles in four languages.[41]

Through the use of such sonic and visual methods, we aimed to empirically grasp emotions and intimate experiences that often escape the spoken and written word, but include silences, bodily expressions (e.g., tears and laughter), and such non-verbal interactions as touch, turning away, and winking, thereby advancing discussions around more-than-representational methods (Dowling et al., 2018; Lorimer, 2005) A comprehensive analysis of these sonic and visual datasets would have exceeded the scope of this dissertation. The primary objective of using these more sensory approaches was to help gather data that could facilitate broader knowledge dissemination and a stronger emotional engagement from the audience. The ultimate aim of this methodological approach was to contribute to better working and living conditions on the ground.

4.3. Reflecting upon unequal positionalities in the field

> *Suffering cannot simply be "looked at," it challenges you. As a counterpart, I also have to relate to it. Not just as an observer, not just as an author, but also as a person.*

[40] There are plans to repeat at least a part of this exhibition within the context of a larger research-art-exhibition of our overall research project about reproductive geopolitics (see: www.reproductivegeopolitics.ch).
[41] The movie can be accessed at: www.dieunsichtbaren.ch.

> *An honest distance is and remains necessary, knowing one's own role, taking seriously, and recognizing what one cannot achieve, what promises one cannot make, and what questions are necessary in order to actually understand the history of others. But, despite this, it remains primarily and ultimately a human encounter.* (Emcke, 2024, p. 23, own translation)

In the above, philosopher and reporter Carolin Emcke describes one of the major challenges encountered in my research. As previously outlined in Chapter 2 (and further discussed in Chapters 6, 7, and 10), my research context is shaped by the prevalence of precarious labor and living conditions. Consequently, many of the research participants with whom I collaborated belonged to marginalized groups and were, due to their legal status, nationality, race, or class, particularly vulnerable, although to variable extents. This highlights the need to address a number of ethical challenges in a careful and considered manner: The questioning of my own positionality and the related power relations within my ethnographic research; concerns about the safety and well-being of research participants during our collaboration; the challenge not to victimize people in marginalized positions, but instead to reveal their agency; and the limits of participation within an unequal power system. All of these concerns constituted constant companions in my methodological reflections.

In accordance with the tenets of feminist research, which advocates for the inclusion of marginalized groups in the research process and the application of "situated ethics" (Schurr, 2017b; White & Bailey, 2004), I endeavored to design a methodological approach that would respect the research participants' need to share their experiences and testimonials in a manner that they would comfortable with and to which they could consent. Striving toward a more inclusive knowledge production process entailed my asking both research partners and interview participants about their opinions about the research focus and the proposed methods, and taking concrete steps toward reciprocity. Being in this precarious field and "only" collecting data on such intimate topics as health and family from research participants, without sharing information about myself and allowing research participants glimpses into my character and history, would have felt wrong to me in this context. During my ethnography, I therefore also shared much information about myself, my family, and my health, which helped me cultivate the relationships between myself and the participants—indeed, in some cases, even close friendships were formed. Emcke's (2024) above-description of the importance of remaining at an honest distance was therefore not always possible in my case. My role within the field

became multi-layered between being there as a researcher, activist, collaborator in a documentary film, and ally. The following fieldnote exemplifies this:

> *The worker, Nadira, needed a ride to get an abortion. An activist and friend of mine asked me if I could help out and so I accompanied her to the clinic and picked her up again after her treatment. When she came out of the clinic, she was crying and telling me about the painful medical procedure. I tried to comfort her by holding her hand. It was already late and dark outside, so I drove her to the* chabola*, a very simple, small* chabola *where she lives alone. When she said goodbye, she kissed me and was still crying. I offered her a place to sleep at mine, until she would feel better, knowing, that this could be a very challenging situation due to vast differences in our positionalities. But she wanted to stay at her place. I was very sad when I left her and, in the car, tears were streaming down my face. I was shaking. What an unfair world.* (Fieldnotes by the author, April 2022)

Such situations, where I had multiple roles at the same time, occurred frequently during my research stay in Huelva. Approaching such encounters with empathy prevented me from simply "observing" without becoming emotionally affected and engaged. As Gillian Rose (1997) described, research is "a messy business. Researchers are entangled in the research process in all sorts of ways, and the demand to situate knowledge is a demand to recognize that messiness" (p. 314). Consequently, the scientific orthodoxy of disengaged, disembodied, placeless, "objective" knowledge should always be subjected to critical scrutiny, and both the research participants' knowledge and our own assumptions must be understood as partial visions based on situated accounts (Haraway, 1988). As researchers, "we are in relation to others who are also simultaneously situated" (White & Bailey, 2004, p. 138). Situating knowledge and reflecting upcoming emotions in the field thus allows one to make transparent by whom the research was produced and under what circumstances (Schurr & Abdo, 2016). Moreover, as argued by Nagar (2002), based on situating identities, researchers have to engage with the "messy politics of power" in fieldwork, which can be particularly challenging when research relations transform into friendships (see also Browne, 2003).

Consequently, I reflected upon my position within the research collaboration with my partners throughout the entire research process, with the aim of becoming aware of my situated and embodied perspective and biases. As Riaño (2015) highlighted, it is of the utmost important to acknowledge "both commonality and difference in the process of negotiating research partnerships" (p. 4). As a white, 30-year-old, unmarried and childless, middle-class female PhD

candidate from Switzerland, who grew up in a predominantly Christian culture, the only social characteristic I shared with most of my research partners was my identification as a woman, and with some of them also the age. Although I was also a migrant in Spain, this status was quite different for me as a visiting researcher from a Western European country than it was for migrant women from the Global South. Having myself grown up in an agricultural environment, watching my father perform wage labor in the fields producing grains and dairy products for the agricultural market, and my mother working at home engaging in the reproductive labor of housework, caring for me and my two brothers and producing vegetables for our own consumption, the intersections of agricultural production and reproductive work have accompanied me since birth. However, time- and place-specific factors make my experiences in small-scale Swiss farming vastly different from what I have observed among migrant laborers in Huelva's berry cultivation. Hence, while my background as a child of farmers gave me some insights into agricultural work, having never done wage labor in this sector, my work experience did not allow me to directly relate to the work of the research participants. One way to critically reflect my specific positionality was to make my background transparent to the research participants with whom I collaborated. Indeed, at the beginning of interviews or observations, I consistently introduced myself by talking about the key characteristics of my above-mentioned positionality, as well as the reasons for my interest in these topics. Moreover, I always asked them if they would like to know more about me and my background.

The recognition of the diverse positionalities within this field also entailed the acknowledgment of the potential risks associated with my knowledge generation about this topic. As Bilger & Van Liempt (2018, p. 281) assert, researchers bear the responsibility to "minimize the harm" for their research subjects. In particular, when conducting research on marginalized groups, it is essential to be aware of the specific political context navigated by the research participants (Bilger & Van Liempt, 2018). Migrant workers in Huelva mostly live in precarious situations, and numerous studies have demonstrated that reporting unlawful labor conditions or other concerns often leads to the significant fear of losing one's job (Castro & Pinto, 2023; Guthman, 2017; Zeneidi, 2013). Furthermore, I have conducted numerous interviews with migrant workers who lacked a valid residence permit in Spain and, as a result, lived with the constant risk of deportation. The well-being and safety of all research participants, and thus the protection of their anonymity, was of paramount concern to me. The use of pseudonyms for all cited research participants as a fundamental aspect of ethical research (Béliard & Eideliman, 2008, p. 138) was thus crucial. In some cases, I also changed other biographical parameters,

such as age or number of children, to avoid drawing conclusions about the individuals in question and guaranteeing their privacy.

In order to ensure that the knowledge production process would be of interest to the participants themselves, I sought a constant dialogue with them. This process was made possible by the considerable amount of time I had spent in the field and through my involvement in collaborative efforts with workers, activists, and trade unionists. Due to this prolonged immersion, I was able to cultivate a robust and, to some extent, mutually-beneficial relationship with some individuals.[42] This allowed me to consult with workers or activists when elaborating interview guidelines or before implementing new methodological approaches (e.g., body mapping) and incorporate their perspectives. Aware of the potential biases that a strong collaboration and friendships with research participants and gatekeepers can entail (Dahinden & Efionayi-Mäder, 2009), I nevertheless chose to incorporate their insights and expertise into my methodological decision-making process. While doing so, I was also aware that "full participation remains an ideal" (Caretta & Riaño, 2016, p. 260). As an academic scholar, the greatest power over the research and the results remained in my hands. Although such power imbalances can be challenging for both friendships and the transformative endeavor of ethnographic fieldwork, I agree with Kath Browne's (2003) assertion that "power relations, as negotiated within and beyond research spaces, are [always] in progress and therefore offer rich possibilities for dialogues and actions" (p. 143).

Reflecting on these different challenges within this complex and multi-layered research field was crucial to learn from and deal with emotions and experiences both during and after the fieldwork so as to formulate my data analysis from an embodied and intersectional perspective.

[42] I tried to make my research stay useful to the research participants also by participating in activist activities that helped workers access healthcare and find information and support in situations where labor laws were not being enforced. Due to my access to a university-funded rental car, I was often able to take workers to the doctor or the grocery store. This allowed them to get around more easily and gave me the opportunity to spend time in the car talking with them. As with Browne's (2003) description of writing about friendships in fieldwork, these practices of support enabled me to give something back, and thus avoid "one-way exploitative relationships" (p. 140).

PART B: EMPIRICAL AND CONCEPTUAL CONTRIBUTIONS

5. Geographies of Reproductive Justice

Carolin Schurr[a], Susanne Schultz[b], Nora Komposch[a], Laura Perler[a], Nina Etter[a] Yolinlitzli Pérez-Hérnandez [a]

[a] University of Bern, Switzerland

[b] Goethe University Frankfurt am Main, Germany

This article (Schurr et al. 2025) has been published on May 12, 2025, in the journal *Progress in Human Geography*: https://doi.org/10.1177/03091325251338823.

My main contribution to this article can be found in Section 5.5 ("Environmental geographies of reproductive justice,"), highlighting how the planetary and the intimate intersect in reproductive matters. Moreover, I also contributed to the conceptualization and writing of the rest of the article.

Abstract: Contemporary struggles for access to abortion across the globe once more show how national and global politics shape intimate reproductive experiences. Feminist geographers have made important contributions to understand how global forces and national regulations are entangled with intimate practices of reproduction, love, and care. In more recent years, reproductive geographies have more explicitly engaged with the spaces, places and mobilities of reproduction and the movement concept reproductive justice has gained importance. This progress paper reviews how reproductive justice has come into debates in human geography and calls for the establishment of a new field: geographies of reproductive justice.

5.1. Introduction

The rise of a new political Right has turned reproductive politics—that is who has power over matters of sex and pregnancy and its consequences (Solinger, 2019)—into a main political battleground. Traditional, conservative moral values that defend a heteronormative model of the family are the ground for contemporary attacks on reproductive and sexual rights that many had taken for granted. In response, feminist movements across the world stand up against these attacks on reproductive and sexual rights. Moreover, decolonial, black and intersectional movements call for the need to connect fights over reproductive rights to questions of social and environmental injustice. Given the transnational political importance of reproductive justice, geography has started to pay closer attention to how reproductive in/justices unfold in specific political contexts both within and across national borders.

Black feminists and feminists of color have developed the concept of reproductive justice in the USA in the 1990s connecting reproductive rights to questions of social justice (Asian Communities for Reproductive Justice, 2005; Luna, 2009; Luna & Luker, 2013; Ross, Brownlee, Diallo, Rodriguez, & Roundtable, 2001; Ross & Solinger, 2017; Silliman, Gerber Fried, Gutiérrez, & Ross, 2004). As an intersectional activist concept, reproductive justice calls for a broader vision of reproductive rights that goes beyond the white liberal pro-choice focus on individual self-determination and abortion rights. Reproductive justice refers to three sets of rights: 1) the right to decide not to have children; 2) the right to decide to have children, and 3) the right to parent children in enabling economic, social, and environmental conditions and free of individual or institutionalized violence (Ross & Solinger, 2017). More recently, a fourth set of rights—the right to sexual autonomy that focuses on the human right to protect and maintain one's body, sexuality, and gender freedom—has been added. The reproductive justice movement stands for three major shifts in feminist reproductive politics: (1) a shift from individualistic and liberal notions of bodily autonomy and self-determination towards a focus on structural inequalities as preconditions for a broad set of reproductive rights (e.g., Price, 2020); (2) a shift from an isolated focus on gender towards intersectional relations of oppression that shape reproductive relations and politics (e.g., Ross & Solinger, 2017); and (3) a shift from abortion rights towards a broader set of reproductive rights including having or not having children and rights of parenting under decent conditions (e.g., Hyatt, McCoyd, & Diaz, 2022). In consequence, the reproductive justice movement turns its political attention beyond the white feminist movements' focus on individual bodies to the (post-)colonial histories of reproductive oppression and current structural discrimination of selective, eugenic, and antinatalist policies. It asks whose motherhood, parenthood, and children are desired and protected by society and

the state and whose are discriminated against, stigmatized, and considered disposable (Perler et al., 2023; Roberts, 1997, 2021; Schultz, 2022, 2023; Schurr, 2017a). Reproductive justice as a concept hence understands necropolitics as sine qua non condition for today's global biopolitics.

Given geography's extensive engagement with bio- and necropolitics (Davies, 2018; Mbembe, 2003; McIntyre & Nast, 2011; McKittrick, 2011; Philo, 2005; for an overview see Rutherford & Rutherford, 2013; Tyner, 2009, 2015; Vasudevan & Smith, 2020), it is surprising that the discipline has been rather slow to take up the concept of reproductive justice. Despite the rare explicit use of this concept, feminist geography has made important inroads in bringing reproductive questions into the discipline by focusing on reproductive bodies in urban public space (Longhurst, 2000, 2001), the disposability of life (Wright, 2006), the racialized and gendered politics of population control (Smith & Vasudevan, 2017; Wilson, 2018), environmental racism (Pulido, 2017), and infrastructures of pregnancy, birthing, caring and parenting (Boyer, 2018; England et al., 2018; Fannin, 2012) among others. The right to have or not have children and take care of children under good social and ecological conditions is enabled in specific political, social, economic, and cultural contexts. Geography's attention to spatial inequalities and situated politics is well suited to analyze contexts that allow or deny quests for reproductive justice. Feminist geography has a long tradition studying how multiple power formations produce space (Mollett & Faria, 2018). Feminist geographies analyzing the spatialities of intersectional power (Rodó-de-Zárate & Baylina, 2018; Schurr & Segebart, 2012; Valentine, 2007) provide a useful analytical framework to study political and structural inequalities that are at the core of the movements' struggles for reproductive justice. A geographic perspective is further apt to study different scales of reproductive policies—and their entanglements—considering the multiple relations between bodies, environments, and interspecies relations. Centering mobilities across national borders for dis/reproductive quests—that is technologies and practices that either enable or disable/prevent the reproduction of future life—is an important step to analyze how mobilities are engendered in consequence of national regulatory forces (Calkin, Freeman, & Moore, 2022; Engle, 2022; Gunnarsson Payne, 2015; Schurr, 2019). We argue in this paper that (feminist) geography with its focus on spatial inequalities and "power geometries" (Massey, 1993), politics of scale and reproductive (im)mobilities has much to offer to analyze struggles for reproductive justice.

For this review paper, we have systematically searched in the Web of Science, and Scopus for the keywords "reproductive justice" in the following journals: *Gender, Place and Culture, Social and Cultural Geography, Political Geography, Geopolitics, Environment and Planning*

A, D and C, Annals for American Geography, Transactions of British Geography, ACME, Antipode, Emotion, Space and Society, Geoforum, Area and *Progress in Human Geography*. To supplement this, we also conducted a Google Scholar search using the keywords "reproductive justice" and "geography". In total we have found 42 papers that explicitly mention "reproductive justice". Several of the papers were part of the initial selection only because the term appeared in the bibliography. We have read all the papers and analysed how and to what extent they refer to and use "reproductive justice". We have also added books and book chapters written by geographers or speaking to geography as a discipline, which address this topic. Given the scarce explicit reference to the concept of reproductive justice, we complemented this literature with texts from feminist geographers who deal with topics of reproductive justice, without mentioning the concept itself. We then mapped the sources (journal papers, books and book chapters) into thematic areas. In a last step, we reread the papers and extracted the central arguments and concepts related to reproductive justice. The review showed that most of the papers found were published in the two journals *Gender, Place and Culture* and *Emotion, Space and Society* and the use of the term increased especially since 2020. Abortion was the most prominent issue for papers that mentioned the concept of reproductive justice with special reference to developments in the USA since Roe vs. Wade was overturned and to the law reform in Ireland. Most of the empirical case studies focused on North America and Europe with few papers focusing on the Global South and Global East. As the literature research took place in English, there is a language-based bias in the paper. We hope to see similar reviews for other languages in the future.

The paper traces geography's initial reluctance to engage with questions of reproduction and subsequent inroads of these questions in the fields of population, political, economic, feminist, and reproductive geographies among others. We then discuss why and how reproductive justice has become a fruitful concept for geography. The literature review then circles around four broader themes connecting reproductive justice with debates on (1) population geographies and antinatalist policies, (2) spatially uneven and stratified access to reproductive health care, (3) environmental geographies, (4) and abolitionist geographies. Within each section, we delineate how geographers have engaged with reproductive justice and how geographic concepts have the potential to advance academic debates about and political struggles for reproductive justice. In the conclusion, we summarize our findings and propose the new field of geographies of reproductive justice to tackle the spatialities, mobilities and multi-scalarity that shape reproductive experiences and politics.

5.2. Bringing "reproduction" into geography

Within geography, population geography has traditionally studied questions of fertility in a rather quantitative fashion. In doing so, population geography has for long neglected not only the intimate and embodied experiences of reproduction but also the biopolitics behind such narratives of "population" growth and decline. Calls for a greater engagement with social theory and attention to the multiple relationships between demographic questions, (geo)politics, culture, and mundane life (Ginsburg & Rapp, 1995; Robbins & Smith, 2017; Tyner, 2013) have resulted in "more nuanced views of power and politics [in population geography]" (Robbins & Smith, 2017, p. 205). Tyner (2013) pushes the subdiscipline towards a politicized approach that asks, "Within any given place, who lives, who dies, and who decides?" (p. 702). Departing from these questions, (feminist) approaches to bio- and necropolitics have started to ask whose bodies and social groups' reproduction is desired and facilitated and whose reproductive futures are denied and discarded (Krupar & Ehlers, 2017; Pulido & De Lara, 2018; Schultz, 2019; Schurr, 2017a; Smith & Vasudevan, 2017; Sziarto, 2017; Wang, 2017). This body of work not only relates directly to core questions of reproductive justice but also critically questions the ways population geography has been disciplinarily established within a problematic eugenic and Malthusian genealogy. It shows population geography's problematic linkages to global population politics and the (mis)use of demographic knowledge production for racist and eugenic politics and settler colonialism.

Distancing themselves from the field of population geography, feminist geographers have started to engage with the politics of reproduction, establishing the research fields of intimate geopolitics (Brickell, 2014; Campos-Delgado & Côté-Boucher, 2024; Perler et al., 2023; Smith, 2012, 2020; Turner & Espinoza, 2021; Tyerman, 2021) and reproductive geographies (Bagelman & Gitome, 2021; Coddington, 2021a, 2021b; England et al., 2018; Hiemstra, 2021).

Intimate geopolitics posits the reproductive body as the central site from which to study processes of state territorialization. It is concerned with the way intimate relationships and decisions about reproduction shape the (geo)political future of the nation through the intertwinement of demography, childbirth, and nation building (Smith, 2020, p. 13). Work in the field of intimate geopolitics asks which social, ethnic, racialized, and religious groups are (dis)encouraged to reproduce (Llavaneras Blanco, 2022; Schurr, 2017a; Turner & Vera Espinoza, 2021). While these concerns are also at the center of the reproductive justice movement, it is interesting that few explicit references to reproductive justice can be found in the fast-growing field of intimate geopolitics.

Over the past decade, the field of reproductive geographies has started to flourish, examining "the experiential and political dimension of reproductive processes" (England et al., 2018, p. 6). Geographers have researched a broad range of reproductive experiences such as contraception (Bendix, Foley, Hendrixson, & Schultz, 2020; Levey & McCreary, 2024; Zabiliūté, 2020), menstruation (Joanes, 2023; Lahiri-Dutt, 2015; Militz, 2023; Nash, 2023), assisted reproductive technologies (Collard, 2018; Kato & Sleeboom-Faulkner, 2012; Lewis, 2018b, 2019; Perler & Schurr, 2022; Schurr, 2018; Schurr, Marquardt, & Militz, 2023), pregnancy (Boyer, 2018; Hamper & Nash, 2021; Longhurst, 2000, 2008), birth and miscarriage (Fannin, 2003; Grant, 2023; Hazen, 2018; McKinnon, 2016; McNiven, 2016), abortion (Baird, Flowers, Kevin, & Roach Anleu, 2024; Calkin, 2023; Calkin et al., 2022; Engle, 2022; Freeman, 2017; Hiemstra, 2021; Moore, 2015; Side, 2016; Thomsen, Levitt, Gernon, & Spencer, 2022), breast feeding and milk pumping (Boyer, 2010; Lane, 2014; Mathews, 2018), menopause (Bhakta, Reed, & Fisher, 2018), and Viagra (Del Casino & Brooks, 2015). This body of work has increasingly diversified and politicized the approaches to reproduction in geography. The field of reproductive geographies builds on several theoretical turns:

Geography's turn towards the body just before the new millennium has been key to provide the ground for what today is called reproductive geographies. Early work on "embodied geographies" (Longhurst, 1997; Nelson, 1999; Parr, 2002; Teather, 1999) has urged geographers to consider "the implications of [bodily] differences for geographical concepts of spatiality, boundaries and community" (McDowell, 1993, p. 306). Longhurst was among the first to engage explicitly with the spatialities of reproductive experiences such as pregnancy, birth, and breastfeeding (Longhurst, 2001, 2008). She showed how the body's fluidity and relationality in pregnancy and birth challenges masculinist notions of space as static and bounded. Feminist economic geographers have further focused on embodied labor in places of work (England & Henry, 2013; McDowell, 1995, 2009; Pratt, 2004b; Schwiter et al., 2018). Social reproduction has been at the forefront of economic geographers' engagement, looking at daily routines of parenting and caring for dependent others, clients and consumers (Katz, 1991, 2001; Lewis, 2018a; Mitchell et al., 2004; Winders & Smith, 2019). Work in this domain, however, has often overlooked the bodily specificities of in/fertility, pregnancy, birth, lactation, menstruation etc.

As in other fields of feminist research, "despite an avowed interest in the body, there [was] a persistent distaste for biological detail" (Wilson, 1998, pp. 14–15). This "distaste" was called into question by feminist new materialism which called for the need "to talk about the materiality of the body as itself an active force" (Alaimo & Hekman, 2008, p. 3). In geography,

work inspired by the *material turn* extended a poststructuralist understanding of the body as "being socio-culturally encoded and discursively normalized" (Strüver, 2019, p. 223) towards considering the body "a permeable space of biocultural responsiveness" (Frost, 2014, p. 307). This work hence considered the fleshiness and materiality of the body as a central site of geographical analysis (Boyer, 2018; Colls, 2007; Colls & Evans, 2013; Fannin, MacLeavy, Larner, & Wang, 2014; Marquardt & Strüver, 2018; Militz, Dzudzek, & Schurr, 2021; Strüver, 2020). Feminist geographers have employed transcorporeal approaches to study the material relation between mothers and babies as forms of "placental relations" (Colls & Fannin, 2013), "uterine geographies" (Lewis, 2018a) or "mother-baby assemblages" (Boyer & Spinney, 2016).

Finally, for the development of the field of reproductive geographies, *the emotional, affective and intimate turn* in geography has been crucial (for an overview see Bondi, Davidson, & Smith, 2005). Numerous feminist scholars have for instance looked at the emotional labor of care workers (Dyer, McDowell, & Batnitzky, 2008; McDowell, 2008, 2009; Schilliger, 2013; Schwiter & Steiner, 2020; Schwiter et al., 2018). As reproductive bodies are "intensely emotional(ized) areas" (Bondi et al., 2005, p. 5), feminist geographers have also engaged with the affective geographies of parenting (Longhurst, 2013, 2016; Pratt, 2009, 2012), breastfeeding (Boswell-Penc & Boyer, 2007; Robinson, 2018), and surrogacy and oocyte donation (Perler & Schurr, 2021; Schurr & Militz, 2018).

In sum, feminist geographies of the body, materialist geographies and emotional and affective geographies provide the conceptual ground for the research field "reproductive geographies". The field shaping edited book "Reproductive Geographies: Bodies, Places and Politics" departs by stating that "reproductive justice movements and new reproductive technologies are raising important questions about the changing social and spatial dimensions of reproductive life" (Fannin, Hazen, & England, 2018, p. 5). The edited volume, however, makes only five explicit references to the concept of reproductive justice. While much appreciating the edited book, we argue that the edited collection is exemplary for geography's late explicit engagement with the concept and the missed opportunities given the concept's intersectional and spatial sensitivity to power geometries. At the same time, we consider the edited book as the point of departure for geographers' engagement with reproductive justice as it puts questions of reproductive rights and social inequalities onto the agenda of human geography.

5.3. Population geographies and antinatalist policies

One context in which geographers refer to reproductive justice is the critical reflection on population geography's history as a field that was disciplinarily established within eugenic and

Malthusian genealogies (Coddington, 2021a; Hendrixson et al., 2020; Hübl, 2019, 2022; Siedhoff, Glorius, & Wintzer, 2023). These scholars criticize the subdiscipline's lacking reappraisal of this problematic history and its use of quantitative measures of demographic development, population distribution or fertility without reflecting inherent Malthusianist presumptions and colonial biases of statistical knowledge production (Bendix & Schultz, 2018). Critical approaches to population geography argue that the epistemic object "population" itself is highly contingent and needs fundamental epistemological reflection.

Feminist researchers employing a reproductive justice lens therefore suggest the critical notion of "populationism" (Hendrixson et al., 2020). It refers to "ideologies that attribute social and ecological ills to human numbers" (Angus & Butler, 2011, p. xxi) and questions how population studies support neo-Malthusianist global policies which consider "population dynamics" the central cause of different global crises ranging from food insecurity over climate change to migration. Authors of the GPC special issue on populationism criticize the abstract and decontextualized use of global (or national) population numbers and call instead for a situated understanding of the multifacted roots of current socioeconomic and -ecological crises (Bendix et al., 2020; Bhatia et al., 2020; Ojeda, Sasser, & Lunstrum, 2020; Rivera-Amarillo & Camargo, 2020; Shaw & Wilson, 2020).

Critical and feminist geographers have further engaged with populationist narratives and agendas in their empirical research on global anti-natalist policies. They show that the knowledge produced by population geography and population studies contributed to an unequal landscape of projections towards different populations at a global and local level suggesting whose reproduction should be averted with the aim to reduce fertility rates—especially among racialized and poor populations (Bendix et al., 2020; Bendix & Schultz, 2018; Hendrixson et al., 2020; Smith & Vasudevan, 2017; Smith, Vasudevan, Serrano, & Gökarıksel, 2019). This body of research speaks to the reproductive justice framework and has welcomed it as a helpful concept to analyze normative, unconsented or even forced contraception or sterilization programs (Schultz, 2023).

Scholars working on the conceptual critique of population geographies by referring to reproductive justice often emphasize temporality as a key concept. Coddington (2021a), for example, addresses questions of temporality within her critique of the way population geographers interpret fertility as a "biological event" which is "taken for granted" (p. 1677). She suggests instead the concept of "anticipatory weight", which refers to the inbuilt futurity of reproductive policies—a "preemptive performance of what might happen" (p. 1681). The

presence of a sedimented past is another important temporal trope in debates on 'population' employing the concept of reproductive justice. This body of work scrutinizes (dis-)continuities of Malthusian and eugenic thinking in global and national programs of population control and racial hygiene (Hendrixson, 2019). Kaufman and Nelson (2012) analyze welfare reform policies of the USA in the 1990s showing the persistence of an antinatalist Malthusian discourse in these reforms that were rooted in a "deep fear of engulfing social chaos if 'we' do not check the fertility of poor women, and particularly women of color" (p. 431).

Anti-natalist politics are not only shaped by temporality but also spatiality. The "demographisation" of social and ecological problems has resulted in a particular geography of anti- or pronatalist policies (Schultz, 2022). Whereas pronatalist policies are directed towards women and men in the Global North and to white, educated, middle-upper class with citizenship status, antinatalist policies target mainly poor, rural people of color residing in the Global South as well as proletarian, migrants, and illegalized social groups in the Global North. Wilson (2018), for example, shows how the Indian state in the aftermath of global population control continues to target "poor, Dalit, Adivasi and religious minority women" (p. 3) with coercive mass sterilizations and unsafe injectable programs.

Scale is another concept geographers use to analyze anti- and pro-natalist reproductive technologies. Feminist geographers use the notion of the global intimate to engage with the multiple entanglements between global programs of population control, national health policies and intimate experiences of infertility, sterilization and contraception (Perler & Schurr, 2021; Perler et al., 2023; Schurr, 2017a). They show how both in the global fertility industry and global establishment of population control, a network of actors ranging from international organizations, national states to foundations and religious organization working on and across different scales interferes into people's intimate lives. The influence of philanthrocapitalist forces becomes obvious in Shaw and Wilson's (2020) paper in which they study the Bill and Melinda Gates Foundation's strategies towards population and agricultural policies. Politics of scale are also crucial to understand the continuities of neo-Malthusian, antinatalist contraceptive programs. Globally acting development agencies promote for example the contraceptive injection Sayana Press particularly in Western and Eastern African countries as a way to foster reproductive autonomy and self-determination (Bendix et al., 2020). As women can apply the hormonal injection by themselves, this antinatalist intervention is framed within the language of reproductive empowerment. Nevertheless, these programs are deeply rooted in antinatalist aims of family planning policies within the FP2020 agenda, a program of a network of transnational and national donors, NGOs, government agencies and Big Pharma (Hendrixson,

2019). They are embedded in a strategic focus of current global family planning programs on long-acting reversible contraception (LARC) propagating hormonal injectables and implants for certain world regions having a supposed "population problem" which have been very contested within global feminist reproductive health struggles since decades (Bendix & Schultz, 2018).

5.4. Spatially uneven and stratified access to reproductive health care

Another strand of literature in geography focuses on questions of access to reproductive health. It studies the "raced, classed, and gendered (among others) dimensions of inaccessibility" (Lopez, 2019, p. 840) to reproductive health care—again mostly with a focus on the USA and UK. Such an intersectional focus on structural injustices lies at the center of the struggle for reproductive justice. Lopez (2019) shows how the access to Medicaid during pregnancy ensures better care coordination and health outcomes for mothers and children regardless of income, race, and age in the USA. Despite the increase of enrolment to Medicaid, however, maternal mortality rates have continued to be over-proportionally high for Black women. Revealing that maternal and infant mortality vary significantly between different regions in the USA, she calls for the need of a spatial analysis for understanding (lacking) access to reproductive healthcare. For the UK, Hall (2023) found that people pause their decisions to have any or more children "as a direct result of changes in the name of austerity" (p. 103755). Focusing on Northeast England, her socio-spatial analysis reveals how high levels of poverty following deindustrialization and austerity cuts intersect with low birth rates. While both articles do not refer to the framework of reproductive justice, they are crucial to point to the socio-spatially unequal access to reproductive health care and the right to have (or not have) a child.

Focusing on racialized reproductive injustices, Nash (2021) further engages with reproductive in/justices to study racist obstetric violence and Black women's lack of access to reproductive health in the USA. She emphasizes the importance of a geographical approach to unequal health outcomes regarding maternity and infant mortality. Analyzing the spatial webs of legal and medical actors involved in pregnancy, birth, and postnatal care, she argues that a singular focus on the hospital as the preeminent site of obstetric violence and medical racism responsible for the over proportionally high deadly outcomes of Black women and their children is far too narrow. Instead, reproductive justice activists and scholars should consider a broader scope of actors when undertaking a multiscalar analysis of reproductive injustices. Sziarto (2017) also focuses on the racialized politics of reproduction, discussing infant mortality in Milwaukee's Black community which is three times higher than for white babies. Calling for the need to craft

an “anti-racist biopolitics” (Sziarto, 2017, p. 315), she is in line with the reproductive justice movement in the sense that the call for free choice is not enough but that economic, social, and racial justice are necessary preconditions.

Komposch, Schurr, and Escrivà (2024) also highlight the importance of employing a multiscalar, intersectional and embodied perspective to grasp the full extent of female migrant farmworkers’ limited access to reproductive health services in Spain. They demonstrate that “liminality [in terms of lacking access to reproductive health care] often manifests itself through the absence of infrastructures, information, and resources rather than through visible barriers” (p. 8). Quests for access to reproductive health care to be able to have or not have children emerge within patterns of global uneven development and (post)colonial imaginaries that designate some bodies the right to appropriate the bodies of others to their ends and render the latter disposable. McKinnon (2016), for example, argues that birth reflects “wider social issues such as the familiar questions of women’s role in the economy, in the family, and women’s power over their own bodies and sexualities” (p. 288).

In a similar vein, Perler and Schurr (2021; Schurr, 2017a) analyze the way the act of egg donation in Mexico’s fertility industry is entangled with egg donor’s reproductive biographies, women’s desire for a “good life”, systematic feminicide, lacking access to reproductive health care in Mexico’s neoliberal healthcare system, and a fast spreading global fertility market which values white(er) lives over non-white lives. When linking women’s decision to provide their oocytes for the national or global fertility market to culturalized obligations of care and the lack of a social welfare state, these scholars address key questions of reproductive justice (again without referring to the concept itself).

Lack of access to reproductive health care can also result in “reproductive mobilities” (Schurr, 2019; Speier, Lozanski, & Frohlick, 2020). The uneven and unequal access to reproductive health care and dis/reproductive technologies engenders all kinds of mobilities in which “people travel abroad to seek treatment they have no access to or cannot afford in their home country” (Schurr, 2018, p. 2). Geographers have studied why and how people travel in search of in vitro fertilization treatment (e.g. Schurr, 2018), oocyte donation (e.g. Gunnarsson Payne, 2015), surrogacy (e.g. Bhattacharjee, 2021; Schurr & Militz, 2018), and sex selection (e.g. Bhatia, 2018). Without explicitly referring to reproductive justice, they show how reproductive mobilities are embedded in colonial and postcolonial histories emphasizing the “legacy of colonial plunder” and the “ruthless utilization of the ‘native’ body for western profit” (Lau, 2018, p. 672). Reproductive mobilities result from the fact that the consumption of the same

reproductive technologies and services has not only different costs in different places, but that certain technologies and services are only legally available in specific places. Other places restrict access to certain reproductive technologies to particular social groups, denying, for example, single intended parents, unmarried or homosexual couples to access IVF treatment, oocyte donation or surrogacy. Feminist geographers unpack the power relations and global inequalities inherent in reproductive mobilities. Lau (2018) calls for the need to unveil how transnational surrogacy "obscures [these] reproductive injustices" and in doing so "constrains possibilities for feminist solidarity across borders of race, class and nation" (p. 671).

The recent rise of geographic literature on access to abortion and the linked mobilities incorporates reproductive justice more systematically than earlier work on mobilities related to assisted reproductive technologies (for an overview see Calkin et al., 2022). Given that the reproductive justice movement emerged in response to the white liberal feminist movement's exclusive focus on abortion rights, this body of work recognizes this potential dissonance (Engle, 2022, p. 6). Feminist geographers have begun to demonstrate how reproductive justice can be incorporated into scholarship on abortion mobilities and how geography's attention to the "more intricate and often 'invisible' realities of gender, poverty, rurality, and immigration statues, as well as the intersections among these is crucial" (Statz & Pruitt, 2019, p. 1107). Distance and mobility are two crucial concepts feminist geographers have discussed in relation to reproductive justice's call for the right to not have a child. Statz and Pruitt (2019) call for the importance of theorizing distance in relation to the juridical recognition of "the burden of distance" as a barrier to access constitutionally guaranteed (reproductive) rights in the context of abortion debates in the USA. As recent research on abortion mobilities shows, gender, race, and class shape women's ability to travel for an abortion. Work on abortion mobilities has focused on cross-border travel for abortion between Chile and Peru (Freeman, 2017) or Ireland and England (Calkin, 2019; Jackson, 2020; Murray & Khan, 2020; Side, 2016, 2020) due to different national legislations, the mobilities of mobile crisis pregnancy centers of pro-life groups (Thomsen et al., 2022) and the mobilities of abortion medication (Calkin, 2021, 2023). In sum, reproductive and abortion mobilities result from the fact that access to dis/reproductive technologies has not only a different cost in different places, but that certain technologies and services are only legal at certain places. Other places restrict access to certain dis/reproductive health services to particular social groups through lacking infrastructure, information, or resources.

5.5. Environmental geographies of reproductive justice

Another strand of literature goes even further and connects the debates on reproductive rights not only with social but also environmental justice. As outlined by the SisterSong Women of Color Reproductive Justice Collective, reproductive justice also includes the right to parent the children we have in safe and sustainable communities (Ross & Solinger, 2017). This right to parent children in safe and sustainable communities can be interfered by multiple factors, such as environmental racism, urban segregation, or unsafe places for families such as war spaces or refugee camps.

A fast-growing number of scholars stress on thinking reproductive and environmental justice together, since "environmental justice shares with reproductive justice the essential and broad ideological frame of social justice with a focus on the whole instead of the sole" (Cook, 2007, p. 62). It is important to understand environment in a broad sense: "By expanding our conception of the environment to include the place where we live, toil, and work, we underscore that all environmental matters are reproductive" (Gay-Antaki, 2023, p. 18). Thinking the two social justice frameworks together not only allows to see reproductive health concerns linked with toxic exposures or climate change but also illustrates other systemic issues of discrimination of marginalized communities (Sasser, 2023).

In recent years, there has been a growing scholarly focus on the intersection of reproductive justice and environmental justice within the field of geography. Cairns (2022) for example analyses Black mothers' struggles to secure clean water for their children in a highly lead-polluted neighborhood in New Jersey, USA. It is known that the toxin lead can have heightened negative neurological effects on babies and young children. She concludes that the slow violence of environmental harm demands especially from women increased social reproductive labor to cure and care for children, partners, and parents whose health is affected by the environmental toxins. Similar conclusions were also drawn by Morrell and Blackwell (2022) who show how urban racial segregation pushes Black women in the neighborhoods that are most environmentally degraded in Milwaukee County, USA. Urban segregation is one example, how place matters in understanding reproductive in/justices. Who has the right and access to live in green cities and neighborhoods with clean water? And who does not? Where does environmental pollution manifest and who's bodies and reproductive capacities are getting affected by it? Jokela-Pansini's (2022) research in the environmentally hazardous region of Taranto, Italy unveils the deleterious impact of toxic air pollution on women's reproductive health. She reveals that mothers' apprehensions concerning environmental pollution compound

their overall anxieties about pregnancy, breastfeeding, and uncertainties surrounding their reproductive well-being (Jokela-Pansini, 2022; Jokela-Pansini & Militz, 2022).

Reproductive justice is also assuming ever greater significance within the intricate intersection of mobility and agricultural labor. Within this domain, the prevalence of reproductive health issues resulting from the exposure to pesticides and unfavorable working conditions has become an inherent part of the daily lived experiences of agricultural workers (Barbour & Guthman, 2018; Cohen & Caxaj, 2018; Galarneau, 2013; Komposch et al., 2024; Sabin, Komposch, & Mestrot, 2024). The arduous nature of this work, coupled with its low wages, often falls upon marginalized communities, including migrants, people of color, and indigenous populations (McCovey & Salter, 2009). These groups bear much of the impact of pesticide spills, highlighting the profound interconnection between reproductive justice and environmental racism. Barbour and Guthman (2018) found evidence for reproductive health damages in California's strawberry industry, where female migrant farmworkers reported severe harm, including miscarriages and birth defects. These women also experienced mental stress due to the "additional moral burden on women farmworkers who are made responsible for protecting future populations" (p. 1). Inadequate access to reproductive health services and reproductive oppression has been reported in the context of seasonal agricultural labor in Canada (Cohen & Caxaj, 2018), the USA (Galarneau, 2013) and Spain (Komposch et al., 2024) predominantly affecting migrant women on the move. These examples serve as reminders that environmental and reproductive justice is inextricably linked not only to factors of race, ethnicity, and class but also to the element of mobility.

As already discussed above, the dynamics of reproductive in/justice unfold across diverse scales, ranging from the global and national to the local and intimately embodied level. The value of a multiscalar approach in comprehending reproductive injustices is further exemplified when examining instances of climate injustices. For example, in their research, Rishworth and Dixon (2018) delve into the historical foundations of inequality, poverty, and the precarious environmental conditions engendered by food insecurity and fluctuating climates in North Ghana. This confluence of factors leads to alarming maternal and child health outcomes. The adverse effects manifest in various ways: the challenges of "expensive journey times to health facilities, gendered care obligations and growing environmental concerns (such as food shortages, drought, etc.) complicate maternal and child health outcomes" (Rishworth & Dixon, 2018, p. 207). While the origins of environmental harm may be global, propagated by climate warming, the impact is localized, acutely experienced through droughts, and profoundly embodied in the alarming state of maternal and child health. Thus, embracing a multiscalar

perspective proves useful in discerning the intricate web of reproductive injustices and their interconnectedness with climate and environmental factors.

5.6. Abolitionist geographies and the right to parent free of violence

Abolitionist geographies are another important field of reference for current work on reproductive justice in geography (Gilmore, 2023; for an overview see Hamlin, 2023). Abolitionism, like reproductive justice, is a political-theoretical framework which currently gains much attention in critical geography and social science more broadly. Abolitionist geographies focus on the spatial arrangements and the scalar entanglements between global racial capitalism, settler colonialism, racialized state violence, and the effects and execution of violent state ideologies and policies on lower institutional scales such as the federal state, the county, the city or the prison administration (Loick & Thompson, 2023). In recent years border regimes and other forms of state and institutional violence in the context of the "welfare state" and social and health policies have also come into view (Laufenberg & Thompson, 2021; Walia, 2013).

Reproductive justice as a concept with abolitionist claims itself (Roberts, 2021) enables to broaden abolitionist geographies' scope towards violence against gendered reproductive bodies and oppression of mothers/parents denying them their right to parent a child at all or in good conditions. Both conceptual debates share the concern of how to analyze institutional and state violence in the context of struggles for access to public services and social policies. Nash (2021), for example, works in her research on anti-Black obstetric violence through this challenge for both the abolitionist project and reproductive justice. She asks what a critical stance might look like that both advocates for access to respectful public care and simultaneously positions itself against the violence inscribed within it: "At once, reproductive justice advocates contend that Black mothers should have access to institutional medicine, even as they underscore that institutional medicine is the site of violence" (Nash, 2021, p. 314).

The anti-institutional and transformative gesture of abolitionism is also adopted by the feminist debate on family abolitionism. This debate relates to reproductive justice as both approaches are based on the critique of the white heterosexual nuclear bourgeois family norm. However, it also somehow collides with it, or at least raises many open questions, insofar as reproductive justice advocates, after all, precisely emphasize the right to mothering/parenting for those stigmatized and discriminated social groups that have been and continue to be socially excluded from having and living family life. Lewis (2018b, 2022) responds to this tension between family abolitionism and reproductive justice by referring to critiques from reproductive justice

activism towards the model of the nuclear family that precisely devalues and discriminates against forms of "other-mothering" as, for example, more community-oriented motherhood or polymaternalism. Family abolitionists criticize state family policies that re/produce notions of who are "appropriate family and 'fit' parents" (Mizielinska, 2022, p. 11). The multiscalarity of state interventions and coping strategies with repressive heteronormative family policies is made evident in different empirical examples in which queer parenthood became impossible due to specific national regulations.

At the center of abolitionist geographies remains the analysis of the spatiality and scalarity of carceral violence and the prison-industrial complex (Hamlin, 2023, p. 10). Highlighting the challenges of parenting in the highly institutionalized and regulated prison spaces, research uncovers struggles at the heart of reproductive justice without, however, always explicitly referencing the concept (Etter, 2022; Moran, Hutton, Dixon, & Disney, 2017; Pallot & Piacentini, 2012; Schliehe, 2017, 2021). Smith et al. (2019) highlight how "forced sterilization's denial of reproductive rights, reproduced in foster care and incarceration alike, and in the carceralization of urban spaces […] destroy Black family life" (p. 145). They discuss the effects of patriarchal white supremacy as dictating "who gets to have ancestors and who gets to have children", asking "in what contexts are children considered innocent and requiring protection? Which children? Whose? Migrant labor has historically separated children from families; yet this class-based division of labor, rather than soliciting white empathy, pathologizes migrant parents and naturalizes laborers' suffering" (p. 145). Centering reproductive justice in abolitionist carceral geographies' inquiries can contribute to understanding and ultimately challenging the ways in which prison spatialities and police violence impend social relations of parenting (Dottolo & Stewart, 2008; Loureiro, 2020; Ouassak, 2020; Smith, 2016). In Brazil, reproductive justice advocates currently debate, for example, how to ally with the mothers' movements within peripheric neighborhoods who protest against police violence and murder of their children (Schultz 2023).

Denying reproductive rights and breaking family ties in the context of migration and border regimes is another issue at the intersection of abolitionist geographic and reproductive justice, that currently gains attention in geography (Coddington, 2021b; Hiemstra, 2021; Komposch et al., 2024; Torres, 2018; Torres, Blue, Faria, Segura, & Swanson, 2022; Torres et al., 2023). Gahman and Hjalmarson (2019) draw on Walia's (2013) concept of border imperialism and propose the spatial perspective of "deracination" as socio-spatial processes of violent dispersing of inhabitants from a territory. A reproductive justice perspective links deracination with the violent tearing apart—emotionally and spatially—of communitarian interpersonal and

interfamily ties in the context of migration and border regimes. Family fracturing has many faces, from the history of national borders being imposed on indigenous communities, dividing them and ascribing them to two different nationalities to the tearing apart of families migration policies (Gahman & Hjalmarson, 2019; Smith et al., 2019). Eaves (2019) also refers to the persistence of gendered violence "justified and/or upheld by the state" (p. 1317) and highlights the zero tolerance immigration policy in the USA since 2018. As part of a broad strategy of criminalization, detention, and deportation of immigrants, there has been a "traumatic process of family separation, where children are detained separately from their parents" (Eaves, 2019, p. 1317). Smith et al. (2019) call for attention to the "performative apathy" towards the violence faced by non-white families in the era of Trump. Engaging with family separation in consequence of Trump's zero-tolerance policy, they "encourage geographers to engage feminists of color's analysis that demonstrate how whiteness is constructed through fictive kinship and destroying or appropriating Black, Brown, Native, and migrant kinship" (p. 145). Beyond the US context, challenges of family fracturing in migrant contexts have been addressed for example by Komposch et al. (2024) studying the emotional suffering of Moroccan workers in Spain within transnational labor migration programmes or by Pratt (2012) with regard to nannies from the Philippines working in Canada. Both works show how migrants are forced to leave their children behind within gendered circular or temporal labor migration regimes.

Abolitionist geographies shed new light on reproductive justice's claim to parent children under good social conditions and free from violence. Work in geography enables a complex and intersectional view of the multiscalar dimensions of repressive statehood and broadens thereby the scope of abolitionist research.

5.7. Conclusion

For long, geography has tended to sideline questions of social and biological reproduction. In recent years, the fields of feminist geographies, intimate geopolitics and reproductive geographies have started to engage more directly with reproductive relations. Much of that literature dealing with reproduction, however, has until recently not engaged with the Black feminist movement framework of reproductive justice. It is only in very recent years, that geographers start to engage with the concept.

What our tour d'horizon over the state of literature in human geography shows is that traditionally, many of the debates addressing questions of reproductive justice are relegated to different subfields such as population geographies, geopolitics, political geography, feminist geography, migration geography, urban geography, environmental geographies, abolitionist

geographies and geographies of the border. In these concluding thoughts, we suggest that the new field of geographies of reproductive justice can serve as a broader umbrella to connect and bridge these different debates in a more holistic way. We argue for the need to establish this new field of research in geography to address current global challenges.

The planetary future is currently under enormous threat. The future of life itself is contested through climate, financial, political and social crisis resulting from the "white (m)Anthropocene" (Di Chiro, 2017). A rather dangerous "Malthusian reflex" (Schultz, 2021) has re-emerged in the climate change debate which uses the strategy of demographisation claiming that the climate crisis can be addressed by reducing birth rates and controlling demographic growth (Ojeda et al., 2020; Sasser, 2014, 2018). This "Malthusian reflex" can be observed in very different political milieus from a technocratic mainstream to right-wing nationalist positions to feminist and climate activist calls for a birth strike (Schultz, 2022). These strategies of demographisation that are currently used to address the climate crisis are in our view incompatible with emancipatory feminist and decolonial projects of social transformation that are committed to fighting global power relations, capitalist exploitation, and social inequality. We argue that geographies of reproductive justice have not only much to offer to understand the uneven effects of climate change and intersecting crises on different marginalized communities. Intersectional feminist approaches such as the movement concept of reproductive justice are urgently needed to formulate critiques against current strategies of demographisation and neo-Malthusian agendas that emerge in the context of the climate crisis. Drawing on the reproductive justice framework which builds on a long history of anti-Malthusian feminist, anti-racist and anti-eugenic struggles enables researchers and activists alike to ground intersectional reproductive politics in these histories. Centering social and global justice, geographies of reproductive justice address the "slow and fast violence" (Christian & Dowler, 2019) wrought by climate change, toxic pollution, deforestation, desertification, and the environmental aftermath of war and violence that deprive particularly vulnerable groups of their livelihoods (Cairns, 2022; Davies, 2018; Jones, 2019; Nixon, 2011; Vorbrugg, 2022). Geographies of reproductive justice connect bio- and necropolitical debates to question the uneven geographies that determine "whose live counts" (Butler, 2004, 2009) or whose are considered "disposable" (Pratt, Johnston, & Banta, 2017; Wright, 2006; Yates, 2011) in the current world order. Working towards alternative socio-ecological models, geographies of reproductive justice depart from the assumption that all lives matter rather than valuing some future live over others or preventing future live all together to tackle the climate crisis.

Reproductive justice, however, can not only contribute to a more holistic approach in geography to address societal challenges that are currently dealt with in different subdisciplines. We argue that geographical concepts in exchange can contribute to advance the concept of reproductive justice and to support feminist struggles for reproductive justice. As we have highlighted throughout this paper, different geographical key concepts enhance a better understanding of reproductive in/justices. A socio-spatial analysis serves to map unequal access to reproductive health care infrastructures and services. An intersectional mapping that considers the lived realities along lines of gender, sexuality, race, class, citizenship and residency status, rural/urban, im/mobility, dis/ability is crucial to identify reproductive health or abortion deserts. It can also serve as a ground for feminist movement struggles and policy making. Attending to the materiality and relationality of mundane spaces is another contribution geographers can make to reproductive justice analysis to point out how certain spaces such as social housing projects, community centers, maternity wards, foster care, prisons, refugee camps etc. impend or enable social relations of parenting for certain groups. Such a spatial lens allows feminist movements to strengthen both abolitionist analysis and reformist claims. It can support reproductive justice movements' intervention in participatory planning processes or to formulate institutional demands to improve their rights to parent also in those spaces that are deemed to rather impend parenting. Family friendly maternity wards, birth houses or family wards in prison are just some out of many examples of such interventions.

Our literature review further shows that place matters in understanding reproductive in/justices. Attending to how one's workplace or place of living facilitates or denies access not only to reproductive health infrastructures but also to a green, clean, safe, and healthy environment is crucial to redeem the demands of the reproductive justice movement. The concept of place is closely tied to two other geographical concepts, namely distance and mobility. Distance thereby is not merely about the absolute physical distance but about topological distance dependent on public transport, availability of information, legal entitlement, border regimes and affordability. Mobility is one of the most applied concepts by geographers to study reproductive issues using the notions of reproductive and abortion mobilities. Employing the concept of mobility justice, geographers have further analyzed how contemporary migration and border regimes violate reproductive rights and fracture families. They have shown how the mobility of people or for example abortion pills can have emancipatory potential while at the same time, mobility tactics can also be used to promote anti-abortion campaigns such as in the case of mobile pregnancy centers.

Lastly, feminist approaches to scales can shed light on how the intimate experiences of conception, contraception, abortion, miscarriage, pregnancy, birth, and parenting are always enmeshed in broader political, cultural, and economic structures. A multi-scalar analysis that attends to the entanglements of scale proves essential to grasp how global and national anti- and pronatalist agendas affect intimate experiences. Geographers' work on scale jumping in the context of social movements allows at the same time to conjointly develop strategies of resistance and emancipation towards reproductive justice.

6. Intimate liminality in Spain's berry industry

Nora Komposch[a], Carolin Schurr[a], Angels Escrivà[b]

[a] University of Bern, Switzerland, [b] University of Huelva, Spain

This article (Komposch, Schurr & Escrivà 2024) has been published on January 27, 2024 in the journal *Transactions of the Institute of British Geographers*: https://doi.org/10.1111/tran.12673. As the first author, I assumed primary responsibility for all aspects of this article, including data collection, data analysis, and writing.

Abstract

Spain's berry industry relies on the agricultural labor of both local and seasonal migrant workers. A significant part of this migrant workforce comprises Moroccan mothers who leave their children with relatives in order to perform this wage labor. The bilateral recruitment regime favors the employment of Moroccan women with children for this labor to ensure that workers return home at the end of the harvesting season. Drawing on multisited ethnographic research in Spain and Morocco, this study revealed the effects of this bilateral labor regime on the intimate lives of migrant workers. We argue that the geopolitical prescriptions of this labor migration regime, along with the working and living conditions of migrant workers in Huelva, result in experiences of intimate liminality. We examined these experiences by exploring: (1) how the role of female workers as mothers becomes liminal as transnational labor agreements marginalize and outsource care obligations, (2) how governmental neglect of migrant workers' occupational health exposes them to reproductive health risks and (3) how this neglect places them in a liminal space in terms of access to healthcare, and (4) how, despite their liminality, migrant workers contest precarious conditions through everyday solidarity practices. We advance a feminist approach to liminality, emphasizing the importance of an embodied, intersectional, and multiscalar perspective.

Keywords

family separation, feminist geopolitics, labor migration, liminality, reproductive health

6.1. Introduction

> *When I was working while pregnant, I was carrying the same [amount of berry boxes] as the others. The employer told me that I could get help, but I didn't, I wanted to work well. (Rachida, agricultural worker, 2022)*

Rachida[43] has been coming to Huelva in Spain for seven years, to harvest berries to improve her family's financial situation in Morocco. Being one of over 10,000 Moroccan women in the bilateral labor migration program[44] between Spain and Morocco, each year between January and June, she leaves her four children with her aunt to work as an agricultural seasonal worker in Spain's berry fields. The work itself is physically demanding and leaves its mark on her health, which manifests through chronic back pain and anxiety attacks—conditions that often remain untreated due to access barriers to the local health system. Many Moroccan women working in Huelva's agriculture experience emotional distress due to harsh treatment at work and separation from their families. During their time in Spain, some of their main concerns are to earn as much money as possible for their families and be recruited again next year. Due to seasonal migration, these workers live between two places over the year, "being neither here nor there" but somewhere "betwixt and between" multiple spaces in time (Turner, 1967, p. 96). In this paper, we develop the notion of intimate liminality by analyzing the impact of the transnational labor migration policies between Morocco and Spain on the reproductive lives of Moroccan female workers—both in terms of care relations and their (access to) reproductive healthcare.

To be recruited by the Moroccan authorities to work in Huelva, workers must be female, married or divorced, between 25 and 45 years old and have children under the age of 15. This transnational demographic policy is primarily geopolitical: Spain and Morocco assume that women's care obligations and emotional bonds to their children ensure their return to Morocco at the season's end. Employers also prefer migrant mothers as

workers as they expect less resistance from them due to family dependency and financial necessity. Hence, their "reproductive biographies" (Perler & Schurr, 2021) shape their access to Huelva's agricultural labor market. This gendered and demographic recruitment strategy also means that care and reproductive health are key issues in migrant mothers' lives.

[43] All names of interview participants have been anonymised.

[44] The labor migration agreement between Spain and Morocco is commonly called a "circular migration programme". Following the critiques of other scholars (Castles & Ozkul, 2014), we avoid the rather normative term "circular" as it implies a voluntary return that is not present in this bilateral programme. We further demonstrate in this paper that the workers' return is not guaranteed.

The main foci of previous research have been the gendered migration regime, the devaluation of female labor and the precarious working conditions faced by female agricultural laborers in Huelva's berry industry (Castillero-Quesada, 2020a; de Castro, Reigada, & Gadea Montesinos, 2019; Hellio, 2014; Moreno Nieto, 2013; Moreno Nieto & Hellio, 2012; Zeneidi, 2013). These grievances have become more visible since the global COVID-19 pandemic (Castillero-Quesada, 2020b; Güell, 2022; Molinero-Gerbeau, 2021). Globally, a growing body of research also points to the alarming health risks migrants face while working in foreign countries (Hansen & Donohoe, 2003; Zimmerman, Kiss, & Hossain, 2011). This is particularly true for farmworkers, who are exposed to environmental pollutants such as pesticides (Barbour & Guthman, 2018; Guthman, 2019; Harthorn, 2003; Holmes, 2013; Saxton, 2015). However, the gender-specific health risks of female migrant workers and their access to reproductive healthcare—especially in delicate situations such as pregnancy—have received little attention. While few studies on the Canadian (Cohen & Caxaj, 2018) or US (Galarneau, 2013) context address this topic, the subject is largely untreated in Huelva (Escrivà & Komposch, 2024). Migrant workers' care and reproductive health concerns in Huelva may be less visible than non-compliance with labor laws or citizenship challenges, but they are as relevant for the women concerned.

We advance a feminist approach to the concept of liminality to understand Moroccan women's lived realities within this transnational labor migration regime. A study on agricultural migrant workers in Italy (Raeymaekers, 2019) shows that liminality includes both "spaces where power is effectuated through the multiple overlapping boundaries that emerge in the midst of various conflicting claims to exercise control and govern populations" and spaces where "the agency of marginalized populations to contest [can be enhanced]" (p. 130). Yet how does this liminal position between two nation-states play out for female migrant workers with regard to their reproductive lives? How do international, national, and local policies for migrant workers push them into liminality? How does this liminal position affect their intimate lives? and How do migrant workers themselves contest the precarious conditions of work, health, and life that assign them a liminal space within the nation-state and its society? Asking who produces and governs liminal spaces, and who shapes or fights against them, this paper demonstrates the need for an embodied, multiscalar and intersectional analysis of liminality.

This article first revisits the literature on liminality in geography in general and feminist geopolitics in particular. After presenting the methods, we then discuss multiple aspects of intimate liminality, showing (1) how transnational labor migration policies enforce family separation, (2) how governmental neglect of migrant workers' experiences exposes them to reproductive health risks and (3) places them in a liminal space in terms of access to healthcare,

and (4) how migrant workers and activists contest liminality. In the conclusion, we assess the potential of a feminist perspective on liminal spaces for exploring the struggle over reproductive justice[45] in the context of migrant labor.

6.2. A feminist geopolitical lens on liminality

The word liminality derives from the Latin term 'līmen', meaning threshold. The concept of liminality was first introduced by the anthropologist Arnold van Gennep (1960) and developed by Victor Turner (1967), who used it to analyze the ambiguity of transitional periods and spaces between "two relatively fixed or stable conditions" (p. 93); Turner also called those who occupy liminal spaces "transitional beings", who are "neither one thing or another; or maybe both; or neither here nor there; or maybe nowhere . . . and are at the very least 'betwixt and between' all the recognized fixed points in space-time of structural classification" (p. 96). This "betwixt and between" renders "transitional beings" structurally invisible since they lose their "classification" in one territory (often in one nation for migrants) without gaining full classification (and the associated rights) in the new one. Moreover, this loss of classification accurately describes the realities of workers who temporarily migrate from one place to another. Being "neither here nor there", they fall out of place-bounded structures, resources, and benefits. As Hennebry et al. (2016) point out regarding transnational temporary migration programs in Canada, liminality "is produced through a confluence of structural factors which keep these individuals in a permanently temporary limbo" (p. 523).

While liminality has been applied to many different topics in the social sciences (for an overview, see Downey, Kinane, & Parker, 2016), its engagement within geography has been somewhat limited (McConnell & Dittmer, 2018; Senanayake, 2022), which is surprising given the importance of place and space for the concept. While Shields (1991) engaged with the liminality of spatially and socially marginal places as early as the 1990s, only recently has the concept received greater attention, especially in cultural, social, and political geography (Banfield, 2020; McConnell, 2017). Geographers have engaged with liminality to conceptualize the growing number of in-between spaces as a consequence of neoliberalization and globalization and have examined refugee spaces (Hyndman, 2000), diplomacy and geopolitical

[45] 'Reproductive justice' was first developed in the US in the 1990s by Black feminists expressing their discontent with white liberal feminist struggles for abortion. It has since turned into an important concept for feminist movements and research. Reproductive justice includes the right (not) to have children and to parent them in safe and healthy environments (Ross & Solinger, 2017), and will only be achieved "when women and girls have the economic, social and political power and resources to make healthy decisions about [their] bodies, sexuality and reproduction for [them and their] families and communities in all areas of our lives" (Asian Communities for Reproductive Justice, 2005, p. 4).

processes in overseas territories (McConnell & Dittmer, 2018), peacebuilding-processes in cities (McDowell & Crooke, 2019), and foodbanks as strategies to deal with neoliberal austerity politics (Cloke, May, & Williams, 2017). While research on liminality in labor geography (Underthun & Jordhus-Lier, 2018), reproductive geography (Bagelman & Gitome, 2021; Mountz, 2021), and health geography (Senanayake, 2022) exist, the intersection of these fields in the context of seasonal labor migration has not yet been explored within the theoretical perspective of liminality.

In this paper, we advance a feminist approach to liminality, arguing that this feminist lens contributes to understanding how liminal spaces are (re)produced and how inequalities and injustices affect the way that liminal spaces are experienced and manoeuvred differently by differently marked bodies. Our notion of intimate liminality is informed by the work of feminist political geographers (McConnell, 2017; McConnell & Dittmer, 2018; Senanayake, 2022). Considering intimacy as "forms of close affective encounter" (Oswin & Olund, 2010, p. 62), we define intimate liminality as the emotional and embodied effects of being in a societal, political, economic, and territorial liminal position on one's (reproductive) health and social relationships with partners, children, family members, and friends. We developed the notion of intimate liminality by first looking at how it affects migrant mothers' emotional capacity for close encounters with close individuals while at the same time, it opens possibilities for new affective encounters with people in a similar liminal position. Second, we call for engaging with how liminality results from migrant women's mundane, embodied experiences of living between two different nation-states and their positionalities as mothers and workers. Third, we advance an intersectional analysis of liminality (Senanayake, 2022), highlighting how different power relations and structures shape the lived experiences of intimate liminality. Patricia Zavella (2011) describes how liminality leads to a transnational migrant imaginary of "peripheral vision", which "expresses subjects' sense of economic, social, cultural or political vulnerability in a globalized world" (p. 8). When analyzing liminality in transnational spaces, a multiscalar approach (Pratt & Rosner, 2012) necessarily considers how global, national, and local politics (re)produce intimate liminality for differently marked bodies. Asking who governs, shapes, or contests liminal spaces reveals the geopolitical character of intimate liminality.

6.3. Methods

The paper builds on multisited ethnographic (Marcus, 1995) fieldwork in Spain and Morocco conducted from April 2021 to June 2023 (a total of eight months across four stays) by Nora

Komposch. The research constituted observations and informal conversations in workers' homes, workplaces, hospitals, and health centers in Huelva and different regions of Morocco. Nora accompanied female workers on their journey to Huelva and visited their families in their Moroccan hometowns. Over 40 interviews were conducted with seasonal workers, doctors, midwives, employers, Spanish and Moroccan public administrators, activists, and unionists.[46] Furthermore, many informal conversations took place with activists, workers, and their family members (in person or remotely via WhatsApp), which were recorded in fieldnotes. The interviews contained biographic and problem-centered questions (Rosenthal, 2007; Witzel, 2000), were conducted in Spanish or French, or facilitated through interpreters in Darija (Moroccan Arabic),[47] and lasted from 20 minutes to 3 hours. Additionally, Nora organized two participatory body-mapping workshops (Gastaldo et al., 2012) with a total of 10 participants to communicate body-related knowledge collectively using creative methods. Interviews and workshops were recorded, transcribed, and analyzed through open and focused coding using MAXQDA qualitative software. Emerging themes from the interviews and workshops were compared with observation fieldnotes to triangulate the multiple data sources.

6.4. The global-intimate: Governing mothers' transnational labor migration

Similarly to California, where much of the berries for the North American food market are produced (Holmes, 2013; Wells, 1996), Huelva serves as the berry chamber for Europe. Berry production is a labor-intensive industry, which for decades, has demanded the recruitment of large numbers of seasonal foreign workers alongside local workers. Roughly half of the approximately 100,000 workers employed in the Andalusian berry industry each year are migrant workers (Escrivà, 2022); most migrate seasonally to Huelva. In recent decades, the composition has become increasingly multinational and feminized. As in many other low-paid sectors, the myth that women have more delicate hands (making them preferred over men for berry-picking) has shaped the discourse of gender-based worker selection. As has been shown in other sectors, such as the Maquiladoras in Mexico, this discourse constructs female workers as more productive, skillful, and compliant (Salzinger, 2003). This social imagery is not reflective of actual ability but instead says much about the industry's desired attributes and gender stereotypes (Elson & Pearson, 1981; Wright, 2006). This gender discourse also conceals the fact that employers opt for female workers to secure cheap labor due to structural gender

[46] Some participants were interviewed several times and some group interviews were conducted.

[47] Note that Nora's positionality is shaped by her background as a white woman who was mainly socialised in predominantly Christian Switzerland. The two interpreters, who were both Moroccan, contributed significantly to cultural understanding in addition to the linguistic translation work.

wage inequalities (Reddy, 2007). Initially, a large part of the female labor force came from Eastern European countries, such as Poland, Romania, and Bulgaria (Escrivà, 2022). Seasonal migration from these regions has diminished with their entry into the European Union (EU), but Eastern European workers still constitute an important part of Huelva's current labor force (Molinero-Gerbeau, 2021). The recruitment of Moroccan women began in the mid-2000s through collaboration between Aeneas (a European Commission program to assist member countries in migration management), the municipality of Cartaya (one of the major berry producing regions of Huelva), and Morocco's National Agency for the Promotion of Employment and Skills (Anapec). With EU funding support, a specific recruitment program was established between Morocco and Spain, which each year offers 7,000–20,000 Moroccan women the opportunity to work in Huelva (Escrivà, 2022).

Selected Moroccan women must be 25 to 45 years of age, from a rural area, and have a child under the age of 15. The former mayor of Cartaya, Juan Millán, referred to as "the architect of Huelva's guest-worker program", stated that mothers were chosen since it was anticipated they would willingly return home to attend to their children (cited in Glass, Mannon, & Petrzelka, 2014, p. 12). As diverse human rights reports show, the selection criteria for Huelva's berry industry are discriminatory and non-compliant with Spanish and EU legislation (Doval Hernández, Jiménez Sánchez, & Zamora Gómez, 2021; Hellio et al., 2019). This may be why a Moroccan public administrator emphasized that the selection criteria are not strict, but merely reflect preference:

> *You cannot select everyone, that would be impossible, so you must choose. Until now we give priority to women with children [...]. We think that they are more in need of money, right? They must feed their family. So that's the reason, it is not at all discriminatory. It is just a prioritization, it's not a criterion [...]. And then there's also... well... there's also another thing ... obviously ... well, it's a circular migration program, right? For this program to survive, the worker must respect the commitment to return. That's important. That contributes to the sustainability of the program, that's another level to it. (Staff member of the Moroccan public administration, 2023)*

As the quote evidences, this demographic recruitment strategy is justified in the name of a 'pro-women' and 'co-development' policy (Macías Llaga, Márquez Domínguez, & Jurado Almonte, 2016). Gender and motherhood are proven during the application process by submitting birth certificates indicating the age of each child. This assertion about the 'other level' of the 'importance of returning home' reveals the geopolitical construction of the transnational

seasonal labor migration system, which focuses on a specific gender, family status, nationality, and class profile. This highlights the Spanish and Moroccan intention to guarantee that the workers will repatriate upon completion of their work tenure. This geopolitical aspect was also clearly addressed by a Spanish public administrator:

> *Why a family profile? […] If a woman [for example] has four children and supports her wider family, […] she has a very big family responsibility. Evidently, that person is much more likely to return home and fulfil her contract […]. (Staff member of the Spanish public administration, 2023)*

Moroccan mothers are expected to leave their children to dedicate their time in Spain to their labor. While many have already experienced family separation because of distant work periods in their own country (Hellio, 2013), this transnational seasonal labor regime forces them to outsource their reproductive parenting labor to other (mostly female) family members over a longer period. This separation of reproduction and production must be read from an intersectional perspective to understand how the (emotional) pain of certain bodies is normalized: "Migrant labor has historically separated children from families; yet this class-based division of labor, rather than soliciting white empathy, pathologizes migrant parents and naturalizes laborers' suffering" (Smith et al., 2019, p. 145).

Meryem, a strawberry picker, described vividly the separation from her children. In a body-mapping workshop, she drew a sea on her chest, where she also painted her broken heart. On either side of the sea, she painted two figures, one referring to herself and the other to her son, who stayed in Morocco:

> *My heart is hurting a lot because my son is so far away. The sea lies between us. It is very painful not being able to see my family. […] At the same time, I also feel strong and think that, if I want, I can achieve a lot. I hope to be able to bring my son to Spain one day. (Meryem, agricultural worker, 2022)*

This account illustrates the poignant emotional anguish that arose from Meryem's intimate experience of physical separation from her child resulting from her wish to fulfil her parental duties. While her child was why she was in Spain, she suffered from the separation. In Turner's (1967) words, emotionally, Meryem is "neither here nor there" but more "betwixt and between all the recognized fixed points in space-time of structural classification" (p. 96). As a result of being physically in one place but emotionally in another, female migrant workers experience intimate liminality. Mothers' ambitions to provide their children with a better future conflict with the emotional pain of mothering across distance (Banta & Pratt, 2022; Pratt, 2012).

In their study of Heulva's selection criteria for its berry industry, Glass et al. (2014) argue that employers and state agencies create an image of the compliant mother as the ideal worker: "Maternal self-sacrifice is assumed to motivate Moroccan women's out-migration for seasonal agriculture, while maternal devotion is assumed to motivate their return" (p. 15). Similar to parent- and gender-specific selection processes in other migrant labor agricultural contexts, the parenthood of Moroccan women should serve as "collateral against non-return" (Basok, 2000, p. 224). However, as the following quote indicates, such rules are not a guarantee that migrant women will not overstay their Spanish work visas:

> *If I didn't have children, I wouldn't need that much money. But to finance the lives of my children, I need more money, so I stayed here. Like this, I can support them financially all year round. [...] Being separated is very hard but I am in contact with my daughters every day, helping them with their homework, always via WhatsApp. (Aicha, agricultural worker, 2023)*

Aicha stayed in Spain precisely because of her care obligations. Finding employment in Morocco was challenging for her due to her rural background and low level of education. Furthermore, the increasing frequency of droughts has significantly reduced opportunities for agricultural labor. The financial strain of supporting her family led her to remain in Spain all year long. Despite being physically distant from her children, she used digital technologies to stay connected and care for them from her liminal position, reducing feelings of distance through real-time video images, similar to other mothers who perform long-distance mothering duties (e.g., Longhurst, 2013).

By forcing workers to separate their reproductive and productive lives, this recruitment model between Spain and Morocco alters the process of motherhood and engenders an intimate liminality of emotional suffering for migrant workers on a global scale. Such transnational labor policies enable selective migration and thus encourage mothers—especially those with little education from rural areas in the Global South—to temporarily change their place of residence. Moroccan mothers who participate in this transnational labor migration regime thus experience intimate liminality due to separation from their children and the inability to physically care for them, which they partially ease through digital technologies.

6.5. The national-intimate: Experiencing reproductive health problems through governmental neglect

Zeneidi (2013) called the labor migration system between Morocco and Huelva a prime example of what Dikeç (2009) described as "spaces of lawlessness" (p. 183). Although laws guaranteeing decent working conditions and basic needs access to (reproductive) healthcare are included in Spanish labor laws and bi-national agreements, non-compliance is widespread. Applying an intersectional perspective, we show that "nothing embodies and illustrates inequality more materially than our health" (Sparke, 2014, p. 680). This section of this paper specifically outlines how governmental neglect of migrant workers' basic rights renders these 'transitional beings' (Turner 1967) and their reproductive health problems invisible. First, we highlight how a lack of governmental inspections can result in reproductive health risks due to daily exposure to pesticides. Second, we point out how migrant workers' intersectional identities complicate their access to adequate health facilities in rural areas. We argue that the lack of access to reproductive health is another aspect of intimate liminality.

Research suggests a clear link between occupational exposure to pesticides and harm to reproductive health (Fucic et al., 2021; Hanke & Jurewicz, 2004; Istvan et al., 2021). Strawberries rate particularly high among fruits where high levels of endocrine disruptor pesticides[48] are used (Veillerette & Lauverjat, 2013). Barbour and Guthman (2018) found evidence of reproductive health damages in California's strawberry industry, where female migrant farmworkers reported severe harm, including miscarriages and birth defects; these women also experienced mental stress due to the "additional moral burden on women farmworkers who are made responsible for protecting future populations" (p. 1). Guthman (2019) further stated that, whereas acute pesticide-related symptoms such as "difficulty breathing, itching and burning, tearing, nausea, headaches" are known, "the disproportionate adverse effects from chronic exposures on farmworkers is a story much less told, but no less pernicious" (p. 148). Similar events occur in Huelva, as told by a former female strawberry picker:

> *Under the polytunnels, there is no escape from the heat or the spray. Sometimes they fumigate next to you, and you have no protection. Then the headaches and stomach*

[48] Endocrine disruptors are chemicals that mimic or interfere with the body's hormones, known as the endocrine system (for more information, see De Prada Redondo, 2018).

> *aches begin, and who knows what the long-term effects might be? (Lina, former agricultural worker and unionist, 2022)*

As Lina indicated, the immediate effects of pesticide use are notable, but the longer-term implications are much harder to detect. This span between directly apparent short- and long-term effects on workers' (reproductive) health, which can emerge once they return to Morocco, is another aspect of intimate liminality. As Senanayake demonstrates, a spatial-temporal approach to the concept of liminality can be helpful for understanding "the instability and 'messiness' of distinctions between health and sickness in contexts where there is prevailing uncertainty about the source and toxicity of environmental exposures" (p. 364). While temporal migratory regimes position migrants within in-between spaces, it is the long-term effects of being societally positioned in liminality that affect migrant workers' wellbeing.

The in-betweenness and the related spatiotemporal separation of the eventual intimate-level damage and effects on workers' bodies make traceability, and therefore accountability for the harm, very difficult (Sabin et al., 2024). In addition, the workers' social position as migrants with low-level education makes it highly challenging for them to claim their rights and hold those responsible to account. Due to the (often) low severity of the short-term effects and barriers to accessing the Spanish health system (as is elaborated upon later), many workers do not seek medical help. Thus, their health problems often stay untreated and invisible in Spanish health statistics—which also prevents government controls from being more widely enforced. Moreover, as the accumulated and long-term effects of pesticide exposure may emerge only years later (when a worker is back in Morocco), the medical links to Spain's place-bounded agricultural labor are so difficult to make, that any compensation claims would be practically unprocessable.

The transitional passage of seasonal labor makes it highly challenging to prove the links between certain health risks due to environmental toxin exposure. Using qualitative research methods, it is very difficult to establish a direct link between pathologies and chemical exposure. In addition, many other factors, including other environmental toxins,[49] may determine reproductive health. However, strawberry pickers such as Rachida link their and their children's ailments with their work in Huelva:

[49] Huelva is home to a fertiliser industry waste dump and an immense chemical industrial park, which, according to multiple studies, are co-responsible for Huelva having one of the highest cancer rates in Spain (e.g. García-Pérez et al., 2020). Both are located adjacent to Huelva's strawberry fields and the migrant workers' temporary housing, who are constantly exposed to these environmental health risks.

> *I worked here while pregnant and since then me and my son are not in good health. I have constant urine infections and my son's legs are not the same length and he is often sick. […] I link this to the work here because my other three children are all in good health. (Rachida, agricultural worker, 2022)*

Reports and newspaper articles indicate that unauthorized (and thus particularly harmful) pesticides were applied to the plants in Spain's berry industry until at least 2022 (Echevarría, 2023; Veillerette & Lauverjat, 2013). Similar processes have been observed by anthropologist Barbara Harthorn (2003), who studied pesticide exposure in Californian farmworkers and argued for a structural violence analysis and a greater focus on the systematic production of health inequality. More government inspections and greater transparency about the (level of) chemicals used are crucial for preventing farms' disobedience of toxin bans. According to the unionists and workers we talked to, while regular state-prescribed company inspections do occur, they often do not sufficiently inquire into the working and health conditions of migrant workers. Company owners often know about the inspection in advance and can obscure illegal working conditions, such as the lack of protective equipment against pesticide exposure. In addition, migrant workers' lack of language skills and their structural dependencies on their employers prevent many workers from reporting labor law violations to inspectors. Intimate liminality results from the gap between existing laws and regulations in Spanish politics, and the state's unwillingness to enforce laws to protect migrant workers' (reproductive) health from damaging toxins. The nation-state's neglect of migrant workers' (reproductive) health affects the workers' and their children's lives in intimate ways. The long-term consequences of toxic exposure not only threaten their psychological and physiological health, but they also impact family economies when mothers eventually assume the economic burden of long-term health effects back in Morocco.

6.6. The regional-intimate: Encountering access barriers to reproductive health

Besides the reproductive health problems from pesticide exposure faced by workers, their intimate liminality is manifested in the regional administration's neglect of their (reproductive) healthcare needs. Although Spain has a universal healthcare system that guarantees free healthcare to all citizens (migrant workers included), many migrant workers struggle to access this on a regional scale during their seasonal stay. Thereby, they become what Sparke (2017) called 'biological sub-citizens'—they are less protected by state laws and have less access to social services as a consequence of their sub-citizenship status. Access to reproductive healthcare in the berry-picking context is highly important since all women who migrate to

Huelva are at reproductive age due to the demographic recruitment strategy. The difficulties accessing healthcare arise from territorial marginalization, language and cultural barriers, and insufficient information about the health system (Escrivà & Komposch, 2025). The region's hospitals are mainly concentrated around Huelva's capital city, although several small village health centers provide basic healthcare. The migrant workers live on the strawberry farms in simple houses or trailers, which are typically far from urban centers or villages. The regional government provides little or, in some regions, no public transport, meaning that workers are forced to walk or organize their own transport. This corresponds to Mountz's (2011) findings regarding the territorial liminality of refugees: "They are detained remotely and therefore removed quietly from support, access and rights" (p. 387). The remoteness of housing inhibits access to basic needs, such as legal representation, social integration, and healthcare. The physical strain of long-distance walking, frequent accidents, and the risk of sexual assault, especially when women walk by night, further complicate access. Consequently, many workers refrain from consulting reproductive health services:

> *We don't go to see the gynaecologist. [...] If something is hurting, we just take a paracetamol [a painkiller]. […] If you don't know the language, it is very difficult. [...] I told the company many times that I need to see a doctor, but they said: 'We have a lot of work', 'we don't have anyone to drive you and help you with the translation'. So, I couldn't go. (Malika, agricultural worker, 2023)*

As Malika's statement indicates, the isolation in liminal spaces occurs through territorial marginalisation as well as through insufficient infrastructural and social integration policies in Huelva, such as public transport and translation services. A minority of Moroccan workers speak Spanish at a level sufficient for health checks and consultations. Some health centres and hospitals in the region provide a telephone translation service. However, the information about this service is not systematically communicated to the workers, and most will not visit a doctor without someone who could serve as a translator.

An additional barrier to migrant workers' access to reproductive healthcare is the paucity of information on the healthcare system and its corresponding amenities, such as the Health Card ('*tarjeta sanitaria*'). This enables migrant workers to identify themselves in hospitals and health centers, have a personalized medical record in the system, make medical appointments, and get tests and medicines prescribed. Without this card, it is only possible to access emergency health services; all other services (including specialized reproductive healthcare and prevention checks with midwives) are inaccessible. As mentioned in the bilateral labor agreement

regarding Moroccan seasonal workers, the state obliges each employer to provide each worker with a Health Card upon their arrival. However, many workers report they have not received the card or any information on how to obtain one. This has resulted in important checks for many reproductive health issues, such as pregnancy checks, not being undertaken, or women ending up in emergency services with issues that should have been addressed at regular check-ups. According to a midwife in the region, 'the main obstacle is that they [pregnant migrant farmworkers] don't come to the analysis' (midwife, 2022). It is important to look more closely at the reasons for this discrepancy between theoretical access and the non-utilization of healthcare. As Sparke (2017) writes:

> *There is a tendency in more neoliberal societies to focus only on individual behaviors as an explanation. This can quickly turn in socio-cultural discourse into a way of blaming the victims and obscuring the more complex causal pathways in which poverty, oppression, dangerous behavior, and embodied experiences of biological sub-citizenship all intertwine. (p. 291)*

Zeneidi (2013) describes how the berry industry's main aim is to make migrant workers work as efficiently as possible. Hence, illnesses or pregnancies, which reduce workers' efficiency, become problematic for employers. As Rachida's statement at the beginning of this paper shows, many women internalize the idea of pregnancy as a 'problem' for work. Basic needs, including attending reproductive health services, take a back seat in this neoliberal market logic. Migrant farmworkers mostly visit the doctor only in an emergency; thus, their needs and health conditions are rendered structurally invisible. This invisibility reinforces their intimate liminality—through their not being able to access the Spanish or Moroccan health systems during their time in Huelva—and heightens the short- and long-term health risks for mothers and children alike.

The discrepancy between the workers' needs and services offered suggests that this intimate liminality is (geo)politically desirable. The government's neglect of migrant workers' potential health issues through pesticide exposure indicates how the workers' realities are rendered invisible through their liminal status. Furthermore, the location of migrant residences, the lack of transportation and translation facilities, and little information about the healthcare system reveal how liminality often manifests itself through the absence of infrastructures, information, and resources rather than through visible barriers. This demonstrates the importance of investigating liminal spaces if we are to address the structural invisibility resulting from intersecting power relations that marginalize certain groups. These 'circular' labor migration

regimes, aimed at enabling rich states to prevent permanent immigration (Zeneidi 2013), are designed to create as little integration into systems of national healthcare and social welfare as possible. Neoliberal state logic gives Spanish authorities—at both the national and regional levels—a financial interest in ensuring that migrants receive as few health services as possible; thus, migrant workers do not incur costs or feel entitled to certain rights in their place of work. At the end of the picking season, they are expected to leave Spain without delay, and preferably without receiving any healthcare services or social benefits. In theory, the Spanish state enables free healthcare for migrant workers. However, in reality, the state's insufficient control of employer law compliance fails to ensure migrant workers' rights to occupational health. Their access to reproductive healthcare is delayed until the end of the season (when there is less work and more free time) or until they are back in their home country. This externalization of healthcare expenses to Morocco benefits both the employers, who avoid additional bureaucratic work and possible absences, and the Spanish state and local governments, who save on healthcare costs. Hence, intimate liminality results from governmental neglect at the national and regional levels affecting the wellbeing and health of migrant workers and their children.

6.7. The local-intimate: Everyday practices of contesting liminality

The three preceding sections discuss the challenges workers face regarding their reproductive lives, which arise from the transnational labor migration regime and the Spanish government's systematic neglect of enforcing labor and healthcare rights. Acknowledging the inherent systemic obstacles that define the intimate liminality of seasonal farmworkers in Huelva, the workers' mundane tactics of contestation are noteworthy. As Senanayake (2022) writes, "liminality as an increasingly common experience might in itself form the basis for new forms of intervention and action" (p. 374). Notwithstanding the arduous circumstances for practicing resistance in the agricultural labor sector in Huelva,[50] many workers develop dissent, mutual support, and self-governance practices. In so doing, they challenge and cope with their physically and socially isolated intimate liminality during their stay in Huelva. Workers contest such liminality through self-organized healthcare and mundane practices of solidarity. When workers were asked in our interviews how they dealt with, circumvented, and navigated the multiple barriers to accessing (reproductive) healthcare in Huelva, one worker answered: 'We

[50] According to multiple interview statements from workers, activists, and unionists, many workers in Huelva's berry industry refrain from publicly denouncing the non-compliance of labor laws by their employers out of fear of losing their job and being forced to leave the country. Multiple scholars have observed that extended borderlands can represent "assemblages of fear" (van Houtum & Pijpers, 2008, p. 158) that are built through intertwined "geopolitical and everyday processes, events and actions" (Pain & Smith, 2008, p. 14).

help each other out with our own means. For example, if a colleague is in pain, we take olive oil, heat it up, and massage each other' (Meryem, agricultural worker, 2022). Despite the precarious working conditions, many workers helped each other deal with health issues:

> *When my co-worker said she had [breast] cancer, I told her not to say anything to the employer, so that she wouldn't get fired. We helped her with the [strawberry] boxes because she couldn't carry them. (Cristina, agricultural worker, 2022)*

Joining forces with local grassroots organizations was another method through which workers strived for reproductive justice. Through transnational feminist practices of solidarity, workers and activists mobilize their diverse resources across multiple categories of difference (Grewal & Kaplan, 1994; Mohanty, 2003). To tackle the diverse obstacles, they faced in their liminal work and living arrangements, workers collaborated with local organizations, such as the Andalusian workers' union *Sindicato Andaluz de los trabajadores* (founded in 2007), the Huelva-based feminist collective *Mujeres 24H* (founded in 2018), and the feminist self-organized workers collective *Jornaleras de Huelva en Lucha* (founded in 2020). These organizations support workers in legal lawsuits and address issues connected to intimate liminality, such as sexual assault at work, which frequently occurs because of the workers' precarious position and related power relations (Güell, 2022). Furthermore, workers address territorial isolation and difficulties accessing health services at the local level with different unions, as recounted by a unionist:

> *If the workers go to town to buy food or see the doctor, they have to walk up to 10 km loaded with groceries. They sometimes also pay taxis to drive them—something that the company should be in charge of. We have demanded several times that the authorities establish a bus line for the workers. (unionist, 2023)*

Due to the lack of local public transport, migrant farmworkers pay between €20–40[51] to unlicensed cab drivers to take them to the health center and translate for them once there. Unions and collectives frequently accompany workers to health centers for free. Together with the collective *Mujeres 24h*, Nora and Angels also regularly offered such transport. Thanks to the broad social networks of Moroccan workers, the contact information of activists with vehicles was quickly circulated. Expanding the Moroccan social networks to local activists also helped the workers to transcend the constraints of intimate liminality, such as isolation and loneliness. Some women successively built local networks through friendships and participating in local social movements, while remaining anonymous due to the risk of repression. With the self-

[51] Daily strawberry harvest wages range from €38–55.

organized workers collective *Jornaleras de Huelva en Lucha*, in May 2022, approximately 10 Moroccan workers orchestrated a rally in front of their company premises. Accompanied by an international film team, they publicly denounced their employer's mistreatment, insufficient provision of services and information, and failure to remunerate them for overtime. As one protester explained:

> *Why should we keep quiet? We should defend ourselves. […] One of us had a wound (in the breast area) and could only treat it with onions. She would have needed medical treatment. But the doctor said she would need a Health Card and therefore sent her away. […]. He said she should ask the company to organize her a Health Card. But since the company didn't give her the document, she had to self-medicate. (Agricultural worker in the documentary film* The Invisibles*, directed by Rufer, 2023)*[52]

Mina's statement indicates her demand for certain rights in a country where she had been contributing to the economy for years. By voicing her claim, she questioned the liminal status assigned to her as a migrant worker. Through collaboration with journalists and activists who reported on their protests in local, national, and international news outlets and on social media, this group of workers managed to raise public awareness about the (reproductive) injustices that migrant workers face and their political claims to improve their situation. By using a "strategy of weaving in and between multiple scales of power to create new spaces of participation and new forms of consciousness and discourse" (Blackwell, 2023, p. 4), they worked on what Blackwell calls multiple 'scales of resistance'. Through public attention to their concerns, this group challenged the logic of structural invisibility that characterized the intimate liminality they were forced to work and live in. Considering the hurdles that migrant women face due to their gender, citizenship, and class, this process of self-determination is particularly significant. Through vocalization and increased visibility, they asserted their agency and challenged existing power structures. Moreover, giving their concerns more visibility paved the way for legislative change at the national level. The international solidarity of social movements at the global level further enables "social geographic imaginations and associated practices connecting people across borders, including through transnational migrant activism" (Mitchell & Sparke, 2020, p. 1048). Collectively sharing a liminal position, migrant workers fostered new intimate relationships with co-workers, developing solidary practices which alleviated emotional suffering in their quotidian lives. These intimate relationships also formed the basis

[52] Nora and Angels supported and advised the film team on site and also appear as informants in the documentary.

for political organizing and acts of resistance, which systematically connected political actors at different scales.

6.8. Conclusion

This paper demonstrates the potential of a feminist approach to liminality, analysing how the liminal position of female Moroccan farmworkers in the Spanish berry industry affects their intimate lives as mothers and workers.

At the global level, the bilateral migration agreement between Spain and Morocco has resulted in demographic selection that encourages mothers to temporarily migrate. However, this agreement simultaneously prevents these mothers from physically exercising their reproductive care. Emotionally, they experience intimate liminality due to territorial separation from their children—which can be partially overcome by digital communication. While the Spanish government guarantees to preserve the bilateral migration agreement, it absolves itself of any obligation to family life and caregiving responsibilities within national boundaries. This transnational agreement shows how global labor migration regimes and the intimate lives of migrants are inextricably interwoven (Pratt & Rosner, 2012). At the national scale, the lack of state measures to protect migrant workers' health from pesticides indicates how, as transitional beings, their realities become invisible in liminality. At the same time, regional authorities fall short of providing migrant workers with the necessary infrastructure for them to access their rights to Spain's universal health system, which results in another aspect of intimate liminality. A lack of transportation, health cards, translation facilities, and information means that workers often refrain from, or delay, seeing doctors or midwives. Accordingly, their medical needs are rendered structurally invisible, which Turner (1967) describes as indicative of liminality. Moreover, through this structural invisibility, statistics and hospital reports fail to reveal the extent of the problems faced by migrant workers due to their harsh working conditions and limited access to healthcare infrastructures. Such examples show how intimate liminality manifests itself not through clearly visible barriers, but through politics of neglect and the absence of facilities and resources. Through revealing the lack of governmental protection at the national level and lack of access to reproductive healthcare at the regional level, we demonstrate how migrant workers are considered 'sub-citizens' as the nation-state fails to protect their bodies from health risks or give them access to universal state services. Our study further illustrates how the boundaries of liminality can be altered and challenged through everyday practices of contestation. Through self-organized healthcare, mutual support, and political actions with grassroots organizations, workers challenged the logic of liminality that

renders the problems of migrant workers invisible and their lives marginal. The more they strengthened their place-bound social networks, the more their status improved. Raising their voices in political actions allowed them to step out of the structural invisibility of liminality.

A feminist approach to liminality focuses on the entanglements of scale and intersectional differences to understand current struggles for reproductive justice. We unveil the multiscalar interwovenness of what we call "reproductive geopolitics" (Perler et al., 2023) by showing the entanglements of transnational migration agreements, governmental policies of neglect at the national and regional scale, tactics of contestation at the local scale, and workers' bodily experiences of liminality on an intimate scale. That these scales are difficult to delineate from each other and are intrinsically linked, is exemplified by the strategies of contestation. They initially occur at the local scale but jump towards the global scale through social media, international journalism, and solidarity networks. Our empirical work revealed that, although the intimate liminality of seasonal agricultural labor might appear as a solidified construct that is difficult to transform, there are ways of contesting, and thus redefining, liminal spaces. However, our analysis shows that responsibility for (re)constructing intimate liminality can be situated at certain scales. Mapping responsibility for the status quo and spaces of resistance helps to direct criticism for inhumane living and working conditions directly to the responsible level, as well as visualize the agency of the actors who fight against politics that maintain migrant workers in a state of liminality. As a former berry worker and unionist recounted, it is the intimate experience of suffering and rage that leads migrant workers to contest liminality across different scales:

> *We often lose our voices [laughs], and eventually we find them back, but eh, well, the truth is that we are few, but we have a lot, a lot of rage inside, from so much barbarity we have seen. We are transforming our rage into struggle and in the end, that's what has made it possible for us to do all this, the networking, collaborating with other organizations with other collectives of organized women in other places. (Lina, former worker and unionist, 2023)*

7. Geoviolence: The making of climate and reproductive injustice in global labor migration

Nora Komposch[a]

[a]Institute of Geography, University of Bern

This article (Komposch, 2025) has been published on June 17, 2025 in an adapted version under the title 'Geoviolence: Climate Injustice, Labour Migration and Intimacy', in the journal *Antipode. Radical Journal of Geography*: https://onlinelibrary.wiley.com/doi/10.1111/anti.70044.

Abstract

In the context of rapid anthropogenic climate change, it is becoming increasingly imperative to examine the consequences of environmental degradation and social injustice as a form of violence. In this paper, I conceptualize the term "geoviolence" to understand the harm stemming from anthropogenic adverse geophysical conditions. Drawing on the labor migration dynamics between Morocco and Spain as a focal point, this investigation exemplifies the emergence of geoviolence at the nexus of reproductive and climate injustice. Based on multisited ethnographic research in Spain and Morocco, I analyze the connections between climate change, migration policies, and intimate suffering. I argue that the effects of diminished rainfall and severe drought in both regions, coupled with restrictive migration policies, exacerbate the familial hardships experienced by Moroccan agricultural laborers, thus engendering experiences of geoviolence.

Keywords:

Labor migration, family separation, climate justice, reproductive justice, Spain, Morocco

7.1. Introduction

> *Years ago, my region [in Morocco] was rich in different kinds of fruit – peaches, watermelons, and cherries. But this year, the trees didn't bear much fruit [because of the lack of rain]. […] Some family members back home are telling me to stay in Spain because there is little work in my hometown. (Faiza[53], May 2023)*

This quote, from a Moroccan agricultural worker, Faiza, who migrates yearly to Spain to work in Huelva's berry industry, illustrates the growing significance of the issue of water (scarcity) in Morocco and Spain. Faiza's work is embedded in a bilateral labor migration agreement between Spain and Morocco, which only allows women with children to work in Huelva.[54] Every year, she leaves her three children in Morocco for six months so she can work in Spain. In the wake of the droughts in Morocco and Spain, working opportunities in agriculture have become increasingly scarce. In January 2024, Andalusian Prime Minister Manuel Moreno Bonilla declared a drought emergency due to the ongoing lack of rain and sinking groundwater levels. Reports show that 2023 was the driest year of the last three decades in Andalusia. In Morocco, due to extreme water scarcity, in January 2024, the government announced that hammams and car-washing stations would only be open three days a week to save water.[55] Meanwhile, Faiza—like many other female workers who used to migrate annually to Huelva to pick strawberries—has decided to stay in Spain. The risk of not being recruited again due to the lack of rain, and having to stay in Morocco without work, was too high for her. Marked by a non-legal visa situation, Faiza now faces a precarious living situation in Spain and long-term separation from her family.

As in Faiza's case, droughts in Spain and Morocco directly affect the family lives of Moroccan agricultural workers who migrate seasonally to Huelva. Due to the anthropogenic climate change,[56] "raising their children in safe and sustainable communities"—as the reproductive justice movement aims for (Ross & Solinger, 2017)—is becoming increasingly challenging.

---

[53] All interview participants have been assigned pseudonyms.

[54] The bilateral recruitment regime between Spain and Morocco grants work visas exclusively to women with children from rural areas. This system intends to ensure that workers return home after the harvest due to their family obligations. Moroccan women leave their children with (often other female) relatives in Morocco while they work in Huelva —a process well known in other labor sectors, such as care work (Muelle, Ojeda, & Fleischer, 2021).

[55] Many Moroccan families with low incomes do not have private showers and therefore depend on public hammams for their mundane hygiene practices. Water scarcity hence directly affects people in intimate ways.

[56] For the sake of readability, I use the term "climate change" to refer specifically to anthropogenic climate change. While I acknowledge that not all climate change is human-induced—natural variability in the climate system also leads to changes—this article focuses on the intensification of weather phenomena, such as droughts in Morocco, within the context of the global climate crisis. Although these droughts may be partly due to regional weather patterns, their intensification reflects the violent impact of human forces driving the current climate emergency.

While much research on the nexus between climate justice and reproductive justice has focused on the reproductive harm of environmental extractivism or chemical use (Dow & Chaparro-Buitrago, 2023), there is a paucity of research on how climate-related forced migration is affecting on the reproductive right to parent children in decent conditions. However, parents are increasingly hindered from raising children in safe and sustainable communities by the effects of climate change and restrictive migration policies. Such family separation must be viewed from an intersectional perspective to understand how the violence, and the resulting emotional pain of certain bodies, is normalized: "Migrant labor has historically separated children from families; yet this class-based division of labor, rather than soliciting white empathy, pathologizes migrant parents and naturalizes laborers' suffering" (Smith et al., 2019, 145).

In this paper, I analyze the intimate experiences of motherhood and the family lives of female Moroccan workers who participate in the "circular"[57] labor migration program between Morocco and Spain to work in Huelva, and the strategies they employ to sustain their families. Based on their accounts and climate data on droughts in Spain and Morocco, I develop the concept of "geoviolence," referring to the human generation, exacerbation, or exploitation of geophysical conditions that result in the increased suffering of humans and their environments. By recounting the Moroccan workers' everyday experiences of geoviolence, and their strategies to cope with it, I illustrate its processual nature, which opens potential for changing oppressive structures. Considering reproductive and climate injustice as consequences of geoviolence allows connections to be traced between environmental degradation and social processes, such as forced migration and related family separation.

In the following sections, I first review discussions about the intersection of reproductive justice and climate justice within the field of geography. Building upon this literature review, I develop the concept of geoviolence. After presenting the methods, I discuss Moroccan agricultural workers' mundane experiences of geoviolence, showing: (1) how droughts in Morocco erase family livelihoods; (2) how water scarcity in Morocco and Spain, combined with transnational migration policies, is leading to long-term family separation; (3) how climate factors and migratory regimes shape mothers' worries about their children's future; and (4) how Moroccan women and activists contest multiple forms of geoviolence in their everyday lives. In the

[57] The labor migration agreement between Spain and Morocco is often called a "circular migration program." However, following critiques by, for example, Bolokan (2023), I avoid this term because it implies a voluntary return, which is, as I will show, anything but certain.

conclusion, I assess the potential of the concept of geoviolence and suggest possible pathways for future research and political action.

7.2. Understanding reproductive and climate (in)justice through geoviolence

Reproductive and climate (in)justice

The term "reproductive justice" was coined by the SisterSong Women of Color Reproductive Justice Collective to denote the human entitlement to personal bodily autonomy, including decisions regarding childbearing, childlessness, and the nurturing of children within safe and sustainable communities (Ross & Solinger, 2017). Originating in the USA during the 1990s, it emerged as a reaction to the exclusion of Black, Indigenous, and women of color, transgender individuals, and other marginalized communities from the predominantly white women's rights movement. Reproductive justice shifts the discourse away from the polarizing "pro-choice" versus "pro-life" debate on abortion, instead emphasizing the intersecting discrimination and power disparities affecting individuals' reproductive health and family (Ross & Solinger, 2017). In recent years, an increasing number of geographers have explicitly engaged with the space-, place-, and mobility- aspects of reproduction, underscoring the geographical significance of the concept of reproductive justice (England et al., 2018; Perler et al., 2023; Schurr, Schultz, Perler, Komposch, & Etter, under review)

Like the reproductive justice movement, the fight for climate justice increasingly connects questions of environmental injustice with racial discrimination, addressing discrimination based on environmental racism (Pulido, 2017). As defined in the *Dictionary of Human Geography*, environmental justice is understood as "the right of everyone to enjoy and benefit from a safe and healthy environment, regardless of race, class, gender or ethnicity" (Kosek, 2000, p. 201). Geographical scholarship has emphasized not only the multidimensional nature of the co-constitution of space and environmental justice (Walker, 2009), but also the importance of different positionalities of marginalized groups (Mikulewicz, Caretta, Sultana, & Crawford, 2023). A climate justice perspective therefore involves recognizing the unequal and disproportionate impacts of climate change on different populations.

The nexus between climate justice and reproductive justice has received growing attention from feminist scholars (de Onis, 2012; Dow & Chaparro-Buitrago, 2023; Sasser, 2023). They have shown how segregation based on race, class, or gender pushes marginalized communities into neighborhoods with high environmental pollution (Morrell & Blackwell, 2022) and how poverty, social inequalities, and changing environmental conditions due to fluctuating climates

lead to alarming maternal and child health conditions (Rishworth & Dixon, 2018). They also reveal how different systems of oppression, such as colonialism, capitalism, racism, and sexism lead to historically rooted environmental and reproductive injustice (Dow & Chaparro-Buitrago, 2023). In the body of work on migrant agricultural labor and reproductive justice, the main focus on the environment–reproduction nexus has been the effects of pesticides on workers' health (Barbour & Guthman, 2018; Komposch et al., 2024; Sabin et al., 2024) and the lack of access to reproductive health services for migrant workers (Cohen & Caxaj, 2018; Komposch et al., 2024). However, little is known about the effects of climate change on family relations and kinship in the context of agricultural labor migration.

In this paper, I analyze reproductive and climate justice together, centering on how climate change affects motherhood and the family lives of female Moroccan farmworkers. I argue that including questions of care in climate-crisis debates is crucial to understanding how climate change exacerbates reproductive injustice.

Geoviolence

Building on the nexus of climate and reproductive (in)justice, I emphasize the importance of conceptualizing the oppression resulting from this injustice as a form of violence. Given the specific form of violence linked to climate change, it is crucial to conceptualize this violence in detail. The social theory of the Anthropocene overcomes the strict distinction between nature and humanity and highlights the importance of revealing globalizing forces that are rearranging nature, impacting human lives and environments (Dalby, 2020). In recent years, this theoretical debate has broadened by shifting the perspective towards a wholistic "planetary" (Chakrabarty, 2021) understanding of Earth, highlighting the importance of more-than-human processes and entities in shaping the planet's future. A planetary perspective, which considers the interrelations between diverse beings and their environment, and brings attention to the global scale of environmental issues (Verne et al., 2024), enables the interconnections of violence linked to climate change to be depicted (for a comprehensive empirical example, see also Eriksen & Ballard, 2020).

Here, I outline how such violent forces manifest in intimate spheres of everyday life, often overlooked in geopolitical debates about violence. Nixon (2011, 2) introduced the concept of slow violence as "violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all". This includes environmental causes like climate change. Christian and Dowler (2019) noted that slow violence describes phenomena long discussed by feminist

scholars researching everyday forms of violence. Since power relations manifest through space (Mollett & Faria, 2018), feminist geographers argue that it is essential to consider the interconnected racialized and gendered dimensions of multiple forms of violence, as they not only explain the impacts of violence but also why they often remain invisible (Christian & Dowler, 2019). Uncertainty and risks related to environmental changes are not universally observed (Sword-Daniels et al., 2018), but are rather a matter of individual experiences related to different positionalities. In line with scholars highlighting the uneven effects of reproductive and climate injustice along lines of gender, race, nationality, class, and other identity categories (Mikulewicz et al., 2023; Sasser, 2023), I therefore call for an intersectional perspective in conceptualizing violence. Human-induced climate change must be considered a form of violence that disproportionately affects marginalized communities, particularly in the Global South.

By examining the nexus between climate change and reproductive injustice, and thereby underscoring the interconnectivity of disparate forms of violence, I advance the concept of *geoviolence*. The term "geo-violence" has been employed on occasion in disparate contexts, yet without further conceptualization. Ginn et al. (2018, p. 221) employ the term in reference to Irvine's (2018) observation of slow violence through ecological harm, yet do not provide any further conceptualization of the notion.[58] Nicholsson et al. (2019) also used the term once, defining it as "where past and current geopolitical conflict, global capitalist development, land governance and management, and complex environmental crises associated with climate change intersect to effect a slow violence upon the body, as well as the communities of which those bodies are a part" (Nicholson et al., 2019, 40). However, they did not utilize or conceptualize it further. My conceptualization of geoviolence draws upon the elements outlined by Nicholson et al. (2019), but I expand their notion towards an appreciation of how violence also affect the more-than-human, and the concrete spaces and places where any kind of human and more-than-human activity occurs. Moreover, I argue that in a time of accelerating climate crises, the harms and damages of climate change are occurring with increasing rapidity. Therefore, I consider the temporal focus on Nixon's *slow* violence as no longer completely

[58] The term has also been used to refer to an information system that documents computerized data on rural political violence in Guatemala (Yamauchi, 1993; Zur, 1994), to describe the relationship between earthquakes and dislocations of the litosphere (Begg, Dissen, Nicol, & Mouslopoulou, 2008, p. 96), and to paraphrase "pervasive administrative violence" against trans-communities (Mills, Clark, Fluri, Tyner, & Dixon, 2017, pp. 302, 303). The term has been used to refer to a project aimed at combating sexual violence (Atencio, Del Blas, del Mar Daza, Novo, & Pedernera, 2021), as well as to describe the violence perpetrated by the Israeli military in the context of the occupation of Palestine (Hasan & Bleibleh, 2023, p. 3). However, none of these authors provide a detailed conceptualization of the notion.

suitable for analyzing such contexts. Rather than focusing on the temporal character of violence, I conceptualize geoviolence in a way that makes the different origins of causes and results visible and highlights the interplay of human and more-than-human factors. I define geoviolence as a destructive human force that generates, exacerbates, or exploits adverse geophysical conditions, leading to increased suffering for human and non-human beings, their communities, and the environments they inhabit. By "adverse geophysical conditions," I am referring to environmental factors that negatively impact the well-being of living organisms and ecosystems, including natural hazards, pollution, and natural features, such as seas or mountains, which can be exploited for harmful purposes (e.g., the Mediterranean Sea, which is used as a barrier against irregular migration). While this concept is particularly valuable in elucidating violence related to climate change, its applicability extends to other contexts as well. Based on my empirical observations, I suggest three origins of the causes of geoviolence—intention, lack of knowledge, and ignorance. In the first case, geoviolence stems from the conscious intention of actors to exploit geophysical conditions to harm other bodies, communities, or the spaces in which they live. This is the case, for example, when the Mediterranean Sea is used as a natural border (Raeymaekers, 2024) for Europe, where it is consciously accepted that this will lead to the death of migrant bodies. Unintentional geoviolence is the result of a lack of knowledge about complex global contexts. This can be seen in state and supra-state policies and in the everyday actions of groups and individuals that accelerate climate change, but the harmful consequences of these actions are not known to the actors. When geoviolence stems from ignorance, the harmful consequences of actions are known but ignored. This form of geoviolence is widespread, as information about climate-damaging actions is widely available. While recognizing the critique from various scholars regarding the exclusion of more-than-human activities and processes in Anthropocene debates (Bennett, 2010; Haraway et al., 2016), I maintain that emphasizing human origins in discussions of geoviolence is crucial for ensuring accountability among human actors. However, focusing on human origins does not discount the influence of other species and organisms on the processes and outcomes of geoviolence. Since environmental problems cannot be resolved at the individual level (Maniates, 2001), I aim to include human actors across multiple scales, from the supra-state institutions to individuals. However, given the power dynamics at play, I place particular emphasis on the state and supra-state origins of structural geoviolence.

While human action causes geoviolence, its process involves the generation, exacerbation, or exploitation of adverse geophysical conditions, be it by instrumentalizing natural conditions for harm or fueling damaging environmental processes. The results of geoviolence can affect

human and non-human bodies on physical and emotional levels, as well as their territories, through environmental degradation. Geoviolence can therefore result in what Pain (2021, 974) conceptualized as "geotrauma," which refers to the "multiscalar, intersecting and mutual relations between trauma and place". The term geoviolence illuminates how socio-ecological processes, such as climate change, can inflict geotrauma. By linking acts of violence and experiences of suffering and trauma across different locations, the *geo* in geoviolence emphasizes how violence can manifest through place-bound physical and natural conditions. Agreeing with Dixon (in Mills, Clark, Fluri, Tyner, & Dixon, 2017), who notes that there is much to be gained by incorporating not only sociospatial aspects into the *geo*, but also by "drawing on geography's complex and intersecting disciplinary histories" (p. 303), the term geoviolence also encompassed geophysical and more-than-human spheres. In their book about alliances in the anthropocene, Eriksen and Ballard (2020) challenge scholars to think about "alternative ways of witnessing and expressing the embodied and emotive affects" (p. 9) of the entanglements of more-than-human alliances. With the proposed conceptualization of geoviolence, I intend to offer such an alternative.

Like geotrauma (Pain 2021), the term geoviolence also highlights the significant role of oppressive power relations on multiple scales. Linking multiple forms of place-bound violence and oppression is crucial, not only to understanding the whole "matrix of domination" (Collins, 2000, 251), but also to seeing the processual force of geoviolence. Its proccessuality, however, also opens a space for action toward more justice, as the process of geoviolence can be slowed down, resisted, or repaired. This paper shows how geoviolence affects humans and their territory by exploring the impact of anthropogenic climate change on the right to parent children in safe conditions in the labor migration context between Morocco and Spain.

7.3. Methods

Empirical data was gathered through multisited ethnographic fieldwork conducted in Spain and Morocco over four stays, covering a total of eight months between April 2021 and June 2023. Throughout this time, I followed migrant workers from Morocco in their everyday lives, employing a "following the people"-approach (Marcus, 1995). This included accompanying a group of Moroccan women on their land/ferry journey from Morocco to Huelva. The work involved detailing observations and informal conversations in the workers' homes, workplaces, hospitals, and health centers in Huelva, and in different Moroccan regions. I also frequently accompanied the activists and unionists who supported the workers. To gain deeper insights, I conducted over 40 interviews with diverse participants, including agricultural workers, doctors,

midwives, employers, members of Spanish and Moroccan public administrations, activists, and unionists.[59] Additionally, I documented numerous informal conversations with activists, workers, and their family members. For the interviews, I used a combination of biographic and problem-centered questions (Rosenthal, 2007; Witzel, 2000), and they were conducted in Spanish or French, often facilitated by one of the two Arabic translators I was collaborating with. These interviews varied in duration from 20 minutes to 3 hours. I maintained frequent informal contact with many of the Moroccan women and conducted more structured interviews via the phone. All the interviews were recorded, transcribed, and then analyzed through open and focused coding using the qualitative data software MAXQDA.

7.4. "There is nothing green anymore": Moroccan livelihoods erased through water stress

Climate-induced migration has become a pressing concern in Morocco, as in many other North African countries (Van Praag et al., 2021). The country is part of a region declared as being highly vulnerable to climate change, experiencing rising temperatures, changing precipitation patterns, and increased aridity (IPCC, 2021). An analysis of climate data from 1960 to 2018 in a national report released by the UNFCCC, shows reduced rainfall, higher temperatures and a drier climate—changes that are contributing to more frequent and intense extreme weather events, including severe droughts, sea level rise, wildfires, and heat waves (Moroccan Ministry for Sustainable Development, 2022). The report also shows that the agricultural sector, particularly family farming, is highly vulnerable to these impacts of climate change. While droughts are not a new weather phenomenon in Morocco (Kreuer, 2019), in recent years the country has faced an unprecedented water crisis due to low rainfall, the increasing demand for water by industrial agriculture, and the uneven distribution of water resources across the country (Khalid & Moujahid, 2023).

As multiple scholars have demonstrated, climate injustice, such as extensive droughts, are not only caused by a capitalist economic system that exploits humans and the environment alike, but are also deeply rooted in colonial history (Gay-Antaki, 2023; Sultana, 2022). Morocco's contemporary agricultural dynamics remain shaped by colonial legacies, perpetuating a focus on export-oriented (primarily toward Europe), capital-intensive production—a model rooted in French policies that prioritized export crops and large-scale irrigation while marginalizing smallholder farmers (Mathez & Loftus, 2023). Over the last two decades, agricultural exports

[59] Some participants were interviewed in groups or several times individually.

have concentrated heavily on water-intensive vegetables and fruits, driving increased virtual water exports—a contradiction of virtual water trade principles, which state that water-scarce nations should import water-intensive goods and prioritize low-water-use domestic crops (Boudhar et al., 2023). This indirect form of water export reflects a neocolonial pattern, depriving Morocco's land and people of primary resources to meet European consumer demands. Insufficient action by Moroccan authorities and consumer-nation governments to curb water overexploitation for export economies and to mitigate worsening water scarcity constitutes another form of what I construe as geoviolence, perpetuating harm through environmental and socio-economic neglect.

The Moroccan water crisis has far-reaching effects on the economy, social cohesion, and food security (Khalid & Moujahid, 2023). Of Morocco's population, 39% work in agriculture, so the water crises directly affect their livelihoods (Choukri, 2021). Water stress also impacts the female migrant workers who travel to Spain under the specific selection criteria to harvest Huelva's strawberries, most of whom come from agricultural areas. Ayat, a 36-year-old woman who had been travelling to Spain seasonally for over 10 years before she finally stayed there permanently, reported in an interview about the situation in her hometown in Morocco:

> *This year we only have tap water for an hour and a half. We used to have water all day. People from the village save it in big cubes for cleaning, washing, cooking. […] They are opening [the ground] with machines to more than 150-meter depths to reach the groundwater. I remember when I was a girl, you could see the water at around 20 meters depth. […] It's been three years since the water started to go down. But this year, I have never seen anything like it. When I visited my town in March, it broke my heart. You see red soil everywhere, there is nothing green anymore. Normally, at this time of the year, we had beautiful flowers – yellow, red, white – well, like a natural garden, but not anymore. (Ayat, April 2023)*

Ayat's account exemplifies how climate change is not only affecting Moroccan territory, but also her people's ability to manage their everyday activities, such as cooking and cleaning. And as the soil becomes increasingly less fertile due to dwindling water availability, the plants that used to grow there are disappearing and the local human population is struggling to sustain their livelihoods. This interview quote serves as a poignant example of geoviolence affecting humans, more-than-humans, and the spaces they inhabit. It is not only threatening the basic existence of individuals, but also engenders place-bound emotional suffering—termed "geotrauma" by Pain (2021).

At the time of writing this article, in February 2024, Ayat told me via the phone that there was no more drinking water at all in her hometown. The water available in her village has begun to give them itchy skin, so they do not drink it anymore, although they still use it for household purposes, such as washing or watering plants. To obtain drinking water, family members must travel by car to another village or buy it from the supermarket, which at best places pressure on tight household budgets, and at worst is simply unaffordable. Additionally, the cost of food has risen strongly. Ayat reported that, while she used to pay 10 cents per kilo of potatoes in previous years, that now costs her €1.20 per kilo.

Her story illustrates how the lack of rain and the drought in Morocco are challenging her ability to provide a decent living for her family in Morocco. Coming from a rural background, where most of their families' income depends on agriculture, Morocco's water crisis is directly affecting their everyday lives. The geoviolence resulting from the water scarcity directly affects the availability of wage labor and impinges on everyday household activities, such as cooking and washing. Consequently, it affects the "bare life" (Agamben, 1998) of their communities. Studies have suggested that the "loss of grounding" (Burstow, 2003, 1303) characterizes traumatic experiences. The climate-induced destruction of Moroccan families' livelihoods, which I consider a form of geoviolence, can therefore cause place-bound geotrauma (Pain, 2021). Without water or wage labor, "parenting the children in safe and sustainable communities," as one level in the reproductive justice framework, is being increasingly challenged. This very intimate form of suffering is an example of how, in Morocco, geoviolence affects humans, and their environment simultaneously.

7.5. "I stay despite the anxiety": Extended family separation amid Spain's drought

Spain, like Morocco, is also increasingly experiencing the consequences of climate change. In Spring and Summer of 2022 and 2023, Spain's temperatures were among the highest on record since the start of measurement, with rainfall at only 22% of expected levels (Benayas, 2023; Serrano-Notivoli et al., 2023). The region of Huelva was severely affected by this, media reporting 2023 spring months being its driest year since records began (Carrasco, 2023). Research shows that the lack of groundwater in Huelva's Doñana wetland, which severely reduces local biodiversity, can be directly linked to the intensive use of water by neighboring agriculture (Green et al., 2024)—an example of how geoviolence is also destroying more-than-human territory in Spain. Water scarcity and the related geoviolence have directly impacted the entire agricultural sector in Huelva. In 2023, several berry producers encountered a significant acceleration in the maturation of their berries, resulting in a concentrated high yield lasting one

to two months, followed by months of harvest loss due to withered plants and the lack of rainfall. These climatic conditions, and their effects on the harvest, meant that many migrant workers from Morocco had little or no work. This can have dire consequences, especially for female workers, as the money they earn during the berry season is meant to sustain their families in Morocco for a large part of the year. While accompanying an activist during my ethnographic fieldwork, we received notification from a group of Moroccan workers that there was no more work for them. Their employer was telling them that they therefore had to return to Morocco two days later. We went to their farm and spoke with the employer to understand his perspective. As recorded in my observational fieldnotes after the encounter, the employer was also suffering from the water problem:

> *My fields are dry. Therefore, there is little work at the moment. Maybe next year the workers won't even come back, and we won't have this problem. Because maybe there won't be enough water for the plants. (Employer's statement, retrospectively paraphrased in author's fieldnotes, May 2023)*

Climate scientists have indicated that increased climate change will manifest through more intense and extreme weather events, including heavy rainfall, wildfires, droughts, and heatwaves (Clarke, Otto, Stuart-Smith, & Harrington, 2022). According to the employer's statement, berry companies are strongly affected. They may have to reduce their plantations, resulting in reduced profits, which can be devastating, especially for small operations. And less to no work for Moroccan workers can directly lead to food shortages for entire families. The potential for reduced rainfall and the subsequent decrease in berry production poses an immediate risk for many Moroccan workers who may not be able to return to Spain in the coming years to provide for their children. Ayat and Faiza described this fear in two interviews:

> *This year is crazy because of the lack of water. Many women have not earned [the full amount of money for the season]. Some only worked for 15 days and then were sent back because there was no fruit to pick. […] I've heard of an employer who told his workers that they would only return next year if there was enough rain. Many women are afraid that they will not be able to come back. (Ayat, May 2023)*

> *Without work, I will not be able to feed my children. So, I stay here [in Spain], even though it causes me a lot of anxiety. (Faiza, May 2023)*

The water crisis in Morocco and Spain is forcing seasonal female workers to consider remaining in Spain instead of returning home. Research has highlighted how water shortages and climate injustice disproportionately affect individuals based on factors such as gender, race or class

(Mikulewicz et al., 2023). For seasonal workers in Huelva, these identified categories play a direct role in their experiences, particularly through gender-specific recruitment strategies that result in mothers' prolonged separation from their families. Faiza's statement underscores the gravity of this decision, which often involves careful consideration of prospects. In returning to Morocco, there is the risk of limited job opportunities due to declining agricultural work, but there are also potential difficulties in securing employment in Spain again if rain is scarce. She is aware of the risks of staying in Spain, particularly due to a possible undocumented visa situation and her limited language skills. Those opting to stay without official papers typically require at least three years to secure residency before they can legally return to Morocco. Being torn between their agricultural wage labor in Spain and their reproductive lives in Morocco places them in a state of "intimate liminality" (Komposch et al., 2024). Climate-induced drought worsens family separation, prolonging the challenging experience of such intimate liminality. This illustrates the dual origins of geoviolence in this scenario—an intentional gender-specific labor migration regime alongside the impacts of climate change stemming from the ignorant lack of action by primarily nations in the Global North and multinational corporations.

By staying, however, Faiza can secure the upbringing of her children, even from a distance. This decision is made with the hope that one day she will be able to bring her children to Spain, reuniting her family under better conditions. Faiza's example shows her agency in addressing the geoviolence resulting from climate and reproductive injustice by consciously choosing the best option available to secure a living for herself and her children. It also exemplifies how geoviolence can affect humans on a very intimate level, by creating long-term emotional suffering and geotrauma for both children and parents. Recognizing the impact of migration regimes and climate change on families, and acknowledging the agency of the worker in deciding to stay, highlights the dynamic expression of geoviolence. The intentional shaping of migration policies, coupled with droughts exacerbated by the failure of nation-states to adequately address climate change, underscores the multidimensional causes of geoviolence.

7.6. "Stop talking about the water crisis": Mothers' worries about their children's future

As described in the previous section, geoviolence can lead to prolonged family separation, with mothers facing numerous challenges due to the geographical distance. Family separation exacerbates mothers' anxieties about their children due to their precarious lives back home. Malika, a 56-year-old seasonal worker, who is suffering from breast cancer, expressed these concerns during an interview:

> *This year, the lack of rain has affected us a lot. My family's avocados didn't grow well, so my family has earned almost nothing this year. I talk to my children on the phone every day and they always talk about it [the water problem]. I told them not to talk to me about it anymore. I am sick and when my children tell me about more problems, I cannot sleep, and it makes me even sicker. (Malika, May 2023)*

Malika's statement illustrates that the water crisis impacts family structures not only by prolonging physical separation, but also by exacerbating maternal anxieties, thereby intensifying emotional suffering. Her example demonstrates how geoviolence inflicts harm on an intimate level, affecting the body and emotions, which can lead to geotrauma.

The maternal concerns of Moroccan female workers in Huelva extend beyond immediate worries about water scarcity to encompass broader issues. In my interviews, numerous women employed in Huelva's berry industry expressed concerns that their relatives in Morocco were increasingly considering out-migration. Climate change often pressures communities in agrarian areas to migrate to urban centers or other countries. In Morocco, where rainfed agriculture constitutes around 80% of the cultivated area and employs most of the agricultural workforce, migration from rural areas to urban centers has increased during droughts (Ferreira Fernandes et al., 2023). A report estimated that climate-induced changes in rainfed agriculture could result in the rural out-migration of up to 1.9 million Moroccans by 2050 (Megevand & Diaz Cassou, 2023). While most migration occurs internally, international migration is becoming more significant, especially for workers with low levels of education (El-Amin & Al-Zu'bi, 2022). People from rural areas often migrate to Europe via risky routes, facing human trafficking and exploitative labor conditions (Brown et al., 2021). During an interview, Ayat, for instance, linked climate-induced migration to the Moroccan government's labor market policies and food prices.

> *Things [mostly referring to food] are almost at the same price as in Spain. It's very hard. And because there is no water, people cannot plant anything. Some sell their land and animals and try to leave. People also leave by boats […] However, the Mediterranean is difficult to cross, since it is closed by the police. (Ayat, April 2023)*

Ayat's statement highlights that increased controls along Europe's borders make migration increasingly difficult and life-threatening. Over 6,000 migrants lost their lives in 2023 attempting to cross the Mediterranean Sea or Atlantic Ocean from Morocco to Spain, due to Europe's repressive border controls (Mellersh, 2024). The operationalization of the environment for the enactment and obfuscation of border violence based on colonial and racist

logics has been documented in other European contexts (Davies, Yemane, Turner, Mayblin, & Isakjee, 2024). Similarly, the instrumentalization of the Atlantic Ocean and Mediterranean Sea as natural borders by EU nation-states exemplifies how geoviolence also manifests through intentional exploitation of already existing environmental conditions. Researchers have reported that violence and mortality rates have sharply increased due to the militarization of Europe's external borders through institutions such as Frontex or through more indirect forms of violence such as removals of rescue ships (Ferrer-Gallardo & Houtum, 2014; Isakjee, Davies, Obradović-Wochnik, & Augustová, 2020; Schindel, 2022). This use by European nation-states of the adverse geophysical conditions of the open sea to deter migration directly results in human suffering and death. Reports indicate that European coastguards, often aware of the risk of death for migrants through drone recordings and helicopter flights (SOS Mediterranee, 2024), frequently abstain from taking action to rescue migrants in distress at sea, revealing the intentionality of this type of geoviolence. Faiza, a worker who has decided to stay in Spain, reported in a group interview:

> *My son is asking me for permission to take the boat because he can't find work in Morocco. I want him to come, but not by boat. I couldn't say yes. It's very risky. (Faiza, May 2023)*

The potential for her child to perish during a precarious ocean journey in an attempt to find employment and a more prosperous future in Europe is a source of significant distress and anguish for the mother. Even though Faiza knows that her son's chances of finding work in her hometown are very low due to the water scarcity, she cannot approve of such a risky migration strategy. This shows how geoviolence challenges her chances of parenting her children in safe conditions, thereby exacerbating her maternal worries. This account illustrates how the climate crisis, combined with inherently violent border regimes, in the context of labor migration between Morocco and Huelva, is profoundly impacting family dynamics, extending the painful experience of separation. The harsh reality of geoviolence becomes perceptible as maternal anxieties intensify over concerns about their families' well-being, exacerbated by the struggle to sustain livelihoods in the face of water scarcity. Moreover, the increasing necessity for the family members of Moroccan workers to undertake perilous outmigration not only amplifies maternal distress, but also exposes the children to the gravest risk imaginable—death—as the most extreme manifestation of geoviolence. The normalization of such life-threatening risks and emotional geotrauma for certain bodies in certain families underscores the disparate valuing of lives across intersecting social categories.

7.7. "I support her": Political agency and tactics of solidarity

The preceding sections have discussed the challenges workers face regarding their family lives, which arise from increasing water scarcity, combined with repressive migration regimes. Acknowledging the inherent systemic obstacles that define the everyday lives of seasonal farmworkers in Huelva, the workers' mundane tactics of solidarity and political agency are remarkable. Both in Morocco and Huelva, people have been organizing and finding strategies to deal with this difficult situation of water stress and related family life challenges. It is noteworthy that (geo-)"violence dispersed across time and space also shapes the conditions for political organizing" and therefore "political agency may not take the form of visible and openly organized oppositional movements'" (Vorbrugg, 2022, p. 453). Drawing on feminist writings on more subtle forms of political resistance (Öcal & Gökarıksel, 2022) reveals how people's quotidian interactions and practices can challenge multiple forms of oppression. Acknowledging the context of geoviolence in which these groups navigate shows the importance of visualizing the more mundane forms of political agency and solidarity.

I have already mentioned multiple ways the Moroccan workers and their families deal with geoviolence, ranging from staying in Huelva and not returning home, to out-migrating from their villages. However, there are also other forms of everyday contestation beyond the decision to migrate. During a follow-up conversation in February 2024, Ayat told me about multiple strategies to face the water crisis and associated family challenges:

> *Since there is less water, people from my village get it from another village, 15 minutes away by car. Many of them don't have a car, so the neighbors transport water for one another. […] People have also been protesting in front of the municipality building for political changes that ensure their access to water. (Ayat, February 2024)*

Such accounts show how collective forms of action are essential in such precarious living conditions. By supporting each other in accessing water, people strengthen their communities, which eventually enables other forms of organizing. In recent years, public protests addressing the Moroccan water crisis have become more frequent (Lemaizi, 2024). Because more people are losing their livelihoods due to water scarcity, it is likely that such protests will increase.

Political agency and solidarity work are also present in Moroccan workers' lives in Huelva. During my fieldwork, I witnessed political organizing by Moroccan workers multiple times. The fieldnote below is an example of such a situation, which has already been discussed in subchapter 7.5.:

> *A feminist collective received a call from Moroccan workers who had been informed by their employer that due to a water shortage, there was no longer enough work for them. They were told they would have to go back to Morocco after only 10 days of work. Together with another member of an informal activist network, I visited the farm. The women expressed concerns of leaving and wanted to find a collective solution that would benefit the entire group. After some discussions, the employer eventually sought work for the women at another company. Two days later, the collective was informed that the employer had found another workplace for them. (Author fieldnotes, May 2023).*

On this occasion, the political organizing of the workers was successful; they achieved their goal of being able to continue to work. On many other occasions, workers have contested multiple outcomes of geoviolence by organizing and mutually supporting each other, despite the difficult situations they face, yet often without achieving their goals. When being exposed to geoviolence on an everyday basis, supporting colleagues and friends in precarious situations becomes a valiant form of resistance. On several occasions, workers told me about how they had received or given support to other women in similar situations. As Ayat describes in the following quote, this support becomes essential especially in moments when women decide not to go home:

> *I told her [a co-worker] that it isn't easy to stay here. It's hard to find work without papers, and many people can betray you, especially if you don't speak Spanish. The most painful thing, however, is that you won't see your children for a long time. […] Whatever I can do to support her, I will. (Ayat, paraphrased in author fieldnotes, May 2023)*

Numerous workers told me about strategies to support each other emotionally, strategically, and materially. This support ranged from listening to each other's emotional pain from being separated from their children and other family, giving advice on how to deal with difficult or abusive working conditions, carrying gifts for children to Morocco for friends who could not return due to their undocumented migratory status, strengthening each other's well-being by eating, talking or dancing together, walking in nature or helping each other finding support from local lawyers or unions. In the context of geoviolence, the example of two friends who used to go scream out all their rage in nature shows how reclaiming space for vocalizing intimate feelings can serve as a mundane form of mutual support. As Pain (2021, 974) wrote, paying attention to violence and geotrauma not only puts into focus the "lived experiences [and] the

repositioning of survivors as experts in narrating trauma[, but also] recognizes the work of reclaiming space after dispossession."

7.8. Conclusion

In this article, I have developed the concept of geoviolence as a way of comprehending the making of reproductive and climate injustice. My analysis focused on how droughts in Spain and Morocco are harming the territory, livelihoods, and family relationships of female Moroccan farmworkers working in Huelva's berry industry. The case study shows how geoviolence affects migrant women materially in terms of sustaining the lives of their families and maintaining their own physical and emotional well-being.

In Morocco, the more-than-human consequences of the geoviolence resulting from anthropogenic climate change are apparent in the recent prolonged droughts. The scarcity of rainfall and depletion of groundwater are making rural areas in Morocco drier. Consequently, the families of migrant workers are losing their sources of income, particularly from subsistence farming, while their everyday activities—cooking, washing, showering—are also under threat. Parenting children in safe and sustainable conditions—a key reproductive justice claim—is becoming increasingly challenging under such circumstances.

Climate crisis–related geoviolence is also evident in the droughts in Spain and their social effects. Water-intensive berry production in Huelva is at risk. This has far-reaching consequences for female Moroccan workers. Many decide to stay in Spain undocumented rather than face not being recruited again, if there is insufficient rainfall in the coming years, due to the growing scarcity of work opportunities in Morocco. Because the recruitment strategy between Spain and Morocco only allows women who are both mothers and from rural areas to work in Huelva, the decision not to return home leads to extensive (geo)traumatic experiences due to family separation, which causes emotional suffering and insecurity for the parents, children, and other family members alike.

Geoviolence also manifests in the form of mothers' increased worries about their children's future. With high unemployment rates, Moroccan rural youth are increasingly migrating across the Mediterranean Sea or Atlantic Ocean to find a better future. Europe's repressive migration regimes make these routes dangerous, if not deadly, exemplifying one of the most extreme human forms of intentional geoviolence.

My study furthermore illustrated how the workers deal with, and contest, the multiple outcomes of geoviolence in various practices of everyday resistance. Moroccan agricultural workers and

their families engage in practices of solidarity by assisting each other in finding access to water in Moroccan villages and supporting each other in dealing with long-term family separation and harsh working conditions. They also demonstrate political agency by challenging climate injustice in their villages and demanding political changes that ensure water accessibility, as well as by organizing with unions in Huelva to protect their workers' rights. When it comes to the political agency to address the effects of geoviolence, it is important to acknowledge that geoviolence interacts with different systems of oppression, such as colonialism, racism, and sexism. This makes the highlighted practices of organizing and solidarity even more noteworthy.

The ramifications of geoviolence in both human lives and their environments was exemplified in the paper by delving into the effects of anthropogenic climate change on the fundamental right to provide safe conditions for parenting in the context of agricultural labor migration between Morocco and Spain. Climate change is not only affecting agricultural work (Brown et al., 2021). It is therefore also necessary to understand the interlinkages between geoviolence and precarious labor in other sectors that depend on migration. In addition, future research could focus on the influence of neocolonial economic processes that, for example, allow foreign food producers to establish a large-scale export-oriented agricultural industries, depriving local communities of scare water resources to supply European consumers with fresh food. While the scope of this article did not allow me to analyze this aspect in-depth, further research focusing on this question could reveal forms of geoviolence in global capital accumulation.

Given the damage resulting from geoviolence, it is crucial to identify the related responsibilities. Rapid changes from climate change have detrimental effects on ecology and society. Thus, it is essential to comprehend the linkages between climate change–amplifying actions and their violent consequences across multiple scales. Recognizing that "only *a few* social groups and *specific* economic practices are responsible for our proto-apocalyptic situation" (Ouma in Verne et al., 2024, p. 166, own translation), an increasing number of scholars emphasize the need to identify those accountable for climate change and human rights violations (Chakrabarty, 2021; Diprose, Valentine, Vanderbeck, Liu, & McQuaid, 2019; Laliberté, 2015). In his review of Dalby's book on Anthropocene geopolitics, Öcal (2021) asks whether states should have an obligation to protect the people of endangered states, and which states bear the greatest responsibility for disappearing territories, given the unevenness in carbon footprints. It is critically important to further investigate these questions in both research and policymaking, despite the difficulties of identifying accountable parties due to the complexity of globalized interrelations and processes. As evidenced in this paper, the effects of

geoviolence can manifest in multiple ways and their origins must be located in the specific practices of certain social groups. In light of accelerating climate change and the increasingly damaging effects of uneven geoviolence on living beings and their environments, holding to account the responsible actors is of particular significance for working together toward a socio-ecological turnaround.

PART C: METHODOLOGICAL CONTRIBUTION

8. Exhibiting toxicity: sprayed strawberries and geographies of hope

Lucy Sabin[a], Nora Komposch[b], Adrien Mestrot[b]

[a] University College London, United Kindgom

[b] University of Bern, Switzerland

This article (Sabin et al., 2024) has been published online on July 20, 2023 (and 2024 in the original work) in the journal *Cultural Geographies in Practice:* https://doi.org/10.1177/14744740231183202.

While Lucy Sabin assumed primary responsibility for the writing process, this article is grounded in the data collection and analysis conducted during my fieldwork. The manuscript was developed collaboratively.

Abstract

Exposición was a 2022 art exhibition that explored seasonal farm laborers' exposure to strawberry herbicides in Huelva, Andalusia. Drawing upon a multidisciplinary collaboration of art, social geography, and soil science, the following discussion contextualizes Exposición and offers reflection on the exhibition as an immersive site for figuratively re-sensing lived experiences of heavily polluted places. The exhibition provided space in which configurations of matter, affect, and atmospherics might allow contemplation of environmental toxicity, while also being a means of voicing the care, solidarity, and hope enacted by affected communities.

Keywords

soil care, geography of hope, toxic politics, herbicides, art-science collaboration

Bern, 2022. *Would you like a strawberry?* asked the figure dressed head to toe in a white hazmat suit. Crimson fruits sparkled on a sterile surgical tray offered as if it were a plate of canapés. The performer wandered from person to person, group to group, inside and outside the Geography Institute, offering dangerously tempting strawberries and sowing seeds of doubt. *Are the strawberries safe to eat?*[60] The hazmat suit seemed to suggest otherwise. As the strawberries were circulated, two simultaneous reactions were catalyzed. On the one hand, the performance looked to provoke suspicion followed by critical engagement with the chemical industries of food production. On the other hand, we hoped the curious canapés might also sparked a sense of enchantment. Desire to eat the strawberries was tempered with an urge to follow the commodity back to its source.

In this article, we invite you to join a tour of our 2022 exhibition at the University of Bern, which storied some of the conditions under which seasonal farm laborers are exposed to sprayed herbicides in the Andalusian strawberry industry. During the tour, we contemplate the exhibition as a site for calibrating affective responses to uneven toxic exposures. Our analysis focusses on ideas of hope, expressed via enchantment, as an orientation for making "permanently polluted" (Liboiron, Tironi, & Calvillo, 2018, p. 332) worlds more livable. Far from escapism, Tara Woodyer and Hilary Geoghegan (2014) frame enchantment as "fleeting moments that can accumulate and sustain hope in times of real difficulty" (p. 5). This orientation felt pressing given the uneven and gendered distribution of exposure to herbicides: much of the precarious labor of strawberry picking in Andalusia is done by migrant women. Maintaining hope in such contexts is essential to reframing dominant narratives, contesting power structures, and redistributing agency (Lopez, 2023).

Our hopeful geography is, following Eben Kirksey (2014), grounded in the "actual living" (p. 296) communities of workers together with assemblages of more-than-humans; namely air, molecules, soil, and strawberries. As such, the exhibition brought together multiple perspectives on toxic environments and was itself the product of a multidisciplinary collaboration between a soil scientist, a social geographer, and an artist.[61] In producing the exhibition, we combined aspects of our research in novel ways. By assembling ethnographic data in the same space as soil "samples", we created tangible relations between our disciplines with which audiences

[60] These strawberries were not actually contaminated. Local, organic strawberries were used, setting in motion the first perceptive tension or contradiction of the exhibition.

[61] The project was part of the second cycle of mLAB residencies at the Geography Institute of the University of Bern, which involved a month-long program at Bern as well as a partly remote collaboration over two years. The mLAB residency consists of transdisciplinary collaborations spanning academia, arts, and (digital) media to co-create experimental research methodologies and innovations in communication (see https://mlab.unibe.ch/).

could engage. In doing so, our intention was to contribute to emerging discourses on geographies of hope as a social response to daily entanglements with the material realities of toxic chemicals and their infrastructures.

8.1. Re-sensing toxicity

Upon entering the main gallery space of Exposición, visitors encountered a temporary structure in the middle of the room: a greenhouse three meters wide, five long, and almost two high. Its arched steel frame was wrapped with a translucent membrane (Figure 6). Visitors who stepped inside the structure became shadow puppets to onlookers outside (Figure 7). Inside, views to the outside world, or even across the greenhouse, were obfuscated by a mysterious mist. Vague plumes swirled around bodies then unfurled into the corners. To breathe in the greenhouse was to breathe in a world of chemical fog laced with an earthy perfume; the ground underfoot was blanketed in a layer of topsoil. Listeners discerned trickling water, footsteps, voices, thrumming machinery, passing traffic, and the crackling of a Geiger counter. This soundscape echoed agricultural labor sites in the strawberry fields of Huelva.

Figure 6: The greenhouse installation. Photo: Lucy Sabin 2022.

Figure 7: Inside the immersive installation, Untitled (greenhouse). Photo: Lucy Sabin 2022.

Exposición, meaning both art exhibition and chemical exposure, was curated as a creative and critical response to industrial agricultural production in Huelva, Andalusia—a region where toxic exposures intersect and accumulate in high concentrations. The issue of environmental toxicity is especially significant because Huelva is home to one of the largest radioactive fertilizer waste dumps in Europe, an immense chemical park, and an open-cast mineral mine further upstream. Alongside the seas of plastic polytunnels used in growing strawberries (Figure 8), this chemical infrastructure jostles with suburbs, rivers, irrigation systems, and arable fields.[62]

We designed and curated Exposición to try and make palpable the effects of toxicity across this landscape through installation and staging. We did so in part by constructing an immersive space; the greenhouse installation was an atmospheric surround that demonstrated each body's entanglement within industrial systems of food production (Figure 6, Figure 7 and Figure 9). One visitor reported that she could "re-sense" the atmosphere of the greenhouse through her

[62] Michelle Murphy (2013) defines "chemical infrastructures" as "the spatial and temporal distributions of industrially produced chemicals as they are produced, consumed, become mobile in the atmosphere, settle into landscapes, travel in waterways, leach from commodities" (p. 104).

own body, enabling her to "better *imagine* how it might feel to work in such harsh conditions". In their account of enchantment, Woodyer and Geoghegan (2014) emphasize the importance of sensory experience, whereby "a new circuit of intensities form between material bodies" (p. 204). In the murky atmosphere of the greenhouse, glycerine from the fog machine became a substitute for another chemical compound: glyphosate, the herbicide commonly sprayed on strawberries. The artwork thus invited visitors to "sample" sprayed pesticides through their bodies as they ingested strawberries, sifted soil with their fingertips, and inhaled the "contaminated" air.

Figure 8: A sea of polytunnels for growing strawberries in Huelva. Photo: Lucy Sabin 2022

8.2. Cultivating hope

While Exposición corresponded to toxic exposures, the exhibition did not drown out possibilities for hope but opened spaces in which hope may be generated and encountered, countering reductive and damage-based understandings of toxic exposures (Tuck, 2009). The tour continues. Natural light streamed through a row of windows, diffusing across the ghostly structure of the greenhouse and the "toxic" fog it contained. Below each pane of glass, interview quotes from Komposch's ethnographic fieldwork in Huelva with seasonal strawberry pickers

were affixed to the sill.[63] The farmworkers are mostly women from Morocco, Eastern Europe, and Andalusia. Their words were transcribed from interviews then translated into English from Arabic or Spanish. Printed quotations described the effects of chemical exposure, exploitative working conditions, and struggles of agricultural workers laboring at another end of an international supply chain.

Figure 9: Visitors had to put on a pair of hazmat booties before entering the “contaminated” greenhouse. Photo: Lucy Sabin 2022.

One quotation, from a unionist and former worker, testified to the adverse health effects of acute exposure to herbicides: “There are times when they are fumigating next to you, and you have no protection whatsoever. You start with horrible headaches, stomach aches and it’s horrible, it’s horrendous, but here in the health sector nobody has ever investigated the health problems that people who work in the strawberry fields are suffering from”. Confirming the lack of protective equipment, a worker stated: “As I bend over to pick the fruit, the dust [from the plant protection product] goes up my nose and makes my eyes water”. And yet, another added, these complaints are not raised with employers, “out of fear of being blacklisted, out of

[63] Between 2021 and 2023, Komposch spent eight months in Huelva and in multiple regions of Morocco conducting a multisited ethnographic research for her PhD on the reproductive lives of seasonal farm workers. Sabin joined Komposch in Huelva for one week in March 2022.

fear of not being hired again by the same boss, out of fear that the boss will tell another boss not to hire you. A lot of fear."

These vignettes not only offered scenes of exposure and narratives of labor exploitation; they also spoke to and communicated workers' capacity for adaptation and imagining livable futures. "You have to know, that all the women who do this work picking strawberries are very strong. We carry 24 kilos of strawberries", affirmed one interviewee. Other quotations described the perennial friendships and self-organization between workers. The seasonal nature of the work mean that the women live together in temporary accommodation and develop close bonds: "We organize ourselves together in everyday life, do our grocery shopping together, eat together and help each other". Another added: "To reduce the back pain, we massage each other with olive oil in the evening".

In the exhibition, accounts of solidarity coexisted with the harsh working conditions of the strawberry industry, inspiring "new formations of what it means to be in community together" (Lopez, 2023, p. 3). While toxic exposure was the subject of the exhibition, the gallery space showed this subject in relation to instances of hope and situated agencies grounded in communities (inspired by Lorimer, 2003). One interviewee expressed their hopeful desire for a better future: "The work here is very important for me because like this I can pay the studies of my children. […] My daughter is studying administration and my son is studying geography".

Along the other surfaces of the gallery, various media contextualized and supported workers' stories. There was a computer monitor displaying an interactive map of the potential impacts of toxic chemical exposures on long-term, reproductive, and intergenerational health of workers (designed by Frey, 2022).[64] A televised exposé of working conditions played on loop on a wall-

[64] For more information on the potential impact of toxic chemical exposure on the (reproductive) health of farmworkers, see also Barbour & Guthman (2018) or Fucic et al. (2021).

Figure 10: Close-up of the "research table" featuring fieldwork photography, academic research, and artefacts from Huelva. Photo: Lucy Sabin 2022.

mounted screen,[65] while an adjacent "research table" offered an assemblage of excerpts from news articles, scientific reports, and policy documents as well as photographs, handcrafted artefacts, and paraphernalia from ongoing campaigns by local activists (Figure 10). Lastly, a triptych of large-format photographic prints portrayed some of the temporary dwellings that the workers occupy seasonally. The dwellings are isolated cabins nestled within industrial-agricultural topographies. Laundry lines vibrant with garments stand out as intimate and mundane reminders of self-organized and collective routines of care (Figure 11).

[65] The televised exposé was released on May 5, 2022 on the Austrian channel ORF2 with the title "Erdbeeren aus Spanien" (Strawberries from Spain) and shows several interviews with environmentalists, trade unionists and with Nora Komposch (see Beato, Manola, & Morales, 2022).

Figure 11: Triptych of digital photographic prints showing the temporary housing provided for seasonal workers. Photo: Lucy Sabin 2022.

8.3. Final Reflections

If *enchantment*, a sense of awe and wonder, is central to cultivating hope in cultural geographies (Geoghegan & Woodyer, 2014), Exposición embraced enchantment through creative storytelling, sensory immersion, playfulness, performance, participation, and paradox. The art exhibition became a space for attending to the "pleasurable sense of mystery and its simultaneous sinister edge" (Geoghegan & Woodyer, 2014, p. 201). Exposición did not attempt to literally re-present pollution but instead sought to introduce ambiguity and enchantment via allegedly toxic (but organic) strawberries, the supposedly poisonous (but harmless) fumigated atmosphere of the greenhouse installation, and the voices of workers who shared their stories of dealing with exploitative working conditions. These artistic encounters framed toxicity as a complex issue, hinting at the uncertainties surrounding the effects and extent of chemical relations across space and time. Grappling with the limits of representing something as vast and elusive as toxicity, Exposición foregrounded singular moments and small stories, some elements of which were confronting but also hopeful and future-oriented, which in turn allowed space for "imagining worlds otherwise" (Lopez, 2023, p. 794).

9. Multisensorik: Globale Intimität multisensorisch erforschen und ausstellen

Mirko Winkel[a], Carolin Schurr[a], Laura Perler[a], Nora Komposch[a]

[a] University of Bern, Switzerland

This book chapter (Winkel, Schurr, Perler, & Komposch, 2023) has been published in German in the book *Artographies: Kreativ-künstlerische Zugänge zu einer machtkritischen Raumforschung*: https://doi.org/10.14361/9783839467763.

My main contribution to this chapter can be found in Section 9.4 (“Exposición: eine Ausstellung zur Erdbeerernte in Andalusien,”), which describes our research-art exhibition on pesticide exposure. Moreover, I was also involved in the collaborative process of the other parts of the chapter.

The original chapter published in the above-mentioned book includes not only the exhibition *Exposición* described here, but also another example of an exhibition that resulted from the doctoral thesis of my colleague Laura Perler. Since this second exhibition is not directly related to this dissertation, this part of the book chapter has been removed in this version of the text.

9.1. Einleitung: intimes Leben erforschen und erzählen

Eine mexikanische Leihmutter erzählt uns davon, wie gerne sie etwas von dem Baby, das sie vor sechs Monaten für ein homosexuelles Paar aus Spanien ausgetragen hat, hören würde; eine spanische Eizellenspenderin berichtet von den Nebenwirkungen auf ihre Stimmung, die die Hormonstimulationen bei ihr ausgelöst haben; und eine Saisonarbeiterin, die in der spanischen Beerenindustrie während ihrer Schwangerschaft Pestiziden ausgesetzt war, klagt über chronische Krankheiten ihres Neugeborenen. Wie können wir als Wissenschaftler:innen die intimen und reproduktiven Erfahrungen dieser Frauen in unserer Forschung empirisch erfassen und ihre Geschichten so erzählen, dass ihre Stimmen und Erfahrungen vermittelt werden können? Und wie kann man dabei die reproduktiven Erfahrungen, die intimen Erlebnisse und die Gefühle der Frauen, mit denen wir forschen, mit politischen und ökonomischen Strukturen auf nationaler und globaler Ebene mithilfe einer Ausstellungspraxis verweben, um zu zeigen, wie sich Intimität und Globalität gegenseitig konstituieren? In diesem Buchbeitrag möchten wir diese Fragen erörtern und dabei zunächst darauf eingehen, wie multisensorische Methoden in der Geographie verhandelt werden und wo wir ihre Grenzen sehen. Daran schließen wir mit Bezug auf aktuelle Diskussionen um kreative Geographien an, in deren Kontext wir das mLAB am Geographischen Institut der Universität Bern vorstellen als einen experimentellen Raum der Begegnung zwischen Kunst und Geographie. Anhand eines Ausstellungsprojektes[66] verdeutlichen wir, wie wir an dieser Schnittstelle gearbeitet haben, um unsere Forschungsergebnisse auf multisensorische Art und Weise der Öffentlichkeit zu präsentieren. In der Konklusion und auf Basis dieser Expertise diskutieren wir schließlich das Potenzial von Ausstellungen als artographische Praxis.

9.2. Multisensorische Methoden in der Geographie und das mLAB als experimenteller Raum zwischen Kunst und Wissenschaft

Einer der Gründe, warum Geograph:innen begannen, mit kreativen Forschungspraktiken zu experimentieren, war die Kritik an den Grenzen der Repräsentation non- und mehr-als-repräsentationaler Geographien. Kreativität und kreative Forschungspraktiken werden zunehmend als eine Möglichkeit gesehen, geographische Wissensproduktion hin zu einer mehr-

[66] Im veröffentlichten Orignaltext stellen wir im Buchkapitel zwei Ausstellungsprojekte vor. Neben dem Ausstellungprojekt *Exposición*, welches im Rahmen dieser Dissertation entstanden ist, wird im Originaltext auch über die Ausstellung *Babys machen? Eizellenspende und Reproduktionspolitiken* von Laura Perler berichtet. Da diese zweite Ausstellung keinen direkten Bezug zu dieser Dissertation hat, wird in dieser Textversion nicht weiter darauf eingegangen.

als-repräsentationalen Weltsicht zu öffnen (z.B. Hawkins, 2013; Schmidt, Singer, & Neuburger, 2022).

Die Suche nach multisensorischen Methoden der Datenerhebung und -repräsentation war eine Motivation für die Gründung des mLAB am Geographischen Institut der Universität Bern. Eine weitere Motivation findet sich in der feministischen Praxis, die eigene Forschung den marginalisierten Gruppen, mit denen und über die wir forschen, zugänglich zu machen und ihren Stimmen und intimen Erfahrungen eine breitere Bühne zu bieten. Das mLAB versteht sich als ein kollektiver und transdisziplinärer Raum, wo Wissenschaft, Kunst, digitale und analoge Medien zusammenkommen und an dieser Schnittstelle neue Formen und Methoden des Geographiemachens entwickeln. Wichtig ist dabei, dass es nicht nur darum geht, mithilfe künstlerischer Arbeiten geographischen Forschungsoutput kreativ aufzuarbeiten, um die Forschungsergebnisse einer breiteren oder spezifischeren Öffentlichkeit zugänglich zu machen. Vielmehr steht im Vordergrund, gemeinsam danach zu fragen, wie sich spezifische geographische Konzepte und Themen sowie künstlerische Praktiken gegenseitig befruchten und gemeinsam neue geographische Kunst oder künstlerische Formen des Geographiemachens entwickeln können.

Eine im mLAB erprobte Praxis ist das Nebeneinanderarbeiten von Forschenden und Kunstschaffenden im Feld, was zu unterschiedlichen, sich ergänzenden Perspektiven und Produkten führt. Diese multimedialen Gegenüber- und Nebeneinanderstellungen lassen sich besonders in Form von Ausstellungen aufbereiten und wiederum multisensorisch erfahrbar machen.

9.3. Ausstellungen als multisensorische geographische Praxis

Die Geographie hat eine lange Tradition im öffentlichen Ausstellen ihrer eigenen Forschungsresultate. Harriet Hawkins (2021) verweist beispielsweise auf die *Royal Geographical Society* in London, die seit ihrer Entstehung im Jahr 1830 darauf bedacht ist, geographische Forschung publik zu machen (Hayes, 2019). Während die koloniale Vergangenheit und die Art und Weise, wie die Geographie als Disziplin zur Darstellung der Kolonien als “wild“, “unzivilisiert“ und “unterentwickelt“ beitrug, reflektiert werden muss, bietet die Praxis der Ausstellung eine interessante Möglichkeit für das Fach, ihre Forschungsergebnisse räumlich zu inszenieren und multisensorisch erfahrbar zu machen. Kunstinstitutionen zeigen in den letzten 20 Jahren vermehrt Ausstellungen, die sich direkt wissenschaftlichen Ergebnissen widmen. Die Designer Chris Rust und Alec Robertson (2003)

definieren die *research exhibition* als eine Möglichkeit, Forschungsfragen und -inhalte auf eine klare und niederschwellige Weise zu kommunizieren.

Es fehlt jedoch eine grundsätzliche Debatte darüber, inwieweit Forschungsausstellungen einen ganz eigenständigen Charakter besitzen und welchen Beitrag sie zur Forschung leisten können. Da in Forschungsausstellungen diverse Wissensträger wie Texte, audiovisuelle Medien, Kunstwerke, Fundstücke, Modelle und so weiter gleichberechtigt nebeneinanderstehen, können neue Verbindungen und multiple Interpretationen entstehen (Bianchi & Dirmoser, 2007). In der Koexistenz verschiedener Daten und deren Interpretationen relativieren Ausstellungen dabei die Definitionshoheit eines:einer Autor:in beziehungsweise Ausstellungsmacher:in:

> *Im Ausstellen kreuzen sich Deutungsabsichten von Ausstellenden, Bedeutungen des Ausgestellten und Bedeutungsvermutungen der Rezipierenden. Dieses Beziehungsgeflecht von AusstellungsmacherInnen, BesucherInnen und Objekten bestimmt die Rezeption. (Muttenthaler & Wonisch, 2015, p. 38)*

Unterschiedliche Besucher:innen nähern sich den ausgestellten Objekten mit unterschiedlichen Geschwindigkeiten, Voraussetzungen und Interessen; sie gehen alleine, mit einem:einer Gesprächspartner:in; sie zeigen (in ihrer Vielstimmigkeit), wie der gleiche Raum ganz unterschiedlich erschlossen werden kann. Ausstellungen entsprechen im besten Sinne einer begehbaren Karte. Die Besucher:innen können von verschiedenen Punkten aus durch die Ausstellung "wandern" und sich somit eine hochindividuelle Erfahrungsdramaturgie erschaffen. Es ist eine "Wahrnehmung-in-Bewegung" (Siepmann, 2003, p. 4). Die Wechselwirkung einzelner Ausstellungsobjekte durch ihre räumliche Nähe und Überlappung (siehe Ausstellung zur Erdbeerernte, bei der das *soundscape* gleichzeitig hörbar ist, während man die Zitate liest) schaffen mögliche inhaltliche Bezüge oder provozieren unüberwindbare Spannungen.

Um sich den Deutungsabsichten der Ausstellungsobjekte anzunähern, kann es hilfreich sein, den Begriff ‚Szenographie' heranzuziehen. Szenographien sind zugleich gebaute Ausschnitte, Verdichtungen oder Miniaturen existierender realweltlicher Räume, aber auch Neuanordnungen, fiktive Entwürfe oder anderweitig gebaute Szenarien und verstehen sich zunehmend als eine eigenständige künstlerisch-gestalterische Praxis (McKinney & Palmer, 2017). Während im Theater unter *scenography* insbesondere hergestellte Atmosphären und Bühnenbilder verstanden werden, kann auch von einem inszenatorischen Eigenwert der ausgestellten Fundstücke gesprochen werden. Rachel Hann (2019) unterscheidet daher zwischen *scenographys* und *scenographics*. Ihr zufolge kann ein Gegenstand *scenographic*

sein, also einen Inszenierungscharakter besitzen, ohne dass es einer künstlerischen Rahmung bedarf. Beispiele wären Werbebroschüren, Raumeinrichtungen, Kleidung von Personen. Durch die Anwendung bestimmter Materialitäten und Ästhetiken ordnen sie sich bestimmten Normen und Ideologien unter oder widersprechen ihnen. *Scenographics* sind "interventional acts of orientation that complicate, reveal or score processes of worlding" (Hann, 2019, p. 11). Demgegenüber ist der Ausstellungsraum selbst die *scenography*, also eine atmosphärische räumliche Anordnung. In einem solchen Raum werden die Objekte *(scenographics)* in ihrem Eigenaussagewert in Form einer doppelten Inszenierung sichtbar oder sogar überhöht.

Im Rahmen der Zusammenarbeit unserer Forschungsgruppe mit dem mLAB stell(t)en wir uns die Frage, inwieweit Ausstellungen als multisensorische geographische Praxis fungieren können. Inwieweit kann das Anordnen und Inszenieren von Wissen und *inszenatorischer* Objekte den komplexen Verstrickungen von intimen, affektualen und oft mehr-als-repräsentationalen Daten gerecht werden und mit Prozessen auf anderen Skalenebenen ins Verhältnis gesetzt werden? Im Folgenden möchten wir ein Ausstellungsprojekt vorstellen, in welchem wir dieser Herausforderung in Form einer künstlerisch-wissenschaftlichen Zusammenarbeit nachgegangen sind.

9.4. Exposición: eine Ausstellung zur Erdbeerernte in Andalusien

Die Ausstellung *Exposición* wurde im Frühjahr 2022 am Geographischen Institut der Universität Bern gezeigt. Die Ausstellung bot Besucher:innen die Möglichkeit, sich den körperlichen Arbeitserfahrungen von Erdbeerpflücker:innen in Andalusien multisensorisch anzunähern.

Die Ernte von Erdbeeren gehört zu den körperlich sehr anstrengenden Arbeiten in der andalusischen Landarbeit und wird in Huelva zu einem Großteil von migrantischen Frauen verrichtet. Zur körperlichen Anstrengung und den prekären Arbeitsbedingungen kommt die gesundheitliche Belastung der Arbeiter:innen durch das routinemäßige Versprühen von Pestiziden und andere Umweltverschmutzungen landwirtschaftlicher und industrieller Tätigkeiten in der Region hinzu. Aufgrund der verheerenden gesundheitlichen Folgen für die Landarbeiter:innen werden Regionen wie Huelva auch als *extreme environments* (Saxton, 2015) bezeichnet. Huelva weltweit Europa's größte Produktionsregion von Erdbeeren, was dazu führt, dass die meisten der dort angebauten Güter von Menschen konsumiert werden, welche ansonsten keinen persönlichen Bezug zur Erfahrung von Landarbeiter:innen in Huelva haben.

Figure 12: Ausstellungskonzept “Exposición”. Fotos von Lucy Sabin, Gestaltung durch Mirko Winkel 2023.

Die Ausstellung *Exposición* bot einen Raum, um über die Körper nachzudenken und deren Erfahrungen nachzuspüren, die ihre Arbeitskraft für groß angelegte und skalenübergreifende Systeme der Lebensmittelproduktion zur Verfügung stellen. Der Name *Exposición* hat in der spanischen Sprache zwei Bedeutungen und bezieht sich sowohl auf die Kunstausstellung als auch auf das Ausgesetztsein gegenüber Toxizität verschiedener Umweltverschmutzungen.

Entstanden ist die Ausstellung durch eine interdisziplinäre, vom mLAB finanzierte und organisierte Zusammenarbeit zwischen der Künstlerin und Geographin Lucy Sabin, die am University College London (UCL) promoviert und die Ausstellung gestaltete und kuratierte, sowie der Geographin Nora Komposch, welche zum Thema reproduktiver Gesundheit von Landarbeiter:innen in Huelva am Geographischen Institut der Universität Bern promoviert, und Adrien Mestrot, Professor für Bodengeographie, der zu Schadstoffen in Böden am gleichen Institut forscht.

Beim Betreten des Ausstellungsraumes hörte man als Besucher:in eine abwechselnde Geräuschkulisse: das Rauschen eines Flusses, Verkehrsgeräusche, Gesprächsfetzen, industrielles Dröhnen und das Klicken eines Messgeräts für Radioaktivität. Die für die Ausstellung zusammengestellten *audioscapes* (Figure 12, Nr. 8) stammen aus der Feldforschung in Huelva und brachten so die Soundkulisse der Arbeitsorte der Landarbeiter:innen hörbar in den Ausstellungsraum nach Bern: der von Industrie und Landwirtschaft stark verschmutzte Fluss Río Tinto, welcher die Erdbeerplantagen mit Wasser speist; Lastwagen und Taxis, welche Waren und Personen zwischen Erdbeerplantagen und urbanen Zentren transportieren; Gespräche von Arbeiter:innen während des Erdbeerpflückens; der an die Erdbeerfelder angrenzende Industriepark und die ebenfalls an die Felder angrenzende radioaktive Phosphorgipsdeponie. Solche *audioscapes* ermöglichen eine affektuale Auseinandersetzung mit den Atmosphären eines bestimmten Raumes (Kanngieser, 2011). Im Falle dieser Ausstellung wurden dadurch unterschiedliche toxische Umweltverschmutzungsquellen bereits über den Hörsinn wahrnehmbar. Visuell fiel vor allem das aufgebaute Gewächshaus (Figure 12, Nr. 9) in der Mitte des Ausstellungsraumes auf, welches für Besucher:innen begehbar war. Im Innern war das Gewächshaus mit Rauchschwaden durchzogen, ein Verweis auf die Pestizide in der Luft der Gewächshäuser, denen die Erntearbeiterinnen tagtäglich ausgesetzt sind. Zudem erfüllte der Geruch von Erde die Luft im Gewächshaus und erinnerte Besucher:innen dadurch an die ständige Verbindung von Boden und Luft. Als “feucht“, “neblig“ und “beklemmend“ wurde die Erfahrung des Betretens des Gewächshauses von Besucher:innen beschrieben. Der Boden war aufgefüllt mit Erde und machte so das Erleben von wirklichen Gewächshäusern greif- und nahbarer. An den Wänden rund um das Gewächshaus hingen weitere Ausstellungselemente. So ermöglichten großformatige Fotos von Lucy Sabin (Figure 12, Nr. 10) einen visuellen Eindruck der weiten Landschaften von Erdbeermonokulturen und der isolierten und teilweise provisorischen Behausungen der Arbeiter:innen, welche direkt an die Erdbeerfelder angrenzen. Weiter wurden durch abgedruckte Interviews mit Landarbeiter:innen, Aktivist:innen und Politiker:innen die

Stimmen (Figure 12, Nr. 11) der betroffenen Personen in Huelva sichtbar und brachten so ihre Erfahrungen in eigenen Worten in den Ausstellungsraum. Ein ‚Forschungstisch' (Figure 12, Nr. 12), auf welchem verschiedene wissenschaftliche Studien zu den Auswirkungen von Pestiziden auf die Gesundheit von Landarbeiter:innen (Barbour & Guthman, 2018; Guthman, 2019; Guthman & Brown, 2016; Holmes, 2013; Istvan et al., 2021; Saxton, 2015) sowie eine partizipativ erarbeitete Karte verschiedener Umweltverschmutzungsfaktoren in Huelva des Forschers Lucas Barrero ausgelegt waren, ermöglichte Besucher:innen das Vertiefen des Themas entsprechend den eigenen Interessensbereichen. Ergänzt wurde die Ausstellung durch zwei digitale Formate: den Videobeitrag eines Fernsehberichts (Figure 12, Nr. 13) im ORF2 aus dem Jahr 2022 zum Thema sowie eine interaktive Karte der Geographin Fabienne Frey (Figure 12, Nr. 14) zu den Auswirkungen von Pestiziden auf die reproduktive Gesundheit von Arbeiter:innen (Frey, 2022), auf der Besucher:innen per Mausklick selbst die Problematik erkunden konnten. Diese Arbeit ist im Rahmen eines Masterkurses mit dem Titel *Mapping the global/intimate*, der in Zusammenarbeit der Forschungsgruppe Sozial- und Kulturgeographie mit dem mLAB im Frühjahrssemester 2022 stattfand, entstanden. Im Anschluss bot Lucy Sabin den Ausstellungsbesucher:innen im Rahmen einer mobilen Performance in Schutzanzügen lokal produzierte Bio-Erdbeeren an, um während der Degustation der Erdbeeren zusammen mit Nora Komposch über die Erfahrungen der Besucher:innen zu diskutieren und offene Fragen zu beantworten.

Durch die Kombination der unterschiedlichen auditiven, visuellen und sensorischen Elemente der Ausstellung und die damit verbundene Mobilisierung aller Sinnesorgane ermöglichte die Ausstellung, das Vorhandensein und die Auswirkungen von Pestiziden und anderen Giftstoffen im Arbeitskontext der andalusischen Erdbeerproduktion erfahrbar zu machen.

9.5. Konklusion: die Forschungsausstellung als Raum für neue Beziehungsgeflechte

Das Ausstellungsbeispiel versucht grundlegendes Faktenwissen mit dem intimen Wissen verschiedener Stakeholder in ein dialogisches Verhältnis zu bringen und so einen affektualen Konflikt bei den Besucher:innen zu provozieren. Der Ausstellungsraum ist nicht starr, sondern bildet den atmosphärischen Rahmen für die Begegnung der Objekte, der Besucher:innen und der Intentionen der Ausstellenden. "[D]er Raum räumt die Möglichkeit wechselnder Relationen zwischen Passanten und Objekten ein, er ermöglicht einen Prozess, der an der Bedeutungsproduktion beteiligt ist." (Siepmann, 2003, p. 4) Hier findet sich eine Entsprechung zum relationalen und performativen Raumverständnis der feministischen Geographie (Gregson & Rose, 2000). Die Bedeutungsformation entsteht erst durch das Zusammenwirken

menschlicher und nichtmenschlicher Akteure im Sinne der *actor-network theory* und der Anerkennung der *agency*, die ihnen innewohnt. Innerhalb der *scenography* des Ausstellungsraumes werden die inszenatorischen Eigenwerte *(scenographics)* offengelegt und verhandelbar. Statt nichttextuelle Datenobjekte (*audioscapes*, Fotografien, Videos, Installationen etc.) isoliert zu betrachten, werden sie in einem neuen Konfliktraum präsentiert, der ihrem mehrdimensionalen und mitunter emotional überfordernden Charakter eine räumliche Entsprechung bietet.

Die konzentrierte verräumlichte Praxis von Forschungsausstellungen ermöglicht es nicht nur, verschiedene Arten und Formen von Daten räumlich miteinander in Beziehung zu setzen. Durch die Interaktionen zwischen kuratierenden und forschenden Personen und dem Publikum sowie mit den verschiedenen Datenobjekten können Forschungsergebnisse auf situierte Art und Weise, in ihrer Relationalität und Multiplizität dargestellt werden, sodass neue Perspektiven durch den gemeinsamen Dialog innerhalb des beziehungsstiftenden Raumes der Ausstellung entstehen. Innerhalb gut ausgeleuchteter Ausstellungsräume können neben Objekten auch Themen und Konzepte eine dreidimensionale, verdichtete Beziehung zueinander entwickeln. Die Verdichtung dieser Komplexe birgt jedoch nicht nur kommunikative Potenziale, sie leistet auch einer Simplifizierung oder gar Manipulation Vorschub. Ähnlich den kritischen Diskursen um geographische Karten strahlen die institutionellen Räume, in denen solche Ausstellungen oftmals stattfinden, eine definierende Autorität aus, in der das Unsichere und das Nichtwissen kaum sichtbar werden. Es gilt also innerhalb einer kritisch-feministischen Forschungs- und Ausstellungspraxis, ein räumliches Äquivalent für das Unsichere und die Positionalität der Ausstellungsmachenden zu finden.

Eine weitere Schwierigkeit, mit der wir uns bei der Konzeption der Ausstellungen konfrontiert sahen, war die Frage, inwieweit die Ausstellungsobjekte und darin erzählten intimen Geschichten die porträtierten Personen gefährden und wie die Personen geschützt werden können. So ist beispielsweise abzuwägen, welche Formen der Anonymisierung möglich sind und wie sich diese auf die affektuale Qualität der Ausstellung auswirken.

Darüber hinaus gilt es grundsätzlich kritisch zu reflektieren, welche Themen und Fragestellungen sich nicht für eine Ausstellungspraxis eignen, weil Wissenschaftlichkeit nicht mehr vollständig gewährleistet werden kann oder weil eine kritische Perspektive nicht entsprechend sichtbar gemacht werden kann. Die Chancen und Risiken einer Zusammenarbeit der verschiedenen Disziplinen müssen daher stets sorgfältig abgewogen werden.

10. The Invisible: Modern Slavery in Europe

This chapter presents a documentary film about the living and working conditions of migrant workers in Huelva. In this short Chapter, I provide a synopsis of the film and explain the process of creating the documentary, as well as my role in this collaborative endeavor.

Synopsis[67]

The International Labor Organization estimates that roughly 28 million people around the world live in working conditions that qualify as modern slavery. Agricultural workers in Huelva, Spain, face similar conditions as they harvest berries valued at approximately one billion euros annually for the European market. Roughly half of this work is performed by migrants from Eastern Europe, Africa, and Latin America. Their fates share one common thread: They have left their homeland in search of a better life. The daily lives of these workers are characterized by inhumane working conditions, precarious housing, lack of healthcare, and few prospects for a better future. The film portrays several migrant workers in their daily lives in Huelva. At the same time, a Swiss geographer investigates the working conditions and the health consequences of these living conditions. Her interviews with trade union activists, reporters, politicians, and scientists show that there are no easy solutions: Social and ecological changes are urgently needed for sustainable and humane berry production. Spain, the EU, the importing countries, and the major distributors must fulfill their responsibilities so that the berries do not leave a bitter aftertaste.

Credits

Production: Filmerei GmbH in collaboration with Rosa Luxemburg Foundation
Written & directed by: Sven Rufer
Produced by: Sven Rufer, Kaja Leonie Ramseier, Luzius Müller
Camera: Sven Rufer, Salvatore Di Pino
Sound: Inés Parish, Sven Rufer
Edited by: Kaja Leonie Ramseier
Music: Luzius Müller
Contextual consulting and support on site: Nora Komposch

[67] The synopsis was written by the filmmaker, who incorporated my feedback into the final text. In this version, I have made only a few linguistic adjustments.

My role in the documentary filmmaking

Finding ways to disseminate my findings among broader publics—especially ones beyond academia—is a major aim of this research. Thus, when the filmmaker Sven Rufer contacted me in November 2021 with the idea of producing a documentary about the precarious labor and living conditions in Huelva, I considered it a highly opportune request in fulfilling this aim. The documentary project was co-led between the Filmerei GmbH and the Rosa Luxemburg Foundation, with the aim to show forms of modern slavery occurring today.

Although I do not focus on the concept of "modern slavery" in my written output of the dissertation (due to the thematic focus on reproduction and family life), numerous scholars employ this term to describe contemporary immigration and labor frameworks. Described by some scholars as a "central element of the global labor environment" (Carrington, Chatzidakis, & Shaw, 2021, p. 433), the term has been used, for instance, in the context of Canada's Seasonal Agricultural Worker Program (Depatie-Pelletier, 2019), where the authors draw on an international legal debate about whether employer-based work permit systems constitute unjustifiable state violations of migrant workers' fundamental rights to freedom and dignity. Furthermore, the recent convergence of social and environmental crises has prompted a broader and more nuanced examination of modern slavery, with a particular focus on the nexus between environmental change and exploitative work environments (Brown et al., 2021). A report co-published by the International Labor Organization (ILO), the International Organization for Migration (IOM), and the international human rights group Walk Free indicates that modern forms of slavery have proliferated across diverse labor sectors, including domestic work, agriculture, food services, nail salons, car washes, and the sex industry. The number of individuals subjected to such conditions has been estimated at 28 million globally (ILO, Walk Free, & IOM, 2022).

The thematic focus of the documentary film was initially defined by the film team and the Rosa Luxemburg Foundation. My collaboration on the project began with the provision of background information regarding the context of the berry industry in Huelva and the related migration processes. In February 2022, during my second fieldwork stay, Sven Rufer joined me in Huelva to begin work on the documentary project. In the field, I provided him with background information, practical knowledge about the region and its particularities, and numerous personal contacts, thereby facilitating his introduction to key informants in the field. Although initially neither I nor the film team had intended to actually include my research activities as part of the film as such, it ultimately formed part of the documentary due to

practical limitations associated with the filmmaker's positionality. The initial plan for the documentary was to follow a single migrant worker to gain insights into the nuances of the worker's daily experiences, from the berry fields to their living spaces. Given the feminization of Huelva's berry industry, it was imperative to document the experiences of female workers. However, since the filmmaker was a man, it was challenging for him to follow the daily activities of a female worker, especially in such intimate spaces as the temporary home. Consequently, he devised a strategy to incorporate multiple workers into the film, while also including my research and interviews with various female workers. I agreed to this idea, as the presence of numerous workers in the film would enable it to show a multiplicity of perspectives, and my own participation enabled the tracing of a connection to consumer countries, such as Switzerland.

I therefore worked closely with Sven Rufer between February 2022 and April 2022, not only providing local support and contextual information, but also having him and his team[68] follow and record several of my interviews and field observations with workers, reporters, politicians, and activists. After the main recording finished in April 2022, my role in the making of the documentary became more peripheral. Although the film team in Zurich frequently sought my opinion regarding the film's editing and incorporated most of my feedback, the final selection of the clips, the music, and the overall signature of the documentary remained in their hands.

The film has been exhibited internationally in several venues. Its inaugural public screening was held in June 2023 in Huelva, Spain. The event was attended by numerous workers and other individuals involved in the documentary's production, as well as other invited guests with expertise in the subject. Subsequently, the film was showcased at the Marbella International Film Festival in Spain in October 2024.[69] This was followed by screenings at other festivals, including the Barcelona Film and Human Rights Festival in December 2024.[70] In Switzerland, the film was publicly screened in cinemas in Geneva, Zürich, Bern, Frauenfeld, and Thusis. The film was also made publicly accessible online in English, German, Spanish, and French, which, in conjunction with proactive media outreach, resulted in extensive media coverage in Switzerland, Spain, and other countries.[71]

---

[68] The film team on site was comprised of Sven Rufer in the capacity of producer, Salvatore di Pino as a second camera operator, and Inés Parish, who was responsible for the sound.

[69] More information about the screening at this film festival can be found at: https://www.marbellafilmfestival.com/festival-2023/.

[70] More information about the screening at this film festival can be found at: https://fcdhbcn.com/festival-de-cine-y-derechos-humanos-de-barcelona-2/.

[71] The documentary was covered by international media, such as *El Salto*, *EuroWeekly*, *La Vanguardia*, and *Tagesanzeiger*. A complete overview of the media coverage can be found in the Annex I.

This public interest in the subject, which was generated through a collaborative effort between the documentary team, myself (from an academic perspective), and numerous activists from Huelva's social movements, underscores both the political significance of a geographical and activist lens on these phenomena and the efficacy of creative methods for disseminating scientific knowledge.

URL to access the documentary: https://dieunsichtbaren.ch/en/home-english/#film

PART D: CONCLUSION

11. Toward the planetary-intimate

In this conclusion, I first offer an overview of the main empirical findings, before elaborating on my conceptual contributions, with a focus on my overall approach of the planetary-intimate in agricultural labor migration. Additionally, I summarize my methodological contributions and reflect on the challenges and potential of engaged geography. Before presenting my final thoughts, I discuss the limitations of this research and suggest future research directions and policy recommendations.

11.1. Empirical findings: Reproductive lives in Huelva's agricultural labor migration

The reproduction-production nexus within the agricultural labor migration program between Morocco and Huelva prompted me to investigate the governance of migrant workers' reproductive lives, and examine how the affected women themselves experience and navigate the challenges of their reproductive lives. The empirical findings are divided into two spheres of women's reproductive lives: first, their access to reproductive health services during their stays in Huelva, and second, their family lives during their stays in Huelva and in Morocco.

Legally speaking, Spain guarantees access to healthcare, including reproductive healthcare, to migrant agricultural workers from Morocco. In practice, however, the authorities fail to provide migrant workers with the necessary infrastructure to enable them to fully exercise their rights to Spain's universal health system. A lack of transportation, health cards, translation services, and information often results in workers either forgoing or postponing visits to medical professionals. Consequently, their medical requirements are structurally hidden from view. This is particularly relevant given that a significant number of workers reported a range of health concerns, including ailments they believed—and that research also suggests—may be linked to their regular exposure to environmental pollutants, such as pesticides. The lack of governmental responses to safeguard the health of migrant workers from the detrimental effects of pesticides exemplifies how the needs of migrant workers, as a consequence of their transitional status, experiences, and needs, are rendered invisible and often remain unaddressed.

Migrant workers' family lives are governed through the labor migration agreement between Spain and Morocco, which only allows mothers with children to seasonally work in Huelva's berry production industry. Having to leave their children in their home country, the same

workers are prevented from exercising (physical) care work within their families. My empirical findings demonstrate that the affected women often experience emotional distress due to the separation from their children, which can be partially mitigated through digital communication. While the Spanish government maintains the bilateral migration agreement, it has not taken responsibility for facilitating the family life and care obligations of migrant workers during their stay in Spanish territory.

My findings also illustrate how this emotional suffering is exacerbated by the consequences of the planetary climate crisis, which are becoming increasingly visible through the rising frequency of severe droughts in both Spain and Morocco. Environmental degradation has resulted in a loss of income for migrant workers' families in their home countries, particularly in terms of subsistence farming. Furthermore, increasing water scarcity hinders the ability to perform such basic daily activities as cooking, washing, and showering. The ability to provide safe and sustainable conditions for parenting children is becoming increasingly difficult under these circumstances, which represents a key demand of the reproductive justice movement. This has significant implications for female Moroccan workers, many of whom opt to remain in Spain rather than face the prospect of not being recruited again in the event of insufficient rainfall in Huelva and a consequential reduction of labor demand. Given the high unemployment rates in rural Morocco—which are also partly linked to the water crisis—the family members of interviewed migrant workers are also increasingly migrating to urban centers or across the Mediterranean or Atlantic in search of a better future. In so doing, they are forced to face the deadly risks associated with Europe's repressive migration regimes.

The findings also demonstrate how female Moroccan workers respond to the challenges of accessing reproductive healthcare and addressing the impact of family separation through the everyday practices of solidarity and contestation. By establishing their own healthcare facilities, providing mutual support, and engaging in political actions with grassroots organizations, the workers challenge their invisibility and marginalization. By supporting each other in locating sources of water in Moroccan villages, providing mutual assistance in coping with prolonged family separation and challenging working conditions, they develop support and solidarity networks. Furthermore, they demonstrate political agency by challenging climate injustice in their villages and demanding political changes to safeguard water accessibility. They also organize with unions in Huelva to protect their workers' rights. In light of the structural class-, race-, and gender-based marginalization that the majority of

these migrant workers face, the aforementioned practices of organizing and solidarity are of even greater significance.

11.2. Conceptual contributions: The planetary-intimate in agricultural labor migration

As discussed in Section 3.1, there are several research gaps regarding the reproductive health issues and challenges of family relations related to geographies of agricultural labor migration, especially when linking these topics to climate change from a geopolitical perspective. My conceptual contribution thus entails suggestions of how to include a perspective of the planetary-intimate in the field of agricultural labor migration. This perspective resulted from three successive steps in my research: 1. Identifying "(reproductive) bodies," "borders," and "agricultural fields" and "homes" as key sites in agricultural labor migration; 2. Developing and using "intimate liminality" and "geoviolence" as theoretical concepts; and 3. Adopting a multi-scalar and non-hierarchical perspective of the planetary-intimate.

Figure 13 on the next page provides a schematic overview of my contributions to an understanding of the planetary-intimate, and illustrates how centering on the four key sites of in agricultural labor migration—(reproductive) bodies, borders, (agricultural) fields, and homes—and using the two concepts of "intimate liminality" and "geoviolence" showcases the intersections of these sites in the complex interweaving of planetary and intimate realms. In the following subsections, I summarize these levels in greater detail.

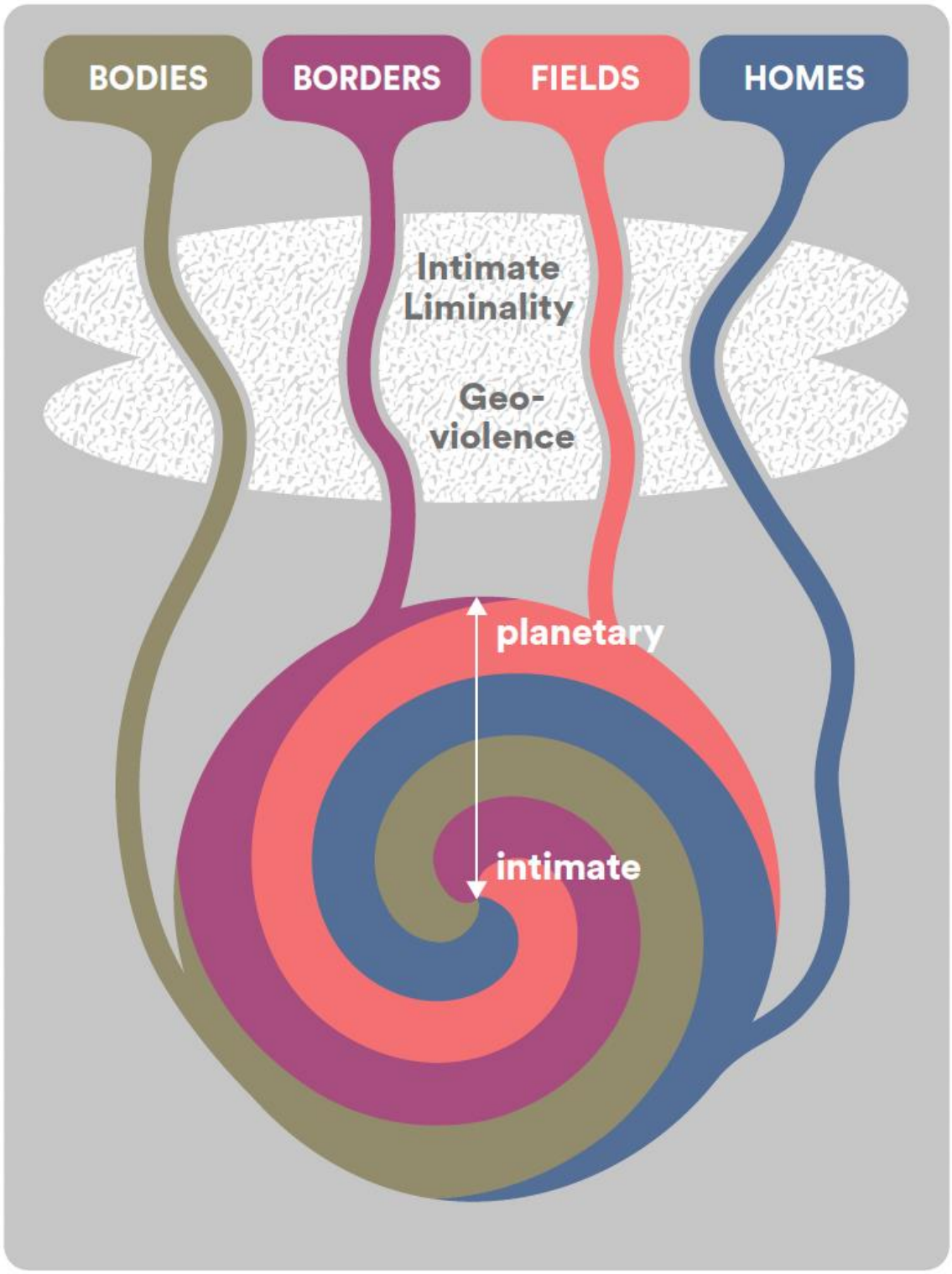


Figure 13: “The planetary-intimate in agricultural labor migration”: Centering on four key sites of agricultural labor migration, and using the concepts of “intimate liminality” and “geoviolence” shows these sites’ intersections in the complex interweaving of the planetary-intimate. Graphic concept by Nora Komposch and Mirko Winkel, design by Mirko Winkel 2024.

Centering on intersecting sites: borders, reproductive bodies, agricultural fields, and homes

In order to analyze the planetary-intimate in agricultural labor migration, I suggest four key intersecting sites of study: borders, reproductive bodies, agricultural fields, and homes. My suggested sites partly build on the work of Gilmartin and Kuusisto-Arponen (2019), who identified "borders" and "bodies" as key sites for critical geographies of migration. Gilmartin and Kuusisto-Arponen (2019) described the entanglements of borders and bodies as follows:

> *The border […] is more than the physical barrier that separates one nation-state from another but is also a practice that is increasingly inscribed on the bodies of migrants. Similarly, the migrant body is the object of geopolitical and geoeconomic processes, whether through state-defined migrant statuses or the increasing precarity of work. These processes intersect in the embodied experiences of migrants.* (p. 25)

I follow this understanding of **borders** as more than the physical separation between nation states. I agree with understanding them as mobile sites, which allows one to see that the practice of bordering can occur at the physical external margins of nation states, but also internally on an everyday basis (e.g., through internal immigration policing practices) (Gilmartin & Kuusisto-Arponen, 2019). The site I am referring to here is thus not the site of one physical national border, but of multiple forms of everyday borders.

Building on the feminist understanding of "the body as a geographical site" (Fluri, 2015, p. 235) and centering on reproductive geopolitics in the field of agriculture labor migration brings me to specify the site ***reproductive*** **bodies**. Through this terminology, I include all aspects of reproductive lives, thereby referring to bodies currently in a biological reproductive process (e.g., pregnant), but also to bodies who are in some ways engaged in social reproduction (e.g., engaging in familial care work).

In addition to these two sites, which I partly adopted from Gilmartin and Kuusisto-Arponen (2019), I propose two further ones. Given my focus on agricultural labor migration, I recommend the inclusion of "agricultural fields" and "homes" as additional sites when analyzing the planetary-intimate in agricultural labor migration. By examining these two labor sites in conjunction with one another, the strong interconnection between productive and reproductive work becomes evident.

Agricultural fields are specific sites for the study of agricultural labor migration. "Agricultural fields" here refers both to fields where small-scale family agricultural work

takes place (as is or was the case in many rural villages from which the Moroccan worker-participants migrated) and to fields of large-scale plantations[72] (e.g., the berry monoculture in Huelva). Agricultural fields represent a site of study where human labor intersects with geophysical nature. Consequently, focusing on this site facilitates the adoption of a planetary perspective. I deliberately use the plural "agricultural fields" here because agricultural labor migration usually involves a number of different fields, as workers migrate depending on the harvest season, or leave their agricultural fields at home to engage in wage labor on more remunerative fields elsewhere.

Homes as sites are also crucial for analyzing the planetary-intimate in agricultural labor migration. Following Blunt and Dowling (2006), I understand homes as "place[s], site[s] in which we live. But, more than this, home[s] [are] also an idea and an imaginary that is imbued with feelings. These may be feelings of belonging, desire and intimacy […], but can also be feelings of fear, violence and alienation" (p. 2). Again, I deliberately use the plural form because migration leads many migrants to consider different places as their (temporary) homes. The planetary perspective on these sites allows one to understand, for example, how such planetary processes as climate change transfer everyday practices of family life in homes, or how intimate forms of reproductive labor in homes allow communities to develop strategies for coping with and contesting such challenges.

All four sites transcend the material specifics of *sites*, encompassing a multifaceted array of social discourses and power dynamics inherent to these spatial contexts. Social qualities, such as norms, hierarchies, and processes of inclusion and exclusion, are of equal importance to understanding these sites as are geophysical characteristics, including location, size, and materiality.

Using the conceptual lenses of "intimate liminality" and "geoviolence"

The agricultural labor migration agreement between Morocco and Spain sets reproduction as the prerequisite for productive labor in Huelva, while simultaneously separating the two within practical governance. Being torn apart by this separation, individuals who participate in such migration processes thereby become what Turner (1967) called "transitional beings."

[72] Following Wolford (2021), I understand plantation not just as a form of large-scale production, but also as "inherently power-laden social structures found in every modern economic system [that] embody both racial violence and resistance, straddling or bridging the divide between rural and urban, agriculture and industry, town and country, and local and global" (p. 1624).

As my co-authors and I have shown in Chapter 6, the geopolitical prescriptions of the labor migration regime between Morocco and Spain, along with the working and living conditions of migrant workers in Huelva, have resulted in what we conceptualized as experiences of "*intimate liminality*," defined as "as the emotional and embodied effects of being in a societal, political, economic, and territorial liminal position on one's (reproductive) health and social relationships with partners, children, family members, and friends." In my case study, we observed this intimate liminality by exploring how the role of female workers as mothers became liminal as transnational labor agreements marginalized and outsourced care obligations, how governmental neglect of migrant workers' occupational health exposed them to reproductive health risks, how this neglect positioned them in a liminal space in terms of access to healthcare, and how, despite their liminality, migrant workers contested precarious conditions through everyday solidarity practices.

The embodied and intersectional perspective on intimate liminality is key, since it allows one to center on the body, and thus highlight both the uniqueness of individual experiences and commonalities across similarly-positioned communities. Understanding the different positionalities of individuals according to an unequal stratified system among gender, race, class, and other attributes is the basis of any kind of critical research that strives to understand power and space within a system of social injustice. Such a feminist approach to liminality, including a multi-scalar, embodied, and intersectional perspective, makes the concept of intimate liminality a useful lens through which to understand the intimate experiences of members of marginalized communities, who are in some way "betwixt and between" (Turner, 1967) two places. It also enables one to understand their practices of coping with and contesting such forms of intimate liminality, and therefore tracing what Jacobson (2023) termed their life-making as forms of engaging in geopolitics.

Moreover, a planetary approach can also grant a deeper understanding of the complex interactions between human and non-human components, such as in terms of changes in (intimate) health due to the occupational exposure to pesticides. Finally, a planetary perspective can also allow one to more fully understand how planetary phenomena, such as the climate crisis, can intensify experiences of family separation, and therefore of intimate liminality.

By including a planetary perspective in my analysis, I developed the concept of "*geoviolence*" as a way of comprehending how reproductive and climate injustice comes into being. This was done by analyzing how climate crisis–related droughts in Spain and

Morocco are harming the territory, livelihoods, and family relationships of female Moroccan farmworkers in Huelva's berry industry. The case study shows how geoviolence affects migrant women materially in terms of sustaining the lives of their families and maintaining their own physical and emotional well-being. I define geoviolence "as a destructive human force that generates, exacerbates, or exploits adverse geophysical conditions, leading to increased suffering for human and non-human beings, their communities, and the environments they inhabit." Conceptualizing human harm (for example, through migratory regimes or the lack of climate measures) inflicted upon bodies and territories not merely as incidental effects, but rather as instances of human-generated geoviolence, can facilitate our identification of the actors responsible on multiple geographical scales. While I deem the concept suitable for analyzing contexts of agricultural labor migration, it could also be extended to other contexts that include anthropogenic harm on lives of any species and/or their lived environments.

Both concepts, "intimate liminality" and "geoviolence," can bolster our understanding of people's intimate experiences in marginalized spaces. Indeed, they facilitate the ability to trace the linked responsibilities from the intimate to the planetary realm. Mapping responsibility for the status quo and spaces of resistance can help in demanding accountability for inhumane living and working conditions directly from the responsible level, as well as to visualize the agency of the actors who fight against politics that maintain migrant workers in a state of experiencing intimate liminality and/or geoviolence.

The planetary-intimate

Building on theses conceptual contributions, I suggest a multi-scalar and non-hierarchical understanding of scales that extends the connections between intimate and global realms (Pratt & Rosner, 2006). I propose the term "planetary-intimate" as a means to emphasize the complex interweaving of planetary and intimate realms, and thereby facilitate a more-than-human view of scales. The concept of the planetary-intimate, similar to Pratt and Rosner's (2006) concept of the "global and the intimate," highlights the complex and evolving interconnections between multiple scales. Yet, a planetary perspective extends our understanding of the intimate configurations of geopolitics (Pain & Staeheli, 2014) by transcending human agency to also include more-than-human forces in the analysis. The mutual interactions between the intimate and the planetary, which has been elaborated in this thesis, demonstrate that planetary processes can alter intimate experiences, while also illustrating that actions within intimate spheres can have direct consequences at the planetary

scale. Thus, analytically focusing on the multiple ways which in the planetary intertwines with the intimate allows for a more concrete understanding of the respective scales and their connections beyond the nature-culture-divide. Focusing on planetary entanglements in agricultural labor migration also paints a fuller picture of the multiple intersections of the above-mentioned key sites of reproductive bodies, borders, agricultural fields and homes.

Furthermore, this approach facilitates the recognition of the interconnections with all beings on this planet. This recognition is particularly important when trying to understand agricultural labor migration since it enables one to question human-constructed boundaries, such as national borders (Litfin, 2003; Mould, 2023) and links our human lives directly to the well-being of the more-than-human environment. Analyses that reveal the entanglements of the planetary-intimate thereby hopefully contribute to what Lobo et al. (2024) described as an urgently-needed "planetary justice."

11.3. Methodological contributions: Engaged geographies for the future

> *It is urgent to inform citizens of the reality and to call for action in defense of our territory, our natural heritage and the rights of all people.* (Castro & Pinto, 2023, p. 119, own translation)

The above quote from researcher Nazaret Castro and activist Ana Pinto of *Jornaleras de Huelva en Lucha* (from their book on Huelva's berry industry) suitably summarizes this dissertation's intended contribution. The effective dissemination of knowledge is crucial for pursuing a feminist research approach that not only seeks to understand unequal power structures in space, but also to use academic research to work toward planetary justice. Especially at a time when such planetary challenges as climate change and geopolitical conflicts threaten human societies, other species, and the environments in which they live, there is an urgent need for the scientific community to communicate knowledge in such a manner as to enable widespread public access. The discipline of geography, which explores the nexus of human activities and geophysical processes in space, and which is able to explain multi-scalar connections, is thus perfectly suited for engaged and action-oriented ways of creating, disseminating, and using knowledge (see also Boyer, Eaves, & Fluri, 2023; Pain, 2003; Ruddick, 2004).

In this regard, this dissertation offers two innovative methodological contributions. The first is the implementation of a research-art-exhibition and a related reflection on the pesticide exposure of agricultural workers in Huelva. The second is a collaboration on a documentary

film about the precarious labor situation of migrant workers. These two research outputs transcend the written text in aiming to emotionally reach a large academic and non-academic audience. They contribute to the development of methods for a/effective knowledge dissemination.

The research-art-exhibition and the documentary film represent the products of an interdisciplinary and transdisciplinary collaboration. Following Miles (2014) who suggests that "art cannot save the planet [but] it can represent, critique and play imaginatively on the problem" (p. 3), we aimed for an engaged form of geographical research through these creative methods. Prior to initiating the collaborative research-art-exhibition project, Lucy Sabin, Adrien Mestrot, and myself had each engaged with the topic of toxicity within our respective disciplines. In this exhibition-project, we collated our respective pre-existing knowledge of soil and plant analysis with ethnography and arts-based research. While collaborating across such disparate disciplines entailed the time-intensive challenge of learning to comprehend each other's unique knowledge language, it also afforded us the opportunity to enrich our exhibition with a multifaceted approach to the topic of toxicity, thereby ensuring a comprehensive and nuanced representation of the subject. For example, insights from soil science allowed Lucy and me to better understand how pollutants can be detected and analyzed in soil and other materials, which contributed to the idea of using real soil in the art exhibition so as to make this toxicity more tangible.

Similar reflections can be drawn about the transdisciplinary collaboration resulting in the documentary film. Given that my own expertise lies in the social sciences, and that Sven Rufer's background was in film production, it was necessary for both of us to invest a considerable amount of time in learning about the other's respective perspectives and areas of interest. It was thus the combination of these varying methodologies and our constant dialogue that facilitated a fruitful collaboration in the documentary's production.

In light of these two trans- and interdisciplinary collaborations, I believe it is essential to underscore the important investment of time and energy that is demanded when working across disciplinary boundaries. This aspect should be taken into consideration when planning such endeavors. Moreover, these two collaborations reinforced my conviction regarding the usefulness of innovative approaches to the dissemination of academic knowledge. The public interest in my study was primarily stimulated by the public screenings of the documentary film and its subsequent release on YouTube. Media interviews about my research conducted by Swiss (*SRF*) and Austrian television (*ORF*), as well as by the Swiss

newspapers *Tagesanzeiger*, *WOZ*, and *Hauptstadt*,[73] illustrate both the political relevance of a geographical perspective on these phenomena and the efficacy of creative methods for science communication.

An engaged and feminist approach to geography—particularly in contexts of precarity and violence—required me to reflect not only on how to effectively disseminate knowledge, but also on how I, as a researcher, became involved in my research field and the implications of this involvement. In her book on violence and the climate crisis, Emcke discusses the conditions for a commitment to climate protection and human rights:

> *[Standing up for climate protection and human rights] requires not only looking for good arguments, not only looking for suitable allies, not only looking for creative, powerful instruments. It also requires us to choose to act against our own despair, against exhaustion, against the longing for a more comfortable life*. (Emcke, 2024, p. 86, own translation)

By pursuing scientific research, I strived for formulating *good arguments*. Through collaborations beyond disciplinary boundaries, I have endeavored to build a network of *suitable allies* in order to collectively develop *creative*, and (hopefully) *powerful instruments*. Yet, as Emcke's (2024) quote indicates, striving toward greater justice often also impacts one on an intimate level, which is why an embodied approach to research was essential. This entailed recognizing that my observations and studies could have had a transformative effect not only on the research field, but also on myself. Although I have previously observed, and been told by activists engaged in climate justice and human rights work, the emotional difficulties that can arise from such activities, this fieldwork has demonstrated that such challenges are also inherent to engaged research when witnessing the violent and precarious life situations of participants.[74] While I believe it important to take such considerations into account when planning similar research endeavors, this should not be a deterrent to engaged research. Instead, my experiences in Huelva and Morocco have taught me that collaboration is key for conducting engaged research—both to *act against one's own despair* and to find ways of developing *powerful instruments*. My social network in Huelva, comprising activists, workers, a filmmaker, and my partner, and regular dialogues

[73] A full overview of all media coverage can be found in Annex I.

[74] I am, of course, aware that my position was fundamentally different and more privileged than that of many activists and workers in the field, because I always had the option to leave the field and return to *a more comfortable life*.

with my colleagues from different universities, friends, and family provided invaluable support in conducting this research.

It became evident to me that engaged research cannot be a single-person endeavor. If research on planetary injustices is to be made accessible to a wider public, it is crucial that academics identify methods to facilitate inter- and transdisciplinary collaborations and acknowledge the time and resources required for such endeavors in their planning and financing.

11.4. Limitations and future research

While this dissertation offers several empirical, conceptual, and methodological contributions, it also has its limitations. As outlined in the methodological chapter, the knowledge created through this research is situated and therefore deeply influenced by my positionality and the access it afforded me to the field. For example, my cultural and linguistic background allowed me to communicate directly with all research partners who spoke Spanish, French, English, or German, but limited my ability to engage directly with those who spoke only Darija Arabic. Although the two Moroccan translators played a crucial role in bridging both linguistic and cultural gaps, my understanding would undoubtedly have been deeper had I been fluent in Darija.

Another limitation of this research is the strong focus on Moroccan women working in Huelva. While I included the views of several other stakeholders—such as other groups of workers, employers, activists, family members, state officials, or politicians—their voices are given less space in this dissertation, which introduces certain constraints. For instance, paying more attention to other groups of workers would have offered a more comprehensive view of the working and living conditions of berry workers in Huelva. This, in turn, might have further illuminated the unique experiences of the Moroccan women. Similarly, a closer examination of the employers' perspectives could have provided a more nuanced understanding of the constraints they face. Although I had originally intended to include the perspectives of employers to a greater extent, the fact that many of them never responded to my requests made it impossible to do so. Nevertheless, incorporating more voices from employers and other groups of workers would be valuable extensions of this research.

Future research on agricultural labor and migration in the context of Huelva's berry industry could benefit from a broader scope, one that includes multiple groups of workers within this sector. For instance, a comparative analysis including other migrant groups *and* Spanish

workers would allow for a more fine-grained analysis of race-, class-, and gender-based hierarchies, thereby reinforcing the intersectional lens. To further enhance this lens, an in-depth examination of the ethno-cultural diversity among Moroccan migrant workers would also be beneficial, as the country is home to a multitude of distinct ethnic identity groups, including Arabs, Amazigh, and Sahrawis. Although I know that Moroccan women from different ethnic backgrounds are employed in Huelva, I did not systematically inquire about their ethnicity, and thus did not incorporate this information into my analysis.

Another avenue for further research would be to examine the impact of women's wage-labor participation on Moroccan family relations. In line with Holdsworth's (2013) assertion that "mobility reveals the inherent quality of intimate relations, particularly how they are structured by power relations" (p. 82), it would be valuable to gain insights into how power dynamics within families and home communities are evolving in response to the phenomenon of agricultural labor migration.

Further research on the neo-colonial entanglements with agricultural labor migration from Morocco to Southern Europe, as well as with agricultural labor in Northern Africa, would be another valuable extension to the existing literature. In recent years, an increasing number of scholars have come to use the notion of "plantationocene" to describe the current era, in which humanity's impact on the planet is significantly shaped by plantation agriculture (Besky, 2022; Haraway et al., 2016; McKittrick, 2011; Ouma in Verne et al., 2024; Wolford, 2021). This concept elucidates how plantations—large-scale, monocultural agricultural systems—are intertwined with racialized labor systems, colonization, and social inequalities, and have reshaped entire ecosystems. Using these theoretical perspectives to investigate neo-colonial entanglements within the context of racial capitalism would not only bring valuable, academic insights, but could also prompt the formulation of specific policy recommendations for a just and sustainable agriculture.

This research (aligned with many other studies) has made it evident that climate change will continue to confront both Huelva and Morocco with many additional challenges, which will significantly impact both the agricultural sector and its related migration patterns. Given the existing environmental degradation in these regions, it would be reasonable to assume that Huelva's agricultural situation will become increasingly challenging as a result of the reduction in water levels, while at the same time, the pressure to migrate to Spain for Moroccans will further increase. In contrast to what was observed in California's berry industry in and around 2010, when migration policies led to labor shortages in the berry

harvest (Guthman, 2017), it can be assumed Huelva will see a rise in available workers without an equivalent increase in available work in the near future. How this will affect the social conditions of workers, including their reproductive lives, would be well worth investigating.

11.5. Policy recommendations

When it comes to policy making, there are three main policy areas where, based on the finding, recommendations can be made: the governance of migration, the organization of food production and consumption, and measures to mitigate climate change.

This dissertation has demonstrated how migratory regimes between Morocco and Spain, as well as those at Europe's external borders in general, contribute to familial hardships and experiences of geoviolence. When labor migration agreements prioritize the productive labor of migrants while neglecting their other basic human needs—including those related to health and family life—such migratory regimes fail to adequately respect the workers' full humanity. Thus, a first recommendation is that labor migration agreements should be structured in a manner that enables individuals engaged in wage labor to maintain their reproductive lives according to their own wishes. In the context of the labor migration agreement between Morocco and Spain, this could entail allowing workers to bring their children with them and subsequently determining whether to remain in Spain or return to Morocco. My assessment is that the implementation of a "circular" labor migration regime, wherein return to the home country is not a voluntary decision, is fundamentally incompatible with the principles of planetary justice. Instead, it would be preferable to grant individuals the freedom to choose whether to pursue temporary or permanent migration. If circular migration models were to be upheld, it would be essential to ensure that the selection procedures do not discriminate on the basis of gender or family situations, so that individuals have the autonomy to determine who among their family members migrates seasonally and whether the remainder of the family remains in the home country.

To solve the precarious working and living conditions described in this research, the migratory policies would also have to change in respect to other migrant groups in Huelva. As long as humans have to accept precarious conditions due to the lack of regularization, employers will continue to avoid improving said conditions, knowing that the threat of deportation limits the possibilities for undocumented migrants to voice their claims. If all of the people who contribute to Huelva's berry industry were to be granted regular and, if they so desire, permanent residence status in Spain, this would enable them to express themselves

more freely and unionize, which could lead to a collective improvement of their living and working conditions.

In order to ensure the continued generation of wage labor in Huelva's berry production sector, it would also be imperative to implement policy transformations in terms of the organization of food production and consumption. In light of the unsustainability of the prevailing agricultural model, which is predicated on excessive water consumption and precarious working conditions, it is imperative that alternative approaches to food production and consumption be adopted and supported by governments through subsidies. As proposed by Castro and Pinto (2023), the implementation of agro-ecological principles and techniques in agricultural practices offers a promising avenue for the sustainable production of berries in Huelva. In terms of organizing consumption, it would be advisable to implement policies guaranteeing that supermarkets provide consumers with transparency regarding the origin of the goods they sell. This would enable consumers to withdraw their consumption of products that are based on exploitative practices against humans or nature, and pressure supermarkets to contribute to the improvement of said conditions. Grassroots initiatives, such as food cooperatives or solidarity-based farming, which seek to work toward greater transparency, democracy, and sustainability within global food networks, offer promising approaches for achieving such a goal. Consequently, a recommendation for governments would be to subsidize such initiatives (in both production and consumption of food) that work toward socially- and ecologically-sustainable food networks.

In order to ensure the agricultural work in Huelva, as well as the basis of any family life in Morocco, in the first place, the soils in both regions must remain fertile and maintain decent groundwater levels. Acknowledging the already-violent effects of anthropogenic climate change, it is imperative that all governments worldwide promptly implement measures to mitigate climate change across all scales so as to avoid any further geoviolence. Such actions are essential not only to ensure freedom of movement, but also to guarantee what Eva von Redecker (2023) describes as "freedom to stay"—the right to remain in a place on this planet without being threatened. In light of accelerating climate change, states are urged to enact a socio-ecological turnaround and thereby guarantee this freedom to stay for all people, regardless of their origin, gender, race, or class.

11.6. Final thoughts

As I am writing these concluding thoughts, one of the Moroccan research participants is sending me pictures and video clips of water protests in her hometown. The images depict

large gatherings of men and women, rallying with empty water containers, vocalizing demands for access to water. These protests are occurring in the region where the participant's two children live. She only sees them rarely since she decided to permanently stay in Spain several years ago for economic reasons. Talking with her on the phone about the water crisis and her family, and witnessing her sadness and at the same time her strength in dealing with it, impressed me once again: "There is nothing else to do but to carry on," she said. And she is right.

This dissertation has outlined the ways in which environmental degradation and migration regimes fundamentally impact people's everyday lives. Moreover, it has demonstrated how the separation of agricultural wage labor and reproductive lives contributes to violence and intimate suffering. In her writings, Emcke (2024) encourages one to recognize "violence as something that has *become*, something that is made up of many individual steps and decisions, that *could* have been made *differently*" (p. 66, emphasis in original, own translation). Similar patterns can be observed in efforts to prevent and stop violence. This dissertation has shown how the decisions and steps of numerous individuals in Huelva, Morocco, and beyond—including workers, their friends and family members, and activists—contribute to collective actions toward solidarity and justice. This illustrates that, as with the emergence of violence, the path to a just and sustainable future is built upon a multitude of individual steps and collective actions. By maintaining a commitment to planetary justice, it is my hope that this dissertation—composed of many individual steps on my part, and collaborative actions with my colleagues and research partners—can serve as a modest contribution to the collective effort to combat violence and injustice on this planet.

References

Agamben, Giorgio (1998). *Homo Sacer: sovereign power and bare life*. Palo Alto: Stanford University Press.

Aguilar, Carmen (2017). Inequality in the primary healthcare system in Andalucía. Retrieved September 21, 2024, from https://carmen-aguilar.github.io/health-inequality-andalucia/

Alaimo, Stacy, & Hekman, Susan (2008). Introduction: Emerging models of materiality in feminist theory. In Stacy Alaimo & Susan Hekman (Eds.), *Material feminisms* (pp. 1–22). Bloomington: Indiana University Press.

Al-Sharmani, Mulki (2010). Transnational family networks in the Somali diaspora in Egypt: women's roles and differentiated experiences. *Gender, Place & Culture*, *17*(4), 499–518. https://doi.org/10.1080/0966369X.2010.485843

Anderson, Ben (2023). Boredom and the politics of climate change. *Scottish Geographical Journal*, *139*(1–2), 133–141. https://doi.org/10.1080/14702541.2023.2197869

Andreae, Bernd (1977). *Agrargeographie: Strukturzonen und Betriebsformen in der Weltlandwirtschaft*. Berlin; New York: Walter de Gruyter.

Angus, Ian, & Butler, Simon (2011). *Too many people?: population, immigration, and the environmental crisis*. Chicago: Haymarket Books.

Arab, Chadia (2018). *Dames de fraises, doight de fée. Les invisibles de la migrationn saisonnière marocaine en Espagne*. Casablanca: En toutes lettres.

Asian Communities for Reproductive Justice (2005). *A new vision for advancing our movement for reproductive health, reproductive rights and reproductive justice*. Retrieved from https://forwardtogether.org/wp-content/uploads/2017/12/ACRJ-A-New-Vision.pdf

Askins, Kye (2014). A quiet politics of being together: Miriam and Rose. *Area*, *46*(4), 353–354. https://doi.org/10.1111/area.12138_5

Atencio, Graciela, Del Blas, Ana, del Mar Daza, María, Novo, Nerea, & Pedernera, Laura (2021). *¿Qué es la Violencia Sexual?* Retrieved from https://geoviolenciasexual.com/wp-content/uploads/2022/01/que-es-la-violencia-sexual-dossier-lr.pdf

Atinkut Asmare, Birtukan, Freyer, Bernhard, & Bingen, Jim (2022). Women in agriculture: pathways of pesticide exposure, potential health risks and vulnerability in sub-Saharan Africa. *Environmental Sciences Europe*, *34*(1), 89. https://doi.org/10.1186/s12302-022-00638-8

Ayunamiento de Cartaya (2008). *Proyecto Aneas Cartaya. "Gestión integral y ética de flujos de migración circular entre Marruecos y Huelva."*. Cartaya: Ayuntamiento de Cartaya.

Bagelman, Jen, & Gitome, Josephine (2021). Birthing across borders: 'Contracting' reproductive geographies. *Dialogues in Human Geography*, *11*(3), 352–373. https://doi.org/10.1177/2043820620965825

Baird, Barbara, Flowers, Prudence, Kevin, Catherine, & Roach Anleu, Sharyn (2024). Reproductive Rights at Home? Prohibiting Telehealth Abortion in South Australia during the COVID-19 Pandemic. *Gender, Place & Culture*, *31*(1), 48–65. https://doi.org/10.1080/0966369X.2022.2125501

Bambra, Clare (2022). Placing intersectional inequalities in health. *Health & Place*, *75*, 102761. https://doi.org/10.1016/j.healthplace.2022.102761

Banfield, Janet (2020). From liminal spaces to the spatialities of liminality. *Area*, *54*(4), 610–617. https://doi.org/10.1111/area.12791

Banta, Vanessa, & Pratt, Geraldine (2022). Immobilised by the pandemic: Filipino domestic workers and seafarers in the time of COVID-19. *Transactions of the Institute of British Geographers*, *48*(3), 556–570. https://doi.org/10.1111/tran.12598

Barabantseva, Elena, Mhurchú, Aoileann Ní, & Peterson, V. Spike (2021). Introduction: Engaging Geopolitics through the Lens of the Intimate. *Geopolitics*, *26*(2), 343–356. https://doi.org/10.1080/14650045.2019.1636558

Barbour, Madison, & Guthman, Julie (2018). (En)gendering Exposure: Pregnant Farmworkers and the Inadequacy of Pesticide Notification. *Journal of Political Ecology*, *25*(1), 332–349. https://doi.org/10.2458/v25i1.23028

Basok, Tanya (2000). He Came, He Saw, He Stayed. Guest Worker Programmes and the Issue of Non-Return. *International Migration*, *38*(2), 215–238. https://doi.org/10.1111/1468-2435.00108

Beato, Alfonso, Manola, Josef, & Morales, Pedro (Directors) (2022, May 4). Erdbeeren aus Spanien [Konkret]. In *ORF 2*. Retrieved from https://on.orf.at/video/14134162/15158374/Erdbeeren-aus-Spanien

Bee, Beth A., Rice, Jennifer, & Trauger, Amy (2015). A Feminist Approach to Climate Change Governance: Everyday and Intimate Politics. *Geography Compass*, *9*(6), 339–350. https://doi.org/10.1111/gec3.12218

Begg, John, Dissen, Van, Nicol, Andy, & Mouslopoulou, Vasiliki (2008). Characteristics of the Pacific-Australian Tectonic Plate Interface in New Zealand. In Ian J. Graham (Ed.), *A continent on the move: New Zealand geoscience into the 21st century* (pp. 91–117). Wellington, New Zealand: Geological Society of New Zealand.

Béliard, Aude, & Eideliman, Jean-Sébastien (2008). Au-dela de la déontologie. Anonymat et confidentialité dans le travail ethnographique. In Didier Fassin & Alban Bensa (Eds.), *Les politiques de l'enquête. Epreuves ethnographiques* (pp. 123–141). Paris: La Découverte.

Benayas, Victoria Torres (2023, May 8). España sufre el peor abril desde que hay registros: 3° por encima de la media y solo un 22% de la lluvia esperable. Retrieved August 7, 2023, from El País: https://elpais.com/clima-y-medio-ambiente/2023-05-08/este-abril-fue-el-mas-calido-y-seco-en-espana-desde-que-hay-registros-tres-grados-por-encima-de-la-media-y-solo-un-22-de-la-lluvia-esperable.html

Bendix, Daniel, Foley, Ellen E., Hendrixson, Anne, & Schultz, Susanne (2020). Targets and technologies: Sayana Press and Jadelle in contemporary population policies. *Gender, Place & Culture*, *27*(3), 351–369. https://doi.org/10.1080/0966369X.2018.1555145

Bendix, Daniel, & Schultz, Susanne (2018). The Political Economy of Family Planning: Population Dynamics and Contraceptive Markets. *Development and Change*, *49*(2), 259–285. https://doi.org/10.1111/dech.12363

Bennett, Jane (2010). *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.

Bernzen, Amelie, Jenkins, J. Craig, & Braun, Boris (2019). Climate Change-Induced Migration in Coastal Bangladesh? A Critical Assessment of Migration Drivers in Rural Households under Economic and Environmental Stress. *Geosciences*, *9*(1), 51. https://doi.org/10.3390/geosciences9010051

Besky, Sarah (2022). Reproducing the Plantation. *Annals of the American Association of Geographers*, 1–4. https://doi.org/10.1080/24694452.2022.2147050

Bhakta, Amita, Reed, Brian, & Fisher, Julie (2018). Behind closed doors: The hidden needs of perimenopausal women in Ghana. In Marcia R. England, Maria Fannin, & Helen Hazen (Eds.), *Reproductive Geographies: Bodies, Places and Politics* (pp. 67–87). London: Routledge.

Bhatia, Rajani (2018). *Gender before Birth: Sex Selection in a Transnational Context*. Washington D.C.: University of Washington Press.

Bhatia, Rajani, Sasser, Jade S., Ojeda, Diana, Hendrixson, Anne, Nadimpally, Sarojini, & Foley, Ellen E. (2020). A feminist exploration of 'populationism': engaging contemporary forms of population control. *Gender, Place & Culture*, *27*(3), 333–350. https://doi.org/10.1080/0966369X.2018.1553859

Bhattacharjee, Dalia (2021). 'Wombs for rent': the geographies of surrogate motherhood in India. *Gender, Place & Culture*, *28*(9), 1351–1355. https://doi.org/10.1080/0966369X.2020.1858033

Bianchi, Paolo, & Dirmoser, Gerhard (2007). Die Ausstellung als Dialograum. *Kunstforum International*, *186*, 82–101.

Bilger, Veronika, & Van Liempt, Ilse (2018). Methodological and ethical dilemmas in research among smuggled migrants. In Ricard Zapata-Barrero & Evren Yalaz (Eds.), *Qualitative Research in European Migration Studies* (pp. 269–286). Cham: Springer.

Binford, Leigh, & McLaughlin, Janet (2021). Entrenched exploitation: temporary foreign agricultural worker programs in North America. In Harvey S. James (Ed.), *Handbook on the Human Impact of Agriculture* (pp. 256–274). Cheltenham: Edward Elgar Publishing.

Blackwell, Maylei (2023). *Scales of Resistance: Indigenous Women's Transborder Activism*. Durham, NC: Duke University Press.

Blanchette, Alex (2020). *Porkopolis: American Animality, Standardized Life, and the Factory Farm*. https://doi.org/10.1515/9781478012047

Blunt, Alison, & Dowling, Robyn (2006). *Home*. London: Routledge.

Bolokan, Dina (2023). On the Hypermobility of Agricultural Workers in Europe: Life Courses Between Rural Moldova and Switzerland/the EU. In Nathan Kerrigan & Philomena de Lima (Eds.), *The Rural-Migration Nexus: Global Problems, Rural Issues* (pp. 51–77). Cham: Springer International Publishing.

Bondi, Liz, Davidson, Joyce, & Smith, Mick (2005). Introduction: Geography's "emotional turn." In Joyce Davidson, Liz Bondi, & Mick Smith (Eds.), *Emotional geographies* (pp. 1–18). Aldershot: Ashgate.

Boswell-Penc, Maia, & Boyer, Kate (2007). Expressing Anxiety? Breast pump usage in American wage workplaces. *Gender, Place & Culture*, *14*(5), 551–567. https://doi.org/10.1080/09663690701562248

Botterill, Kate, Hopkins, Peter, & Sanghera, Gurchathen (2020). Familial geopolitics and ontological security: intergenerational relations, migration and minority youth (in)securities in Scotland. *Geopolitics*, *25*(5), 1138–1163. https://doi.org/10.1080/14650045.2018.1512098

Boudhar, A., Boudhar, S., Oudgou, M., & Ibourk, A. (2023). Assessment of Virtual Water Flows in Morocco's Foreign Trade of Crop Products. *Resources,* 12(4), 1–23. https://doi.org/10.3390/resources12040049

Boudia, Soraya, & Jas, Nathalie (2016). *Powerless Science? Science and Politics in a Toxic World* (Reprint Edition). New York Oxford: Berghahn Books.

Boyer, Kate (2010). Of care and commodities: breast milk and the new politics of mobile biosubstances. *Progress in Human Geography*, *34*(1), 5–20. Bristol: Bristol University Press.

Boyer, Kate (2018). *Spaces and politics of motherhood*. London, New York: Rowman & Littlefield.

Boyer, Kate, Eaves, LaToya E., & Fluri, Jennifer (Eds.) (2023). *Activist Feminist Geographies*. https://doi.org/10.56687/9781529225129

Boyer, Kate, & Spinney, Justin (2016). Motherhood, mobility and materiality: Material entanglements, journey-making and the process of 'becoming mother.' *Environment and Planning D: Society and Space*, *34*(6), 1113–1131. https://doi.org/10.1177/0263775815622209

Boyle, Paul, & Norman, Paul (2009). Migration and Health. In Tim Brown, Sara McLafferty, & Graham Moon (Eds.), *A Companion to Health and Medical Geography* (pp. 346–374). https://doi.org/10.1002/9781444314762.ch19

Brenner, Neil, & Schmid, Christian (2011). Planetary Urbanisation. In Matthew Gandy (Ed.), *Urban constellations* (pp. 10–13). Berlin: Jovis.

Brickell, Katherine (2014). "The Whole World Is Watching": Intimate Geopolitics of Forced Eviction and Women's Activism in Cambodia. *Annals of the Association of American Geographers*, *104*(6), 1256–1272. https://doi.org/10.1080/00045608.2014.944452

Brown, David, Boyd, Doreen S, Brickell, Katherine, Ives, Christopher D, Natarajan, Nithya, & Parsons, Laurie (2021). Modern slavery, environmental degradation and climate change: Fisheries, field, forests and factories. *Environment and Planning E: Nature and Space*, *4*(2), 191–207. https://doi.org/10.1177/2514848619887156

Browne, Kath (2003). Negotiations and fieldworkings: friendship and feminist research. *ACME: An International E-Journal for Critical Geographers*, *2*(1), 132–146. https://doi.org/10.14288/acme.v2i2.690

Buier, Natalia (2024). Naming and dividing: The production of residual labour in the region of Doñana. *Dialectical Anthropology*. https://doi.org/10.1007/s10624-024-09750-y

Burstow, Bonnie (2003). Toward a Radical Understanding of Trauma and Trauma Work. *Violence Against Women*, *9*(11), 1293–1317. https://doi.org/10.1177/1077801203255555

Butler, Judith (2004). *Precarious life: the powers of mourning and violence*. London: Verso.

Butler, Judith (2009). *Frames of war: When is life grievable?* London: Verso.

Cairns, Kate (2022). Caring about water in Camden, New Jersey: social reproduction against slow violence. *Gender, Place & Culture*, *29*(10), 1423–1445. https://doi.org/10.1080/0966369X.2021.1997940

Calkin, Sydney (2019). Healthcare not airfare! Art, abortion and political agency in Ireland. *Gender, Place & Culture*, *26*(3), 338–361. https://doi.org/10.1080/0966369X.2018.1552928

Calkin, Sydney (2021). Legal geographies of medication abortion in the USA. *Transactions of Institute of British Geographers*, *47*(2), 378–392. https://doi.org/10.1111/tran.12506

Calkin, Sydney (2023). *Abortion Pills Go Global: Reproductive Freedom across Borders*. Berkeley, CA: University of California Press.

Calkin, Sydney, Freeman, Cordelia, & Moore, Francesca (2022). The geography of abortion: Discourse, spatiality and mobility. *Progress in Human Geography*, *46*(6), 1413–1430. https://doi.org/10.1177/03091325221128885

Camacho, Carlos, Negro, Juan J., Elmberg, Johan, Fox, Anthony D., Nagy, Szabolcs, Pain, Deborah J., & Green, Andy J. (2022). Groundwater extraction poses extreme threat to Doñana World Heritage Site. *Nature Ecology & Evolution*, *6*(6), 654–655. https://doi.org/10.1038/s41559-022-01763-6

Campos-Delgado, Amalia, & Côté-Boucher, Karine (2024). Tactics of Empathy: The Intimate Geopolitics of Mexican Migrant Detention. *Geopolitics*, *29*(2), 471–494. https://doi.org/10.1080/14650045.2022.2039633

Campos-Flores, Linamar, & Martin, Patricia M. (2024). Towards an emotional geoeconomics? Masculinity and emotions among Mexican and Guatemalan temporary agricultural workers in Quebec. *Canadian Geographies / Géographies Canadiennes*, *68*(2), 293–302. https://doi.org/10.1111/cag.12877

Campos-Flores, Linamar, & Rosales-Mendoza, Adriana Leona (2023). Living Better but Separated: The Emotional Impacts of the Canadian Seasonal Agricultural Workers Programme on Transmigrant Workers. In Nathan Kerrigan & Philomena de Lima (Eds.), *The Rural-Migration Nexus: Global Problems, Rural Issues* (pp. 111–140). Cham: Springer International Publishing.

Caretta, Martina Angela, & Riaño, Yvonne (2016). Feminist participatory methodologies in geography: creating spaces of inclusion. *Qualitative Research*, *16*(3), 258–266. https://doi.org/10.1177/1468794116629575

Carrasco, Antonio (2023). Huelva vive el año más seco de su historia. *Huelva Información*. Retrieved from https://www.huelvainformacion.es/huelva/Huelva-seco-historia-sequia-lluvias_0_1785422084.html

Carrington, Michal, Chatzidakis, Andreas, & Shaw, Deirdre (2021). Consuming Worker Exploitation? Accounts and Justifications for Consumer (In)action to Modern Slavery. *Work, Employment and Society*, *35*(3), 432–450. https://doi.org/10.1177/0950017020926372

Carson, Rachel ([1967] 2000). *Silent Spring*. London: Penguin Books.

Castillero-Quesada, Soledad (2020a). Producción alimentaria intensiva, migraciones y género: la industria del fruto rojo en la provincia de Huelva, España. *Maguaré*, *34*(2), 113–136. https://doi.org/10.15446/mag.v34n2.92582

Castillero-Quesada, Soledad (2020b). Trabajar en tiempos de Covid. Fricciones de lo esencial en la producción alimentaria. El caso de los frutos rojos en la provincia de Huelva. *Revista Andaluza de Antropología*, *19*, 67–86. https://doi.org/10.12795/RAA.2020.19.04

Castles, Stephen, & Ozkul, Derya (2014). Circular Migration: Triple Win, or a New Label for Temporary Migration? In Graziano Battistella (Ed.), *Global and Asian Perspectives on International Migration* (pp. 27–49). Cham: Springer International Publishing.

Castro, Nazaret, & Pinto, Ana (2023). *Abramos las cancelas. La lucha de las jornaleras de Huelva por otro modelo de agricultura*. Madrid: La Laboratoria.

Chakrabarty, Dipesh (2021). *The Climate of History in a Planetary Age*. Chicago: University of Chicago Press.

Choukri, Jalil (2021). Les défis de l'agriculture marocaine vus par les analystes du ministère des Finances. *Médias24*. Retrieved from https://medias24.com/2019/02/11/les-defis-de-lagriculture-marocaine-vus-par-les-analystes-du-ministere-des-finances/

Christian, Jenna Marie, & Dowler, Lorraine (2019). Slow and Fast Violence: A Feminist Critique of Binaries. *ACME: An International Journal for Critical Geographies*, *18*(5), 1066–1075. https://doi.org/10.14288/acme.v18i5.1692

Clark, Nigel, & Szerszynski, Bronislaw (2021). *Planetary Social Thought: The Anthropocene Challenge to the Social Sciences*. Cambridge: Polity Press.

Clarke, Ben, Otto, Friederike, Stuart-Smith, Rupert, & Harrington, Luke (2022). Extreme weather impacts of climate change: an attribution perspective. *Environmental Research: Climate*, *1*(1), 012001. https://doi.org/10.1088/2752-5295/ac6e7d

Cloke, Paul, May, Jon, & Williams, Andrew (2017). The geographies of food banks in the meantime. *Progress in Human Geography*, *41*(6), 703–726. https://doi.org/10.1177/0309132516655881

Coddington, Kate (2021a). For political geographies of fertilities. *Environment and Planning C: Politics and Space*, *39*(8), 1675–1691. https://doi.org/10.1177/23996544211050078

Coddington, Kate (2021b). Incompatible with life: Embodied borders, migrant fertility, and the UK's 'hostile environment.' *Environment and Planning C: Politics and Space*, *39*(8), 1711–1724. https://doi.org/10.1177/2399654420968112

Cohen, Amy, & Caxaj, Susana (2018). Bodies and Borders: Migrant Women Farmworkers and the Struggle for Sexual and Reproductive Justice in British Columbia, Canada. *Alternate Routes: A Journal of Critical Social Research*, *29*.

Collard, Juliane (2018). Biological reproduction, respatialised: Conceiving abnormality in biotech age. In Marcia R. England, Maria Fannin, & Helen Hazen (Eds.), *Reproductive Geographies: Bodies, Places and Politics* (pp. 31–47). London: Routledge.

Collard, Rosemary-Claire, & Dempsey, Jessica (2018). Accumulation by difference-making: an anthropocene story, starring witches. *Gender, Place & Culture*, *25*(9), 1349–1364. https://doi.org/10.1080/0966369X.2018.1521385

Collins, Patricia Hill (2000). *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment* (2nd ed.). New York: Routledge.

Colls, Rachel (2007). Materialising bodily matter: Intra-action and the embodiment of "fat." *Geoforum*, *38*(2), 353–365. https://doi.org/DOI 10.1016/j.geoforum.2006.09.004

Colls, Rachel, & Evans, Bethan (2013). Making space for fat Bodies? A critical account of 'the obesogenic environment.' *Progress in Human Geography*, *38*(6), 733–753. https://doi.org/10.1177/0309132513500373

Colls, Rachel, & Fannin, Maria (2013). Placental surfaces and the geographies of bodily interiors. *Environment and Planning A*, *45*(5), 1087–1104. https://doi.org/10.1068/a44698

Cook, Katsi (2007). Environmental Justice: Woman is the First Environment. In SisterSong Women of Color Reproductive Justice Collective & Loretta J. Ross (Eds.), *Reproductive Justice Briefing Book* (pp. 62–63). Retrieved from https://www.protectchoice.org/downloads/Reproductive%20Justice%20Briefing%20Book.pdf

Coombes, Brad, Johnson, Jay T., & Howitt, Richard (2013). Indigenous geographies II: The aspirational spaces in postcolonial politics - reconciliation, belonging and social provision. *Progress in Human Geography*, *37*(5), 691–700. https://doi.org/10.1177/0309132512469590

Dahinden, Janine, & Efionayi-Mäder, Denise (2009). Challenges and strategies in empirical fieldwork with asylum seekers and migrant sex workers. In Ilse Van Liempt & Veronika Bilger (Eds.), *Ethics of Migration Research Methodology. Dealing with Vulnerable Immigrants* (pp. 98–117). Sussex: Sussex Academic Press.

Dalby, Simon (2020). *Anthropocene Geopolitics: Globalization, Security, Sustainability*. Ottawa: University of Ottawa Press.

Dalla Costa, Mariarosa, & James, Selma (1972). *The Power of Women and the Subversion of the Community, 3rd Edition*. Bristol: Falling Wall Press.

Darlington-Pollock, Frances, & Peters, Kimberley (2021). Progress in the study of health inequalities and selective migration: Mobilising the new mobilities paradigm. *Progress in Human Geography*, *45*(5), 1061–1082. https://doi.org/10.1177/0309132520968151

Davies, Thom (2018). Toxic Space and Time: Slow Violence, Necropolitics, and Petrochemical Pollution. *Annals of the American Association of Geographers*, *108*(6), 1537–1553. https://doi.org/10.1080/24694452.2018.1470924

Davies, Thom, Yemane, Tesfalem H, Turner, Joe, Mayblin, Lucy, & Isakjee, Arshad (2024). Eco-coloniality and the violent environmentalism of the UK–France border. *Environment and Planning D: Society and Space*, 02637758241264415. https://doi.org/10.1177/02637758241264415

Davis, Angela (1981). *Women, race and class*. New York: Randon House.

Davis, Richard A., Welty, A. T., Borrego, José, Morales, Juan Antonio, Pendon, José Gabriel, & Ryan, Jeffrey G (2000). Rio Tinto estuary (Spain): 5000 years of pollution. *Environmental Geology*, *39*(10), 1107–1116. https://doi.org/10.1007/s002549900096

de Castro, Carlos, Reigada, Alicia, & Gadea Montesinos, María Elena (2019). The devaluation of female labour in fruit and vegetable packaging plants in Spanish Mediterranean agriculture. *Organization*, *27*, 135050841988338. https://doi.org/10.1177/1350508419883387

de Onis, Catalina (2012). "Looking Both Ways": Metaphor and the Rhetorical Alignment of Intersectional Climate Justice and Reproductive Justice Concerns. *Environmental Communication: A Journal of Nature and Culture*, *6*, 308–327. https://doi.org/10.1080/17524032.2012.690092

De Prada Redondo, Carlos (2018). *Alimentos con residuos de pesticidas alteradores hormonales*. Madrid: Fundación Vivo Sana.

Dedieu, François, Jouzel, Jean-Noël, & Prete, Giovanni (2015). Governing by ignoring : the manufacture and the function of the underreporting of farmworkers pesticide poisoning in France and in California. In Matthias Gross & Linsey McGoey (Eds.), *Routlege International Handbook of Ignorance studies* (pp. 297–307). London: Routledge.

Del Casino, Vincent J., & Brooks, Catherine F. (2015). Talking about bodies online: Viagra, YouTube, and the politics of public(ized) sexualities. *Gender, Place & Culture*, *22*(4), 474–493. https://doi.org/10.1080/0966369X.2013.879106

Delphy, Christine (1984). *Close to Home: A Materialist Analysis of Women's Oppression*. London: Hutchinson.

Depatie-Pelletier, Eugénie (2019). *Labour Migration Program Declared a "Modern Form of Slavery" under Constitutional Review : Employer-Tying Measure's Impact vs Mythical "Harm Reduction" Policies*. Retrieved from https://papyrus.bib.umontreal.ca/xmlui/handle/1866/22564

Derickson, Kate (2018). Masters of the universe. *Environment and Planning D: Society and Space*, *36*(3), 556–562. https://doi.org/10.1177/0263775817715724

Di Chiro, Giovanna (2017). Welcome to the White (M)Anthropocene? A feminist-environmentalist critique. In Sherilyn MacGregor (Ed.), *Routledge Handbook of Gender and Environment* (pp. 487–505). London: Routledge.

Dikeç, Mustafa (2009). The "where" of asylum. *Environment and Planning D: Society and Space*, *27*(2), 183–189. https://doi.org/10.1068/d2702ec

Diprose, Kristina, Valentine, Gill, Vanderbeck, Robert M., Liu, Chen, & McQuaid, Katie (2019). *Climate Change, Consumption and Intergenerational Justice*. Bristol: Bristol University Press.

Dixon, Deborah P., & Marston, Sallie A. (2011). Introduction: Feminist engagements with geopolitics. *Gender, Place & Culture*, *18*(4), 445–453. https://doi.org/10.1080/0966369X.2011.583401

Domosh, Mona (1998). Geography and gender: home, again? *Progress in Human Geography*, *22*(2), 276–282. https://doi.org/10.1191/030913298676121192

Dottolo, Andrea, & Stewart, Abigail (2008). Don't ever forget, you're a Black Man in America: Intersections of Race, Class and Gender In Encounters with the Police. *Sex Roles*, *59*, 350–364. https://doi.org/10.1007/s11199-007-9387-x

Doval Hernández, Violeta, Jiménez Sánchez, Carolina, & Zamora Gómez, Christina María (2021). *Los derechos humanos de las mujeres migrantes temporeras en Andalucía*. Geneva: Liga internacional de mujeres por la paz y la libertad.

Dow, Katharine, & Chaparro-Buitrago, Julieta (2023). Toward Environmental Reproductive Justice. In *A Companion to the Anthropology of Reproductive Medicine and Technology* (pp. 266–281). Hoboken: John Wiley & Sons.

Dowler, Lorraine, & Sharp, Joanne (2001). A feminist geopolitics? *Space & Polity*, *5*(3), 165–176.

Dowling, Robyn, Lloyd, Kate, & Suchet-Pearson, Sandie (2018). Qualitative methods III: experimenting, picturing, sensing. *Progress in Human Geography*, *42*(5), 779–788.

Downey, Dara, Kinane, Ian, & Parker, Elizabeth (2016). *Landscapes of Liminality. Between Space and Place*. London and New York: Rowman and Littlefield.

Dubas-Jakóbczyk, Katarzyna, Gonzalez, Ana Isabel, Domagała, Alicja, Astier-Peña, Maria Pilar, Vicente, Veronica Casado, Planet, Antonia-Gema, … Batenburg, Ronald (2024). Medical deserts in Spain—Insights from an international project. *The International Journal of Health Planning and Management*, *39*(3), 708–721. https://doi.org/10.1002/hpm.3782

Dueñas, Concepción, Fernández, Marta C., Cañete, Sergio, & Pérez, Margarita (2010). Radiological impacts of natural radioactivity from phosphogypsum piles in Huelva (Spain). *Radiation Measurements*, *45*(2), 242–246. https://doi.org/10.1016/j.radmeas.2010.01.007

Dyer, Sarah, McDowell, Linda, & Batnitzky, Adina (2008). Emotional labour/body work: The caring labours of migrants in the UK's National Health Service. *Geoforum*, *39*(6), 2030–2038. https://doi.org/10.1016/j.geoforum.2008.08.005

Eaves, LaToya E. (2019). The imperative of struggle: feminist and gender geographies in the United States. *Gender, Place & Culture*, *26*(7–9), 1314–1321. https://doi.org/10.1080/0966369X.2018.1552564

Echevarría, Perico (2020, February 11). El 99,9 % de la contratación en origen de 2019 incurría en fraude de ley -. Retrieved July 19, 2024, from https://www.lamardeonuba.es/contratacion-en-origen-de-trabajadoras-marroquies-fraude-masivo-o-caos-administrativo/

Echevarría, Perico (2023, June 3). "Sólo productos ecológicos, como la última vez", inspecciones avisadas a la empresa Bionest cuestionan los sellos de calidad de los frutos rojos onubenses -. Retrieved December 11, 2023, from https://www.lamardeonuba.es/solo-productos-ecologicos-como-la-ultima-vez-inspecciones-avisadas-a-la-empresa-bionest-cuestionan-los-sellos-de-calidad-de-los-frutos-rojos-onubenses/

Ehrkamp, Patricia (2017). Geographies of migration I: Refugees. *Progress in Human Geography*, *41*(6), 813–822. https://doi.org/10.1177/0309132516663061

El-Amin, Ali A., & Al-Zu'bi, Bashir Kh (2022). Effects of Exchange Rate on Unemployment in Morocco Economy. *Jordan Journal of Economic Sciences*, *9*(1), 35–52. https://doi.org/10.35516/jjes.v9i1.248

Elson, Diane, & Pearson, Ruth (1981). "Nimble Fingers Make Cheap Workers": An Analysis of Women's Employment in Third World Export Manufacturing. *Feminist Review*, (7), 87–107. https://doi.org/10.2307/1394761

Emcke, Carolin (2024). *Was wahr ist: Über Gewalt und Klima*. Göttingen: Wallstein Verlag.

England, Kim, & Henry, Caitlin (2013). Care work, migration and citizenship: international nurses in the UK. *Social & Cultural Geography*, *14*(5), 558–574. https://doi.org/10.1080/14649365.2013.786789

England, Marcia, Fannin, Maria, & Hazen, Helen (Eds.) (2018). *Reproductive Geographies: Bodies, Places and Politics*. London: Routledge.

Engle, Olivia (2022). Abortion mobilities. *Geography Compass*, *16*(9), e12656. https://doi.org/10.1111/gec3.12656

Eriksen, Christine, & Ballard, Susan (2020). *Alliances in the Anthropocene: Fire, Plants, and People* (1st ed. 2020 Edition). Singapore: Palgrave Pivot.

Escobar, Arturo (1998). Whose Knowledge, Whose nature? Biodiversity, Conservation, and the Political Ecology of Social Movements. *Journal of Political Ecology*, *5*(1), 53–82. https://doi.org/10.2458/v5i1.21397

Escrivà, Angels (2022). Globalization and health: gender issues in temporary agricultural work (Huelva). In Natalia Ribas-Mateos & Saskia Sassen (Eds.), *The Elgar Companion to Gender and Global Migration* (pp. 324–333). Cheltenham: Edward Elgar.

Escrivà, Angels, & Komposch, Nora (2025). Feminist Activism and Migration. In Laura Oso, Melissa Moralli, & Natalia Ribas-Mateos (Eds.), *Elgar Encyclopedia of global migration: New Mobilities and Artivism*. (pp. 230–232). Cheltenham: Edward Elgar.

Escrivà, Angels, Komposch, Nora, & Ribas-Mateos, Natalia (2025). Making Health Services Work for Temporary Agriculture Workers in Huelva, Spain. In *Migrant and Refugee Access to Health Systems: Challenging (Im)mobilities in Healthcare*. Northampton. Cheltenham: Edward Elgar.

Etter, Nina (2022). *Carceral Geographies of Imprisoned Motherhood: Exploring Experiences of and Governance Towards Mothers in the Women's Prison in Hindelbank, Switzerland* (Bachelor's Thesis, University of Bern). Retrieved from https://www.geography.unibe.ch/unibe/portal/fak_naturwis/e_geowiss/c_igeogr/content/e39603/e7107

83/e710790/e1430943/e1430947/pane1431054/e1431062/Etter_Nina_Bachelorarbeit_Carceralgeographiesofimprisonedmotherhood_17.08.2022_ger.pdf

Fannin, Maria (2003). Domesticating birth in the hospital: "family-centered" birth and the emergence of "homelike" birthing rooms. *Antipode*, *35*(3), 513–535. https://doi.org/10.1111/1467-8330.00337

Fannin, Maria (2012). The burden of choosing wisely: biopolitics at the beginning of life. *Gender, Place & Culture*, *20*(3), 273–289. https://doi.org/10.1080/0966369X.2012.694355

Fannin, Maria, Hazen, Helen, & England, Marcia R. (2018). Introduction: A call for reproductive geographies. In Marcia R. England, Maria Fannin, & Helen Hazen (Eds.), *Reproductive Geographies: Bodies, Places and Politics* (pp. 1–14). London: Routledge.

Fannin, Maria, MacLeavy, Julie, Larner, Wendy, & Wang, Wenfei Winnie (2014). Work, life, bodies: New materialisms and feminisms. *Feminist Theory*, *15*(3), 261–268. https://doi.org/10.1177/1464700114545320

FAO (2022). *Addressing Gender Issues in Pesticide Management | GEF Islands*. Retrieved from Food and Agriculture Organization of the United Nations (FAO): https://www.gefislands.org/research/addressing-gender-issues-pesticide-management

Fassin, Didier (2009). Another politics of life is possible. *Theory, Culture & Society*, *26*(5), 44–60. https://doi.org/10.1177/0263276409106349

Federici, Silvia (2004). *Caliban and the Witch: Women, the Body and Primitive Accumulation* (Illustrated Edition). Brooklyn: Autonomedia.

Federici, Silvia (2012). *Revolution at Point Zero: Housework, Reproduction, and Feminist Struggle*. Oakland: PM Press.

Ferreira Fernandes, Carla Sofia, Alves, Fátima, & Loureiro, João (2023). Human Mobility: The Invisible Issue in Climate Change Adaptation Policies: The Case of Morocco. In Walter Leal Filho, Marina Kovaleva, Fátima Alves, & Ismaila Rimi Abubakar (Eds.), *Climate Change Strategies: Handling the Challenges of Adapting to a Changing Climate* (pp. 441–457). Cham: Springer.

Ferrer-Gallardo, Xavier, & Houtum, Henk van (2014). The Deadly EU Border Control. *ACME: An International Journal for Critical Geographies*, *13*(2), 295–304.

Flick, Uwe (2009). *An Introduction to Qualitative Research*. London: Sage.

Flippen, Chenoa A. (2014). Intersectionality at Work: Determinants of Labor Supply among Immigrant Latinas. *Gender & Society*, *28*(3), 404–434.

Fluri, Jennifer L. (2015). Feminist political geography. In John Agnew, Virginie Mamadouh, Anna J. Secor, & Joanne Sharp (Eds.), *The Wiley Blackwell Companion to Political Geography* (pp. 235–247). https://doi.org/10.1002/9781118725771.ch18

Fraser, Nancy (2016). Contradictions of Capital and Care. *New Left Review*, (100), 99–117.

Freeman, Cordelia (2017). The crime of choice: abortion border crossings from Chile to Peru. *Gender, Place & Culture*, *24*(6), 851–868. https://doi.org/10.1080/0966369X.2017.1339020

Freshuelva (2023, July 19). Freshuelva culmina la campaña con una producción de 243.000 toneladas de fresas y un descenso del 10% | Freshuelva. Retrieved June 15, 2024, from https://freshuelva.es/freshuelva-culmina-la-campana-con-una-produccion-de-243-000-toneladas-de-fresas-y-un-descenso-del-10/

Frey, Fabienne (2022). *Pesticides' impact on the reproductive system of female agricultural workers.* Retrieved from https://indd.adobe.com/view/67b1af6a-a944-4ff5-ae1b-aac9743eae28

Frost, Samantha (2014). Re-considering the turn to biology in feminist theory. *Feminist Theory*, *15*(3), 307–326. https://doi.org/10.1177/1464700114545323

Fucic, Aleksandra, Duca, Radu C., Galea, Karen S., Maric, Tihana, Garcia, Kelly, Bloom, Michael S., … Vena, John E. (2021). Reproductive Health Risks Associated with Occupational and Environmental Exposure to Pesticides. *International Journal of Environmental Research and Public Health*, *18*(12), 6576. https://doi.org/10.3390/ijerph18126576

Gahman, Levi, & Hjalmarson, Elise (2019). Border Imperialism, Racial Capitalism, and Geographies of Deracination. *ACME: An International Journal for Critical Geographies*, *18*(1), 107–129.

Galarneau, Charlene (2013). Farm labor, reproductive justice: Migrant women farmworkers in the US. *Health and Human Rights*, *15*(1), E144-160.

Galt, Ryan E. (2017). *Food Systems in an Unequal World: Pesticides, Vegetables, and Agrarian Capitalism in Costa Rica* (Reprint Edition). Tucson: University of Arizona Press.

García, Ana M. (2003). Pesticide exposure and women's health. *American Journal of Industrial Medicine*, *44*(6), 584–594. https://doi.org/10.1002/ajim.10256

García-Pérez, Javier, Fernández de Larrea-Baz, Nerea, Lope, Virginia, Molina, Antonio J., O'Callaghan-Gordo, Cristina, Alonso, María Henar, … Pollán, Marina (2020). Residential proximity to industrial pollution sources and colorectal cancer risk: A multicase-control study (MCC-Spain). *Environment International*, *144*, 106055. https://doi.org/10.1016/j.envint.2020.106055

Gardner, Charlie J., Thierry, Aaron, Rowlandson, William, & Steinberger, Julia K. (2021). From Publications to Public Actions: The Role of Universities in Facilitating Academic Advocacy and Activism in the Climate and Ecological Emergency. *Frontiers in Sustainability*, *2*(679019), 1–6. https://doi.org/10.3389/frsus.2021.679019

Garrett, Bradley L. (2011). Videographic geographies: Using digital video for geographic research. *Progress in Human Geography*, *35*(4), 521–541. https://doi.org/10.1177/0309132510388337

Gastaldo, Denise, Magalhães, Lilian, Carrasco, Christine, & Davy, Charity (2012). *Body Mapping | Migration as a Social Determinant of Health*. Retrieved from http://www.migrationhealth.ca/undocumented-workers-ontario/body-mapping

Gay-Antaki, Miriam (2023). Embodied geographies of environmental justice: Toward the sovereign right to wholly inhabit oneself. *Environment and Planning E: Nature and Space*, *6*(4), 2379–2399. https://doi.org/10.1177/25148486231151802

Geoghegan, Hilary, & Woodyer, Tara (2014). Cultural geography and enchantment: the affirmative constitution of geographical research. *Journal of Cultural Geography*, *31*(2), 218–229. https://doi.org/10.1080/08873631.2014.906850

Gibson-Graham, J. K. (1996). *The end of capitalism (as we knew it)*. Minneapolis: The University of Minnesota Press.

Gilmartin, Mary, & Kuusisto-Arponen, Anna-Kaisa (2019). Borders and bodies: siting critical geographies of migration. In Katharyne Mitchell, Reece Jones, & Jennifer L. Fluri (Eds.), *Handbook on Critical Geographies of Migration* (pp. 18–29). Cheltenham: Edward Elgar Publishing.

Gilmartin, Mary, & Migge, Bettina (2016). Migrant mothers and the geographies of belonging. *Gender, Place & Culture*, *23*(2), 147–161. https://doi.org/10.1080/0966369X.2014.991700

Gilmore, Ruth Wilson (2023). *Abolition geography: essays towards liberation*. London: Verso.

Gimeno-Feliu, Luis A., Calderón-Larrañaga, Amaia, Diaz, Esperanza, Poblador-Plou, Beatriz, Macipe-Costa, Rosa, & Prados-Torres, Alexandra (2015). The healthy migrant effect in primary care. *Gaceta Sanitaria*, *29*(1), 15–20. https://doi.org/10.1016/j.gaceta.2014.07.007

Ginn, Franklin, Bastian, Michelle, Farrier, David, & Kidwell, Jeremy (2018). Introduction: Unexpected Encounters with Deep Time. *Environmental Humanities*, *10*(1), 213–225. https://doi.org/10.1215/22011919-4385534

Ginsburg, Faye, & Rapp, Rayna (1995). *Conceiving the new world order: the global politics of reproduction*. Berkeley, CA: University of California Press.

Glass, Christy M., Mannon, Susan, & Petrzelka, Peggy (2014). Good Mothers as Guest Workers: Constructing the Trope of Compliant Maternity in Spain's Strawberry Industry. *International Journal of Sociology*, *44*(3), 8–22. https://doi.org/10.2753/IJS0020-7659440301

Government Subdelegation Huelva (2023). Llegan a Huelva las primeras 3.900 temporeras del programa de migración circular con Marruecos 2023. Retrieved July 19, 2024, from Ministerio de Inclusión, Seguridad Social y Migraciones: https://www.inclusion.gob.es/w/llegan-a-huelva-las-primeras-3.900-temporeras-del-programa-de-migracion-circular-con-marruecos-2023

Grant, Aimee (2023). Miscarriage and Curtains: A phenomenological autoethnography of curtains, privacy, and loss in an Early Pregnancy Unit in the UK. *Geoforum*, *143*, 103786. https://doi.org/10.1016/j.geoforum.2023.103786

Green, Andy J, Alcorlo, Paloma, Peeters, Edwin THM, Morris, Edward P, Espinar, José L, Bravo-Utrera, Miguel Angel, … Scheffer, Marten (2017). Creating a safe operating space for wetlands in a changing climate. *Frontiers in Ecology and the Environment*, *15*(2), 99–107. https://doi.org/10.1002/fee.1459

Green, Andy J., Guardiola-Albert, Carolina, Bravo-Utrera, Miguel Ángel, Bustamante, Javier, Camacho, Antonio, Camacho, Carlos, … Díaz-Delgado, Ricardo (2024). Groundwater Abstraction has Caused Extensive Ecological Damage to the Doñana World Heritage Site, Spain. *Wetlands*, *44*(2), 20. https://doi.org/10.1007/s13157-023-01769-1

Gregson, Nicky, & Rose, Gillian (2000). Taking Butler elsewhere: Performativities, spatialities and subjectivities. *Environment and Planning D: Society and Space*, *18*(4), 433–452.

Grewal, Inderpal, & Kaplan, Caren (1994). *Scattered hegemonies: Postmodernity and transnational feminist practice.* Minneapolis: University of Minnesota Press.

Grigg, David B. (1984). *An Introduction to Agricultural Geography*. London: Hutchinson Educational.

Güell, Berta (2022). La interseccionalidad en el trabajo agrícola estacional: el caso de Huelva en tiempos de COVID-19. *Estudios Geográficos*, *83*(293), e113–e113. https://doi.org/10.3989/estgeogr.2022119.119

Gunnarsson Payne, Jenny (2015). Reproduction in transition: cross-border egg donation, biodesirability and new reproductive subjectivities on the European fertility market. *Gender, Place & Culture*, *22*(1), 107–122. https://doi.org/10.1080/0966369X.2013.832656

Guthman, Julie (2016). Going both ways: More chemicals, more organics, and the significance of land in post-methyl bromide fumigation decisions for California's strawberry industry. *Journal of Rural Studies*, *47*(A), 76–84. https://doi.org/10.1016/j.jrurstud.2016.07.020

Guthman, Julie (2017). Paradoxes of the Border: Labor Shortages and Farmworker Minor Agency in Reworking California's Strawberry Fields. *Economic Geography*, *93*(1), 24–43. https://doi.org/10.1080/00130095.2016.1180241

Guthman, Julie (2019). *Wilted: Pathogens, Chemicals, and the Fragile Future of the Strawberry Industry*. Oakland: University of California Press.

Guthman, Julie, & Brown, Sandy (2016). I will never eat another strawberry again: the biopolitics of consumer-citizenship in the fight against methyl iodide in California. *Agriculture and Human Values*, *33*(3), 575–585. https://doi.org/10.1007/s10460-015-9626-7

Guthman, Julie, & Mansfield, Becky (2015). Nature, Difference, and the Body. In Tom Perreault, Gavin Bridge, & James McCarthy (Eds.), *The Routledge Handbook of Political Ecology* (pp. 558–570). London: Routledge.

Hall, Sarah Marie (2023). A Pregnant Pause? Reproduction, waiting and silences in the relational endurance of austerity. *Geoforum*, *142*, 103755. https://doi.org/10.1016/j.geoforum.2023.103755

Hamlin, Madeleine (2023). Geography's abolitionist turn: Notes on freedom, property, and the state. *Progress in Human Geography*, 03091325231194657. https://doi.org/10.1177/03091325231194657

Hamper, Josie, & Nash, Catherine (2021). Bonding work: Spacing relations through pregnancy apps. *Transactions of the Institute of British Geographers*, *46*(3), 584–597. https://doi.org/10.1111/tran.12446

Hanke, Wojciech, & Jurewicz, Joanna (2004). The risk of adverse reproductive and developmental disorders due to occupational pesticide exposure: an overview of current epidemiological evidence. *International Journal of Occupational Medicine and Environmental Health*, *17*(2), 223–243.

Hann, Rachel (2019). *Beyond Scenography* (1st Edition). New York und Oxon: Routledge.

Hansen, Eric, & Donohoe, Martin (2003). Health Issues of Migrant and Seasonal Farmworkers. *Journal of Health Care for the Poor and Underserved*, *14*(2), 153–164. https://doi.org/10.1353/hpu.2010.0790

Haraway, Donna (1988). *Situated Knowledges: The Science Question in Feminism and the Privilege of the Partial Perspective*. *Feminist Studies*(14), 575–599.

Haraway, Donna (1991). *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: Free Association Books.

Haraway, Donna, Ishikawa, Noboru, Gilbert, Scott F., Olwig, Kenneth, Tsing, Anna L., & Bubandt, Nils (2016). Anthropologists Are Talking – About the Anthropocene. *Ethnos*, *81*(3), 535–564. https://doi.org/10.1080/00141844.2015.1105838

Harrison, Jill Lindsey (2011). *Pesticide Drift and the Pursuit of Environmental Justice*. Cambridge: MIT Press.

Harthorn, Barbara Herr (2003). Safe Exposure? Perceptions of Health Risks from Agricultural Chemicals among California Farmworkers. In Barbara Herr Harthorn & Laury Oaks (Eds.), *Risk, Culture, and Health Inequality. Shifting Perceptions of Danger and Blame* (pp. 143–164). Westport: Greenwood.

Hasan, Dana, & Bleibleh, Sahera (2023). The everyday art of resistance: Interpreting "*resistancescapes*" against urban violence in Palestine. *Political Geography*, *101*, 102833. https://doi.org/10.1016/j.polgeo.2023.102833

Hawkins, Harriet (2013). Geography and art. An expanding field: Site, the body and practice. *Progress in Human Geography*, *37*(1), 52–71. https://doi.org/10.1177/0309132512442865

Hawkins, Harriet (2019). Geography's creative (re)turn: toward a critical framework. *Progress in Human Geography*, *43*(6), 963–984. https://doi.org/10.1177/0309132518804341

Hawkins, Harriet (2021). *Geography, Art, Research: Artistic Research in the GeoHumanities* (1st ed.). Oxon and New York: Routledge.

Hayes, Emily (2019). Slidescapes: three Royal Geographical Society lantern lectures by Vaughan Cornish. *Early Popular Visual Culture*, *17*(1), 71–88. https://doi.org/10.1080/17460654.2019.1618543

Hazen, Helen (2018). The best of both worlds? Mother's narratives around birth centre experiences in the Twin Cities, Minnesota. In Marcia R. England, Maria Fannin, & Helen Hazen (Eds.), *Reproductive Geographies: Bodies, Places and Politics* (pp. 122–141). London: Routledge.

Hellio, Emmanuelle (2008). Importer des femmes pour exporter des fraises (Huelva). *Études Rurales*, (182), 185–199.

Hellio, Emmanuelle (2013). "We don't have women in boxes'. In Jörg Gertel & Sarah Ruth Sippel (Eds.), *Seasonal Workers in Mediterranean Agriculture: The social costs of eating fresh* (pp. 141–157). Retrieved from https://halshs.archives-ouvertes.fr/halshs-02467165

Hellio, Emmanuelle (2014). *Importer des femmes pour exporter des fraises ? : Flexibilité du travail, canalisation des flux migratoires et échappatoires dans une monoculture intensive globalisée : le cas des saisonnières marocaines en Andalousie* (These de doctorat, Nice). Retrieved from https://www.theses.fr/2014NICE2040

Hellio, Emmanuelle (2016). "They know that you'll leave, like a dog moving onto the next bin": Undocumented male and seasonal contracted female workers in the agricultural labour market of Huelva, Spain. In Alessandra Corrado, Carlos De Castro, & Domenico Perrotta (Eds.), *Migration and agriculture. Mobility and change in the Mediterranean area*. London: Routledge.

Hellio, Emmanuelle, Montero Logroño, Inma, Campos, José María, Karaoui, Kautar, Cassain, Laura, & Onetti Mateos, Marina (2019). *Moroccan Women Working in the Strawberry Farms of Huelva Province. Working and Housing Conditions For Women Hired in Their Country of Origin*. Retrieved from Women's Link Worldwide (WLW): https://www.womenslinkworldwide.org/en/files/3118/executive-report-moroccan-women-working-in-the-strawberries-farms-of-huelva-province.pdf

Hendrixson, Anne (2019). Population Control in the Troubled Present: The '120 by 20' Target and Implant Access Program. *Development and Change*, *50*(3), 786–804. https://doi.org/10.1111/dech.12423

Hendrixson, Anne, Ojeda, Diana, Sasser, Jade S., Nadimpally, Sarojini, Foley, Ellen E., & Bhatia, Rajani (2020). Confronting populationism: feminist challenges to population control in an era of climate change. *Gender, Place & Culture*, *27*(3), 307–315. https://doi.org/10.1080/0966369X.2019.1639634

Hennebry, Jenna, McLaughlin, Janet, & Preibisch, Kerry (2016). Out of the Loop: (In)access to Health Care for Migrant Workers in Canada. *Journal of International Migration and Integration*, *17*(2), 521–538. https://doi.org/10.1007/s12134-015-0417-1

Hernández Maeso, Raquel Patricia, & Cruz Hidalgo, Esteban (2020). Evolución de la distribución de la población urbana y rural: Un retrato de la España vaciada. *Revista de estudios económicos y empresariales*, *32*, 15–33.

Hetherington, Kregg (2020). *The Government of Beans: Regulating Life in the Age of Monocrops*. Durham: Duke University Press.

Hickey, Colin, & Robeyns, Ingrid (2020). Planetary justice: What can we learn from ethics and political philosophy? *Earth System Governance*, *6*, 100045. https://doi.org/10.1016/j.esg.2020.100045

Hiemstra, Nancy (2021). Mothers, babies, and abortion at the border: Contradictory U.S. policies, or targeting fertility? *Environment and Planning C: Politics and Space*, *39*(8), 1692–1710. https://doi.org/10.1177/2399654421998368

Holdsworth, Clare (2013). *Family and Intimate Mobilities*. London: Palgrave Macmillan.

Holmes, Seth M. (2013). *Fresh Fruit, Broken Bodies*. Oakland: University of California Press.

Hoover, Elizabeth (2018). Environmental reproductive justice: intersections in an American Indian community impacted by environmental contamination. *Environmental Sociology*, *4*(1), 8–21. https://doi.org/10.1080/23251042.2017.1381898

Horton, Sarah Bronwen (2016). *They Leave Their Kidneys in the Fields: Illness, Injury, and Illegality among U.S. Farmworkers*. Oakland: University of California Press.

Hsia, Renee Y., & Gil-González, Diana (2021). Perspectives on Spain's legislative experience providing access to healthcare to irregular migrants: a qualitative interview study. *BMJ Open*, *11*(8), e050204. https://doi.org/10.1136/bmjopen-2021-050204

Hübl, Susanne (2019). *Bevölkerung - ein unschuldiges Konzept in der Geographie? Entwurf einer feministischen Bevölkerungsgeographie im Anschluss an Donna Haraway*. Frankfurt am Main: Goethe-Universität.

Hübl, Susanne (2022). Reproductive Justice: Impulse für intersektionale Bevölkerungsgeographien. *Geographica Helvetica*, *77*(1), 133–139. https://doi.org/10.5194/gh-77-133-2022

Hyatt, Erica Goldblatt, McCoyd, Judith L.M., & Diaz, Mery F. (2022). From Abortion Rights to Reproductive Justice: A Call to Action. *Affilia*, *37*(2), 194–203. https://doi.org/10.1177/08861099221077153

Hyndman, Jennifer (2000). *Managing Displacement: Refugees and the Politics of Humanitarianism*. Minneapolis: University of Minnesota Press.

Hyndman, Jennifer (2010). Introduction: The feminist politics of refugee migration. *Gender, Place and Culture*, *17*(4), 453–459. https://doi.org/10.1080/0966369X.2010.485835

Ilbery, Brian W. (1985). *Agricultural geography: a social and economic analysis*. Oxford: Oxford University Press.

ILO, Walk Free, & IOM (2022). *Global Estimates of Modern Slavery. Forced Labour and Forced Marriage*. Retrieved from https://www.ilo.org/publications/major-publications/global-estimates-modern-slavery-forced-labour-and-forced-marriage

INE, (Instituto Nacional de Estadística) (2024). *España en cifras 2024* (p. 53). Retrieved from file:///var/folders/s7/8svrvyzj67d30f_31qmh9lyr0000gn/T/EEC_2024_PUBLICACION_COMPLETA-1.pdf

infoMigrants (2024, May 17). Spain approves healthcare for undocumented migrants. *InfoMigrants*. Retrieved from https://www.infomigrants.net/en/post/57157/spain-approves-healthcare-for-undocumented-migrants

Interfresa (2024, March 27). Interfresa renueva por unanimidad sus cargos directivos. Retrieved July 17, 2024, from https://www.interfresa.com/bebuilder-1944/

IPCC (Ed.) (2021). Summary for Policymakers. In *Climate Change 2021 – The Physical Science Basis: Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 3–32). https://doi.org/10.1017/9781009157896.001

Irvine, Richard D. G. (2018). Seeing Environmental Violence in Deep Time: Perspectives from Contemporary Mongolian Literature and Music. *Environmental Humanities*, *10*(1), 257–272. https://doi.org/10.1215/22011919-4385562

Isakjee, Arshad, Davies, Thom, Obradović-Wochnik, Jelena, & Augustová, Karolína (2020). Liberal Violence and the Racial Borders of the European Union. *Antipode*, *52*(6), 1751–1773. https://doi.org/10.1111/anti.12670

Istvan, Marion, Rahban, Rita, Dananche, Brigitte, Senn, Alfred, Stettler, Eric, Multigner, Luc, … Garlantézec, Ronan (2021). Maternal occupational exposure to endocrine-disrupting chemicals during pregnancy and semen parameters in adulthood: results of a nationwide cross-sectional study among Swiss conscripts. *Human Reproduction*, *36*(7), 1948–1958. https://doi.org/10.1093/humrep/deab034

Jackson, Lucy (2020). Trauma, tragedy and stigma: The discomforting narrative of reproductive rights in

Northern Ireland. *Emotion, Space and Society*, *35*, 100678. https://doi.org/10.1016/j.emospa.2020.100678

Jacobsen, Malene H. (2023). A feminist geopolitics of living: Syrians' struggles to maintain and reunite intimate ties across borders. *Gender, Place & Culture*, *30*(9), 1303–1324. https://doi.org/10.1080/0966369X.2023.2169255

Jakobsen, Thomas Saetre, Scott, Sam, & Rye, Johan Fredrik (2023). Offshoring social reproduction: low-wage labour circulation and the separation of work and family life. In Johanna Waters & Brenda S. A. Yeoh (Eds.), *Handbook on Migration and the Family* (pp. 315–332). Cheltenham: Edward Elgar.

Jazeel, Tariq (2018). Urban theory with an outside. *Environment and Planning D: Society and Space*, *36*(3), 405–419. https://doi.org/10.1177/0263775817707968

Joanes, Jasmine (2023). Bloody, hairy, and hormonal: An intimate geopolitics of Polycystic Ovarian Syndrome (PCOS). *Political Geography*, *106*, 102952. https://doi.org/10.1016/j.polgeo.2023.102952

Johnson, Jay T., & Murton, Brian (2007). Re/placing Native Science: Indigenous Voices in Contemporary Constructions of Nature. *Geographical Research*, *45*(2), 121–129. https://doi.org/10.1111/j.1745-5871.2007.00442.x

Jokela-Pansini, Maaret (2022). Beyond "toxic bodies": Multiplied rationalities of women's reproductive health in a high-risk environmental area (Taranto, Italy). *Health & Place*, *77*, 102900. https://doi.org/10.1016/j.healthplace.2022.102900

Jokela-Pansini, Maaret, & Militz, Elisabeth (2022). Breathing new futures in polluted environments (Taranto, Italy). *Transactions of the Institute of British Geographers*, *47*(3), 741–755. https://doi.org/10.1111/tran.12532

Jones, Naya (2019). Dying to eat? Black food geographies of slow violence and resilience. *ACME: An International Journal for Critical Geographies*, *18*(5), 1076–1099.

Kanngieser, Anja (2011). A sonic geography of voice: Towards an affective politics. *Progress in Human Geography*, *36*(3), 336–353. https://doi.org/10.1177/0309132511423969

Karkulehto, Sanna, Koistinen, Aino-Kaisa, & Ugron, Nóra (2022). Planetary activism at the end of the world: Feminist and posthumanist imaginaries beyond Man. *European Journal of Women's Studies*, *29*(4), 577–592. https://doi.org/10.1177/13505068221126550

Kato, Masae, & Sleeboom-Faulkner, Margaret (2012). Ova collection in Japan – making visible women's experience in male spaces. *Gender, Place & Culture*, *20*(6), 737–753. https://doi.org/10.1080/0966369X.2012.709829

Katz, Cindi (1991). Sow what you know: the struggle for social reproduction in rural Sudan. *Annals of the Association of American Geographers*, *81*(3), 488–514.

Katz, Cindi (2001). Vagabond capitalism and the necessity of social reproduction. *Antipode*, *33*(4), 709–728. https://doi.org/10.1111/1467-8330.00207

Kaufman, Emily, & Nelson, Lise (2012). Malthus, gender and the demarcation of 'dangerous' bodies in 1996 US welfare reform. *Gender, Place & Culture*, *19*(4), 429–448. https://doi.org/10.1080/0966369X.2011.625081

Khalid, Fatima, & Moujahid, Lamia EL (2023). La gestion de l'eau au Maroc: Vers un nouveau mode de gouvernance. *Revue droit et société*, *3*(10), 7–21. https://doi.org/10.5281/ZENODO.8108933

Khan, Furqan, & Janjua, Tayyaba Zaman (2021). Climate-Induced Migration in North Africa: A Case Study of Morocco. *INSpire- the International Studies Undergraduate Student Journal*.

Kipfer, Stefan (2018). Pushing the limits of urban research: Urbanization, pipelines and counter-colonial politics. *Environment and Planning D: Society and Space*, *36*(3), 474–493. https://doi.org/10.1177/0263775818758328

Kirksey, Eben (2014). Hope. *Environmental Humanities*, *5*(1), 295–300. https://doi.org/10.1215/22011919-3615550

Komposch, Nora (2022). Transforming Family Spaces through Worker Cooperatives. A Case Study on Self-organised Care Work in New York City. *Annals of the Austrian Geographical Society*, *164*, 253–281. https://doi.org/10.1553/moegg164s253

Komposch, Nora (2025). Geoviolence: Climate Injustice, Labour Migration and Intimacy. *Antipode*, *0*(0), 1–

19. https://doi.org/10.1111/anti.70044

Komposch, Nora, & Perler, Laura (2022). Book Review: Mehr als Selbstbestimmung! Kämpfe für reproduktive Gerechtigkeit by Kitchen Politics. *Widerspruch*, *78*, 221–223.

Komposch, Nora, Pohl, Nicholas, & Riaño, Yvonne (2021). Worker Cooperatives' Potential for Migrant Women's Self-Empowerment. Insights from a Case Study in New York City. *Nccr – on the Move Working Paper Series*, *29*. Retrieved from https://nccr-onthemove.ch/publications/worker-cooperatives-potential-for-migrant-womens-self-empowerment/

Komposch, Nora, Schurr, Carolin, & Escrivà, Angels (2024). Intimate liminality in Spain's berry industry. *Transactions of the Institute of British Geographers*, *49*(4), 1–14. https://doi.org/10.111/tran.12673

Kosek, Jake (2000). Environmental Justice. In Derek Gregory, Ron Johnston, Geraldine Pratt, Michael Watts, & Sarah Whatmore (Eds.), *The Dictionary of Human Geography* (5th ed.). Oxford: Wiley Blackwell.

Kreuer, David (2019). *Notions of Drought. Nomadic Economy and Tribal Community in Eastern Morocco* (Doctoral dissertation). University of Leipzig, Leipzig.

Krupar, Shiloh, & Ehlers, Nadine (2017). Biofutures: Race and the governance of health. *Environment and Planning D: Society and Space*, *35*(2), 222–240. https://doi.org/10.1177/0263775816654475

La Merrill, Michele, Emond, Claude, Kim, Min Ji, Antignac, Jean-Philippe, Le Bizec, Bruno, Clément, Karine, … Barouki, Robert (2013). Toxicological Function of Adipose Tissue: Focus on Persistent Organic Pollutants. *Environmental Health Perspectives*, *121*(2), 162–169. https://doi.org/10.1289/ehp.1205485

Lahiri-Dutt, Kuntala (2015). Medicalising menstruation: a feminist critique of the political economy of menstrual hygiene management in South Asia. *Gender, Place & Culture*, *22*(8), 1158–1176. https://doi.org/10.1080/0966369X.2014.939156

Laliberté, Nicole (2015). Geographies of Human Rights: Mapping Responsibility. *Geography Compass*, *9*(2), 57–67. https://doi.org/10.1111/gec3.12196

Laliberté, Nicole, & Schurr, Carolin (2016). Introduction to special issue: the stickiness of emotions in the field – complicating feminist methodologies. *Gender, Place & Culture*, *23*(1), 72–78. https://doi.org/10.1080/0966369X.2014.992117

Lane, Rebecca (2014). Healthy discretion? Breastfeeding and the mutual maintenance of motherhood and public space. *Gender, Place & Culture*, *21*(2), 195–210. https://doi.org/10.1080/0966369X.2013.791251

Lau, Lisa (2018). A postcolonial framing of Indian commercial surrogacy: issues, representations, and orientalisms. *Gender, Place & Culture*, *25*(5), 666–685. https://doi.org/10.1080/0966369X.2018.1471047

Laufenberg, Mike, & Thompson, Vanessa (Eds.) (2021). *Sicherheit - Rassismuskritische und feministische Beiträge*. Münster: Westfälisches Dampfboot.

Lee, Stephen (2019). Family Separation as Slow Death. *Columbia Law Review*, *119*(8), 2319–2384.

Lemaizi, Salaheddine (2024, January 16). Figuig : Mobilisation contre la « privatisation de l'eau ». Retrieved March 4, 2024, from Enass.ma : Le média des sans voix: https://enass.ma/2024/01/16/figuig-mobilisation-contre-la-privatisation-de-leau/

Levey, Madeline, & McCreary, Tyler (2024). IUD counseling and the gynecological gaze: the biopolitics of clinical shared decision-making in the US. *Gender, Place & Culture*, *31*(7), 867–888. https://doi.org/10.1080/0966369X.2022.2125934

Lewis, Sophie (2018a). Cyborg uterine geography Complicating "care" and social reproduction. *Dialogues in Human Geography*, *8*(3), 300–316. https://doi.org/10.1177/2043820618804625

Lewis, Sophie (2018b). International solidarity in reproductive justice: surrogacy and gender-inclusive polymaternalism. *Gender, Place & Culture*, *25*(2), 207–227. https://doi.org/10.1080/0966369X.2018.1425286

Lewis, Sophie (2019). *Full Surrogacy Now*. New York: Verso.

Lewis, Sophie (2022). *Abolish the family: a manifesto for care and liberation*. London: Verso.

Liboiron, Max, Tironi, Manuel, & Calvillo, Nerea (2018). Toxic politics: Acting in a permanently polluted world. *Social Studies of Science*, *48*(3), 331–349.

Litfin, Karen (2003). Planetary Politics. In John Agnew, Katharyne Mitchell, & Gerard Toal (Eds.), *A Companion to Political Geography* (pp. 470–482). https://doi.org/10.1002/9780470998946.ch30

Llavaneras Blanco, Masaya (2022). Intimate bordering: Intimacy, anti-blackness and gender violence in the making of the Dominican border. *Political Geography*, *99*, 102743. https://doi.org/10.1016/j.polgeo.2022.102743

Llop-Gironés, Alba, Vargas Lorenzo, Ingrid, Garcia-Subirats, Irene, Aller, Marta-Beatriz, & Vázquez Navarrete, María Luisa (2014). [Immigrants' access to health care in Spain: a review]. *Revista espanola de salud publica*, *88*(6), 715–734. https://doi.org/10.4321/s1135-57272014000600005

Lobo, Michele, Mayes, Eve, & Bedford, Laura (2024). Earth Unbound: Situating Climate Change, Solidarity and Planetary Justice. In *Planetary Justice* (pp. 1–22). Bristol: Bristol University Press.

Loick, Daniel, & Thompson, Vanessa (Eds.) (2023). *Abolitionismus. Ein Reader*. Frankfurt a. M.: Suhrkamp.

Longhurst, Robyn (1997). (Dis)embodied geographies. *Progress in Human Geography*, *21*(4), 486–501. https://doi.org/10.1191/030913297668704177

Longhurst, Robyn (2000). "Corporeographies" of pregnancy: "bikini babes." *Environment and Planning D-Society & Space*, *18*(4), 453–472.

Longhurst, Robyn (2001). *Bodies: Exploring Fluid Boundaries*. London: Routledge.

Longhurst, Robyn (2008). *Maternities. Gender, bodies and space*. London: Routledge.

Longhurst, Robyn (2013). Using Skype to Mother: Bodies, Emotions, Visuality, and Screens. *Environment and Planning D: Society and Space*, *31*(4), 664–679. https://doi.org/10.1068/d20111

Longhurst, Robyn (2016). Mothering, digital media and emotional geographies in Hamilton, Aotearoa New Zealand. *Social & Cultural Geography*, *17*(1), 120–139. https://doi.org/10.1080/14649365.2015.1059477

Löning (2020). *Lidl Human Rights Impact Assessment Spanish (Huelva) Berry Supply Chain*. Retrieved from Lidl Great Britain: https://corporate.lidl.co.uk/sustainability/human-rights/hria

Lopez, Patricia J. (2019). Toward a care ethical approach to access to health care in neoliberal times. *Gender, Place & Culture*, *26*(6), 830–846. https://doi.org/10.1080/0966369X.2019.1619523

Lopez, Patricia J. (2023). For a pedagogy of hope: imagining worlds otherwise. *Journal of Geography in Higher Education*, *47*(5), 792–804. https://doi.org/10.1080/03098265.2022.2155803

Lorimer, Hayden (2003). Telling small stories: spaces of knowledge and the practice of geography. *Transactions of the Institute of British Geographers*, *28*(2), 197–217. https://doi.org/10.1111/1475-5661.00087

Lorimer, Hayden (2005). Cultural geography: The busyness of being "more-than-representational." *Progress in Human Geography*, *29*(1), 83–94.

Loureiro, Gabriela Silva (2020). To be Black, Queer and Radical: Centring the epistemology of Marielle Franco. *Open Cultural Studies*, *4*(1), 50–58. https://doi.org/doi:10.1515/culture-2020-0005

Lozano, Andros, & Iriberri, Ainhoa (2017, February 26). El triángulo del cáncer: por qué en Huelva, Cádiz y Sevilla se muere más que en el resto de España. *El Español*. Retrieved from https://www.elespanol.com/reportajes/grandes-historias/20170224/196230728_0.html

Luna, Zakiya (2009). From Rights to Justice: Women of Color Changing the Face of US Reproductive Rights Organizing. *Societies Without Borders*, *4*(3), 343–365. https://doi.org/10.1163/187188609X12492771031618

Luna, Zakiya, & Luker, Kristin (2013). Reproductive Justice. *Annual Review of Law and Social Science*, *9*(1), 327–352. https://doi.org/10.1146/annurev-lawsocsci-102612-134037

Macías Llaga, Israel, Márquez Domínguez, Juan Antonio, & Jurado Almonte, José Manuel (2016). Recruitment in origin of moroccan seasonal workers for the spanish croplands as an experience of codevelopment. *Cuadernos Geográficos*, *55*(2), 173–194.

Maldito (2022, February 21). ¿Qué ocurre con el agua en Doñana? Las extracciones de agua subterránea para regar los cultivos de frutos rojos y el consumo humano secan el humedal · Maldita.es - Periodismo para que no te la cuelen. Retrieved July 17, 2024, from site: https://maldita.es/clima/20220221/donana-agua-pozos-ilegales-fresas-cultivos-agua-parlamento/

Malmusi, Davide, Borrell, Carme, & Benach, Joan (2010). Migration-related health inequalities: Showing the complex interactions between gender, social class and place of origin. *Social Science & Medicine*, *71*(9), 1610–1619. https://doi.org/10.1016/j.socscimed.2010.07.043

Maniates, Michael F. (2001). Individualization: Plant a Tree, Buy a Bike, Save the World? *Global Environmental Politics*, *1*(3), 31–52. https://doi.org/10.1162/152638001316881395

Mansfield, Becky (2018). A New Biopolitics of Environmental Health: Permeable Bodies and the Anthropocene. In Terry Marsden (Ed.), *The SAGE Handbook of Nature: Three Volume Set* (Vols. 1–3, pp. 216–230). Los Angeles: Sage.

Mansfield, Becky, Werner, Marion, Berndt, Christian, Shattuck, Annie, Galt, Ryan, Williams, Bryan, … Tittor, Anne (2024). A new critical social science research agenda on pesticides. *Agriculture and Human Values*, *41*(2), 395–412. https://doi.org/10.1007/s10460-023-10492-w

Marcus, George M. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. *Annual Review of Anthropology*, *24*, 95–117.

Marquardt, Nadine, & Strüver, Anke (2018). Körper. Machtgeladene Intraaktionen zwischen Biologischem und Sozialem. In Anne Vogelpohl, Boris Michel, Henrik Lebuhn, Johanna Hoerning, & Bernd Belina (Eds.), *Raumproduktionen II. Theoretische Kontroversen und politische Auseinandersetzungen* (pp. 38–59). Münster: Westfälisches Dampfboot.

Márquez Domínguez, Juan Antonio, Gordo Márquez, Mercedes, & Delgado, Francisco Javier García (2009). Temporary "contracts in origin" as policy to control immigration in Spain: the "Huelva model." *Cahiers de l'Urmis*, (12). https://doi.org/10.4000/urmis.878

Martikainen, Pekka, Sipilä, Petteri, Blomgren, Jenni, & van Lenthe, Frank J. (2008). The effects of migration on the relationship between area socioeconomic structure and mortality. *Health & Place*, *14*(2), 361–366. https://doi.org/10.1016/j.healthplace.2007.07.004

Massaro, Vanessa A., & Williams, Jill (2013). Feminist geopolitics. *Geography Compass*, *7*(8), 567–577. https://doi.org/10.1111/gec3.12054

Massey, Doreen (1993). Power-geometry and a progressive sense of place. In John Bird, Barry Curtis, Tim Putnam, & Lisa Tickner (Eds.), *Mapping the Futures* (pp. 59–69). New York: Routledge.

Massey, Doreen (1994). *Space, place and gender*. Cambridge: Polity Press.

Mathews, Vanessa (2018). Reconfiguring the breastfeeding body in urban public spaces. *Social & Cultural Geography*, *20*(9), 1266–1284. https://doi.org/10.1080/14649365.2018.1433867

Mathez, Andrea, & Loftus, Alex (2023). Endless modernisation: Power and knowledge in the Green Morocco Plan. *Environment and Planning E: Nature and Space*, *6*(1), 87–112. https://doi.org/10.1177/25148486221101541

Mayring, Philipp (2015). *Qualitative Inhaltsanalyse. Grundlagen und Techniken*. Weinheim, Basel: Beltz.

Mbembe, Achille (2003). Necropolitics. *Public Culture*, *15*(1), 11–40. https://doi.org/10.1215/08992363-15-1-11

McConnell, Fiona (2017). Liminal geopolitics: the subjectivity and spatiality of diplomacy at the margins. *Transactions of the Institute of British Geographers*, *42*(1), 139–152. https://doi.org/10.1111/tran.12156

McConnell, Fiona, & Dittmer, Jason (2018). Liminality and the diplomacy of the British Overseas Territories: An assemblage approach. *Environment and Planning D: Society and Space*, *36*(1), 139–158. https://doi.org/10.1177/0263775817733479

McCovey, Mavis, & Salter, John (2009). *Medicine Trails: A Life in Many Worlds*. Berkeley: Heyday Books.

McDowell, Linda (1992). Doing gender: feminism, feminists and research methods in Human Geography. *Transactions of the Institute of British Geographers*, *17*(4), 399–416.

McDowell, Linda (1993). Space, place and gender relations, part I: feminist empiricism and the geography of social relations. *Progress in Human Geography*, *17*(2), 157–179. https://doi.org/10.1177/030913259301700202

McDowell, Linda (1995). Body Work. Heterosexual Gender Performances in City Workplaces. In David Bell & Gill Valentine (Eds.), *Mapping Desire* (pp. 75–95). London: Routledge.

McDowell, Linda (1999). *Gender, Identity & Place. Understanding Feminist Geographies*. Minneapolis:

University of Minnesota Press.

McDowell, Linda (2008). Thinking through work: complex inequalities, constructions of difference and trans-national migrants. *Progress in Human Geography*, *32*(4), 491–507. https://doi.org/10.1177/0309132507088116

McDowell, Linda (2009). *Working Bodies: Interactive Service Employment and Workplace Identities*. Oxford: Wiley-Blackwell.

McDowell, Sara, & Crooke, Elizabeth (2019). Creating liminal spaces of collective possibility in divided societies: building and burning the Temple. *Cultural Geographies*, *26*(3), 323–339. https://doi.org/10.1177/1474474018817791

McIlwaine, Cathy (1999). Family. In Linda McDowell & Joanne P. Sharp (Eds.), *A feminist glossary of human geography*. London: Arnold.

McIntyre, Michael, & Nast, Heidi J. (2011). Bio(necro)polis: Marx, surplus populations, and the spatial dialectics of reproduction and "race." *Antipode*, *43*(5), 1465–1488. https://doi.org/10.1111/j.1467-8330.2011.00906.x

McKinney, Joslin, & Palmer, Scott (2017). *Scenography Expanded: An Introduction to Contemporary Performance Design*. London: Bloomsbury Publishing.

McKinnon, Katharine (2016). The geopolitics of birth. *Area*, *48*(3), 285–291. https://doi.org/10.1111/area.12131

McKittrick, Katherine (2011). On Plantations, Prisons, and a Black Sense of Place. *Social & Cultural Geography*, *12*(8), 947–963. https://doi.org/10.1080/14649365.2011.624280

McLaughlin, Janet, Wells, Don, Mendiburo, Aaraón, Lyn, André, & Vasilevska, Biljana (2017). 'Temporary Workers', Temporary Fathers: Transnational Family Impacts of Canada's Seasonal Agricultural Worker Program. *Relations Industrielles / Industrial Relations*, *72*(4), 682–709. https://doi.org/10.7202/1043172ar

McMichael, Anthony, McMichael, Celia, Berry, Helen, & Bowen, Kathryn (2010). *Climate-related displacement: health risks and responses*. Germany: VDM Verlag.

McNiven, Abi (2016). 'Geographies of dying and death' in relation to pregnancy losses: ultrasonography experiences. *Social & Cultural Geography*, *17*(2), 233–246. https://doi.org/10.1080/14649365.2015.1033448

Meehan, Katie, & Stauss, Kendra (2015). *Precarious Worlds: Contested Geographies of Social Reproduction*. Athens, London: University of Georgia Press.

Megevand, Carole, & Diaz Cassou, Javier (2023). *Morocco - Country Climate and Development Report (CCDR) : Background Paper - Water Scarcity and Droughts (English)*. Retrieved from https://policycommons.net/artifacts/3882222/morocco-country-climate-and-development-report-ccdr/4688577/

Mellersh, Natasha (2024, January 24). Morocco curbs migration attempts to Europe in 2023. Retrieved April 4, 2024, from InfoMigrants: https://www.infomigrants.net/en/post/54740/morocco-curbs-migration-attempts-to-europe-in-2023

Mies, Maria (1981). Dynamics of Sexual Division of Labour and Capital Accumulation: Women Lace Workers of Narsapur. *Economic and Political Weekly*, *16*(10/12), 487–500.

Mies, Maria, & Bennholdt-Thomsen, Veronika (1999). *The Subsistence Perspective: Beyond the Globalised Economy*. London: Zed Books.

Migge, Bettina, & Gilmartin, Mary (2011). Migrants and healthcare: Investigating patient mobility among migrants in Ireland. *Health & Place*, *17*(5), 1144–1149. https://doi.org/10.1016/j.healthplace.2011.05.002

Mikulewicz, Michael, Caretta, Martina Angela, Sultana, Farhana, & J. W. Crawford, Neil (2023). Intersectionality & Climate Justice: A call for synergy in climate change scholarship. *Environmental Politics*, *32*(7), 1275–1286. https://doi.org/10.1080/09644016.2023.2172869

Miles, Malcolm (2014). *Eco-Aesthetics: Art, Literature and Architecture in a Period of Climate Change*. Retrieved from https://www.bloomsbury.com/uk/ecoaesthetics-9781472524607/

Militz, Elisabeth (2023). Intimate geographies of virginal blood. *Cultural Geographies*, *30*(1), 123–139. https://doi.org/10.1177/14744740221110586

Militz, Elisabeth, Dzudzek, Iris, & Schurr, Carolin (2021). Feministische Geographien der Technowissenschaften. In Autor*innenkollektiv Geographie und Geschlecht (Ed.), *Handbuch Feministische Geographien: Arbeitsweisen und Konzepte* (pp. 190–214). Leverkusen-Opladen: Barbara Budrich.

Militz, Elisabeth, Faria, Caroline, & Schurr, Carolin (2020). Affectual intensities: writing with resonance as feminist methodology. *Area*, *52*(2), 429–436. https://doi.org/10.1111/area.12584

Mills, Sarah, Clark, Nigel, Fluri, Jennifer L., Tyner, James, & Dixon, Deborah P. (2017). Feminist Geopolitics: Material States. *The AAG Review of Books*, *5*(4), 297–304. https://doi.org/10.1080/2325548X.2017.1366848

Ministerio de Inclusión, Seguridad Social y Migraciones. *Orden ISM/1302/2022, de 27 de diciembre, por la que se regula la gestión colectiva de contrataciones en origen para 2023*. , Pub. L. No. Orden ISM/1302/2022, § 1, BOE-A-2022-23056 188970 (2022). Retrieved from https://www.boe.es/eli/es/o/2022/12/27/ism1302

Mitchell, Katharyne, Marston, Sallie A., & Katz, Cindi (2004). *Life's Work: Geographies of Social Reproduction*. New York: Wiley.

Mitchell, Katharyne, & Sparke, Matthew (2020). Hotspot geopolitics versus geosocial solidarity: Contending constructions of safe space for migrants in Europe. *Environment and Planning D: Society and Space*, *38*(6), 1046–1066. https://doi.org/10.1177/0263775818793647

Mizielinska, Joanna (2022). The limits of choice: queer parents and stateless children in their search for recognition in Poland. *Gender, Place & Culture*, *29*(2), 153–176. https://doi.org/10.1080/0966369X.2020.1845616

Mohanty, Chandra (2003). *Feminism without borders. Decolonizing theory, practicing solidarity*. Durham: Duke University Press.

Molinero-Gerbeau, Yoan (2021). De complementarios a indispensables. Trabajadores rumanos en los enclaves de producción estacional de Huelva y Lleida. In Silvia Marcu (Ed.), *Transformaciones y Retos de la Movilidad de los Europeos del Este en España. Treinta años después de la caída del Muro de Berlín* (pp. 239–260). Valencia: Tirant Lo Blanch.

Molinero-Gerbeau, Yoan, López-Sala, Ana, & Șerban, Monica (2021). On the Social Sustainability of Industrial Agriculture Dependent on Migrant Workers. Romanian Workers in Spain's Seasonal Agriculture. *Sustainability*, *13*(3), 1062. https://doi.org/10.3390/su13031062

Mollett, Sharlene, & Faria, Caroline (2018). The Spatialities of Intersectional Thinking: Fashioning Feminist Geographic Futures. *Gender, Place & Culture*, *25*(4), 565–577. https://doi.org/10.1080/0966369X.2018.1454404

Montenegro, Patricia (2023, March 25). Huelva vuelve a decir "no al desmantelamiento" de la sanidad pública. *Huelva Información*. Retrieved from https://www.huelvainformacion.es/huelva/Huelva-vuelve-desmantelamiento-sanidad-publica_0_1777922967.html

Moore, Francesca (2015). Contested spaces: abortion clinics, women's shelters and hospitals. *Social & Cultural Geography*, *16*(4), 492–493. https://doi.org/10.1080/14649365.2014.927274

Moran, Dominique, Hutton, Marie A., Dixon, Louise, & Disney, Tom (2017). 'Daddy is a difficult word for me to hear': carceral geographies of parenting and the prison visiting room as a contested space of situated fathering. *Children's Geographies*, *15*(1), 107–121. https://doi.org/10.1080/14733285.2016.1193592

Moreno Nieto, Juana (2013). Migrations saisonnières á travers les « contrats d'origine. In Marie-Pierre Anglade, Leila Bouasria, Mériam Cheikh, Fanny Debarre, Véronique Manry, & Camille Schmoll (Eds.), *Expériences du genre. Intimités, marginalités, travail et migration*. Paris-Casablanca: Le Fennec-Khartala.

Moreno Nieto, Juana, & Hellio, Emmanuelle (2012). Las jornaleras de la fresa en Andalucía y Marruecos. Hacia un análisis feminista de la globalización agroalimentaria. Retrieved January 19, 2021, from https://www.soberaniaalimentaria.info/numeros-publicados/61-numero-30/480-las-jornaleras-de-la-fresa-en-andalucia-y-marruecos

Moroccan Ministry for Sustainable Development (2022). *Morocco National Adaptation Plan 2022-2030*.

Retrieved from https://unfccc.int/documents/636730

Morrell, Erica, & Blackwell, Dalvery (2022). Spatialized Intersectionality: Gendered and Racialized Residential Segregation and the Milwaukee Lead Crisis. *Environmental Justice*, *15*(1), 31–38. https://doi.org/10.1089/env.2021.0015

Moss, Pamela (2003). *Feminist geography in practice: Research and methods*. Oxford: Blackwell.

Mould, Oli (2023). From globalisation to the planetary: Towards a critical framework of planetary thinking in geography. *Geography Compass*, *17*(9), e12720. https://doi.org/10.1111/gec3.12720

Mountz, Alison (2011). Where asylum-seekers wait: feminist counter-topographies of sites between states. *Gender, Place & Culture*, *18*(3), 381–399. https://doi.org/10.1080/0966369X.2011.566370

Mountz, Alison (2021). Bodies, borders, babies: Birthing in liminal spaces. *Dialogues in Human Geography*, 204382062110202. https://doi.org/10.1177/20438206211020238

Mountz, Alison, & Hyndman, Jennifer (2006). Feminist approaches to the global intimate. *Women's Studies Quarterly*, *34*(1 & 2), 446–463.

Mozo, Carmen, Moreno Nieto, Juana, & Reigada, Alicia (2022). Health as an emerging value in the construction of quality of berries in Huelva (Spain). *International Sociology*, *37*(6), 698–715. https://doi.org/10.1177/02685809221115960

Muelle, Camila Esguerra, Ojeda, Diana, & Fleischer, Friederike (2021). Forced Displacement, Migration, and (Trans)National Care Networks. In Linda Peake, Elsa Koleth, Gökbörü S. Tanyildiz, Rajyashree N. Reddy, & Darren Patrick (Eds.), *A Feminist Urban Theory for our Time* (pp. 215–235). https://doi.org/10.1002/9781119789161.ch9

Murphy, Michelle (2013). Chemical Infrastructures of the St Clair River. In Soraya Boudia & Nathalie Jas (Eds.), *Toxicants, Health and Regulation since 1945* (1st ed., pp. 103–116). London: Pickering and Chatto.

Murray, Lesley, & Khan, Nichola (2020). The im/mobilities of 'sometimes-migrating' for abortion: Ireland to Great Britain. *Mobilities*, *15*(2), 161–172. https://doi.org/10.1080/17450101.2020.1730637

Muttenthaler, Roswitha, & Wonisch, Regina (2015). *Gesten des Zeigens: Zur Repräsentation von Gender und Race in Ausstellungen* (1 Aufl.). Bielefeld: transcript Verlag.

Nash, Jennifer (2021). Birth Geographies: Race, Reproductive Justice, and the Politics of the Hospital. *Harvard Journal of Law and Gender*, *44*(2), 299–328.

Nash, Linda (2007). *Inescapable Ecologies: A History of Environment, Disease, and Knowledge* (First Edition). Berkeley: University of California Press.

Nash, Meredith (2023). Breaking the silence around blood: managing menstruation during remote Antarctic fieldwork. *Gender, Place & Culture*, *30*(8), 1083–1103. https://doi.org/10.1080/0966369X.2022.2066635

Nast, Heidi J. (2011). "Race" and the Bio(necro)polis. *Antipode*, *43*(5), 1457–1464. https://doi.org/10.1111/j.1467-8330.2011.00907.x

Neimanis, Astrida, & Walker, Rachel Loewen (2014). Weathering: Climate Change and the "Thick Time" of Transcorporeality. *Hypatia*, *29*(3), 558–575. https://doi.org/10.1111/hypa.12064

Nelson, Lise (1999). Bodies (and Spaces) Do Matter: The Limits of Performativity. *Gender, Place & Culture*, *6*(4), 331–353. https://doi.org/10.1080/09663699924926

Nelson, Lise, & Seager, Joni (2005). *Companion to Feminist Geography*. Oxford: Wiley-Blackwell.

Nixon, Rob (2011). *Slow Violence and the Environmentalism of the Poor*. Massachusetts: Harvard University Press.

Nolin, Catherine (2002). Transnational ruptures and sutures: questions of identity and social relations among Guatemalans in Canada. *GeoJournal*, *56*(1), 59–67. https://doi.org/10.1023/a:1021709019790

Öcal, Devran Koray (2021). Book Review: Anthropocene Geopolitics: Globalization, Security, Sustainability. *Human Geography*, *14*(2), 310–311. https://doi.org/10.1177/19427786211008184

Öcal, Devran Koray, & Gökarıksel, Banu (2022). Grounding religious geopolitics: The everyday counter-geopolitical practices of Turkish mosque communities in Germany. *Geoforum*, *129*, 151–160.

https://doi.org/10.1016/j.geoforum.2022.01.011

Ojeda, Diana, Sasser, Jade S., & Lunstrum, Elizabeth (2020). Malthus's specter and the anthropocene. *Gender, Place & Culture*, *27*(3), 316–332. https://doi.org/10.1080/0966369X.2018.1553858

Oswin, Natalie, & Olund, Eric (2010). Governing Intimacy. *Environment and Planning D: Society and Space*, *28*(1), 60–67. https://doi.org/10.1068/d2801ed

Ouassak, Fatima (2020). *La puissance des mères: Pour un nouveau sujet révolutionnaire*. Paris: La Découverte.

Pain, Rachel (2003). Social geography: on action-orientated research. *Progress in Human Geography*, *27*(5), 649–657. https://doi.org/10.1191/0309132503ph455pr

Pain, Rachel (2009). Globalized fear? Towards an emotional geopolitics. *Progress in Human Geography*, *33*(4), 466–486. https://doi.org/10.1177/0309132508104994

Pain, Rachel (2015). Intimate war. *Political Geography*, *44*, 64–73. https://doi.org/10.1016/j.polgeo.2014.09.011

Pain, Rachel (2021). Geotrauma: Violence, place and repossession. *Progress in Human Geography*, *45*(5), 972–989. https://doi.org/10.1177/0309132520943676

Pain, Rachel, & Smith, Susan J. (Eds.) (2008). *Fear: Critical Geopolitics and Everyday Life*. Aldershot: Ashgate.

Pain, Rachel, & Staeheli, Lynn (2014). Introduction: intimacy-geopolitics and violence. *Area*, *46*(4), 344–347. https://doi.org/10.1111/area.12138

Pallot, Judith, & Piacentini, Laura (2012). *Gender, Geography, and Punishment: The Experience of Women in Carceral Russia*. Oxford, New York: Oxford University Press.

Parr, Hester (2002). New body-geographies: the embodied spaces of health and medical information on the Internet. *Environment and Planning D: Society and Space*, *20*(1), 73–95. https://doi.org/10.1068/d41j

Parrenas, Rhacel Salazar (2001). *Servants of Globalization: Women, Migration, and Domestic Work, First Edition* (1st ed.). Stanford, Calif: Stanford University Press.

Peake, Linda, Patrick, Darren, Reddy, Rajyashree N., Sarp Tanyildiz, Gökbörü, Ruddick, Sue, & Tchoukaleyska, Roza (2018). Placing Planetary Urbanization in other Fields of Vision. *Environment and Planning D: Society and Space*, *36*(3), 374–386. https://doi.org/10.1177/0263775818775198

Perler, Laura, & Schurr, Carolin (2021). Intimate Lives in the Global Bioeconomy: Reproductive Biographies of Mexican Egg Donors. *Body & Society*, *27*(3), 3–27. https://doi.org/10.1177/1357034X20936326

Perler, Laura, & Schurr, Carolin (2022). Geographies of assisted reproduction: The Spanish egg donation economy as a global/intimate contact zone. *Documents d'Anàlisi Geogràfica*, *68*(2), 313–333. https://doi.org/10.5565/rev/dag.725

Perler, Laura, Schurr, Carolin, Komposch, Nora, Winkel, Mirko, & Cervantez Rodríguez, Pedro Alejandro (2023). Reproductive geopolitics: Governing in/fertile bodies in Mexico's past and present. *Environment and Planning C: Politics and Space*, *42*(1), 102–124. https://doi.org/10.1177/23996544231182546

Philo, Chris (2005). Sex, life, death, geography: fragmentary remarks inspired by 'Foucault's population geographies.' *Population, Space and Place*, *11*(4), 325–333. https://doi.org/10.1002/psp.369

Pink, Sarah (2009). *Doing Sensory Ethnography*. London: Sage.

Pratt, Geraldine (2004a). Feminist geographies: spatialising feminist politics. In Paul Cloke, Philip Crang, & Mark Goodwin (Eds.), *Envisioning Human Geographies* (pp. 128–145). London: Routledge.

Pratt, Geraldine (2004b). *Working feminism*. Edinburgh: Edinburg University Press.

Pratt, Geraldine (2009). Circulating sadness: Witnessing Filipina mothers' stories of family separation. *Gender, Place & Culture*, *16*(1), 3–22. https://doi.org/10.1080/09663690802574753

Pratt, Geraldine (2012). *Families apart: migrant mothers and the conflicts of labor and love*. Minneapolis: University of Minnesota Press.

Pratt, Geraldine, Johnston, Caleb, & Banta, Vanessa (2017). Lifetimes of disposability and surplus

entrepreneurs in Bagong Barrio, Manila. *Antipode*, *49*(1), 169–192. https://doi.org/10.1111/anti.12249

Pratt, Geraldine, & Rosner, Victoria (2006). Introduction: The Global & the Intimate. *Women's Studies Quaterly*, *34*(1–2), 13–24.

Pratt, Geraldine, & Rosner, Victoria (2012). *The global and the intimate: feminism in our time*. New York: Columbia University Press.

Preibisch, Kerry, & Santamaría, Luz María Hermoso (2006). Engendering Labour Migration: The Case of Foreign Workers in Canadian Agriculture. In Evangelia Tastsoglou & Alexandra Dobrowolsky (Eds.), *Women, Migration and Citizenship* (pp. 107–130). London: Routledge.

Price, Kimala (2020). What Is Reproductive Justice? How Women of Color Activists Are Redefining the Pro-Choice Paradigm. *Meridians*, *19*(S1), 340–362. https://doi.org/10.1215/15366936-8566034

Pulido, Laura (2017). Geographies of race and ethnicity II: Environmental racism, racial capitalism and state-sanctioned violence. *Progress in Human Geography*, *41*(4), 524–533. https://doi.org/10.1177/0309132516646495

Pulido, Laura, & De Lara, Juan (2018). Reimagining 'justice' in environmental justice: Radical ecologies, decolonial thought, and the Black Radical Tradition. *Environment and Planning E: Nature and Space*, *1*(1–2), 76–98. https://doi.org/10.1177/2514848618770363

Raeymaekers, Timothy (2019). On the Politics of Claiming Peripheral Space. *Tracce Urbane. Rivista Italiana Transdisciplinare Di Studi Urbani*, *3*(5), 124–138. https://doi.org/10.13133/2532-6562_3.5.14557

Raeymaekers, Timothy (2024). *The Natural Border. Bounding Migrant Farmwork in the Black Mediterranean*. Ithaca and London: Cornell University Press.

Reddy, Chandri Raghava (2007). Plant Tissue Culture Industry and Women's Participation: 'Nimble Fingers' or Docile Labor? *Gender, Technology and Development*, *11*(2), 179–198. https://doi.org/10.1177/097185240701100203

Reddy, Rajyashree N (2018). The urban under erasure: Towards a postcolonial critique of planetary urbanization. *Environment and Planning D: Society and Space*, *36*(3), 529–539. https://doi.org/10.1177/0263775817744220

Reigada, Alicia (2016). Family farms, migrant labourers and regional imbalance in global agri-food systems: on the social (un)sustainability of intensive strawberry production in Huelva (Spain). In Alessandra Corrado, Carlos De Castro, & Domenico Perrotta (Eds.), *Migration and agriculture. Mobility and change in the Mediterranean area* (pp. 119–134). London: Routledge.

Riaño, Yvonne (2015). Minga biographic workshops with highly skilled migrant women: enhancing spaces of inclusion. *Qualitative Research Sage, Special Issue on Feminist Participatory Methodologies*, *16*(3), 1–13. https://doi.org/10.1177/1468794115614884

Rishworth, Andrea, & Dixon, Jenna (2018). Reproducing inequalities: Examining the intersection of environment and global maternal and child health. In Marcia R. England, Maria Fannin, & Helen Hazen (Eds.), *Reproductive Geographies: Bodies, Places and Politics* (pp. 201–220). London: Routledge.

Rivera-Amarillo, Claudia, & Camargo, Alejandro (2020). Zika assemblages: women, populationism, and the geographies of epidemiological surveillance. *Gender, Place & Culture*, *27*(3), 412–428. https://doi.org/10.1080/0966369X.2018.1555518

Robbins, Paul, & Smith, Sara (2017). Baby bust: Towards political demography. *Progress in Human Geography*, *41*(2), 199–219. https://doi.org/10.1177/0309132516633321

Roberts, Dorothy (1997). *Killing the Black Body: Race, Reproduction and the Meaning of Liberty*. New York: Pantheon Books.

Roberts, Dorothy (2021). *Torn Apart: How the Child Welfare System Destroys Black Families and How Abolition Can Build a Safer World*. New York: Basic Books.

Robinson, Catherine (2018). Misshapen motherhood: Placing breastfeeding distress. *Emotion, Space and Society*, *26*, 41–48. https://doi.org/10.1016/j.emospa.2016.09.008

Robinson, Guy (2013). *Geographies of agriculture: Globalisation, restructuring and sustainability*. London: Routledge.

Rodó-de-Zárate, Maria, & Baylina, Mireia (2018). Intersectionality in feminist geographies. *Gender, Place & Culture*, *25*(4), 547–553. https://doi.org/10.1080/0966369X.2018.1453489

Rodríguez-Rocha, Vivian (2021). Social Reproduction Theory: State of the field and new directions in geography. *Geography Compass*, *15*(8), e12586. https://doi.org/10.1111/gec3.12586

Rose, Gillian (1993). *Feminism and geography. The limits of geographical knowledge*. Oxford: Polity Press.

Rose, Gillian (2011). *Visual methodologies: an introduction to researching with visual materials*. London: Sage.

Rosenthal, Gabriele (2007). Biographical research. In Clive Seale, Giampietro Gobo, Jaber F. Gubrium, & David Silverman (Eds.), *Qualitative Research Practice* (pp. 48–64). London: Sage.

Ross, Loretta J., Brownlee, Sarah L., Diallo, Dâzon Dixon, Rodriguez, Luz, & Roundtable, Latina (2001). The "Sistering Collective": Women of Color, Reproductive Health and Human Rights. *American Journal of Health Studies*, *17*(2), 79–88.

Ross, Loretta J., & Solinger, Rickie (2017). *Reproductive Justice: An Introduction* (1st ed.). Oakland, CA: University of California Press.

Ruddick, Sue (2004). Activist geographies: building possible worlds. In Paul Cloke, Philip Crang, & Mark Goodwin (Eds.), *Envisioning Human Geographies* (1st ed., pp. 229–241). London: Routledge.

Ruddick, Sue, Peake, Linda, Tanyildiz, Gökbörü S., & Patrick, Darren (2018). Planetary Urbanization: An Urban Theory for Our Time? *Environment and Planning D: Society and Space*, *36*(3), 387–404. https://doi.org/10.1177/0263775817721489

Rufer, Sven (Director) (2023). *The Invisibles – Modern Slavery in Europe* [Documentary Film]. Retrieved from https://dieunsichtbaren.ch

Rust, Chris, & Robertson, Alec (2003, April 1). *Show or tell? Opportunities, problems and methods of the exhibition as a form of research dissemination*. Presented at the Proceedings of 5th European Academy of Design Conference, Barcelona. Retrieved from http://shura.shu.ac.uk/961/

Rutherford, Stephanie, & Rutherford, Paul (2013). Geography and Biopolitics. *Geography Compass*, *7*(6), 423–434. https://doi.org/10.1111/gec3.12047

Ryan, Kathryn (2016). Incorporating emotional geography into climate change research: A case study in Londonderry, Vermont, USA. *Emotion, Space and Society*, *19*, 5–12. https://doi.org/10.1016/j.emospa.2016.02.006

Sabin, Lucy, Komposch, Nora, & Mestrot, Adrien (2024). Exhibiting toxicity: sprayed strawberries and geographies of hope. *Cultural Geographies*, *31*(1), 113–120. https://doi.org/10.1177/14744740231183202

Salas, Javier García (2023, November 27). Más de 1.400 millones de euros para garantizar el futuro de Doñana y los municipios del entorno. Retrieved August 2, 2024, from Huelva Información: https://www.huelvainformacion.es/provincia/millones-garantizar-Donana-municipios-entorno_0_1852015799.html

Salzinger, Leslie (2003). *Genders in Production: Making Workers in Mexico's Global Factories*. Berkeley: University of California Press.

Sarría-Santamera, Antonio, Hijas-Gómez, Ana Isabel, Carmona, Rocío, & Gimeno-Feliú, Luís Andrés (2016). A systematic review of the use of health services by immigrants and native populations. *Public Health Reviews*, *37*(1), 28. https://doi.org/10.1186/s40985-016-0042-3

Sasser, Jade S. (2014). From Darkness into Light: Race, Population, and Environmental Advocacy. *Antipode*, *46*(5), 1240–1257. https://doi.org/10.1111/anti.12029

Sasser, Jade S. (2018). *On infertile ground: population control and women's rights in the era of climate change*. New York: New York University Press.

Sasser, Jade S. (2023). At the intersection of climate justice and reproductive justice. *WIREs Climate Change*, *15*(1), e860. https://doi.org/10.1002/wcc.860

Saxton, Dvera I. (2015). Strawberry Fields as Extreme Environments: The Ecobiopolitics of Farmworker Health. *Medical Anthropology*, *34*(2), 166–183. https://doi.org/10.1080/01459740.2014.959167

Schilliger, Sarah (2013). Care-Migration. Kampf der Hausarbeiterinnen um transnationale Wohlfahrt und gleiche Rechte. *Widerspruch*, *62*, 51–58.

Schilliger, Sarah (2015). Globalisierte Care-Arrangements in Schweizer Privathaushalten. In Eva Nadai & Michael Nollert (Eds.), *Geschlechterverhältnisse im Post-Wohlfahrtstaat* (pp. 154–174). Dresden: Beltz.

Schilliger, Sarah, Schwiter, Karin, & Steiner, Jennifer (2023). Care crises and care fixes under Covid-19: the example of transnational live-in care work. *Social & Cultural Geography*, 24(3–4), 391–408. https://doi.org/10.1080/14649365.2022.2073608

Schilling, Janpeter, Freier, Korbinian P., Hertig, Elke, & Scheffran, Jürgen (2012). Climate change, vulnerability and adaptation in North Africa with focus on Morocco. *Agriculture, Ecosystems & Environment*, *156*, 12–26. https://doi.org/10.1016/j.agee.2012.04.021

Schindel, Estela (2022). Death by 'nature': The European border regime and the spatial production of slow violence. *Environment and Planning C: Politics and Space*, *40*(2), 428–446. https://doi.org/10.1177/2399654419884948

Schliehe, Anna K. (2017). Towards a Feminist Carceral Geography? Of Female Offenders and Prison Spaces. In Dominique Moran & Anna K. Schliehe (Eds.), *Carceral Spatiality: Dialogues between Geography and Criminology* (pp. 75–109). London: Palgrave Macmillan UK.

Schliehe, Anna K. (2021). *Young Women's Carceral Geographies: Abandonment, Trouble and Mobility*. London: Emerald Publishing Limited.

Schmidt, Katharina, Singer, Katrin, & Neuburger, Martina (2022). Comics und Relief Maps als feministische Kartographien der Positionalität. In Finn Dammann & Boris Michel (Eds.), *Sozial- und Kulturgeographie* (1st ed., Vol. 51, pp. 181–202). https://doi.org/10.14361/9783839459584-013

Schultz, Susanne (2019). Demographic futurity: How statistical assumption politics shape immigration policy rationales in Germany. *Environment and Planning D: Society and Space*, *37*(4), 644–662. https://doi.org/10.1177/0263775818772580

Schultz, Susanne (2021). The Neo-Malthusian Reflex in Climate Politics: Technocratic, Right Wing and Feminist References. *Australian Feminist Studies*, *36*(110), 1–18. https://doi.org/10.1080/08164649.2021.1995847

Schultz, Susanne (2022). *Die Politik des Kinderkriegens: Zur Kritik demografischer Regierungsstrategien*. Bielefeld: Transcript.

Schultz, Susanne (2023). *Reproductive Racism: Migration, Birth Control and The Specter of Population*. London: Anthem Press.

Schurr, Carolin (2014). Emotionen, Affekte und mehr-als-repräsentationale Geographien. *Geographische Zeitschrift*, *102*(3), 148–161.

Schurr, Carolin (2017a). From biopolitics to bioeconomies: the ART of (re-)producing white futures in Mexico's surrogacy market. *Environment and Planning D: Society and Space*, *35*(2), 241–262. https://doi.org/10.1177/0263775816638851

Schurr, Carolin (2017b). (Un)fruchtbare Begegnungen im Feld: ethische und emotionale Herausforderungen in der Feldforschung. In Kristine Beurskens, Tim Leibert, Lea Bauer, Caroline Trieglaff, Lennart Wiesiolek, & Simon Köppl (Eds.), *Experimentiert, diskutiert, visualisiert: Die IfL Forschungswerkstätten #1 und #2 im Rückblick* (Vol. 34, pp. 10–22). Leipzig: Leibniz-Institut für Länderkunde.

Schurr, Carolin (2018). The baby business booms: economic geographies of assisted reproduction. *Geography Compass*, *12*(8), e12395. https://doi.org/doi:10.1111/gec3.12395

Schurr, Carolin (2019). Multiple mobilities in Mexico's fertility industry. *Mobilities*, *14*(1), 103–119. https://doi.org/10.1080/17450101.2019.1522881

Schurr, Carolin, & Abdo, Katharina (2016). Rethinking the place of emotions in the field through social laboratories. *Gender, Place & Culture: A Journal of Feminist Geography*, *23*(1), 120–133.

Schurr, Carolin, Komposch, Nora, Pérez-Hernandez, Yolinitzli, & Perler, Laura (forthcoming). Towards Reproductive Geopolitics. *Space and Polity*.

Schurr, Carolin, Marquardt, Nadine, & Militz, Elisabeth (2023). Intimate technologies: Towards a feminist perspective on geographies of technoscience. *Progress in Human Geography*, *47*(2), 215–237. https://doi.org/10.1177/03091325231151673

Schurr, Carolin, & Militz, Elisabeth (2018). The affective economy of transnational surrogacy. *Environment and Planning A: Economy and Space*, *50*(8), 1626–1645. https://doi.org/10.1177/0308518X18769652

Schurr, C., Schultz, S., Komposch, N., Etter, N., Perler, L., & Pérez-Hérnandez, Y. (2025). Geographies of reproductive justice. *Progress in Human Geography*, *0*(0). https://doi.org/10.1177/03091325251338823

Schurr, Carolin, & Segebart, Dörte (2012). Engaging with feminist postcolonial concerns through participatory action research and intersectionality. *Geographica Helvetica*, *67*(3), 147–154. https://doi.org/10.5194/gh-67-147-2012

Schwiter, Karin, Berndt, Christian, & Schilling, Linda (2014). Ein sorgender Markt. Wie transnationale Vermittlungsagenturen für Seniorenbetreuung Im/mobilität, Ethnizität und Geschlecht in Wert setzen. *Geographische Zeitschrift*, *102*(4), 212–231. https://doi.org/10.5167/uzh-105336

Schwiter, Karin, & Steiner, Jennifer (2020). Geographies of care work: The commodification of care, digital care futures and alternative caring visions. *Geography Compass*, *14*(12), e12546. https://doi.org/10.1111/gec3.12546

Schwiter, Karin, Strauss, Kendra, & England, Kim (2018). At home with the boss: Migrant live-in caregivers, social reproduction and constrained agency in the UK, Canada, Austria and Switzerland. *Transactions of the Institute of British Geographers*, *43*(3), 462–476. https://doi.org/10.1111/tran.12235

Senanayake, Nari (2022). Theorising liminal states of health: A spatio-temporal analysis of undiagnosis and anticipatory diagnosis in the shadow of toxic pollution. *Transactions of the Institute of British Geographers*, *47*(2), 363–377. https://doi.org/10.1111/tran.12504

Serrano-Notivoli, Roberto, Tejedor, Ernesto, Sarricolea, Pablo, Meseguer-Ruiz, Oliver, de Luis, Martín, Saz, Miguel Ángel, … Olcina, Jorge (2023). Unprecedented warmth: A look at Spain's exceptional summer of 2022. *Atmospheric Research*, *293*, 106931. https://doi.org/10.1016/j.atmosres.2023.106931

Serre-Delcor, Núria, Oliveira, Inés, Moreno, Ruben, Treviño, Begoña, Hajdók, Eva, Esteban, Esperanza, … Evangelidou, Stella (2021). A Cross-Sectional Survey on Professionals to Assess Health Needs of Newly Arrived Migrants in Spain. *Frontiers in Public Health*, *9*. https://doi.org/10.3389/fpubh.2021.667251

Sharp, Joanne (2005). Geography and gender: Feminist methodologies in collaboration and in the field. *Progress in Human Geography*, *29*(3), 304–309.

Shaw, Amanda, & Wilson, Kalpana (2020). The Bill and Melinda Gates Foundation and the necro-populationism of 'climate-smart' agriculture. *Gender, Place & Culture*, *27*(3), 370–393. https://doi.org/10.1080/0966369X.2019.1609426

Shields, Rob (1991). *Places on the margin: Alternative geographies of Modernity*. London: Routledge.

Sidaway, James D., Woon, Chih Yuan, & Jacobs, Jane M. (2014). Planetary postcolonialism. *Singapore Journal of Tropical Geography*, *35*(1), 4–21. https://doi.org/10.1111/sjtg.12049

Side, Katherine (2016). A geopolitics of migrant women, mobility and abortion access in the Republic of Ireland. *Gender, Place & Culture*, *23*(12), 1788–1799. https://doi.org/10.1080/0966369X.2016.1262831

Side, Katherine (2020). Abortion Im/mobility: Spatial Consequences in the Republic of Ireland. *Feminist Review*, *124*(1), 15–31. https://doi.org/10.1177/0141778919894891

Siedhoff, Mathias, Glorius, Birgit, & Wintzer, Jeannine (2023). Overview: Für eine (Neu-)Theoretisierung und (Neu-)Methodologisierung bevölkerungsrelevanter Phänomene. *Geographica Helvetica*, *78*(1), 199–205. https://doi.org/10.5194/gh-78-199-2023

Siepmann, Eckhard (2003). "Ein Raumverhältnis, das sich durch Bewegung herstellt". Die performative Wende erreicht das Museum. *kunsttexte.de - E-Journal für Kunst- und Bildgeschichte*, *2*. https://doi.org/10.18452/6914

Silliman, Jael, Gerber Fried, Marlene, Gutiérrez, Elena R., & Ross, Loretta J. (Eds.) (2004). *Undivided rights: women of color organize for reproductive justice*. Chicago, Illinois: Haymarket Books.

Silva Santisteban, Rocio (Ed.) (2020). *Indigenous Women & Climate Change*. Copenhagen: IWGIA.

Smith, Christen A. (2016). Facing the Dragon: Black Mothering, Sequelae, and Gendered Necropolitics in the Americas. *Transforming Anthropology*, *24*(1), 31–48. https://doi.org/10.1111/traa.12055

Smith, Sara (2012). Intimate Geopolitics: Religion, Marriage, and Reproductive Bodies in Leh, Ladakh. *Annals of the Association of American Geographers*, *102*(6), 1511–1528. https://doi.org/10.1080/00045608.2012.660391

Smith, Sara (2020). *Intimate Geopolitics: Love, Territory, and the Future on India's Northern Threshold*. New Brunswick: Rutgers University Press.

Smith, Sara, & Vasudevan, Pavithra (2017). Race, biopolitics, and the future: introduction to the special section. *Environment and Planning D: Society and Space*, *35*(2), 210–221. https://doi.org/10.1177/0263775817699494

Smith, Sara, Vasudevan, Pavithra, Serrano, Carlos, & Gökarıksel, Banu (2019). Breaking families: Whiteness, state violence, and the alienable rights of kin. *Political Geography*, *72*(6), 144–146. https://doi.org/10.1016/j.polgeo.2019.01.001

Smith, Susan J, & Easterlow, Donna (2005). The strange geography of health inequalities. *Transactions of the Institute of British Geographers*, *30*(2), 173–190. https://doi.org/10.1111/j.1475-5661.2005.00159.x

Solinger, Rickie (2019). *Pregnancy and Power, Revised Edition*. New York: New York University Press.

SOS Mediterranee (2024, April 4). « First approach. First assessment ». Retrieved April 5, 2024, from https://sosmediterranee.ch/de/log/first-approach-first-assessment/

Sparke, Matthew (2014). Health. In Roger Lee, Noel Castree, Rob Kitchin, Victoria Lawson, Anssi Paasi, Chris Philo, … Charles W J Withers (Eds.), *The SAGE Handbook of Human Geography: Two Volume Set* (Vol. 2, pp. 680–704). London: Sage.

Sparke, Matthew (2017). Austerity and the embodiment of neoliberalism as ill-health: Towards a theory of biological sub-citizenship. *Social Science & Medicine*, *187*, 287–295. https://doi.org/10.1016/j.socscimed.2016.12.027

Speier, Amy, Lozanski, Kristin, & Frohlick, Susan (2020). Reproductive mobilities. *Mobilities*, *15*(2), 107–119. https://doi.org/10.1080/17450101.2020.1726644

Spivak, Gayatri Chakravorty (2003). *Death of a Discipline* (p. 136 Pages). New York: Columbia University Press.

Statz, Michele, & Pruitt, Lisa R (2019). To recognize the tyranny of distance: A spatial reading of Whole Woman's Health v. Hellerstedt. *Environment and Planning A: Economy and Space*, *51*(5), 1106–1127. https://doi.org/10.1177/0308518X18757508

Strüver, Anke (2019). Von der Inkorporierung und Verkörperung des Sozialen zur Somatisierung der Umwelt: Posthumanistische Überlegungen zum biosozialen Subjekt. *Geographica Helvetica*, *74*(2), 223–233. https://doi.org/10.5194/gh-74-223-2019

Strüver, Anke (2020). Urbane Metabolismen. Verkörperte Politische Ökologien des e/Essens. *Sub\urban. Zeitschrift Für Kritische Stadtforschung*, *8*(1/2), 99–116. https://doi.org/10.36900/suburban.v8i1/2.497

Sultana, Farhana (2007). Reflexivity, Positionality and Participatory Ethics: Negotiating Fieldwork Dilemmas in International Research. *ACME: An International Journal for Critical Geographies*, *6*(3), 374–385.

Sultana, Farhana (2022). Critical climate justice. *The Geographical Journal*, *188*(1), 118–124. https://doi.org/10.1111/geoj.12417

Sweet, Elizabeth L., & Ortiz Escalante, Sara (2017). Engaging territorio cuerpo-tierra through body and community mapping: a methodology for making communities safer. *Gender, Place & Culture*, *24*(4), 594–606. https://doi.org/10.1080/0966369X.2016.1219325

Sword-Daniels, Victoria, Eriksen, Christine, Hudson-Doyle, Emma E., Alaniz, Ryan, Adler, Carolina, Schenk, Todd, & Vallance, Suzanne (2018). Embodied uncertainty: living with complexity and natural hazards. *Journal of Risk Research*, *21*(3), 290–307. https://doi.org/10.1080/13669877.2016.1200659

Sziarto, Kristin M (2017). Whose reproductive futures? Race-biopolitics and resistance in the Black infant mortality reduction campaigns in Milwaukee. *Environment and Planning D: Society and Space*, *35*(2), 299–318. https://doi.org/10.1177/0263775816655803

Teather, Elizabeth Kenworthy (Ed.) (1999). *Embodied Geographies: Spaces, Bodies and Rites of Passage*. London: Routledge.

Teeple Hopkins, Carmen (2015). Introduction: Feminist geographies of social reproduction and race. *Women's*

Studies International Forum, *48*, 135–140. https://doi.org/10.1016/j.wsif.2014.06.002

Thomsen, Carly, Levitt, Zach, Gernon, Christopher, & Spencer, Penelope (2022). US anti-abortion ideology on the move: Mobile crisis pregnancy centers as unruly, unmappable, ungovernable. *Political Geography*, *92*, 102523. https://doi.org/10.1016/j.polgeo.2021.102523

Torres, Rebecca Maria (2018). A crisis of rights and responsibility: feminist geopolitical perspectives on Latin American refugees and migrants. *Gender, Place and Culture*, *25*(1), 13–36. https://doi.org/10.1080/0966369X.2017.1414036

Torres, Rebecca Maria, Blue, Sarah, Faria, Caroline, Segura, Tamara, & Swanson, Kate (2022). "Asylum is Not for Mexicans": Unaccompanied Youth and Racio-Governance at the US Border. *Geopolitics*, 1–30. https://doi.org/10.1080/14650045.2022.2086459

Torres, Rebecca Maria, Glockner, Valentina, Niño-Vega, Nohora, García-Figueroa, Gabriela, Faria, Caroline, Danze, Alicia, … Slack, Jeremy (2023). Lockdown and the list: Mexican refugees, asylum denial, and the feminist geopolitics of esperar (waiting/hoping). *Environment and Planning C: Politics and Space*, *41*(8), 1503–1520. https://doi.org/10.1177/23996544221118906

Tsing, Anna Lowenhaupt (2015). *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (First Edition). Princeton: Princeton University Press.

Tuck, Eve (2009). Suspending Damage: A Letter to Communities. *Harvard Educational Review*, *79*(3), 409–428. https://doi.org/10.17763/haer.79.3.n0016675661t3n15

Turner, Joe, & Vera Espinoza, Marcia (2021). The Affective and Intimate Life of the Family Migration Visa: Knowing, Feeling and Encountering the Heteronormative State. *Geopolitics*, *26*(2), 357–377. https://doi.org/10.1080/14650045.2019.1603994

Turner, Victor (1967). *The forest of symbols: Aspects of Ndembu ritual*. Ithaca, NY; London, UK: Cornell University Press.

Ty Miller, Jessica, & Thai Vu, Anvy (2021). Emerging research methods in environmental displacement and forced migration research. *Geography Compass*, *15*(4), e12558. https://doi.org/10.1111/gec3.12558

Tyerman, Thom (2021). Everyday Borders in Calais: The Globally Intimate Injustices of Segregation. *Geopolitics*, *26*(2), 464–485. https://doi.org/10.1080/14650045.2019.1631807

Tyner, James A. (2009). *War, violence, and population: Making the body count*. New York: Guilford Press.

Tyner, James A. (2013). Population geography I: surplus populations. *Progress in Human Geography*, *37*(5), 701–711. https://doi.org/10.1177/0309132512473924

Tyner, James A. (2015). Population geography II: Mortality, premature death, and the ordering of life. *Progress in Human Geography*, *39*(3), 360–373. https://doi.org/10.1177/0309132514527037

Ulloa, Astrid (2021). Feminist Political Ecologies in Latin American Context. In Nancy A. Naples (Ed.), *Companion to Feminist Studies* (pp. 427–446). Hoboken: John Wiley & Sons.

Underthun, Anders, & Jordhus-Lier, David Christoffer (2018). Liminality at work in Norwegian hotels. *Tourism Geographies*, *20*(1), 11–28. https://doi.org/10.1080/14616688.2017.1314546

Valentine, Gill (2007). Theorizing and Researching Intersectionality: A Challenge for Feminist Geography. *The Professional Geographer*, *59*(1), 10–21. https://doi.org/10.1111/j.1467-9272.2007.00587.x

Valverde, Carmen, & Kuypers, Karisha (2023). *Spanish Berry Outlook* (No. SP2023-0024; pp. 1–5). Retrieved from GAIN (Global Agricultural Information Network): https://agriexchange.apeda.gov.in/MarketReport/Reports/Spanish%20Berry%20Outlook%20%20_Madrid_Spain_SP2023-0024.pdf

Van Gennep, Arnold (1960). *The rites of passage*. Chicago: University of Chicago Press.

van Houtum, Henk, & Pijpers, R. (2008). On strawberry fields and cherry picking: fear and desire in the bordering and immigration politics of the European Union. In Rachel Pain & Susan J. Smith (Eds.), *Fear: Critical Geopolitics and Everyday Life* (pp. 157–174). Burlington: Ashgate.

Van Praag, Lore, Ou-Salah, Loubna, Hut, Elodie, & Zickgraf, Caroline (2021). *Migration and Environmental Change in Morocco: In search for Linkages Between Migration Aspirations and (Perceived) Environmental Changes*. Cham: Springer.

Vasudevan, Pavithra, & Smith, Sara (2020). The domestic geopolitics of racial capitalism. *Environment and Planning C: Politics and Space*, *38*(7–8), 1160–1179. https://doi.org/10.1177/2399654420901567

Veillerette, François, & Lauverjat, Nadine (2013). EXPPERT 2 : Des Perturbateurs Endocriniens dans des fraises. Retrieved January 21, 2021, from Générations Futures: https://www.generations-futures.fr/publications/perturbateurs-endocriniens-dans-des-fraises/

Verne, Julia, Marquardt, Nadine, & Ouma, Stefan (2024). Planetary Futures: Über Leben in kritischen Zeiten: Keynote auf dem 62. Deutschen Kongress für Geographie (DKG) in Frankfurt am Main. Keynote at the 62nd Geography Congress in Germany, Frankfurt/Main. *Geographische Zeitschrift*, *112*(2), 151–171. https://doi.org/10.25162/gz-2024-0009

Vicente-Serrano, Sergio M., Lopez-Moreno, Juan-I., Beguería, Santiago, Lorenzo-Lacruz, Jorge, Sanchez-Lorenzo, Arturo, García-Ruiz, José M., … Espejo, Francisco (2014). Evidence of increasing drought severity caused by temperature rise in southern Europe. *Environmental Research Letters*, *9*(4), 044001. https://doi.org/10.1088/1748-9326/9/4/044001

von Redecker, Eva (2023). *Bleibefreiheit*. Frankfurt am Main: S. Fischer Verlag.

Vorbrugg, Alexander (2022). Ethnographies of slow violence: Epistemological alliances in fieldwork and narrating ruins. *Environment and Planning C: Politics and Space*, *40*(2), 447–462. https://doi.org/10.1177/2399654419881660

Walia, Harsha (2013). *Undoing border imperialism*. Oakland, CA: Ak Press.

Walker, Gordon (2009). Beyond Distribution and Proximity: Exploring the Multiple Spatialities of Environmental Justice. *Antipode*, *41*(4), 614–636. https://doi.org/10.1111/j.1467-8330.2009.00691.x

Wang, Chi-Mao, Maye, Damian, & Woods, Michael (2023). Planetary rural geographies. *Dialogues in Human Geography*, 20438206231191731. https://doi.org/10.1177/20438206231191731

Wang, Sean H. (2017). Fetal citizens? Birthright citizenship, reproductive futurism, and the "panic" over Chinese birth tourism in southern California. *Environment and Planning D: Society and Space*, *35*(2), 263–280. https://doi.org/10.1177/0263775816679832

Wells, Don, McLaughlin, Janet, Lyn, Andre, & Mendiburo, Aaraon Diaz (2014). Sustaining Precarious Transnational Families: The Significance of Remittances From Canada's Seasonal Agricultural Workers Program. *Just Labour*, *22*, 144–167. https://doi.org/10.25071/1705-1436.9

Wells, Miriam J. (1996). *Strawberry Fields: Politics, Class, and Work in California Agriculture*. Ithaca, N.Y: Cornell University Press.

White, Catherine, & Bailey, Cathy (2004). Feminist knowledge and ethical concerns: towards a geography of situated ethics. *Espace Populations Sociétés*, (1), 131–141. https://doi.org/10.4000/eps.568

Wilson, Elizabeth (1998). *Neural geographies: feminism and the microstructure of cognition*. London: Routledge.

Wilson, Kalpana (2018). For Reproductive Justice in an Era of Gates and Modi: The Violence of India's Population Policies. *Feminist Review*, *119*(1), 89–105. https://doi.org/10.1057/s41305-018-0112-0

Winders, Jamie, & Smith, Barbara Ellen (2019). Social reproduction and capitalist production: A genealogy of dominant imaginaries. *Progress in Human Geography*, *43*(5), 871–889. https://doi.org/10.1177/0309132518791730

Winkel, Mirko, Schurr, Carolin, Perler, Laura, & Komposch, Nora (2023). Multisensorik – Globale Intimität multisensorisch erforschen und ausstellen. In *Sozial- und Kulturgeographie*. *Artographies – Kreativ-künstlerische Zugänge zu einer machtkritischen Raumforschung* (pp. 215–228). Bielefeld: Transcript.

Witzel, Andreas (2000). The Problem-centered Interview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *1*(1), 1–9.

Wolford, Wendy (2021). The Plantationocene: A Lusotropical Contribution to the Theory. *Annals of the American Association of Geographers*, *111*(6), 1622–1639. https://doi.org/10.1080/24694452.2020.1850231

Wright, Melissa (2006). *Disposable women and other myths of global capitalism*. London: Routledge.

WWF (2024). Urgent action needed to reverse ecological collapse of Donãna. Retrieved August 2, 2024, from https://wwf.panda.org/wwf_news/?10602466/Urgent-action-needed-to-reverse-ecological-collapse-of-Donana

Yamauchi, Paul Edward (1993). Patterns of Death: Descriptions of Geographic and Temporal Patterns of Rural

State Terror in Guatemala 1978 - 1985. *Physicians for Social Responsibility Quaterly*, *3*(2), 67–78.

Yates, Michelle (2011). The Human-As-Waste, the Labor Theory of Value and Disposability in Contemporary Capitalism. *Antipode*, *43*(5), 1679–1695. https://doi.org/10.1111/j.1467-8330.2011.00900.x

Zabiliūtė, Emilija (2020). Claiming status and contesting sexual violence and harassment among community health activists in Delhi. *Gender, Place & Culture*, *27*(1), 52–68. https://doi.org/10.1080/0966369X.2019.1586651

Zavella, Patricia (2011). *I'm Neither Here nor There: Mexicans' Quotidian Struggles with Migration and Poverty*. https://doi.org/10.1515/9780822394259

Zeneidi, Djemila (2013). *Femmes / fraises. Import / export*. Paris: Souffrance et théorie.

Zimmerman, Cathy, Kiss, Ligia, & Hossain, Mazeda (2011). Migration and Health: A Framework for 21st Century Policy-Making. *PLoS Medicine*, *8*(5), e1001034. https://doi.org/10.1371/journal.pmed.1001034

Zur, Judith (1994). The Psychological Impact of Impunity. *Anthropology Today*, *10*(3), 12–17. https://doi.org/10.2307/2783479

Annex: Declaration of consent

Declaration of consent

on the basis of Article 18 of the PromR Phil.-nat. 19

Name/First Name: Komposch, Nora

Registration Number: 12-126-918

Study program:

Bachelor ☐ Master ☐ Dissertation ☑

Title of the thesis: Bodies, Borders, Berry Fields: The Planetary-Intimate in Agricultural Labor Migration

Supervisor: Prof. Carolin Schurr,
Prof. Julie Guthman

I declare herewith that this thesis is my own work and that I have not used any sources other than those stated. I have indicated the adoption of quotations as well as thoughts taken from other authors as such in the thesis. I am aware that the Senate pursuant to Article 36 paragraph 1 litera r of the University Act of September 5th, 1996 and Article 69 of the University Statute of June 7th, 2011 is authorized to revoke the doctoral degree awarded on the basis of this thesis.
For the purposes of evaluation and verification of compliance with the declaration of originality and the regulations governing plagiarism, I hereby grant the University of Bern the right to process my personal data and to perform the acts of use this requires, in particular, to reproduce the written thesis and to store it permanently in a database, and to use said database, or to make said database available, to enable comparison with theses submitted by others.

Bern, 07.10.2024

Place/Date

Signature