

Field Notes from the *Multispecies Futures Lab*: Entangled Lives, Bodies, and Ecocultural Systems

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Part 1: The Bitter Taste of Melons, *la bonifica integrale* and “Donkey” Migrations

As I bite into a piece of melon (*Cucumis melo*), images of a severed brown-skinned right arm accompany the honey-sweet taste of melon in my mouth.

The arm belongs to a specific individual—Satnam Singh.

In my mind, I cannot avoid picturing the pale musk-orange of the melon mixed with the deep red of blood and the white of shattered bone. Flesh of two species, all ensconced within the transparent elasticity of airtight, sterile plastic wrap.

Mr. Singh, originally from the state of Punjab in India, was hired at a farm in the Agro Pontino area of Lazio, the central Italian region of which Rome is the capital city. At age thirty-one he was just one of thousands of undocumented and documented migrant workers who provide Italian and European consumers with their groceries at an affordable price. The illegal yet widespread practice of sourcing, recruiting, and managing these workers in the Italian agricultural sector is called *caporalato* or “gangmastering.” Essentially a modern form of slavery upon which parts of the agricultural economy rely, the *caporalato* is facilitated by problematic immigration and labor laws as well as economic need and greed that keep labor costs inhumanely low and profit margins unjustifiably high. The CGIL (Italy’s largest trade union) estimates that up to 230,000 people, or a quarter of agricultural workers in Italy, do not have a formal employment contract.¹ This is one of the often unspoken aspects of the *Made in Italy* brand.

On June 19, 2024, Satnam Singh died at the San Camillo hospital in Rome after spending two days in agony. His right arm had been crushed by the machinery that he was operating to wrap in plastic newly harvested melons—that quintessential Italian summer fruit that is made to appear on supermarket shelves in pristine form, as if it had no connection to the ecocultural context in which it grew: rather, it seems to have magically been born right there on the store shelves through some kind of an industrial immaculate conception. The standardized look of the shrink-wrapped melon deliberately makes invisible to the consumer the complex foodways and the many species, substances and persons that coaxed the melon plant to create “perfect” fruit. Mr. Singh could have been saved if he had received immediate medical attention. However, the farm owners allegedly dumped him like agricultural waste in front of his own home (along with his severed arm placed in a fruit container) and drove off, possibly hoping to avoid facing any legal repercussions for participating in the *caporalato* system. Some reputable news sources mention that Mr. Singh was packing strawberries (*Fragraria ananassa*) rather than melons, giving me one more fruit species to link with a specific example of immense suffering.² Others vaguely mention generic vegetables (*ortaggi*), now implicating possibly any or all fruit and vegetables. A story that begins with one person’s avoidable death and one fruit species’ carefully controlled life has suddenly unleashed a

¹ Angela Giufridda, “Satnam Lost his Arm,” *The Guardian*, July 20, 2024, <https://www.theguardian.com/media/article/2024/jul/20/satnam-lost-his-arm-and-was-allegedly-left-to-die-on-the-roadside-this-is-the-horror-of-exploitation-on-italian-farms>.

² “Satnam Singh, morto dopo essere stato scaricato ferito davanti casa,” *La Repubblica*, July 20, 2024, https://roma.repubblica.it/cronaca/2024/06/20/news/morte_satnam_singh_latina_lovato-423262714/.

web of stories that touch entire multispecies systems of interconnected affects, values, and interests.

Mr. Singh's story struck me deeply, as it also did many others in Italy and beyond. I began to wonder if exploring the past and present multispecies resonances of the Agro Pontino region might provide greater context to place value on Mr. Singh's hopeful life and wasteful death. Could a humanistic and qualitative analysis of how cultural and identity politics impinge upon the destinies of individuals, regions, economies, and entire ecosystems add to our understanding of how cultural, natural, and economic configurations are mutually interdependent and *co-becoming* (i.e. becoming together, coming into and being in existence via ongoing multiple human and nonhuman relationships)?³ I intentionally employ the word "ecosystem" rather than "landscape," as the use of the latter has often meant thinking of natural spaces as mere inert backdrops for anthropocentric actions and considerations. By choosing to term these important spaces by what they are—*ecocultural*⁴ *systems*—I intend to turn my attention and attentiveness to the many interconnected animate beings and inanimate materials that actively *intra-act*⁵ rather than simply interact, and co-become with human identities and culture.

Would it not be meaningful, for example, to consider the draining and transformation in the Fascist era of the species-rich wetlands of this area, while considering Mr. Singh's contemporary migration, life, and death in this very same ecocultural space? Benito Mussolini's regime dramatically altered this territory in the 1930s via the *bonifica integrale* (total reclamation) project. Previously a sparsely populated alluvial plain at or below sea level, filled with estuaries, swamps, mixed forests, and barrier dunes, the Agro Pontino harbored incredible species diversity and complex land-sea intra-actions. Although attempts had been made since antiquity to extract "productive" space (from an anthropocentric point of view, of course) from it, the *bonifica integrale* decisively impacted the area by draining of the marshes at an industrial scale never seen before. This vast area, especially south of the ancient Via Appia, was reimagined and repurposed into a curated, flat, "modern," and rigorously controlled ecocultural system comprised of intensive crop production farms and modern Fascist cities (with a completely newly built capital city, Littoria—now Latina), hosting mono-accultured Fascist citizens, many of whom were resettled here from their homelands in the northern regions of Veneto and Friuli. The historical loss of the Agro Pontino wetlands and lowland forests, called the Selva di Cisterna and the Selva di Terracina, deprived not only the entire ecosystem of a crucial species-rich habitat, but also removed an important breeding and nursery area for the Mediterranean's rich marine life. The *bonifica integrale* immediately reminds me of the much-used phrase "drain the swamp"—employed in America as a potent political metaphor to represent a righteous fight against entrenched government or state corruption. Here too a practice that was actually a disastrous extermination of valuable wetland ecosystems was justified by Fascism by attributing a purely positive and essential

³ Co-becoming is a concept best defined for the purposes of the Environmental and Multispecies Humanities by Donna Haraway. See Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003).

⁴ "Ecoculture" is a relatively new term that emphasizes the profound interconnections between human lived experiences and the larger nonhuman biological and environmental systems that sustain and promote them.

⁵ The term "intra-action," coined by Karen Barad, describes how two entities (in this case, the melon and its human producer or consumer) co-constitute each other rather than simply interacting as separate entities. Understood in this way, the human producer/consumer *partly becomes who they are* due to their profound entanglement, or intra-activity, associated with the multispecies and technological production, delivery and consumption of the melon, just as the melon plant's life is shaped by its producers and consumers. See Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007).

“cleansing and purifying” meaning to it. Indeed, the Agro Pontino is kept “productive” even today only through the constant use of energy to drain incursions of rainwater and seawater. The Parco Nazionale del Circeo, founded by Mussolini in 1934 on the advice of Senator Raffaele Bastianelli, fortunately conserves a small remnant of these extraordinary ecosystems.⁶

It can be seen, even via this brief recounting of the Agro Pontino’s ecocultural history, that draining this “swamp”—or protecting it—was and is guided via millennia of changing ecocultural discourses and epistemic and affective frameworks. The extraction of migrant labor has been a prime topos of postcolonial humanistic enquiry. However, as multispecies, multi-era, and multi-scale stories (and stories within stories) of the Agro Pontino ecosystem emerge, it starts to become apparent that Mr. Singh’s life, labor, and death should also be understood within what I am calling a “multispecies paradigm shift” within the humanities and beyond. The life and death of this individual should be viewed not in isolation, but as yet another appalling illustration of what I call Anthropos’s “capture-and-control” of multispecies life in its myriad forms, human and nonhuman, for profit. Such a multispecies paradigm shift has theoretical, methodological, and ethical implications for Italian race and migration studies (among others). But, since we are at it, why limit the story of Mr. Singh to the Agro Pontino, or indeed to Italy? In a digitally connected world of freely flowing capital, labor and human imagination, desire and fantasies (what I call the “Cybercene” era), would it also not be important to consider the ecocultural effects of contemporary immigration to the Global North on Satnam Singh’s land of origin? The fertile agricultural terrain of Punjab, the “land of the five rivers,” is traditionally considered India’s breadbasket—but it is now a land now deprived of many of its (primarily male) youth. The latter are inspired by TikTok and YouTube videos of “dunki” migration to move away from their homes towards the mirage of a better life in the West. Punjab’s loss of human capital via digitally supplied dreams becomes Italy’s (disavowed) gain. Abusaleh Sharif and Attaulla Khan explain the economic push and pull factors fueling “dunki” migration from relatively affluent migrants in India to the Global North (Europe and North America):

Complex supply chain routes that transport goods and services from manufacturing sites to high-demand European and American markets are the cornerstones of contemporary economic development. These supply chain routes are now supported by complex IT systems built on data-driven, internet-enabled infrastructure, providing real-time insights and tracking of products from source to consumer.

However, there are severe obstacles and even legal entry barriers to the free flow of appropriate labour and a productive workforce across nations. This obstacle has promoted illegal migration from the Global South to the North along routes called “donkey” or “*dunki*” in India.⁷

Essentially, a booming market for cheap, undocumented workers, a lull or drop in birthrates in prosperous countries of the Global North, and barriers to the legal entry of unskilled migrant labor have created the perfect storm of conditions to fuel *dunki* migrations. However, few economists or

⁶ For an excellent and detailed cultural analysis of Mussolini’s environmental interventions, see Marco Armiero, Roberta Biasillo, Wilko Graf von Hardenberg, and James Sievert, *Mussolini’s Nature: An Environmental History of Fascism* (Cambridge: MIT Press, 2022).

⁷ Abusaleh Sharif and Attaulla Khan, “What is the Shadow Value of an Illegal Indian Immigrant in the US?” *The Wire*, October 24, 2024, <https://thewire.in/world/indian-dunki-migration-us-shadow-value>.

quantitative migration experts are able to explain exactly why *relatively affluent* young men from India are risking these undocumented pathways to entry. This is where humanistic rather than scientific or social-science analysis can be of help, via what I call “naturalcultural discourse analysis.” One of the foundational scholars in the environmental humanities, Ursula Heise, explains the urgent need for such new and old forms of interdisciplinary humanistic analysis:

[It is] more than a matter of acknowledging the “cultural, ethical, and institutional dimensions of environmental crises,” in the typical lingo of interdisciplinary programs, international governance offices, and NGOs. They constitute a fundamental challenge to the understanding of environmental crises as basically techno-scientific, with history and culture added on as secondary complications. The environmental humanities, by contrast, envision ecological crises fundamentally as questions of socioeconomic inequality, cultural difference, and divergent histories, values, and ethical frameworks. Scientific understanding and technological problem-solving, essential though they are, themselves are shaped by such frameworks and stand to gain by situating themselves in this historical and sociocultural landscape.⁸

One of the ongoing projects of my new humanities lab is very much such an attempt to provide some qualitative answers to the phenomenon of *dunki* migrations by delving into the cultural, the mediatic, and the psychic understandings of places, cultures, and desires.⁹ To engage in what I call “naturalcultural discourse analysis” is to institute an ecocultural and multispecies paradigm shift within my own research in literary, cinematic, and mediatic studies, thus repositioning the study of identity-based mobilities. My working hypothesis is that viral narratives on digital platforms such as WhatsApp, as well as free daily video phone calls between those who have successfully migrated and family and community members “back home,” create powerful stories and new digital relationships that constitute new forms of co-becoming across continents. These stories, and the sustainable transcultural digital communities created via smartphone screens, persuade families, especially from specific Indian states (Punjab, Telangana, Kerala, and Andhra Pradesh), to sell their land and other possessions in order to invest in these very expensive and dangerous options, in the hopes of achieving the “Western dream.” Satnam Singh’s personal story and life choices may not have necessarily followed this general pattern of digitally fueled *dunki* migration. However, the overall cultural transformation caused by the migration of Punjabi men such as Mr. Singh is absolutely of simultaneous human and multispecies consequence. One only has to cultivate attentiveness to the effects of these migrations *in both India and Italy* to tease out the multispecies and social justice implications of these identity configurations and geographic mobilities, such as the consequences of these transformations on the sustainable cultivation of different crop species, the quality of the soil and water, and the effect of the availability (or lack) of food crops on individual microbiomes within the intestinal folds of the human communities affected. The double relationship between migrants and their new as well as former communities, whether newly forged or left abandoned in diverse places and spaces, should also be part of any naturalcultural analysis.

⁸ Ursula K. Heise, “Introduction: Planet, Species, Justice—and the Stories We Tell about Them,” in *The Routledge Companion to the Environmental Humanities*, ed. Ursula K. Heise, Jon Christensen, and Michelle Niemann (London: Taylor and Francis, 2017), 2.

⁹ For more details on the lab, please visit <https://www.multispeciesfutureslab.org/>.

My initial attempts to incorporate and fuse together these natural and cultural elements of the Agro Pontino ecocultural system were, however, only partially satisfying and successful. These initial trials and experiments forced me to continue exploring different options for some months. Finally, I was able to devise some analytic methods (naturalcultural discourse analysis being one of them) and products such as “multispecies thick-maps” that seemed to me to provide a viable and useful way forward. I briefly describe two such prototypes in further sections below.

Part 2: Multispecies, Multi-Kind, Situated Knowledges as Method: Lab Origins, Goals and Structure

Understanding the tragedy of Satnam Singh’s avoidable death from the transcultural, multi-scalar, multi-epochal, multi-species, and multi-kind perspectives described above brings added visibility, value and resonances to one life. These resonances are generated by movement from the microbial to organ-level, from the organs to the personal, from the individual to local, from the local to the regional, from the regional to the national, and the national to the planetary. A shift in focus from the present moment of global digital connectivity and movement to other historical periods of anthropogenic intervention allows for the generation of further resonances. These field notes commence from a memorial to a young brown man from Punjab in order to emphasize how the theoretical and methodological considerations of my new lab described here are far from simply abstract, but rather deeply pragmatic and entangled with actual lives, bodies, and ecocultural systems. Creating pathways to providing these kinds of transcultural, multi-scalar, multi-epochal, multi-species, and multi-kind perspectives underpins the activity of the Multispecies Futures Lab and its interdisciplinary exploration of the entanglements between globalized digital discourses, transcultural bio- and ecopolitics, and the workings of natural ecosystems.

With the example of Mr. Singh and the Agro Pontino ecocultural system in mind, in this section I will provide a succinct description of the possibilities provided by the environmental and multispecies humanities to study intersecting questions of nationality, citizenship, and other constructed bio- and ecocultural identities such as race, ethnicity, blackness, migrant-status or citizenship, gender, labor, sexuality, productivity, reproductivity, and multispecies co-becoming. Instead of an in-depth literature and theoretical review or analysis, I hope to provide a generative summary of the foundational terms and premises of the humanities lab which was conceived in early 2022, launched in May 2023 as The Cybercene Lab, and then renamed as The Multispecies Futures Lab in May 2025. The lab’s deliberately transcultural and decolonial theoretical and methodological approaches are reflected in both the global reach of its individual projects and initiatives (current and forthcoming projects span the Americas, Asia, Africa, and Europe) and in the particular emphasis on decolonial and indigenous epistemologies and axiologies. Despite its broad global and interdisciplinary scope, I will limit these specific lab notes to subjects and projects of Italian/European/Mediterranean biopolitical and ecocultural interest. I will not seek to accomplish the impossible task of providing an exhaustive exploration of all possible intersections between questions of Italian nationhood/race/migrations/diasporas and the environmental and multispecies humanities. Rather, my intention in describing my lab’s initial entanglements with ecocultural studies is to provide readers with possible points of resonance with their own approaches and interests.

Birthing the Agro Pontino Multispecies Thick-Map

My previous research was chiefly focused on analyses of literary and cinematic discourse in Italy with regard to migrations, race, nationality, and other intersecting identity configurations via some of the major theoretical works of postcolonial theory. By early 2018, despite the important results being produced within the general field of postcolonial Italian studies, I was growing increasingly restless with the anthropocentric and mostly textual approaches to analyzing migration culture in this tradition. I realized that I could no longer ignore my primary academic interests during my high school and college years in zoology and the environmental sciences. This background had provided me with the tools to learn and practice the “art of attentiveness”¹⁰ that is so essential to recognizing the often-repressed yet all-pervasive and very profound presence of natural world within the story of Anthropos. This attentiveness led to me to become curious about scholarship in the humanities that sought to bridge the cultural concerns of postcolonial theory with questions of ecological sustainability as explored by the environmental humanities, such as the pioneering work of Rob Nixon.¹¹ Thus, in order to consider *natureculture* (a term coined by multispecies scholar Donna Haraway¹²) and *ecoculture* as a new and more expansive arena to analyze global human-based identity configurations and mobilities, I began to formulate a broader transnational humanities lab-based structure between 2021 and 2022, modelled in the tradition of the “training labs” found in the sciences. With these specific pragmatic intentions in mind, I founded the lab in May 2023 and co-conceived it with a monograph-in-progress tentatively entitled *Our Multispecies Futures: Control, Care, and Kinship in a Transformed World*. The forthcoming book complements the project-based focus of the lab by providing a more in-depth explanation and illustration of the theoretical framework, concepts, and methodological approaches that undergird the lab’s projects.

As its thematic focus, the lab aims “to explore interdisciplinary and pragmatic pathways towards multispecies wellbeing and restored ecocultural habitability.” The primary question that guides its activities is: “How do we imagine, create and maintain harmonious and thriving multispecies ‘naturalcultural’ communities regionally, nationally, and globally?” To do so in a more incisive way, the lab proposes the “Cybercene” as a new gathering principle to study the current ecocultural era in our planetary history. As lands burn, oceans boil, species go extinct almost unnoticed on a daily basis, and political/economic/cultural conflicts (local, regional and global) multiply, the lab seeks to foster collaborations and communication between experts within and beyond academia to develop and/or strengthen alternative knowledges and ecocultural practices. Roughly encompassing the first two decades of the twenty-first century and still ongoing, I define the Cybercene as a “pivotal period in which online on-screen realities, digital representations and narratives have quickly and effectively transformed identities and substituted the value of actual bodies and living habitats.”¹³ The lab is founded on the premise that naming, understanding, and addressing this transformation can be a springboard allowing us to locate and deploy more effective pathways to address some of the major crises and opportunities (both natural and cultural) of our era, just as the broader ecocultural analysis of the Agro Pontino and *dunki* migrations could offer Mr. Singh’s life and death some added resonance and visibility.

¹⁰ Thom Van Dooren, Thom, Eben Kirksey, and Ursula Münster, “Multispecies Studies: Cultivating Arts of Attentiveness,” *Environmental Humanities* 8, no. 1 (2016): 1.

¹¹ See Rob Nixon, “Environmentalism and Postcolonialism,” in *Postcolonial Studies and Beyond*, ed. Ania Loomba, Suvir Kaul, Matti Bunzl, Antoinette Burton, Jef Esty (Durham: Duke University Press, 2005).

¹² See Haraway, *The Companion*.

¹³ Vetri Nathan, “Multispecies Futures Lab,” May 2023, <https://www.multispeciesfutureslab.org/>.

Intentionally situated in approach and global in scope, both the lab and monograph aim to analyze the underlying causes and mechanisms of the Cybercene practices of othering, commodification, and wasting. An ecocultural approach to understanding the Cybercene via the lab's projects brings to light the intimate entanglements between two contemporary phenomena that have tended to be studied within the confines of strict disciplinary boundaries: climate change, habitat destruction, and biodiversity collapse on the one hand, explored via the various earth and environmental sciences, and contemporary identity-based polarization, conflict, and violence on the other hand, explored via the social sciences and humanities. With two research clusters around which individual projects are organized, I hope to show that the underlying reasons behind corrosive Cybercene ecocultural practices (such as those that affected Satnam Singh) are not technological per se, but cultural, affective, epistemic, and psychic. If so, then it follows that solutions to our era's complex problems will be partial or ineffective unless they also focus on these humanistic-and culture-centric processes. The two research clusters are:

CLUSTER 1: Multispecies Studies (MS): This cluster encourages transcultural and collaborative explorations seeking to locate humanistic pathways that can counter corrosive ecocultural practices in the Cybercene. This cluster stems from a conviction that decolonial, qualitative, and holistic approaches are crucial to moving us toward global multispecies healing, justice, and habitability.

CLUSTER 2: Cybercene Studies (CS): This cluster examines theoretical frameworks that may help the lab better to understand the intimate connections between virtual-vs-embodied ecocultural identities and relationships. How do Cybercene mediatic representations, narratives, and fantasies directly or indirectly shape our individual and collective approaches, attitudes, and practices towards actual multispecies lives, bodies and ecosystems? How do they assist power in the control of lives in order to waste, extract, exploit and exterminate?

A humanities lab possesses the advantage of not necessarily needing a physical space and specific equipment and infrastructure, indispensable instead for most science-based labs. The Multispecies Futures Lab exists with the purpose of creating the epistemological space for collaborative experimentation around a central theme. It facilitates the incubation of faculty and student projects, the collaboration and flow of ideas, and application of truly interdisciplinary methods within place- and space-specific projects, along with the creation and dissemination of public-facing and multimedial knowledge. This kind of intellectual space to "play" openly with "odd" combinations of methods and concepts departs from other focused research working groups that tend to have their disciplinary-bound preconceptions and orientations baked in. It is also different from simply being a website with a particular research content, as the lab is actively developing new methodological approaches within site-specific projects IRL ("in the real world") in ways that depart from the textual approaches typical of the humanities.

In addition to naturalcultural discourse analysis that I briefly described above, another primary product of this methodological exploration is what I call "multispecies thick-maps." This term describes both a research and visualization method, as well as a potential digital resource that superimposes many layers (thick-mapping) on any given location of ecocultural importance. Indeed, the Agro Pontino ecocultural project described here is the very first prototype of such a multispecies thick-map. The lab-incubated method of multispecies thick-mapping employed in this project draws from techniques pioneered by digital humanities scholars such as Todd Presner,

David Shepard, and Yoh Kawano in the context of fostering research in the urban humanities: “[Thick-mapping is] about exploring, participating, and listening, something **that transforms our conception of mapping into a practice of ethics.**”¹⁴ Multispecies thick-mapping is a new interdisciplinary and non-anthropocentric method of spatialization and visualization that takes into account both the *diachronic* nature of a specific place (across multiple time periods, from geological epochs to contemporary, decade-long time scales) and its *synchronic* characteristics, i.e., all these features existing together in the present, at the same time, via a series of overlapping physical and imaginative systems, both human and nonhuman.” My search for a multispecies thick-mapping method builds upon and extends the concept of ethical thick-mapping, passing from an anthropocentric/human experience of the map to being attentive to the (often invisible or disregarded) intra-action, co-becoming, concerns and value of interconnected multispecies lives, bodies, and ecosystems.

Upon testing this new method undergirded by a multispecies paradigm-shift model, the resulting Agro Pontino Multispecies Thick-Map (currently in production) gradually but surely came alive with startling resonances of entangled multispecies stories that formed superimposed layers of narration of spaces, places, and eras. Depending on how this map is experienced, the viewer may be oddly reminded of the cloying sweetness of Italian-raised *Cucumis melo* while considering the monumental rationality of the straight and wide avenues and boulevards of Fascist-designed Latina and Sabaudia. Another viewer may find the digitally-fueled fantasies of migrant success becoming strangely superimposed in their mind while they imagine feeling the prick of the *Anopheles labranchiae* on their skin (this is the primary species of mosquito that was responsible for spreading malaria in the region before the *bonifica integrale*). I have focused on *intra-action* and *co-becoming* as cornerstone concepts while creating this first prototype of a multispecies thick-map. The hope with such an approach is that these kinds of multispecies thick-maps can be open-yet-situated in their multiple perspectives, approach angles, hallucinations, and resonances, rather than strictly static and singularly controlling of all meanings. When in digital rather than analog form, they can also grow tendrils, new shoots, and diverse rhizomes, if and when needed.

A second example of a multispecies thick-mapping project that further illustrates this multispecies and interdisciplinary method is currently in initial phases of production at the time of writing: the Ecocultures of the Scala dei Turchi project in the province of Agrigento, Sicily. This initiative was undertaken thanks to a very fruitful collaboration with Dr. Teresa Fiore (Inserra Chair in Italian Studies at Montclair State University, New Jersey). The location of this project is the Scala dei Turchi (the Turkish Steps or Turkish Stairs)—a magnificent geological outcrop located on the shores of the Agrigento province in Sicily. The Scala dei Turchi was proposed by Dr. Fiore precisely because it perfectly illustrates the complex interplay of marine and terrestrial life, both human and non, on vastly different timescales. Created to be deployed within the framework of Agrigento as the 2025 Italian Capital of Culture, this initiative aims to produce a public-facing multispecies thick-map that would show how the terrestrial and marine lives and physical features of this space function *as active intra-acting agents* rather than simply inert settings or mere tools for diverse geological, historical, and present-day ecocultural practices and experiences of the territory. To do so, the project brings together a collaborative group of experts (academic and non) from disparate disciplines, including geology, urban planning, tourism,

¹⁴ Todd Presner, David Shepard, and Yoh Kawano, *HyperCities: Thick Mapping in the Digital Humanities* (Cambridge: Harvard University Press, 2014), 7 (my emphasis).

ethnobotany, marine biology, literature, and the culinary arts. Stories embedded in the thick-map seek to illustrate sea grass “reefs” growing underwater near the beaches; the many species of plants that make up the *macchia mediterranea* (Mediterranean shrubland) still surviving in patches; migrant crossings over the Mediterranean Sea; fish and crustacean species that end up on dinner tables; legends, memories, and stories of the steps narrated by local communities; as well as literary, cinematic, and mediatic representations of the cliffs. By dramatically superimposing and making visible these naturalcultural entanglements to the public, this second multispecies thick-map prototype aims to provide a startling example of multispecies co-becoming to students, scholars, local communities and tourists alike. The hope is that, in some small way, this kind of visualization may lead to momentum toward better care and protection of this precious ecocultural space.

Four Foundational Premises: *Natureculture*, Situated Decolonial Epistemologies, the Material Turn, and the Limits of Anthropocentricity

The Multispecies Futures Lab’s methodological approaches, as organized within the two clusters mentioned above and briefly illustrated via the examples of the Agro Pontino and Turkish Steps ecocultural projects, are founded on four broad foundational theoretical and ethical premises: 1) analyzing natureculture; 2) investing in a situated and decolonial approach seeking to restore value to the knowledge of indigenous and other resilient marginalized communities; 3) taking a “material turn” in the exploration of natureculture; and 4) moving away from exclusively anthropocentric perspectives in order to analyze natureculture. These four basic premises also guide the lab’s approach to studying Italian- and European-specific biopolitical and ecopolitical identities, intra-actions, and co-becomings in various projects.

As briefly mentioned above, an essential premise of the lab is that “nature” and “culture” must be understood as profoundly interconnected—thus we have the term “natureculture.” Donna Haraway aptly describes the high-stakes situation that we humans have created at the expense of our planet and all its inhabitants, including ourselves—a situation that urgently needs interdisciplinary approaches to studying and making naturalcultural relations more visible:

We are facing the production of systemic homelessness. The way that flowers aren’t blooming at the right time, and so insects can’t feed their babies and can’t travel because the timing is all screwed up, is a kind of forced homelessness. It’s a kind of forced migration, in time and space. So it’s not a humanist question. It’s a multi-kind and multi-species question.¹⁵

Haraway contends that questions of human migration, racial and nation-based injustice, unequal resource distribution, and habitat destruction in the Global South involve multispecies and naturalcultural considerations. Readers will know well that the most vulnerable human *and* non-human lives are facing the gravest consequences in our screwed-up world: scientists have proof that through climate change and habitat loss humans have instigated a sixth mass-extinction event, the first to be human-induced, with the most recent previous event being the extinction of the

¹⁵ Donna Haraway, “Situated Knowledge: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (1988): 589.

dinosaurs.¹⁶ Climate change and habitat/biodiversity destruction have also become a direct or indirect driver in political instability, cultural extremism, and refugee/migratory crises, leading to wasted human lives and relationships¹⁷ everywhere on Earth, but especially in poorer, marginalized, and racialized communities. Long before the current climate crisis, the cultural meaning given to multispecies life on the planet has been the basis of the valuing (or devaluing) human lives: indeed, Linnean classification and categorization-influenced speciesism are foundational premises upon which the colonial racialization of Black and brown humans is built. Christopher Peterson succinctly states: “racism is predicated on dehumanization—or more precisely on a fundamental disavowal of human animality that makes dehumanization possible.”¹⁸ It is for these reasons that the multispecies humanities can provide productive pathways to better understanding the ecocultural mechanisms of racialization and other situated Italian biopolitical manifestations of inclusion and exclusion. This is exactly what the kind of analysis in which the Multispecies Futures Lab engages via the method of naturalcultural discourse analysis. The question Peterson raises is very relevant to the multispecies ecocultural understanding of Italy’s racialized others: “How is it that on the occasion of the two hundredth anniversary of Darwin’s birth...many still assume that an antiracist politics must insist on the humanity of the socially abject? To what extent are both racist and antiracist discourses predicated on a shared repudiation of animality? How might we comprehend animality in nonpejorative terms?”¹⁹

This emerging field of what I like to call the multispecies humanities can be described as an ecosystem of theoretical and methodological approaches that seek to question the foundational anthropocentricity of the “humanities” in order to provide more productive ways to understand the profound entanglements between bodies, lives, and complex systems (both natural and cultural). Rather than describing my focus on multispecies entanglements via the lab within fields variously called animal or plant studies, or even human-animal studies, which can inadvertently imply preconceived human-nonhuman dualities, I chose to place it within the scholarly context of multispecies studies or multispecies humanities that moves away from such dichotomies. As Dooren, Kirsey, and Müntser explain:

While both “the animal” and “the environment” have in recent decades been the subject of new forms of scholarly inquiry in the humanities and social sciences, multispecies studies promises something a little bit different. In contrast to animal studies, multispecies scholarship takes up a broader taxonomic scope of inquiry. But it does not simply replace a focal animal with a plant or bacterium. Much, but by no means all, of the work in animal studies has focused on people’s relationships

¹⁶ A mass extinction is a short period of geological time in which a high percentage of biodiversity, or distinct species—bacteria, fungi, plants, mammals, birds, reptiles, amphibians, fish, invertebrates—dies out. In this definition, it’s important to note that, in geological time, a “short” period can span thousands or even millions of years. The planet has experienced five previous mass extinction events, the last one occurring 65.5 million years ago, which wiped out the dinosaurs. Experts now believe we’re in the midst of a sixth mass extinction. See World Wildlife Foundation, “What is the Sixth Mass-Extinction and What Can We Do about It?” accessed March 8, 2025, <https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it#:~:text=Unlike%20previous%20extinction%20events%20caused,been%20converted%20for%20food%20production.>

¹⁷ Marco Armiero describes contemporary planetary ecological crises as symptoms of wasted relationships, lives and places. See Marco Armiero, *Wasteocene: Stories from the Global Dump* (Cambridge: Cambridge University Press, 2021), 2.

¹⁸ Christopher Peterson, *Bestial Traces: Race, Sexuality, Animality* (New York: Fordham University Press, 2013), 2.

¹⁹ *Ibid.*

with a given animal (a dialogic focus that is readily apparent in the term human-animal studies). Instead, a multispecies approach focuses on the multitudes of lively agents that bring one another into being through entangled relations that include, but always also exceed, dynamics of predator and prey, parasite and host, researcher and researched, symbiotic partner, or indifferent neighbor. But these larger contexts are not mere environments in the sense of a homogeneous, static background for a focal subject. Rather, they are complex “ecologies of selves,” dynamic milieus that are continually shaped and reshaped, actively—even if not always knowingly—crafted through the sharing of “meanings, interests and affects,” as well as flesh, minerals, fluids, genetic materials, and much more. As is discussed further below, this multiplicity, this multiplying of perspectives and influences, is key to what multispecies studies is all about.²⁰

Basic Multispecies Futures Lab premises such as natureculture and moving beyond Anthropos have been introduced and discussed by foundational scholars such as Donna Haraway, Karen Barad, Stacy Alaimo, and Ursula Heise (2008).²¹ Within Italian studies, profound naturalcultural entanglements have been greatly understudied and undervalued, although research by scholars such as Serenella Iovino, Marco Armiero, Deborah Amberson and Elena Past, Monica Seger, and Pasquale Verdicchio has made inroads in analyzing diverse manifestations of natureculture and its implications.²² However, it can also be said that most current scholarship continues to demonstrate strongly anthropocentric tendencies and perspectives, rather than genuinely exploring multispecies (both human and nonhuman) perspectives.

While acknowledging the value of this newer academic scholarship, the Multispecies Futures Lab deliberately places equal value and visibility on the often-repressed axiologies and cultural theories articulated by experts from marginalized communities, including racial, sexual, and other minorities, global indigenous scholars, as well as nonhuman experts. These perspectives have been consistently devalued, disregarded, or actively denigrated and repressed by dominant (and often colonial-based) academic epistemologies and methodologies. The lab stands firmly with the conviction that finally providing recognition to the expertise of human communities that have been “theorizing” multispecies and multi-kind relationships for generations and even millennia is both ethically important and of strategic importance. This epistemic humility is foundational to the lab’s work. Indeed, current and future projects are guided by indigenous/aboriginal/native, queer, Black, and migrant ecocultural expertise along with the latest theories of more dominant knowledge systems such as the environmental humanities and sciences. These projects are committed to listening to all kinds of place- and space-relevant experts without getting stuck in the identity-traps of separate disciplinary and identity-based silos (such as Black studies, queer studies, migrant

²⁰ van Dooren et al., “Multispecies Studies,” 3–4.

²¹ See Haraway, *The Companion and “Situated Knowledges”*; Barad, *Meeting*; Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington: Indiana University Press, 2010); and Ursula Heise, *Sense of Place* (Oxford: Oxford University Press, 2008).

²² Serenella Iovino, *Ecocriticism and Italy: Ecology, Resistance, and Liberation* (London: Bloomsbury, 2016); Armiero, *Wastocene*; Deborah Amberson and Elena Past, eds., *Thinking Italian Animals: Human and Posthuman in Modern Italian Literature and Film* (New York: Palgrave Macmillan, 2014); Monica Seger, *Landscapes in Between: Environmental Change in Modern Italian Literature and Film* (Toronto: University of Toronto Press, 2015) and *Toxic Matters: Narrating Italy’s Dioxin* (Charlottesville: University of Virginia Press, 2022); and Pasquale Verdicchio, *Ecocritical Approaches to Italian Culture and Literature: The Denatured Wild* (Lanham: Lexington Books, 2016).

literature, etc.). There is immense collaborative value in the old and new terminologies and methodologies of many marginalized communities—they can provide exciting epistemic alternatives that can expand the boundaries of restrictive and damaging normative colonial humanness, especially when they are in conversation with each other. An example of such a tradition can be found within an aboriginal worldview that includes non-animate entities within the exploration of the human experience, as explained by Leroy Little Bear: “For example, the categorizing process in many Aboriginal languages does not make use of the dichotomies either/or, black/white, saint/sinner. There is no animate/inanimate dichotomy. Everything is more or less animate. Consequently, Aboriginal languages allow for talking to trees and rocks, an allowance not accorded in English.”²³ As we can see here, terminology *is* epistemology *and* also methodology. In accordance with Little Bear’s suggestion, my definition of *multispecies* in the Multispecies Futures Lab includes homo sapiens, our mortal multispecies kin (plants, animals, fungi, microbes) as well our “more or less animate” relations, such as rocks, streams, and landscapes with which we may share “meanings, interests and affects.”²⁴ With such alternative epistemic approaches as guides, the lab hopes to analyze the many interconnections between Cybercene mediatic epistemologies, discourses, and emotions and multispecies lives, bodies, and ecosystems via a truly hybrid rather than particularizing approach. Such transcultural, comparative, global, and, therefore, truly decolonial pathways are essential in order to better understand the complex connections between cultural power, ecological wellbeing, and embodied subaltern experiences in a global phenomenon such as that of the Cybercene.

In order to study multispecies “ecologies of selves” via an inclusive, hybrid, situated and decolonial set of tools, I realized that far more attention and value needs to be placed on material and ontological entanglements with cultural discourse while analyzing natureculture. Stimulating and important work has been done in the field of Italian race and migration studies in the past two decades, but a “material turn” is essential in my future projects in order to further understand and emphasize the direct impact of the meanings generated by Italian biopolitical discourses of race, migrant-status, citizenship, natality, etc. upon actual lives, bodies, and ecosystems. The methodological tools generated by the material turn (i.e. how meaning impinges on matter and vice versa), as expressed via newer traditions in environmental humanities scholarship such as new materialism, actor-network theory, object-oriented ontologies, and speculative realism, have begun to chip away at the immensely destructive yet immensely durable separation between nature and culture in normative academic and cultural thought. An example of a completed Multispecies Futures Lab project that harnessed the material turn within the Multispecies Studies (MS) cluster is “Edible Nation: Imagining Somalia Through Cuisine.” This project analyzed how the global Somali diaspora harnesses “creative nostalgia” via culinary preparation, consumption, and public representation in order to create personalized spaces of belonging.²⁵ The concluding paragraph in the publication of my findings points toward the potential richness of examining the naturalcultural and material manifestations of culture and identity:

²³ Leroy Little Bear, “Jagged Worldviews Colliding,” in *Reclaiming Indigenous Voice and Vision*, ed. Marie Battiste (Vancouver: UBC Press, 2000), 78. Some readers will point to fables, fairy tales and indeed a vast oral and textual narrative tradition (in many nonaboriginal languages and cultures) in which precisely these things occur and are part of the narrative poetics. The difference is that these epistemic approaches to multispecies relations are not typically formative for the normative ecocultural practices of these non-aboriginal cultures.

²⁴ Dooren et al., “Multispecies Studies,” 3.

²⁵ Vetri Nathan, “Edible Nation: Imagining Somalia through Cuisine,” in *Longing for the Future: Mal d’Afrique and Afro-Optimism in Perspectives on Somalia*, ed. Rosetta G. Caponetto, Giusy Di Filippo, Martina Di Florio (New York: Routledge, 2024).

Humanistic scholarship on diasporic communities has often focused on literary works to explore the creation of personal and collective homelands by authors who lack a stable, singular national identity. This beneficial work has created a recognizable platform, and the industry of “migrant” or postcolonial authors, publishing companies, critics, international prize committees, and academics have impressed upon the value of these innovative works of art in furthering our understanding of the human experience, histories, and futures in a globally connected society. It is hoped that this chapter will contribute to further scholarship that looks at cultural practices other than literature (such as cuisine) that are far more broad-based than reading or writing to better understand the vibrancy and complexity of the processes of nation- and community-building within nations and diasporic communities.²⁶

A more expansive approach to analyzing culture that includes, but is not exclusively focused on texts such as literature and film can provide many potential benefits. For is not considering only certain human cultural texts an indirect form of inattentiveness to many other forms of (human and nonhuman) culture? The opportunities of having a more capacious understanding of culture that brings the literary or cinematic/mediatic in conversation with matter could provide more expansive avenues to analyze natureculture. Can objects, matter, substances, fluids, lives, and bodies not be understood as dynamic cultural texts that can be analyzed for their various forms of multispecies and multi-kind co-becoming? Can matter, or just *being*, not speak for itself? Can a literary or cinematic text fail to affect—or to be affected by—its material ecocultural context? In order to finally emphasize the naturalcultural, the multispecies and material turn, it would also be extremely useful to clearly distinguish between “ecocriticism” and the larger purview of the environmental and multispecies humanities—with ecocriticism understood as a subfield of the latter that analyzes textual representations of the natural world in diverse forms of human literature, media, and art. The multispecies humanities, on the other hand, could work on better analyzing the “meaning-matter” connection via methods such as naturalcultural discourse analysis, as developed in the Multispecies Futures Lab.

In line with the four premises very briefly described above, potential future topics of focus via the lab’s own research output and via collaborations with students, researchers and institutions will include (but are not limited to):

- Material impacts of cultural paradigms and transformations in various periods
- Multispecies perspectives and relations (plant, animal, fungi, microbial)
- National and transnational biopolitical/ecopolitical discourses and practices of labor, land use, natality, race, and gender/sexuality
- Global and Mediterranean migrations as ecocultural phenomena
- (Un)sustainable local and global extractive practices
- Theorizing human-and “more-than-human” relations in the Cybercene
- Spiritual traditions on nature/culture/multispecies relations
- Touristic landscapes, rural versus urban spaces
- Deep/ecological/geological/cosmic vs historical time

²⁶ Ibid., 59.

- Land versus marine and archipelagic perspectives
- Indigenous epistemologies and decolonial ecocultural rehabilitation

(Some) Conclusions: Researching Multispecies Ecocultural Systems in the Cybercene

While its activities are global in nature and scope, the Multispecies Futures Lab's projects will continue to include subjects of Italian, European, and Mediterranean concern. Europe's temperatures are increasing approximately twice as fast the global average due to anthropogenic climate change, making it the fastest-warming continent on the planet.²⁷ Climate change is affecting all Europeans, but especially its most vulnerable individuals and communities—from the documented and undocumented farm laborers toiling under an increasingly searing sun and intolerably humid conditions, to its wider demographically ageing population, to its poorer and more marginalized groups. Europe's economic, cultural and political intra-actions and co-becomings with ecocultural realities in diverse areas of the Global South are also of primary relevance to the lab's work.

Even before our current era, Europe's natural and cultural trajectories within and beyond its imagined borders have long been intimately interconnected. Indeed, as Italian landscapes are baked dry or are swept away by floods or landslides, as Alpine glaciers vanish, as the Mediterranean boils and as Europe's hunger for resources from its own ecosystems and from the Global South fuels biodiversity collapse and resource inequalities, the lab's projects seek to impress that scholarship can no longer continue to sustain rigid hierarchical epistemological divisions between culture/nature, meaning/matter, human/nonhuman, and national/transnational. As I have outlined in these notes, these foundational conceptual dichotomies are finally being questioned by newer research in subfields such as the environmental humanities, multispecies (“more-than-human”) studies, new materialisms, postcolonial, decolonial, and indigenous studies. However, as it is hopefully evident via these notes, there is tremendous unrealized potential to integrate these newer frameworks and approaches within Italian studies.

Could Mr. Satnam Singh's tragic and untimely death be properly remembered and honored in some small way by studying the epistemic foundations of the “capture and control” of multispecies bodies and lives (human plus more than human) over time? Could these kinds of explorations that seek a better multispecies ethics of care not greatly expand the remit and impact of the humanities? These field notes have sought to very briefly illustrate why and how natureculture (in both its newer academic/theoretical explorations and much more established yet undervalued decolonial configurations) ought to be given far greater importance by researchers and educators. Moreover, these notes argue that the environmental and multispecies humanities must be allowed to stand together with other critical frameworks such as transnational Italian studies, ecocriticism, and postcolonial studies in order to better understand the Italian nation's complex relationships with its biopoliticized selves and others in the Anthropocene, while also avoiding the quagmire of identity-based disciplinary silos. Are we as scholars, educators, students, and the general public willing to expand our attentiveness beyond textual cultures to also exploring various co-becomings of culture and nature on all scales, from the microbial to the planetary? Can we bring back value and visibility to often-disregarded naturalcultural relationships? It seems to me that the rewards of

²⁷ European Environment Agency, “Global and European Temperature,” June 16, 2025, <https://www.eea.europa.eu/en/analysis/indicators/global-and-european-temperatures#:~:text=Europe%20is%20warming%20faster%20than,during%20the%20pre%2Dindustrial%20period.>

nurturing these experimental approaches to understanding naturecultures could be quite immense, both for Italian studies and the humanities at large