



Outside the Henhouse

Ethnography of poultry labour on a neo-rural farm

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Abstract: In industrial poultry systems, animal subjectivity is fully subordinated to the logic of productive efficiency: hens are confined, monitored, hybridized, and rendered vulnerable on multiple levels – immunological, spatial, and reproductive. According to Keck (2020), the biopolitical infrastructures created in the name of biosecurity often generate the very crises they claim to prevent, as in the case of avian influenza. While epidemics expose the limits of such systems, the concept of spillover has been used in anthropology to emphasize the entanglement among companion species (Barad 2007; Haraway 2003).

Building on this paradigm, the article presents an ethnographic reflection on a neo-rural farm (van der Ploeg 2009) in the Sabina region of central Italy, where laying hens live outdoors day and night, without a coop and in contact with wild fauna. The absence of centralized control allows animals to reclaim body, time, and space, expressing a situated ethology that enables a form of autonomous, recognized labor. Within a broader inquiry into contemporary neo-rurality (Giancristofaro, Villa 2023), this study explores the practical implications of an ontological reconfiguration of non-human labor (Povinelli 2016).

By blurring the boundaries between domestic and wild, the farmers cultivate practices of care extended to all species inhabiting the landscape – plants, predators, microbes – assuming responsibility for the local biocenosis. Participant observation reveals how non-human work operates as a relational and metabolic process, challenging anthropocentric notions of productivity and efficiency. Ethnography thus returns non-human labor as an ethological re-emergence that interweaves affective, ecological, and metabolic dimensions of production, suggesting applications in agro-ecology, animal welfare, and multispecies cohabitation policies.

Keywords: Multispecies; Poultry; Avian; Biocenosis; Ecology



Introduction

Gallus gallus domesticus – the avian species we encounter daily in multiple forms, from the free-ranging bird to the packaged commodity – today stands as a privileged prism through which to observe the posture of human activities and their environmental consequences (Bennett *et al.* 2018). Its evolution, biology, geographical distribution, and the archaeology of its bones¹ compose a vibrant archive that powerfully reveals the socio-spatial dynamics of extraction, overproduction, and exploitation that sustain the current agricultural and ecological crisis (Coles 2022; Guthman 2015; Schrager 2022) on a global scale (Nally, Taylor 2015; Patel 2013).

It is unsurprising that anthropology finds in this bird a fertile object of inquiry, as well as in the multiple relational forms through which we engage with it (Whyte 2022). Historically, the chicken has participated in networks of exchange among humans, mediated relations between the human and the divine, and – thanks to the epistemological impulses of the ontological turn – can now be conceived as a relational partner within a fully interspecific framework. This relationship extends beyond mere value extraction, highlighting the implications of coexistence based on reciprocity and co-dependence.

Within current debates about the definition of our historical-cultural (and geological) epoch, turning our gaze to the internal metabolism of the chicken – with its specific vulnerabilities, pathologies, and possibilities for life or disease – becomes a way to interrogate the external metabolisms that envelop it. The chicken thus operates as a mirror reflecting the extractivist and neo-colonial modalities through which we continue to relate to nonhuman alterity (Bennett *et al.* 2018; Coles 2022). Such alterity, implicated in metabolic, productive, and consumptive services, exists not only in relation to the human but as a bearer of its own multiple and irreducible identities.

Aligning ourselves with this perspective means, for anthropologists, continuing the work of deconstructing categories built through anthropocentric frameworks; it requires interrogating the notion of “species” as a fluid category, to avoid essentialist drifts and to orient reflection toward an idea of life as interspecific cooperation – a non-alienated, universal multispecies condition.

To approach alterity – animal, vegetal, fungal, or bacterial – with rigor means accepting to be destabilized by it (Lawrence 2021; Tsing 2015). Each encoun-

¹ Among the materials that could define the Anthropocene, the “super-sized” bones of broiler chickens rank first (cfr. Bennett *et al.* 2018; Zalasiewicz 2020).

ter produces knowledge, a form of knowing that unsettles anthropocentric epistemologies, reveals their partiality and, rather than denying other subjectivities, stimulates new modes of communication and affordance with the world (Dubeau 2018; Gibson 1996; Haraway 2003). There is no “outside” of the human that is pure or untouched nature: every living form is entangled in relations of co-production that shape landscapes, identities, economies, and sensibilities (Haraway 2008).

In this direction, the commitment is not merely theoretical but methodological: to outline and explore authentically multispecies modes of investigation (Gibbs 2021), capable of restoring the complexity of the relationships that constitute our external and internal environment (Raffaetà 2021).

Questioning animal suffering and the sustainability of the agri-food industry means describing chains of relations between humans and animals in the production of food that are systemically obscured. Humans and nonhumans labor – and suffer – within the same productivist logic of contemporary hypercapitalism. Human alienation cannot be understood without recognizing that animals too are severed from their own worlds of meaning, their bodies molded by the demands of extractive violence. Nonhuman *species-beings* (Fair, McMullen 2023) have historically co-produced value, resisted exploitation, and participated in the material and symbolic processes of world-making: alive or dead, they feed us; they assist us in rural tasks; industries experiment on them to create medicines; and, not least, as pets, they are care workers, offering solace to lonely humans (ivi, p. 1). The distinction between companion animals and companion species (Haraway 2003) thus reveals, on one side, the utilitarian dimension, and on the other, the possibility of true coexistence and alliance. When reduced to livestock, these species cease to be companions – in both Haraway’s and the political sense of the term – becoming instead consumable products.

With this awareness, two interpretative horizons open before researchers: either to reject and denounce exploitation, or to trace the signs of a possible multispecies flourishing (Haraway 2016; Thom van Dooren *et al.* 2016; Tsing 2017), towards a paradigm shift grounded in shared resistance and transformation (Bird Rose 2011; Escobar 2018; Kirksey 2015; Haraway 2016; Somers, Soldatic 2020 Tsing 2015; Whyte 2018).

In this article, we attempt to illustrate this latter path, presenting a fragment of the study we are pursuing.² This ethnographic fragment reflects and ex-

² Investigating the new ontological postures in the neo-rural spaces is the common research area of the authors on which the master’s thesis at the university of Turin called “Sociability of margins and refugia multispecie. A multisited ethnography among four neo-rural experiences”.

emplifies an approach that is spreading in the countryside, focused on mutual need satisfaction (Davies, Riach 2018; Latouche 2004), in an effort to overcome the bias that frames more-than-human beings as “natural systems that support life on Earth” (Brundtland 1987, pp. 41-42). The Covid-19 pandemic has underscored the zoonotic and ecosystemic origins of interdependence (Bonilla-Aldana *et al.* 2020): even extremophile species are part of complex food webs and trophic cascades (Govenar 2012) that make the world an immense rotating banquet in the cosmos.

Drawing on insights from medical anthropology on public health, this work recognizes how intensive labor – human and nonhuman – generates structural forms of suffering and pathologies that cross species boundaries. Zoonoses emerge as symptoms of a productive system that, in seeking to maximize efficiency, overexposes bodies and metabolisms (Petryna 2002). From this perspective, health itself becomes an indicator of the ecological and social crisis produced by turbocapitalism – an order that, in attempting to control life, accelerates its collapse, generating metabolic “monsters” and “ghosts” (Keck 2020; Tsing *et al.* 2017).

From these theoretical premises, the paper moves to the ethnographic level, presenting a case study of a laying-hen farm in the Sabina region of Lazio (Italy).

This limited field of study, extrapolated from the larger one on neo-rural communities, allows us to observe a “small laboratory” in which to closely visualize the relationships between species and the consequences on the production level. Through an inductive approach, therefore, we have obtained data on the posture of this farm to formulate more general theories or principles that are linked to the most recent themes developed within the ontological turn in anthropology. However, by virtue of these quantitative limitations, the aim of the article is not to derive an absolute truth about all neo-rural farms involving non-human labor but suggests some conclusions that will have to be compared with further research.

In this perspective, the paper offers a reflection on forms of nonhuman labor as practices of exchange and ontological co-responsibility, in which value is not measured in terms of performance or productivity but in participation and vital continuity (Povinelli 2016).

Subsequently, the results of the investigations found a home in some publications, cfr. Coletta e Messina 2024; Messina 2025; Coletta e Messina 2025, but also non-academic returns such as a short videodocumentary (available on <https://www.youtube.com/watch?v=TqiZX2Ve-C2Y&t=26s&pp=ygU1dGVsZSBwb250ZSBkaSBsZWdubyBjYW1iaWFtZW50byBjbGltYXRpY-28gYXBpY3VsdHVyYSA%3D>).

A methodological note for a small-scale field

The case presented in this paper forms part of a broader investigation into contemporary neo-rurality – a phenomenon that is reshaping rural and peri-urban landscapes through the infusion of new cultural capital and translocal networks of knowledge and sensibilities (Coletta, Messina 2025; Giancristofaro, Villa 2023). The research, which began in 2023, involved the authors in around ten research sites – farms or agro-forestry areas managed using regenerative approaches – which were visited periodically for periods ranging from two to five weeks. This article presents the results of a preliminary exploratory inquiry. Rather than a concluded study, it aims to map the “bio-cenotic” principles and ethico-political foundations of “La Gallina Selvatica”. We acknowledge that our presence on the field was not continuous and that direct interactions with the poultry were limited. However, we contend that this reflects a deliberate methodological choice that accepts the “limit” as an act of witnessing (Rutt *et al.* 2024).

Adopting a posture of “polite inquiry” (Despret 2016), we chose to respect the hens’ agency of withdrawal, relying on “proxy interviewing” (Hamilton, Taylor 2017) to bridge the interspecies gap. By treating the farmers as “bio-social sensors”, we accessed their situated knowledge: a longitudinal translation of animal work (Coulter 2016) rooted in years of cohabitation. This approach, which continues through serial digital encounters, shifts the ethnographic focus toward the multispecies relationship itself, validating the farmers as legitimate epistemic mediators.

From an epistemological perspective, our entry into the field was not guided by pre-existing ethological expertise, but by what Vinciane Despret (2016) defines as “active openness”: our technical inexperience regarding poultry farming is the very source of our openness to an ethnographic encounter that is not limited to “looking”, but is first and foremost a capacity for “attunement” and “corporeal empathy” (*Ibid.*). It means entering a field where the hens are co-authors of the research, and it is necessary to know how to ask the *right* questions (*Ibid.*). As Candea (2010) argues, the non-human’s agency emerges through “friction” or the frustration of human expectations. In our field, the hens’ refusal to use provided shelters or their unpredictable movement through the woods provided the very epistemic resistance necessary to treat them as subjects rather than objects of study.

Recognising the limitations of short-term observation of a group, we adopted a methodology of *mediated listening*. We drew on the situated knowledge (Haraway 1988) of the managers, Lorenzo and Daniela, who acted as interspecific mediators (Hamilton, Taylor 2017). Their accounts of ethological behaviours were treated

as “ethnographic proxies”: data validated by their daily practice of cooperation and cohabitation. This process of “interspecific translation” is a cornerstone of multispecies epistemology: knowing an animal is always a matter of “becoming with” (Haraway 2008) through shared work and creative potential of play (Graeber 2014). Humans and non-humans inhabit what Kohn (2013) defines as an “ecology of selves”, a shared semiotic field where meanings are negotiated beyond human language. In this forest setting, communication occurs through indexical signs – change in posture, specific sounds, the choice of a particular place – which both humans and non-humans interpret to coordinate their coexistence. Recognizing this shared semiosis means acknowledging that the forest itself “thinks” through the relational interactions of its inhabitants.

This approach responds to the need to understand animal subjectivity through the affective and relational work of the humans who share their daily lives with them (Porcher 2017). Consequently, we adapted the methods of participant observation to interspecific coexistence, using field diaries, visual recordings, sensory descriptions and micro-ethnographies of the architectures of domestication (Anderson *et al.* 2017). Such an approach aligns with the principles of “ethno-ethology” (Lestel *et al.* 2006), a field that combines ethological rigor with ethnographic sensivity to study hybrid communities. By observing the hens’ spatial choices not just as biological instincts but as cultural expressions within a specific farm setting, we bridge the gap between natural and social sciences, acknowledging that animal behaviour is always situated and relational. During the fieldwork, we observed a widespread community of hens whose members were sometimes visible, sometimes hidden amongst trees and bushes, or busy nesting in the brooders or resting on the raised perches designed by Lorenzo to offer privacy and protection. These structures are not mere zootechnical objects, but devices that recognise the animal’s spatial agency. In being absent from our sight, the members were present in their wild dimension, manifesting their own being and power. Our first impressions did not evoke the docile animal of the zootechnical imagination, but an agile and alert body: “a terrestrial raptor, composed and swift on reptilian legs”.³

We chose Lorenzo and Daniela because their project diverges from business-as-usual livestock management, taking the form of an agro-forestry coexistence aligned with the principles of permaculture (Coletta, Messina 2025), although they are keen to further distinguish their unique project from the broader agro-ecological and permaculture context.⁴

³ Field Notes (July 2023).

⁴ The farm focuses on restoring local ecosystems by carefully promoting biodiversity. In particular, the agro-silvo-pastoral system follows the principles of “biocenotropism”: a term coined by the

The farm's name is a programmatic statement: hens, however domesticated, are recognised as agents capable of activating latent behavioural memories – “They remember being wild”,⁵ says Daniela. We have therefore reformulated our primary research question: how is the relationship between humans and non-humans negotiated, in practical terms, within neo-rural approaches? If this alliance is established in domestic contexts (*companion species*, Haraway 2008), how does it take shape in a productive context? And furthermore: how does animal labour (Coulter 2016) transform if the focus of farming shifts away from extraction?

To answer these questions, before examining the ethnographic case, we will draw on studies concerning the ontology of industrial livestock farming and the health risks (such as avian influenza) arising from animal exploitation, in order to contextualise the stance of the founders of “La Gallina Selvatica”.

To critically situate our case study and validate the methodological approach adopted, it is necessary to compare the neo-rural reality of “La Gallina Selvatica” with the established multi-species literature on intensive farming spaces. Authors such as Alex Blanchette (2020) have extensively documented how the infrastructure of contemporary animal husbandry brings about a radical standardisation of animal life, reducing non-human lives to mere cogs in an assembly line.

In the specific context of industrial poultry farming, Les Beldo (2017) through the crucial concept of “metabolic labour”, demonstrates how, in broiler chickens, exploitation extends down to the cellular level, extracting surplus value from the simple physiological act of growing and digesting. In these extractive regimes, as Timothy Pachirat (2011) points out, the animal undergoes a process of systematic invisibilisation that erases its individuality, making it almost impossible to conduct participant observation that does not result in an ethnography of trauma or testimony (Rutt *et al.* 2024).

By contrast, our study explores animal geographies within a context of emancipation from extractive dogma. In this respect, our research aligns with the methodological efforts of Kathryn Gillespie (2018), who emphasises the epistemological urgency of reconstructing the biographies of individual farm ani-

farm that encapsulates the core principles of their approach. With respect for local ecosystems, the aim is to support the entire food chain by promoting every element, starting with endangered wild species such as orchids, reptiles and amphibians. The complete freedom granted to the animals introduced by Lorenzo and Daniela (chickens and goats) goes beyond the controversial concept of “animal welfare”, focusing instead on the dignity of the species.

⁵ Field Notes (July 2023).

mals (moving beyond the abstraction of the “herd”) through careful observation of their routines and preferences. By observing the hens of “La Gallina Selvatica” self-managing their spaces between the woodland and the brooding houses, we find direct empirical corroboration in Catherine Oliver’s (2021) studies on liberated poultry geographies and in the research by Blattner, Donaldson and Wilcox (2020) on agency in post-productive spaces. These case studies empirically demonstrate how, once freed from the regime of forced metabolic labour, farm animals exhibit complex forms of spatial agency, social organisation and resilience.

Beyond the Ontology of the Cage: Escaping Ontological Confinement

In recent decades,⁶ the breeding of laying hens has undergone profound transformations, driven by social and political pressures to improve animal welfare (IEEP 2020). In 2012, EU Directive 1999/74 banned conventional cages, replacing them with extensive housing systems—on the ground, outdoors, in aviaries, or under organic regimes⁷ – believed to better respect the species-specific behavior of hens. However, the freedom promoted by these systems remains partial: even “free-range” or “barn” systems reproduce forms of confinement, where spatial unevenness and high density generate overcrowding and behavioral stress (Adlhoch *et al.* 2023).

The “cage” as a physical device evolves and becomes “enriched,” yet its biopolitical function remains in more capillary forms. In Foucauldian theory, it becomes a metaphor for any apparatus of power that disciplines bodies. Still it is necessary to distinguish, as suggested by Foucault (1975), between the model of leprosy (*enfermement*) and that of plague (*surveillance*). If the old chicken battery operated by massive exclusion and segregation (*leprosy model*), extensive and “enriched” systems – monitored by sensors and algorithms – implement the plague model: an analytical quadrillage where

⁶ Since the 1980s, animal rights movements and the first European directives (EEC 88/166; EU 1999/74) have attempted to reform the system by introducing so-called “enriched cages” with nests, perches, and scratching areas. However, criticism (CIWF 2018) has highlighted the inadequacy of these measures: scratching on plastic mats or perching on wire mesh does not restore ethological freedom.

⁷ Lorenzo and Daniela’s farm, which they describe as “wild”, is supposedly organic on paper: the same label under which companies of very different quality, sometimes of questionable quality, and even involved in scandals. Cfr. Report’s Rai <https://www.rai.it/programmi/report/inchieste/Chepolli-3fab37d4-8b06-4a50-b9d8-6f1403dbbe6a.html> (Ultima consultazione 18/10/2025).

space is not only closed, but parceled out, and any inappropriate behavior can be inhibited. In this context, “confinement” – a term that can take a spatial and an ontological value here – does not act by denying life, but by meticulously managing every biological parameter to make it “docile” and productive (Wadiwel 2015).

The transition from the disciplined body to “bare life” requires critical attention to the philosophy of Giorgio Agamben (2007). So the industrial animal would not be a “sacrificed” being because sacrifice belongs to a ritual and legal sphere that recognizes a transcendence of the dying, as well as a sacred value. On the contrary, following Cary Wolfe’s (2013) analysis of the architecture of biopolitics, the animal is reduced to *Homo Sacer*: the one who can be killed but not sacrificed. His death is a mere technical event, devoid of moral or political value, placed in a permanent “state of exception” which is intensive farming itself. If Klasky and Butt (2023) propose the archetype of the *bovis sacer*, it is precisely to highlight this condition of “unpunished killability” where life is preserved (foster life) only as a function of its total consumability (Chrulaw 2013, pp. 70-75).

Therefore, this condition of deadening life (Stanescu 2013) is not a simple deprivation of freedom, but an “ontology of life directed towards consumption” (ivi, p. 73), where the animal exists in a suspended temporality, oriented exclusively towards its future decomposition into a commodity. It is a form of “animal capital” (Shukin 2009) that circulates both as physical matter and as a hegemonic sign of human domination. In this framework, suffering is not an accident of path, but the epistemological core of a system that requires the denial of agency to function.

In her critique of anthropocentric regimes of power, Donna Haraway (2015) calls attention to the complexity of multispecies relations, moving beyond hierarchical comparisons between humans and animals and the simplistic culture-nature divide. For Haraway, technological and scientific control over species is an extension of human domination that fragments and instrumentalizes life. She therefore advocates a politics of co-resistance and care – *making kin* – in defiance of the traditional anthropocentric order (*Ibid*; 2016).

The shared history of *Homo sapiens* and *Gallus gallus* – their long co-domestication – began over 8,000 years ago and for centuries took the form of an interspecific negotiation, in which both species benefited from proximity (Zalasiewicz 2020). Only with industrialization and the logic of competition was *Gallus gallus domesticus* reduced to a mere means of production, losing its subjective and ecological value. This ontological reduction severed the animal from its agency, transforming the relationship into one of functional exploitation.

In 2021, the European Commission announced its intention to gradually ban cages by 2027.⁸ Yet “enriched” and “barn” systems remain dominant. The promise of technological welfare often translates into a new paradigm of techno-efficiency, where sensors and machine-learning algorithms monitor animal behavior (Milosevic *et al.* 2019) without altering the relational structure of the farm.

Anthropology has long evaded the issue of animal suffering, privileging symbolic systems over the material and structural dimensions of violence (Mancuso 2021). Yet suffering – as an “epistemological discomfort” (Beneduce 2008) – may serve as a key to understanding the dissolution of cultural systems founded on the separation of human and animal (Dei 2005). Sentience and the capacity to feel pain, now recognized across many species (Aaltola 2012; Mancuso 2023), demand an ecosystemic approach that transcends the pain/suffering dichotomy. Aaltola (*Ibid.*) defines suffering as the manifestation of denied agency: not merely physical pain, but the deprivation of the power to act within one’s environment.

In our ethnographic case, the farmers running an agro-forestry laying-hen system have abolished the “cage” as well as all forms of confinement such as coops or shelters. The hens do not traverse closed spaces but live outdoors day and night, freely ranging across three hectares of terrain, roosting in trees or on perches to protect themselves autonomously from other wild subjectivities. In this context, their ethological activities-scratching, socializing, nesting, seed dispersal – constitute ecological transformations that personalize the integrity of the landscape.

Among the first hypotheses, it seems that what happens in this farm represents a reversal of the technological paradigm for improving animal health and ethological freedom: not simply removing the cage or expanding the available space but rather creating space for the animal’s own action. Furthermore, Lorenzo and Daniela seem to understand the role of farmers as ecological mediators, practicing a more than human form of advocacy that reconfigures the very meaning of agriculture, well-being, and work. Their practices, the result of continuous study and experimentation, seem to be seeking a dynamic balance between control and coexistence, care and attention to the multiple rhythms of (re)production (Kallio, LaFleur 2023).

These initial assumptions, however, must also consider current biosecurity restrictions. Our analysis of the working conditions of laying hens also inte-

⁸ https://www.eeas.europa.eu/eeas/commission-propose-phasing-out-cages-farm-animals_und_en (accessed 2/3/2026)

grates a reflection on the health conditions and risks of these off-grid workers. If there are health risks, how are they assessed by farmers? What solutions do they adopt define their paradigm?

These issues are relevant but also urgent considering the zoonotic phenomena of recent years and the related measures adopted by governments and public health agencies. The management of “naked life”, caged and killed, finds its maximum technical and regulatory expression in the biosafety paradigm. If Foucault’s model of the “plague” was based on constant surveillance, contemporary biosafety operates as a true immunological device (Esposito 2002): to protect the social (and productive) body from infection, it imposes a clear and aseptic separation between the “controlled” interior of the farm and the “wild” and potentially pathogenic exterior. Consequently, the agency and freedom of movement that characterize Lorenzo and Daniela’s experience are not only ethical choices, but become, in the eyes of the healthcare system, dangerous vulnerabilities. Is the avian influenza (HPAI) spectrum the ultimate breaking point in the balance between ecological care and regulatory control?

Zoonosis as the Disease of Labour

In this contribution, we recall studies on zoonotic epidemics because they represent one of the most evident expressions of the industrial subjugation of animal life (Haraway 2008) and as such may be considered a sanitary risk for non-human workers implicated in intensive farms. In particular, avian influenza manifests the inadequacy of biopolitical dispositions that claim to govern species’ vitality in the name of bio-security (Keck 2020; 2025; Davis 2025). The intensive systems, founded on high densities, genetic selection and confinement, generate the very conditions they intend to prevent: immunological stress, viral instability and inter-specific vulnerability.

Direct contact between domestic poultry and wild birds represents one of the main critical points in global sanitary management of the poultry supply chain. Migratory species – especially anatid waterfowl (geese, ducks, swans) – act as privileged vectors of Influenza A viruses, hosting low-pathogenicity strains (LPAI) which, once introduced into intensive farms, may mutate into highly pathogenic forms (HPAI) due to high density and inter-specific contact (Webster *et al.* 2007; Keck 2020; Adlhoch *et al.* 2023). Overcoming the purely medical-veterinary vision, the analysis of contemporary zoonotic pandemics requires a critique of political ecology and surveillance devices.

According to Frédéric Keck (2020), the concept of “avian reservoir” is not a simple biological entity, but a complex socio-technical configuration. The pri-

mary reservoir consists of wild aquatic birds (Anseriformes), in which influenza viruses have always circulated in low-pathogenic forms. However, the reservoir becomes a biopolitical category the moment it comes into contact with human infrastructure: live animal markets and large farms become “mixing zones” where the virus can mutate. This ecological configuration finds its most toxic and “monstrous” declination in the structure of industrial agribusiness (Davis 2025).

If Keck analyzes the mutation through propagation sites, Davis identifies its structural driver: intensive farming acts as a true biological reactor. The extreme density of thousands of heads in confined spaces, combined with complete genetic uniformity (which eliminates natural resistance from populations), provides the avian virus with an ideal culture medium to accelerate its evolution towards highly pathogenic forms. For Davis, the toxicity of livestock farming lies not only in physical pollution, but in the creation of an evolutionary “perfect storm”: the meat industry has torn down ecological buffers between wild and domestic (lakes and forests), accelerating the leap in species (spillovers) through a profit logic that systematically ignores global biological costs.

From an anthropological perspective, the concern for the nonhuman is not limited to interest in a subordinated alterity, but involves a sanitary dimension: public health depends on the biological integrity of the animals we consume and of the ecological environments we share.

In these contexts, can an intensive poultry farm be considered a workplace where hens are employed as workers? What mechanisms of power exploit the animal’s biological metabolism? Without well-being no effort is sustainable, but if the effort continues then the work becomes coercion. As Abulafia (2010) observes, the slave does not exist by nature: he is produced. The process begins with uprooting from one’s environment, proceeds through depersonalisation, one loses subject-status and becomes the property of others. What follows is reification and a juridical-ontological subjection in which life is reduced to mere labour-force, deprived of rights, relationships and agency. This sequence transforms humans into slaves – and returns, with different devices and intensities, the treatment of animals in intensive farming. Their existence – and their death – is regulated by a slow, institutionalised violence (Nixon 2011), a necropolitical regime that decides who may live and who may be left to die (Mbembe 2023).

Anthropology has interpreted spillover not simply as viral passage from one species to another, but as the material expression of the entanglement among living beings (Barad 2007; Haraway 2008). Zoonosis thus reveals the biological closeness between humans and non-humans, showing that the immune system

itself is a natur-culture affair (Haraway 2013). In ecological terms, the radical separation between domestic and wild is a fiction, because viruses circulate in bodies and ecosystems, not in categories. When this proximity is distorted by a productive paradigm, co-evolution becomes co-vulnerability.

Environmental anthropology has expanded its capacity to register the link between human health and environmental health by incorporating other “ways of seeing”. Roberta Raffaetà (2021) has shown how narratives about bacteria act as analytical devices capable of unveiling the visceral links of symbiotic health between species: the global health system is in a phase of instability because metagenomic discoveries challenge the categories of culture, nature, individual, relation and health. Though it remains complex to determine causal links in environmental disasters (Ravenda 2018), the impact of agro-chemical multinationals produces cascade effects: “health is not the property of a body, but an emergent property from an ecosystem of relations” (Raffaetà 2021, p. 17).

Faced with this catastrophic risk scenario, Keck (2025) proposes a necessary paradigm shift: the transition from repressive control to “solidarity between species” mediated by the sentinel concept. While traditional biosafety responds to the virus with mass culling and sterilization (pastoral logic of exclusion), the sentinel paradigm invites us to consider the animal as an epistemological ally. Sentinels are those birds – domestic or wild – that, living near viral borders, first show signs of infection. Recognizing the usefulness of sentries means accepting a shared vulnerability: instead of preemptively killing the animal “reservoir” to protect the human, one learns to listen to the signals the animal communicates. Global health protocols such as “One World, One Health” (OWOH), born after Covid, confirm this interconnected vision between animal, environmental, and human health, but they can have an authoritarian drift in the name of biosafety (Consigliere *et al.* 2022). The attempt to centrally control the pathogen’s migratory flows and the immunological response (vaccines, culling) does not call into question extractive capitalism and the ecological relationship with which humans produce food and inhabit the Earth.

The risk of the “One World” paradigm is that standardized “top-down” responses (lockdowns, disciplinary protocols, legal consequences) are adopted that do not take into account local specificities and “ecocosmologies” other than the capitalist one. Therefore, health remains founded on the preventive elimination of biological otherness rather than on the transformation of relationships that favor epidemics. The immunological dichotomy between a “self” to be defended and a “non-self” to be expelled fuels a bellicose conception of existence and a widespread germophobia (Raffaetà 2020, p. 52) that has been exacerbated by the Covid-19 pandemic (Consigliere *et al.* 2022) characterized by pollution of disinformation (Pan *et al.* 2023). This has created a climate of disorientation

and generalized alertness that has obscured non-human action: what could be ecological interlocutors, biosystemic health indicators, or sentinel devices become fenced enemies (Lakoff, Keck 2013; Coletta, Messina 2024). Mass alert, rather than an opportunity for ecological and cultural education, becomes a technology of governance.

As Alliegro (2020) observes, the state of an environment-in-crisis signals wounds that simultaneously tear ecosystems and corrode the sociocultural apparatuses of the communities inhabiting them. In this scenario, medical anthropology is called upon to interrogate health and suffering – human and non-human – as joint phenomena linked by inextricable etiological and relational webs. To repoliticise lives, labour and research, giving voice to those silenced, becomes practice of resistance and lever for destabilising the future (Quaranta 2018), refusing to “stand by and wait for the next disastrous zoonotic epidemic” (Calisher *et al.* 2008, p. 540).

Human action shapes biological processes: every local phenomenon, every situated biology, is a node of a bio-social assemblage (Quaranta 2018), outcome of global processes whose effects reverberate across multiple scales. The “scapes” of capital, technology, bodies, ideas and more expose the entanglement of temporalities and spatialities even across distances, obliging us to rethink the challenges of the present (Appadurai 1996).

The non-human entities of the everyday – even those microscopic and invisible, like viruses and bacteria – escape our control and, in their emergence, reveal the vulnerability of infrastructures and anthropocentric categories.⁹ Today the environment is studded with spectral traces that haunt more-than-human geographies: the Anthropocene is inhabited by ghosts, by vestiges and bones (Zalasiewicz 2020) of the more-than-human ecologies through which new futures unravel and re-configure. Landscapes thus emerge from spectral intertwinings, from multiple life-and-death histories (Mathews in Tsing *et al.* 2017, p. G5). What prospects of coexistence are possible with these assemblages of life that know how to inhabit the biological world better than anyone else? Sym-biosis – “living with” – implies mutual vulnerability and responsibility, it also implies confronting “dying with” as the only ethical form of multispecies coexistence

⁹ The true dominators of this world are microscopic organisms: bacteria, fungi, holobionts and other assemblies that for over 3.5 billion years have inhabited the Earth undisturbed. These complex, spectral, monstrous entities embody “the marvels of symbiosis and the threats of ecological destruction” (Tsing *et al.* 2021, p. M2). They remind us to remember: testifying living landscapes where presence, time and futures intertwine even when we are no longer here to observe, disturb or traverse them. Lichens, fungi and other holobionts show radically other ways of “being in time” (Ivi: G143). If we aim to cultivate landscapes in which humans and other species adapt reciprocally, we must recognise the “discrepant multispecies rhythms” (*Ibid.*) that cross us.

(Raffaetà 2022). Life forms at the edge of their biological boundaries return as monsters (Tsing *et al.* 2019): hybrid and unexpected entities emerging from ecological ruins and interspecies relationships. They are material and ghostly witnesses to the damage caused by man, indelible traces of processes that precede and surpass us.

In this scenario, avian influenza configures itself as the flip side of the poultry economy: a biological sign of exploitation. When the hen is reduced to a reproductive machine, the virus acts as an index of its suffering – a biological echo that escapes human control, a pathology of forced labour. Avian influenza is the biological product of today's economic model and the agro-industrial system that treats animals as instruments; eggs, meat and virus are all by-products of the same process. The virus itself, treated as “wild invasion”, “disease of nature”, or “fault/weakness” rather than as a warning message, is allowed to proliferate in the conditions most fertile for its reproduction – until, eventually, a pathogen jumps species and reaches humans, triggering a new pandemic. Pandemics are treated as “natural calamities” – inevitable and unforeseeable accidents – rather than as “unintended consequences of our actions” (Quammen 1996). From one side, the environmental pressure caused by our species; from the other, our technologies and social models contribute to rapidly and systemically spreading pathogens. (Ivi, p. 31)

Reading avian influenza in this key, it becomes the biological metaphor of a broader condition of exploitation. It is the sign of a labour-pathology traversing species and bodies, human and non-human alike: a slow poisoning contracted “on the job,” where production intensification coincides with risk exposure. Recognising hens as workers thus also means admitting to the pathological conditions of their employment – and with them the urgency of an ontological redesign of the workspace and of the meaning of labour itself – from production of value to reproduction of life.

These considerations will be useful to us in critically investigating the ethnographic field, where the confinement between domestic and wild is deliberately broken down. If this biocenotropic breeding is based on coexistence, ecological proximity, and the renunciation of biosafety barriers, how is the health risk configured? What effects do these choices have on the well-being of the animal (and our food chain)?

Multispecies Ethnography in a “Wild” Farm

Keck (2020) observes that the ontological turn in anthropology can also be read as an animal turn, insofar as it attributes to animals an agency that classical

humanism reserved exclusively for humans. From this arises a double requirement for the social sciences: on the one hand, to rethink their own ontological premises – an epistemic and methodological issue – and, on the other, to confront the political and juridical implications of recognising animal subjectivity within social relations.

Only recently ethnographies have begun to grant analytical attention to non-human actors in their ontological positioning. Whereas in the past animals were analysed as symbolic or material devices through which categories of thought were articulated (Lévi-Strauss 1962; Shanklin 1985; Mullin 1999), the multispecies perspective (Kirksey, Helmreich 2010) has restored to them an active presence within relational networks, showing how, in the era of climate crisis, they can become strategic interlocutors for imagining new alliances and forms of kinship (Haraway 2016; Alber *et al.* 2023).

Within this theoretical horizon, the present contribution offers an ethnography of an experiment in multispecies cohabitation and collaboration situated in the Sabina region of central Italy: a neo-rural farm (Giancrisofaro, Villa 2023; van der Ploeg 2009) where laying hens live outdoors, without a henhouse, immersed in a landscape permeable to wild fauna. The absence of control infrastructures – fences, sheds, automatic feeders – allows animals to reclaim body, time, and space, shaping a situated ethology in which nonhuman labour takes the form of relational and symbiotic practice (Haraway 2016; Tsing 2015). In this sense, the daily care of the farmers is not a productive investment but a form of shared ecological design (Tsing *et al.* 2020; Zola 2021), in which interspecies negotiation actively shapes the common space.

Compared to Belbo's (2017) ethnography on a small group of broiler chickens, our "field" consisted of almost three hectares of semi-wooded landscape inhabited by approximately 249 laying hens, divided into family groups that the farmer defines as *harems*, each characterised by the presence of an alpha rooster. This territorial division is not imposed nor conflictual but emerges through processes of self-management among subjectivities: under conditions of "free will", each hen traces variable trajectories, choosing where to position herself, with whom to interact, and which substrate to frequent. As Latour (2009) suggests, the social sciences should not define a priori what counts as "nature" or "society", but rather observe how these categories are redefined through local practices of recomposition. This is precisely what happens in the Sabina field, where environmental management becomes a *naturcultural* question shared across species.

As Anderson *et al.* (2017) note, understanding interspecies relations requires moving beyond the dichotomy between domination and mutualism. Their notion of "architectures of domestication" shows how material artefacts – fences,

barriers, perches – are relational devices mediating cooperation between species. In the case they analyse – that of falconers – the hood placed on a raptor's head before hunting acts as a shared signal: “once placed on the falcon's head, it indicates the beginning of the journey to hunt, and its removal marks the imminent moment of free flight” (Anderson *et al.* 2017, p. 36). Far from being symbols of coercion, such artefacts structure social interaction between humans and animals “through comfort and security rather than through force or threat” (*Ibid.*). The approach proposed by Anderson *et al.* (2017) offers a valuable key to reading the landscape of “La Gallina Selvatica”:¹⁰ three rugged hectares on the slope of a river valley facing north-west. Here, alongside the previously mentioned relational infrastructures – water points, forest margins, natural terraces – a radical element emerges, introducing a conceptual and methodological shift: the absence of the henhouse. Without an enclosed structure for nocturnal shelter, the hens roost in trees or on perches made by Lorenzo.

This spatial configuration is based on the hens' ability to clearly distinguish between disturbances that lead to a chronic deterioration in living conditions (Paul *et al.* 2023) and transient ecological hazards. The former, defined as aversive physical stimuli, include water sprays (*Ibid.*), inadequate lighting or flickering (Kristensen *et al.* 2007; McPhee *et al.* 2024), loud and sudden noises (Campo *et al.* 2005) and, more generally, an unhealthy environment (Dawkins 2004). These factors differ markedly from the “ecological disturbances” typical of the natural environment, such as wind, rain or predator attacks (Paul *et al.* 2023). Whilst the former are characteristic of intensive indoor farming (sheds) and represent constant or repeated disturbances from which the animal cannot escape, the events that hens encounter in the environment designed at “La Gallina Selvatica” are dynamics with which the individual actively interacts, deciding on a case-by-case basis how to respond. The wide availability of varied shaded and sunny areas (hedges, trees, tall grass, nesting boxes) and structured shelters (protected perches, ecotones), together with a living soil rich in loose material (Yu *et al.* 2023) and the distribution of food along long lines on the ground, constitute an ecosystem that drastically reduces stress, parasites and environmental shocks. This complexity ensures that the animal's biological desires and needs are fully met (Dawkins 2008; Olsson, Keeling 2002; Paul *et al.* 2023; Widowski, Duncan 2000;).

¹⁰ This theoretical concept has also been fertile in other breeding contexts. Zola (2021), in his ethnography of donkeys for social hiking, reworks Davydov's (2014) example of the Evenki of Siberia, where mobile breeding structures serve as communication infrastructures between herders and reindeer, allowing them to negotiate proximity, movement, and landscape. Similarly, Zola identifies actual “architetture asinine” that enable shared ethologies between species (2021, p. 6).

In this context, Lorenzo and Daniela's decision not to hinder any incursions by predators – whilst monitored by the presence of two Maremmano sheep-dogs – allows the hens to manage the encounter autonomously. This approach avoids the suppression of primal flight or fight instincts, preventing the form of cognitive deprivation that would result from a sterile and totally over-protected environment. During our time in the field, the owners accompanied our interpretation of the landscape with detailed explanations of the implications of every management decision. Every environmental element, in fact, responds to a precise design, the result of years of study and direct observation. Their intervention is kept to a minimum and focused primarily on monitoring an environment that is not static, but constantly evolving through the introduction of new areas, plant species and animals.

To highlight the innovative features of this farm, we draw on the words of Lorenzo, the owner, who in 2024 published two informative articles outlining his applied research for poultry farming. Supported by direct observation and scientific literature (biology, microbiology, preventive medicine), his proposal does not merely document an alternative experience but advances – with surprising clarity – “definitive solutions to the most common problems observable in all types of henhouses, from the backyard to the industrial” (our translation from Italian).¹¹

In particular, the birds' health and stress levels are constantly assessed through observations of their natural behaviour. Behaviours such as aggression, feather pecking, prolonged states of alertness with immobility, head-shaking, lameness, hesitation in decision-making and the systematic avoidance of certain places act as indicators of distress (Dawkins 2004; Paul *et al.* 2022; Son *et al.* 2022). Conversely, high foraging frequency, loyalty to favourite locations and the formation of small, stable social groups – comprising a dominant male, several females and sometimes young males – represent positive feedback. Confirming that the *harems* observed in the field correspond to the social learning units described in literature, the potential in such groups, the potential for social learning, behavioural synchronisation, effective communication, and conflict mediation by the cock (Dawkins 2004; Nicol 2015; Paul *et al.* 2023) confirms the existence of living conditions capable of guaranteeing genuine dignity for the animals.

Lorenzo's reflection begins with a simple premise: the henhouse, as a confinement device, generates social pathologies even before biological ones. Re-

¹¹ Lorenzo's paper: <https://magazine.5lb.eu/2023/11/allevamento-galline-selvatiche-nuova-medicina-hamer-5458.html> (consultato il 08/05/2026).

counting his experience with hens kept in restricted spaces, he reconstructs the aetiological genealogy of many common infections. Under conditions of captivity, the proliferation of parasites (es. *Dermanyssus gallinae*) depends not only on environmental factors but on the animal's social position within the group: the most vulnerable hens become preferred targets of the pathogen not because of physiological weakness, but because of relational fragility – due, he writes, to “impossibility of escape, unwanted contact, resentment over food or vital space”.¹²

In nature, he observes, these conflicts dissipate rapidly. In captivity, however, “activating conditions can persist for long periods with dramatic effects”,¹³ establishing a structural violence that is invisible yet persistent. Renouncing the henhouse, from this perspective, is not a romantic gesture but an eminently biopolitical one: removing animals from the infrastructures of control means redistributing agency and enabling the construction of an open relational architecture capable of coevolving with the rhythms and postures of the animals themselves. By observing behavioural symptoms, a farmer can determine who is under parasite attack: “itching, heat and metabolic acceleration” are accompanied by psychological stress and repeated attempts to escape – for instance, sleeping far from the group. When social stress is prolonged within a confined group, the conditions for mobbing arise:

When new hens arrive, they will be mobbed at once, by the roosters who will try repeatedly to mount them and by the other hens. They will be driven away from food, water and even the perches, receiving merciless pecks and blows, chased and plucked.¹⁴

Whereas in nature such turmoil lasts only hours, until the newcomers are “worthy” of joining the group – like a painful rite of initiation (Van Gennep 2012) – in confined spaces the same dynamic may continue for days or “potentially endless periods”, as the available space is inadequate for social resolution. With an example, Lorenzo clarifies the correlation between biological pressure and social pressure. After a violent attack, a young hen showed signs of weight loss contiguous with infestation by the red mite. Did the infestation cause the weight loss, or did the abuse by three roosters cause it? According to Lorenzo, the rapid weight loss was a reflex of the impossibility of escape: the organism entered a terminal state in which metabolic acceleration gener-

¹² *ibidem*.

¹³ *ibidem*.

¹⁴ *ibidem*.

ated internal heat that attracted the mites. In other words, the anthropogenic architecture – built on geometries of protection (paternalism) and capital safeguarding (capitalism) – imposes an internal proximity inadequate to the hens’ experiential ethos.

We use these fragments to deepen the ethnographic field and, later, to address the question: what does it mean to redistribute the proceeds of the metabolic labour of laying hens?

Although microorganisms are often considered “bad to think” (Raffaetà 2021, 11), they represent a fertile category for anthropological reflection: highly metabolic beings capable of reproducing and mutating rapidly, endowed with an ecological agency that can be beneficial or harmful depending on the frictions between specific biologies. In this ethnographic perspective, microorganisms participate in shaping the ecological architecture of the henhouse, where the local bacterial flora affects the psychosomatic well-being of individuals and the avian population. The henhouse – not yet the intensive shed – is already a paternalistic form of domestication: an enclosed, bounded place for shelter and laying, but also a space of complex conviviality that can turn into forced cohabitation, producing structural violence (Farmer 2006).

Lorenzo questioned the utility of the henhouse in 2017. After his first youthful experiments, he decided to abandon the structure when he realised that both he and the hens could do without it. In his view, the emergence of parasites is not an accidental biological event but a symptom of the socio-spatial constraints typical of confinement, which prevent the natural dissipation of social friction. The link between parasites and health constitutes a contingent equilibrium of situated proximity. “From an ecological point of view, one might observe that the presence of parasites conditions the ethology of species living in natural contexts,” but the parasite often acts as an incentive for movement: “in the case of hens, if they were free to move and not enclosed within four walls, it is easy to imagine they would change roost.”¹⁵

Bateson (2000) reminds us of the impossibility of separating organism and environment. Phenomena, even immaterial ones, are indissolubly tied to the material substrate with which they interact. At the core of the ecology of mind – as well as of the principles we observed in the poultry field and, more broadly, of discourses on well-being and symptom meaning – lies the intention to adopt a holistic vision able to integrate fluctuating contextual stimuli and connections that nourish every relationship. Ignoring these deeper, invisible parts of the environment

¹⁵ <https://magazine.5lb.eu/2023/11/allevamento-galline-selvatiche-nuova-medicina-hammer-5458.html>

and of ourselves means exposing ourselves to conflicts and unexpected reactions that strike us with unforeseen violence. Those who act within ecosystems while ignoring the deep connections in which they are immersed create mephitic environments, the paroxysm of a human society whose ideas are not ecological. As Raffaetà (2021) observes, acknowledging ecosystemic connections does not automatically lead to harmony or health with oneself or the environment; reality cannot be adapted according to criteria of utility and interest alone. It is not sensible to act directly on a symptom (an infection, for instance) without exploring the invisible network of relations that constitutes the field of forces to which it belongs. In anthropological terms, the absence of the henhouse – and the consequent expansion of traversable space – produces among the animals a more relaxed social climate, in which inter and intraspecies relations are negotiated to distribute a sense of “dwelling” within the landscape.

Like any individual or human community, animals are specific designers who reshape the landscape through actions and behaviours that modify its elements. Without a henhouse, the hens develop the intentionality to experience the place by crossing and negotiating proximities, trajectories, solitude, and intimacy – fulfilling their social and personal needs, living fully the sociability of the environment they inhabit.

The concept of “architecture of domestication” (Anderson *et al.* 2017) questions the kinds of dialogue that emerge among species and through which supports. Lorenzo’s textual contribution, informed by his experimental expertise, reveals the possibility of reconstructing a deeper aetiology of animal malaise, attentive to its physio-socio-specific processes: reducing tension among hens results in less availability of inflamed tissues and maintains spatial equilibrium with pathogens (still present). Here, notions such as biodiversity and biosecurity fade into a continuum that finds new possibilities of cohabitative balance. If one chooses to co-live with hens, the care required entails attentiveness also to the microbiome that informs them and to becoming familiar with their specific social ecology.

In this setting, animal subjectivity is not suppressed by coercive devices but recognised as an active component of socio-environmental organisation. The hens participate in defining their *Umwelt* (von Uexküll 2001), constructing micro-architectures of cover, pathways of shade, and informal geographies of rest and vigilance. This practice recalls Graeber’s (2011; 2018) reflections on labour as an intrinsically relational activity, irreducible to the mere production of value: to work, for hens as for humans, is to take part in a common world. In this sense, the ethnographic results invite us to expand the notion of environmental stakeholders to include other living beings – those who, through their metabolism, participate in the system’s ongoing reproducibility.

Released from Duty: Hens at Their Own Service

What happens when labour is emancipated from its reduction to mere productive activity and restored to the broader horizon of practices through which we reproduce our eco-social existence—our ways of weaving relationships, inhabiting places, and articulating meaning? From this perspective, working conditions can no longer be separated from quality of life, perceived well-being, or the affective density of relationships with our human and non-human neighbours.

In the Sabina fieldsite, participant observation reveals a configuration that overturns common expectations about laying-hen farming. The roughly 249 hens spread across nearly three hectares are not simple productive units. They display complex behavioural repertoires, dynamic internal relations, and ecological contributions that transcend the mere production of eggs. Their daily activities participate in the reproduction of the landscape within a social organisation that emerges through practices of autonomy and negotiation rather than through top-down imposition.

These observations lead back to a central question in the debate on nonhuman labour: if laying hens can be granted the status of workers, what kind of contractuality do they possess? More precisely, from an anthropological standpoint: to what ontological position are they assigned in order to perform the metabolic task proper to their species?

To address this question, our ethnographic case invites a relational definition of labour – one distant from extractive or exploitative models of workforce use and closer to collective participation, measured through the specific agency of the actors involved. Under this light, the Sabina hens engage in recognised forms of work: their metabolism and behaviour contribute to soil maintenance, biological regulation, and the co-production of a habitable environment, including the redistribution of guano across the land.

Welden's (2021) reflections on "working with nature" are particularly relevant here, as they intertwine the symbolic, political, and ecological dimensions of nonhuman labour. He identifies three modalities of interspecies collaboration: (beaver) as labourer, as coworker, and as community. In the first, the nonhuman is an ecological agent valued for producing ecosystem services for human ends – the animal as workforce, to whom labour is imposed within the extractive logic that renders "nature" a productive infrastructure. In the second, the nonhuman is a "coworker," recognised as an ecosystem engineer, a competent subject with whom to cooperate ecologically, negotiate working conditions, and co-design the landscape. In the third, it is part of a multispecies collectivity, an ecological kin with whom one co-lives rather than works; here, the very

concept of labour dissolves into a broader weave of relationships, affections, and shared responsibilities. In this sense, the categories of labour, care, and coexistence overlap, since “working with” is also “living with,” a mutual awareness of our shared role in redefining the world and its conditions of livability. “Working with nature” thus signifies recognising the nonhuman as a companion species, respecting its knowledge, limits, needs, and agency – an agency whose value is also political (Latour 2007; Stengers 2005).

Ethnographic findings show that Lorenzo and Daniela do not treat animals as productive forces from which to extract market value. Instead, they cultivate a complex ecosystem capable of hosting other animal species – insects, amphibians, predators, microbes. Their daily practices – arboreal management, removal of the henhouse, maintenance of movable perches, and care of landscape margins as meeting spaces – establish a form of spatial “contractuality” grounded in shared dwelling. The reward is neither juridical nor monetary but binding through reciprocal practice and expectation. This contract involves four observable elements: (1) spatial autonomy – the choice of resting place; (2) temporal autonomy – the modulation of activity and rest; (3) recognition of agency – farmers interpret and respond to hens’ behaviours; (4) protection and care – targeted interventions to reduce stress and disease without the impositions typical of intensive systems.

Such practical contractuality produces effective rights over living conditions: not legal rights, but rights embodied in daily routines and management. The hens enjoy protections over their bodies (lower density, natural shelters), their time (unforced rhythms), and their space (freedom of choice and escape). Farmers, conversely, assume obligations – often informal – of observation, interpretation, and adaptation. The recognition of animal subjectivity here is not rhetorical; it directly influences technical decisions (placement of waterers, preservation of margins) and informs health interventions oriented toward prevention through improved relational conditions.

This contractual symmetry, however, consists of a system of mutual expectations, within which we identify specific duties and tasks required of the hens. Their “duty” is not limited to the production of eggs, but is rather active ecological labour (Tsing 2015): through foraging (Lavigne, Lavigne 2013), scratching (Paul *et al.* 2021) and defecation (Soudet 2021), the hens act as “landscape designers”. In this context, the egg consequently emerges not as the sole purpose of the contract, but as one of the many “benefits” of a shared metabolic life.

When the hens’ “productivity” declines due to illness or old age, the bond is not severed through the culling typical of industrial systems. On Lorenzo and Daniela’s farm, older hens, even when they stop laying, continue to play a crucial social role: they act as “keepers of social memory” (Nicol 2015), stabilising

the *harems*, guiding younger individuals to safe perches and mediating group conflicts. Their duty remains a relational service that maintains stability and cohesion at a social level.

Consequently, the expectation does not concern a standardised output, but the system's ongoing reproducibility. If a hen is ill, the obligation to "care" for her (Zola 2021) takes precedence over the expectation of yield, precisely because a sick hen is seen as a flaw in the ecological architecture of the park. The "payment" that the owners receive is the creation of a "living" landscape, which in many respects has reached such a level of complexity that it is self-managing and self-reproducing, where the health of humans, birds and all other elements of the field are inextricably linked.

Hens are not passive recipients of conditions but subjects capable of refusal, withdrawal, or group reformation. These acts have tangible effects on the functioning of the farm: choosing to roost in trees rather than on perches, temporary isolation, or avoidance of certain areas all shape parasite distribution, collective stress, and even health indicators. The ethnography also highlights how many pathologies are not primarily biological but arise from dysfunctional socio-ecological dynamics. Management strategies privileging spatial redistribution and biological variability thus prove more effective in mitigating these phenomena. Biodiversity and biosecurity, once opposed, merge into a continuum of coexistence and adaptive balance. Living with hens entails deciphering the microbiome that informs them and attuning to their specific social ecology. This model, however, should not be idealised. Freedom entails costs and vulnerabilities. Exposure to predators and contact with wild birds can introduce spillover risks and livestock losses, while management demands skill, time, and a reconfigured economy of risk. Here, nonhuman labour is not secured behind bars or filtered systems but re-situated within its ecosystemic dimension, implicating each individual's immune integrity. Such an approach resists standardisation, production remains situated and contingent upon internal living conditions.

Normatively and politically, this framework raises crucial questions. If nonhuman labour exists and its contractuality is practical and relational, animal welfare policies should include qualitative and relational indicators – behavioural autonomy, microbiotic diversity, and freedom of choice – alongside spatial and quantitative measures. Recognising "practical rights" could translate into incentives for farming models that embody safety, autonomy, and shared care, and into training programmes that enable farmers to interpret and negotiate animal behaviour as management input rather than as malfunction.

Ultimately, the Sabina case offers a wider theoretical-political insight: nonhuman labour can be acknowledged beyond extractive and compensatory logics;

contractuality can be effective even when informal; and recognising animal subjectivity is not a moral gesture but a managerial practice producing better living conditions and greater ecological resilience. If the challenge is to rethink how capital organises living metabolisms, then experiments such as Lorenzo and Daniela's are not eccentric but prototypical of a multispecies politics as-signing practical rights and corresponding duties – transforming animal labour into a question of social and ecological justice (Barron, Hess 2020).

Conclusions: Applied Insights

The research highlights a fundamental ontological transition: the overcoming of the animal understood as a “bio-metabolic machine” in favor of a co-constituent subject of the landscape. In the context of Sabina, Lorenzo and Daniela's neo-rural approach replaces the nature/culture binomial with a kinship practice that recognizes animal agency as the core of ecosystem regeneration. Here, the hen ceases to be “bare life” (Agamben 2007) to become an active interlocutor whose metabolic work (fertilization, biological control, soil aeration) is valued as a fundamental contribution to the “weaving of life” (Consigliere *et al.* 2022).

As ethnographers engaged in the analysis of human-nonhuman relationships, we explored Daniela and Lorenzo's breeding to observe the practical and relational tools capable of triggering landscape regeneration. The restoration of *refugia* capable of hosting species diversity and transcending the division between wild and domestic emerges as a way to restore kinship relationships that fuel ecosystem abundance (Tsing 2015) – not without contradictions.

Ethnography presents nonhuman work as an ethological re-emergence that intertwines the affective, ecological, and metabolic dimensions of production. This indicates an ontological paradigm shift: the transition from the nature/culture binomial to kinship and co-production practices that recognize other living beings as interlocutors and collaborators. This shift is not merely theoretical; it guides concrete interventions: designing agro-silvo-pastoral landscapes that value animals' metabolic contributions (soil fertility, pollination, biological control) rather than neutralizing them; reformulating animal welfare through relational indicators (behavioral autonomy, choice, microbiome variability); rethinking biosafety as relational management and solidarity; and promoting participatory territorial governance in which farmers, technicians, politicians and anthropologists negotiate shared care protocols.

However, this experimental choice is not without risks and highlights what Anna Tsing (2005) would define as a friction between divergent epistemolo-

gies. On the one hand, the farm practices a “biocenotropic” approach that valorizes every metabolic contribution while minimizing human or technological intervention; on the other, the biosafety device imposes an immunological model based on separation and denial of contact (Esposito 2002). The presence of bodies of water and the absence of physical barriers, although functional to ethological health and the reduction of social stress, directly conflict with sanitary regulations. Here the friction emerges between the sentinel paradigm (Keck 2020), which sees the animal in the open as an ally for monitoring environmental signals, and that of the reservoir, which reduces it to a mere risk of contagion to be isolated through the “plague model” (Foucault 1975).

Recognizing nonhuman labor as a co-production of the world (Haraway 2008) requires redefining the concepts of responsibility and remuneration. In the case of “La Gallin Selvatica”, the wage paid is not the feed (the mere maintenance of the animal-machine), but the restoration of spatial sovereignty, time and ontological dignity. Not hindering their needs and desires is what allows us to rethink security not as exclusion or isolation, but as the management of shared immune relationships: an invitation to take responsibility for common vulnerability, seeing health as a field of resistance and solidarity against a rhetoric that risks emptying it for multinational interests (Consigliere *et al.* 2022).

The final paradox of this ethnography lies in the company’s response to pressure from the local health authority (ASL).¹⁶ The demand for the installation of “sparrow nets” – the latest attempt to impose ontological confinement (Wadiwel 2013) – has pushed farmers toward a paradoxical act of resistance: reducing production loads to safeguard the relational structure. Transforming from an egg production company to a plant nursery, Lorenzo and Daniela chose to step back to ensure the project (and the chickens) stay alive.¹⁷ Since 2025, the livestock farm has been reconfigured as an “Agro-naturalistic Park”, evolving into an agro-silvo-pastoral and nursery project. In this new multispecies ar-

¹⁶ In 2022, the national health authority implemented the National Surveillance Plan for Avian Influenza, which will be implemented by the Lazio Region in 2023. At the end of 2024, after several attempts to negotiate with the authorities, Lorenzo and Daniela decided to close the poultry company (cfr. *Piano nazionale di sorveglianza per l’influenza aviaria*: https://www.fnovi.it/sites/default/files/PN_SORVEGLIANZA_INFLUENZA_AVIARIA_2022.pdf).

¹⁷ Attrition with the biosafety regime reached its peak in the confrontation with health authorities (ASL), leading to a radical structural metamorphosis of the company. Faced with the regulatory obligation to install physical roofing (sparrow nets) over an area of several hectares – an operation that was technically unsustainable, as well as ontologically contrary to the “open” principle pursued by the project – the managers chose to cease the sale of eggs, which for seven years had been the sole source of income. The need to comply with the new restrictions on avian influenza forced a drastic reduction in the number of heads, from around 250 to 49, prompting Lorenzo and Daniela to refound the settlement’s very identity.

chitecture, the reduced presence of hens was complemented by that of dwarf goats, while the economic income was transferred to a collection of resilient native and alien plants, selected for their ability to adapt to critical environmental conditions with reduced maintenance. These are, for the most part, herbaceous perennials that are affected by the abandonment of traditional livestock practices, such as free grazing. This step does not represent a surrender, but a collaborative survival strategy (Tsing 2015): by abandoning the intensive production of commodities, the company preserved its “relational sovereignty”, confirming that the chickens were not gears of a machine, but individuals whose dignity had to be preserved within the soil.

Recognizing the interspecific intertwining of our existences carries a simple but radical consequence: social justice can only be multispecies justice. If the relationships that make up the world are multispecies, then the future must be too (Sakakibara 2025). The production of knowledge brings with it the responsibility to illuminate this shared existence (Haraway 2008), this subtle becoming-with that sustains us (Lorimer 2010, p. 73). Adopting this research posture involves expanding the senses, refining the ability to perceive and feel (Hamilton, Taylor 2017), cultivating the “art of noting” (Sakakibara 2025, p. 3; Tsing 2015) beyond conventional academic protocols. It is an exercise in epistemic humility: a recognition of our cognitive limitations and the will to be guided towards other situated languages and practices (Urbanik 2018).

Ethnographic analysis thus becomes a strategic terrain for observing how ecological reproduction replaces capitalist production, restoring meaning and agency to the more-than-human subjects who participate in collective life. Recognizing living things as “matters of concern” (Latour 2004) and “matters of care” (Puig de la Bellacasa 2017) means orienting action towards an ethic of “respons-ability” (Barad 2010), promoting the regeneration of multispecies assemblages as ways of living in the midst of disturbance (Tsing 2015). A sympoietic intertwining capable of generating new narratives for the future (Haraway 2016), in which living is not a solitary act but a choral practice of continuity and metamorphosis.

In light of quantitative limitations, this research does not presume to have exhausted the complexity of interspecific dynamics in neurural and productive contexts, nor does it intend to provide conclusive answers to questions that remain open and stratified. This work is rather configured as an exploratory contribution aimed at tracing new analytical trajectories from a necessarily multidisciplinary perspective. For example, the long-term implications of such “ontological resistances” in the face of global tightening of biosafety policies remain to be explored, as does the scalability of models based on interspecies solidarity (Keck 2025) in less marginal territories than the one observed. The



hope is that this ethnography can stimulate further investigations capable of integrating political ecology with situated practice, pushing the discipline toward an increasingly accurate understanding of how social and environmental justice are intertwined in the shared destinies of humans and nonhumans. Far from wanting to close the debate, this study aims to be an invitation to multiply our gaze on those “multispecies assemblages” (Tsing 2015) which, despite the disturbance of the present, continue to generate alternative ways of inhabiting the world.

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